EAST WATERWAY OPERABLE UNIT SUPPLEMENTAL REMEDIAL INVESTIGATION/ FEASIBILITY STUDY DATA REPORT: SURFACE SEDIMENT SAMPLING FOR CHEMICAL ANALYSES AND TOXICITY TESTING

FINAL

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Acronyms

Acronym	Definition
ACG	analytical concentration goal
AET	apparent effects threshold
Anchor	Anchor Environmental LLC
ARI	Analytical Resources, Inc.
AP	Analytical Perspectives
BEHP	bis(2-ethylhexyl) phthalate
BHC	benzene hexachloride
C-qualifier	PCB congener co-elution, concentration represents combined result for co-eluting congeners
CCV	continuing calibration verification
CFR	Code of Federal Regulations
COC	chain of custody
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSL	cleanup screening level
CVAA	cold vapor atomic absorption
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DL	detection limit
DMMP	Dredged Material Management Program
dw	dry weight
EC50	concentration that causes a non-lethal effect in 50% of an exposed population
Ecology	Washington State Department of Ecology
EPA	US Environmental Protection Agency
EW	East Waterway
GC/ECD	gas chromatography/electron capture detection
GC/MS	gas chromatography/mass spectrometry

Acronym	Definition
GPS	global positioning system
HPAH	high-molecular-weight polycyclic aromatic hydrocarbon
HpCDD	heptachlorodibenzo-*p*-dioxin
HpCDF	heptachlorodibenzofuran
HRGC/HRMS	high-resolution gas chromatography/high-resolution mass spectrometry
HxCDD	hexachlorodibenzo-*p*-dioxin
HxCDF	hexachlorodibenzofuran
ICP-AES	inductively coupled plasma-atomic emission spectrometry
ICP-MS	inductively coupled plasma-mass spectrometry
ICS	interference check sample
ID	identification
J-qualifier	estimated concentration
LC50	concentration that is lethal to 50% of an exposed population
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LPAH	low-molecular-weight polycyclic aromatic hydrocarbon
M-qualified	calculated concentration
MDL	method detection limit
MIS	multi-increment sampling
ML	maximum level
MS	matrix spike
MSD	matrix spike duplicate
N-qualified	tentative identification
NAD83	North American Datum of 1983
OC	organic carbon
OCDD	octachlorodibenzo-*p*-dioxin
OCDF	octachlorodibenzofuran
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCP	pentachlorophenol
PDM	post-dredge monitoring
PeCDD	pentachlorodibenzo-*p*-dioxin
PeCDF	pentachlorodibenzofuran
ppt	parts per thousand

Acronym	Definition
PSEP	Puget Sound Estuary Program
QAPP	quality assurance project plan
QC	quality control
RL	reporting limit
RPD	relative percent difference
SD	standard deviation
SDG	sample delivery group
SIM	selected ion monitoring
SL	screening level
SMS	Washington State Sediment Management Standards
SQS	sediment quality standards
SRI	supplemental remedial investigation
SRI/FS	supplemental remedial investigation/feasibility study
SRM	standard reference material
SVOC	semivolatile organic compound
T-30	Terminal 30
TBT	tributyltin
TCDD	tetrachlorodibenzo-*p*-dioxin
TCDF	tetrachlorodibenzofuran
TEQ	toxic equivalent
TOC	total organic carbon
U-qualifier	not detected at given concentration
Windward	Windward Environmental LLC
ww	wet weight
Y-qualifier	elevated reporting limit due to analytical interferences

1 Introduction

This data report presents the results of chemical analyses and toxicity tests conducted with surface sediment samples collected from the East Waterway (EW) as part of the supplemental remedial investigation and feasibility study (SRI/FS). The surface sediment quality assurance project plan (QAPP) (Windward 2009b), the intertidal multi-increment sampling (MIS) QAPP (Windward 2009a), and the Terminal 30 (T-30) post-dredge monitoring (PDM) plan (Windward and Anchor 2008) provided the detailed sampling designs and sampling and analytical protocols for the surface sediment data provided in this data report. The results of the SRI surface sediment investigation and the T-30 PDM program are presented together, because both sampling events were requested by the US Environmental Protection Agency (EPA) under the EW Comprehensive Environmental Response, Compensation, and Liability Act order, and the combined dataset will be used for the EW SRI.

Data collected in this study will be used to evaluate risk to humans and ecological receptors from surface sediment exposure in the EW human health and ecological risk assessments. The data will also be used in the SRI to describe the nature and extent of contamination.

The remainder of this report is organized into the following sections:

- Section 2, Surface Sediment Collection Methods
- Section 3, Laboratory Methods
- Section 4, Results
- Section 5, References

The text of this report is supported by the following appendices:

- Appendix A, Chemistry Data Tables
- Appendix B, Data Management
- Appendix C, Data Validation Reports
- Appendix D, Laboratory Reports
- Appendix E, Collection Forms and Field Notes
- Appendix F, Chain-of-Custody Forms

Appendices C through F, which consist of detailed validation reports and scanned original field and laboratory documents, are provided on the attached CD.

2 Surface Sediment Collection Methods

This section presents the surface sediment sample identification (ID) scheme, sampling locations, summary of collection methods, and field deviations from the QAPPs (Windward 2009a, b; Windward and Anchor 2008) for surface sediment samples collected in the EW. Copies of field notes, surface sediment collection forms, and protocol modification forms are presented in Appendix E. Copies of completed chain of custody (COC) forms used to track sample custody are presented in Appendix F.

2.1 SAMPLE IDENTIFICATION SCHEME

The surface sediment sample ID schemes for samples collected according to the surface sediment QAPP (Windward 2009b), referred to as Rounds 1 and 2 below; surface sediment samples collected as part of the T-30 PDM; and subtidal composite samples and intertidal MIS samples (Windward 2009b) are presented in the following subsections.

2.1.1 Surface sediment Rounds 1 and 2

Each surface sediment sampling location has been assigned a unique alphanumeric location ID number. The first characters of the location ID are "EW" to identify the EW project area. The project area designation is followed by "09" to identify the year in which the sample was collected. The next characters are "SS" to indicate the type of sample collected (i.e., surface sediment), followed by a consecutive number identifying the specific location within the EW (e.g., EW09-SS-001).

The sample ID is similar to the location ID but includes the suffix of "010" to indicate that sediment sample is from the 0-to-10-cm depth interval. For example, the sediment sample collected at location EW09-SS-001 is identified as EW09-SS-001-010. Field duplicates are identified using location numbers starting with 300.

Rinsate blanks have been assigned the same characters as those for the sampling locations, followed by the identifier "RB." For example, the rinsate blank collected at EW09-SS-001 is identified as EW09-SS-001-RB.

2.1.2 Terminal 30 post-dredge monitoring

Each surface sediment sampling location has been assigned a unique alphanumeric location ID number. The first characters of the location ID are "T30" to identify the Terminal 30 PDM event. The next two characters designate the sampling year, and the last two characters are consecutive numbers that identify the sampling location. For example, the sample collected at location 1 in 2009 is identified as T30-09-01. Field duplicate samples have been assigned a unique sampling location number starting with 101 (e.g., T30-09-101). Rinsate blanks have been assigned the same characters as those used for the sample identifiers, followed by the identifier "RB." For example, the rinsate blank collected for sample T30-09-01 is identified as T30-09-01-RB.

2.1.3 Subtidal composite samples

Grab samples were composited for 13 subtidal areas. The sample ID for these samples is similar to that of the location ID but includes "CS," to identify that it is a subtidal composite sample, followed by the area from which the subtidal composite sample was derived. Finally, a suffix of "010" indicates that the sediment sample is from the 0-to-10-cm depth interval. For example, the subtidal composite sediment sample created for Area 1 is identified as EW09-CS-001-010.

2.1.4 MIS intertidal samples

Unique alphanumeric sample numbers have been assigned to each discrete surface sediment sample and each MIS composite sample as detailed in the MIS QAPP (Windward 2009a). For the discrete sediment samples, the first four characters are "EW09" to identify the East Waterway project area and the year of collection (2009). The next five characters, "ITSED," identify the sample as intertidal sediment. The next numbers identify the sampling area from which the sample was taken. The final identifier is a consecutive sample number. For example, the sample identifier EW09-01-ITSED01 represents the first discrete sediment sample collected from Area 1.

A unique sample number was assigned to each MIS composite sample once samples had been composited in the laboratory. The three area-wide (e.g., EW-wide) samples are identified as AWMIS samples, and the single public-access sample is identified as PAMIS. The AWMIS samples include a consecutive sample number following the letters "MIS." For example, the first MIS composite sample for the EW-wide intertidal areas is identified as EW09-ITSED-AWMIS-01.

2.2 SAMPLING LOCATIONS

The following subsections provide the location information for the surface sediment grab samples, the samples collected to create the subtidal composite samples, and the MIS intertidal samples.

2.2.1 Surface sediment grab sampling locations

EW Round 1 samples were collected March 1 to 6, 2009; EW Round 2 samples were collected June 22 to 24, 2009; T-30 PDM samples were collected February 18 and 19, 2009. The rationale for selecting sediment sampling locations is presented in the EW surface sediment QAPP (Windward 2009b) and the T-30 PDM plan (Windward and Anchor 2008). Table 2-1 provides the collection dates and times, coordinates, and field-collected data for each sampling location. The target locations and actual locations sampled are provided on Map 2-1. Section 2.3.1 discusses those samples that were collected farther than 10 m from their target locations.

Table 2-1. EW Round 1, EW Round 2, and T-30 post-dredge monitoring surface sediment sampling locations

Sampling Location	Date and Time	Target Location[a]		Actual Location[a]		Distance from Target (m)	Water Depth (m)
		(X)	(Y)	(X)	(Y)		
EW09-SS-001	03/04/09 1625	1267030	211463	1267029	211461	0.68	-5.6
EW09-SS-002	06/24/09 1035	1267119	211479	1267117	211499	6.1	0
EW09-SS-003	03/04/09 1549	1267015	211559	1267061	211559	14	-6.6
EW09-SS-004	06/24/09 1057	1267174	211679	1267165	211681	2.78	0
EW09-SS-005	06/24/09 1140	1267065	211700	1267066	211701	0.43	-8
EW09-SS-006	03/04/09 1526	1267010	211801	1267021	211808	4.0	0
EW09-SS-007	06/23/09 1003	1267344	211945	1267330	211948	4.4	0
EW09-SS-008	06/24/09 1215	1267006	211959	1267005	211954	1.5	-1.5
EW09-SS-009	03/04/09 1502	1267171	212029	1267172	212064	11	-1
EW09-SS-010	06/23/09 1024	1267171	212029	1267383	212101	7	0
EW09-SS-011	03/04/09 1430	1267088	212098	1267091	212087	3.5	-2
EW09-SS-012	03/05/09 0955	1267217	212146	1267207	212224	24	-1.2
EW09-SS-013	06/23/09 1034	1267077	212278	1267083	212277	1.9	-4.5
EW09-SS-014	06/22/09 1228	1267323	212298	1267325	212298	0.61	-6.2
EW09-SS-015	06/22/09 1400	1267387	212335	1267383	212344	3.0	0
EW09-SS-016	06/22/09 1202	1267596	212475	1267551	212483	14	0
EW09-SS-017	03/05/09 1017	1267330	212592	1267331	212586	1.9	-18
EW09-SS-018	03/04/09 1350	1267697	212791	1267755	212811	19	0
EW09-SS-019	03/05/09 1251	1267466	212736	1267474	212736	2.4	-15
EW09-SS-020	06/22/09 1252	1267599	212819	1267594	212822	1.8	-9.5
EW09-SS-021	03/04/09 1322	1267286	212830	1267288	212828	0.89	-11
EW09-SS-022	03/04/09 1300	1267125	212919	1267219	212920	29	-4
EW09-SS-023	03/04/09 1156	1267744	212960	1267743	212957	0.95	-15
EW09-SS-024	06/22/09 1422	1267409	213064	1267409	213062	0.61	-14
EW09-SS-025	03/02/09 1050	1267166	213065	1267167	213067	0.68	-9.7
EW09-SS-026	06/22/09 1318	1267674	213068	1267673	213068	0.30	-17
EW09-SS-027	03/04/09 1137	1267846	213088	1267850	213108	6.1	-11
EW09-SS-028	03/04/09 1114	1267073	213157	1267075	213153	1.3	-20
EW09-SS-029	03/04/09 1054	1267199	213378	1267200	213373	1.7	-14
EW09-SS-030	03/04/09 1034	1267509	213404	1267512	213407	1.2	-16
EW09-SS-031	03/04/09 1015	1267796	213552	1267791	213555	1.7	-17
EW09-SS-032	03/04/09 0930	1267438	213694	1267436	213693	0.76	-16
EW09-SS-033	03/04/09 0953	1267168	213772	1267166	213771	0.69	-15
EW09-SS-034	03/04/09 0909	1267730	213822	1267732	213815	2.2	-18

Sampling Location	Date and Time	Target Location[a]		Actual Location[a]		Distance from Target (m)	Water Depth (m)
		(X)	(Y)	(X)	(Y)		
EW09-SS-035	06/22/09 1459	1267081	213932	1267081	213933	0.33	-16
EW09-SS-036	03/04/09 0952	1267451	213969	1267395	214000	20	-16
EW09-SS-037	06/22/09 1340	1267626	214038	1267623	214036	0.92	-16
EW09-SS-038	06/22/09 1436	1267842	214046	1267846	214050	1.7	-13
EW09-SS-039	03/04/09 1035	1267162	212555	1267153	212597	13	-6.2
EW09-SS-040	03/04/09 1122	1267752	213333	1267753	213333	0.38	-27
EW09-SS-100	03/04/09 0843	1267027	214201	1267016	214210	4.3	-12
EW09-SS-101	06/22/09 1515	1267835	214262	1267840	214257	2.2	-13
EW09-SS-102	03/02/09 1036	1267150	214469	1267182	214443	12	-19
EW09-SS-103	06/22/09 1532	1267787	214525	1267786	214525	0.36	-16
EW09-SS-104	06/23/09 1108	1268359	214566	1268357	214572	1.8	-8.5
EW09-SS-105	06/23/09 1050	1268392	214696	1268389	214696	1.0	-13
EW09-SS-106	06/22/09 1642	1268158	214725	1268153	214726	1.5	0
EW09-SS-107	03/02/09 1014	1267935	214849	1267921	214851	4.2	0
EW09-SS-108	03/04/09 1208	1267146	214907	1267144	214903	1.5	-19
EW09-SS-109	03/02/09 0933	1268102	214916	1268100	214913	1.2	-10
EW09-SS-110	06/22/09 1550	1268241	215015	1268243	215019	1.3	-8.2
EW09-SS-111	03/02/09 0906	1267196	215035	1267196	215037	0.61	-20
EW09-SS-112	03/04/09 1305	1267987	215125	1267985	215131	2.0	-14
EW09-SS-113	06/22/09 1610	1267798	215150	1267798	215149	0.30	-15
EW09-SS-114	03/02/09 0829	1267049	215411	1267035	215406	4.4	-9.4
EW09-SS-115	06/22/09 1701	1267805	215433	1267818	215397	12	-15
EW09-SS-116	03/01/09 1554	1267257	215759	1267255	215762	1.1	-20
EW09-SS-118	03/01/09 1615	1267363	215923	1267364	215920	0.90	-19
EW09-SS-119	06/22/09 1716	1267535	216180	1267532	216179	0.81	-17
EW09-SS-120	03/01/09 1530	1267238	216343	1267256	216342	5.4	-18
EW09-SS-121	06/23/09 1702	1267499	216420	1267502	216417	1.3	-19
EW09-SS-122	06/23/09 1648	1267192	216667	1267186	216668	1.8	-16
EW09-SS-123	06/23/09 1624	1267534	216741	1267531	216756	4.7	-19
EW09-SS-124	03/05/09 0855	1267335	216885	1267334	216891	1.8	-20
EW09-SS-125	03/01/09 1512	1267276	217256	1267272	217261	1.9	-20
EW09-SS-126	06/23/09 1608	1267086	217296	1267067	217295	5.9	-10
EW09-SS-127	03/01/09 1453	1267422	217317	1267421	217316	0.43	-18
EW09-SS-128	03/01/09 1435	1267627	217355	1267629	217363	2.4	-19
EW09-SS-129	06/23/09 1545	1267910	217491	1267908	217496	1.5	-10
EW09-SS-130	03/01/09 1636	1267279	217523	1267267	217523	3.6	-16

Sampling Location	Date and Time	Target Location[a]		Actual Location[a]		Distance from Target (m)	Water Depth (m)
		(X)	(Y)	(X)	(Y)		
EW09-SS-131	06/22/09 1626	1267490	217547	1267482	217548	2.5	-18
EW09-SS-132	06/23/09 1538	1267117	215721	1267118	215706	4.5	-17
EW09-SS-133	03/01/09 1410	1267097	214637	1267102	214630	2.7	-18
EW09-SS-134	06/23/09 1502	1267658	217679	1267657	217669	3.0	-17
EW09-SS-200	03/01/09 1349	1267828	217834	1267829	217833	0.49	-11
EW09-SS-201	06/23/09 1354	1267454	217834	1267458	217833	1.1	-17
EW09-SS-202	03/01/09 1315	1267156	217860	1267157	217847	3.9	-16
EW09-SS-203	06/23/09 1319	1267252	218104	1267298	218114	14	-17
EW09-SS-204	06/23/09 1153	1267802	218285	1267800	218283	0.82	-13
EW09-SS-205	03/01/09 1256	1267257	218379	1267251	218363	5.1	-17
EW09-SS-206	06/23/09 1132	1267911	218526	1267860	218544	16	-6
EW09-SS-207	06/23/09 1436	1267172	218574	1267182	218590	5.6	-16
EW09-SS-208	06/23/09 1305	1267826	218789	1267898	218719	40	-6.2
EW09-SS-209	03/04/09 1434	1267826	218789	1267820	218797	3.0	-17
EW09-SS-210	06/23/09 1415	1267238	218821	1267243	218823	1.7	-15
EW09-SS-211	06/22/09 1036	1267133	218823	1267130	218822	0.87	-10
EW09-SS-212	06/22/09 1007	1267657	218838	1267658	218836	0.73	-16
EW09-SS-213	06/22/09 1121	1268348	218906	1268346	218903	1.2	-11
EW09-SS-214	03/01/09 1221	1268121	218951	1268122	218955	1.3	-12
EW09-SS-215	03/01/09 1130	1268990	218971	1268971	218968	5.9	-10
EW09-SS-216	03/01/09 1104	1267849	219059	1267853	219059	1.3	-14
EW09-SS-217	03/04/09 1512	1267274	219269	1267301	219270	8.3	-17
EW09-SS-218	03/01/09 0956	1267443	219327	1267468	219325	7.8	-18
EW09-SS-219	06/23/09 0929	1267974	219385	1267959	219386	4.6	-8.2
EW09-SS-220	06/23/09 0857	1267776	219554	1267783	219553	2.1	-19
EW09-SS-221	06/22/09 0903	1267683	219341	1267685	219343	0.75	-16
EW09-SS-222	02/18/09 0921	1267915	219529	1267923	219524	3.0	-16
EW09-SS-223	02/18/09 1003	1267927	219710	1267907	219714	6.2	-16
T30-01	02/18/09 1107	1267744	215688	1267740	215684	1.8	-19
T30-03	02/18/09 1157	1267828	215723	1267828	215721	0.67	-19
T30-04	02/18/09 1018	1267748	215903	1267751	215904	1.07	-19
T30-06	02/18/09 1050	1267832	215903	1267824	215902	2.43	-19
T30-07	02/18/09 1348	1267744	216056	1267740	216055	1.3	-14
T30-09	02/18/09 1444	1267828	216056	1267819	216066	4.1	-16
T30-13	02/18/09 1335	1267748	216344	1267745	216342	1.03	-20
T30-14	02/18/09 1455	1267830	216343	1267836	216340	1.9	-19

Sampling Location	Date and Time	Target Location[a]		Actual Location[a]		Distance from Target (m)	Water Depth (m)
		(X)	(Y)	(X)	(Y)		
T30-20	02/19/09 0957	1267828	216602	1267831	216605	1.3	-18
T30-21	02/19/09 1029	1267744	216722	1267744	216725	0.88	-17
T30-24	02/19/09 0928	1267832	216849	1267837	216846	1.88	-19
T30-26	03/04/09 1644	1267828	216968	1267863	216968	11	-19
T30-27	02/19/09 1007	1267748	217104	1267748	217103	0.23	-19
T30-28	02/19/09 1017	1267832	217104	1267839	217101	2.32	-19
T30-29	06/24/09 1010	1267744	217207	1267746	217213	1.9	-19
T30-31	02/19/09 1104	1267748	217315	1267747	217318	0.95	-19

[a] Coordinates given in NAD83 horizontal datum; X-Y coordinates in Washington State Plane N (US ft).
NAD83 – North American Datum of 1983

2.2.2 Subtidal composite

Thirty-eight grab samples were collected to represent areas that were not sampled in Rounds 1 and 2 in the subtidal composite samples. These areas had sufficient surface sediment data and did not require additional sampling; however, samples were required to represent these areas in the subtidal composite samples. The rationale for selecting sediment sampling locations is presented in the surface sediment QAPP (Windward 2009b). As described in the QAPP, subtidal grab samples were collected to provide coverage in areas where surface grabs were not proposed because of the availability of historical data for Washington State Sediment Management Standards (SMS) chemicals in these areas. Locations that were sampled solely to contribute sediment to subtidal composite samples are provided in Table 2-2 and shown on Map 2-2.

Table 2-2. Surface sediment sampling locations for samples collected for subtidal composite samples

Sampling Location	Date and Time	Target Location[a]		Actual Location[a]		Distance from Target (m)	Water Depth (m)
		(X)	(Y)	(X)	(Y)		
EW09-SS-501	03/05/09 1034	1267289	213201	1267286	213203	1.0	-12
EW09-SS-502	03/05/09 1047	1267293	213498	1267292	213495	0.8	-13
EW09-SS-503	03/05/09 1100	1267274	213960	1267276	213959	0.7	-12
EW09-SS-504	03/05/09 1113	1267327	214203	1267330	214199	1.7	-16
EW09-SS-505	03/05/09 1126	1267625	214212	1267622	214211	0.9	-16
EW09-SS-506	03/05/09 1137	1267479	214421	1267485	214418	2.2	-16
EW09-SS-507	03/05/09 1147	1267671	214464	1267671	214465	0.3	-16
EW09-SS-508	03/05/09 1200	1267310	214765	1267307	214765	0.8	-16
EW09-SS-509	03/05/09 1343	1268266	214777	1268265	214775	0.7	-12
EW09-SS-510	03/05/09 1355	1267559	214828	1267557	214825	1.1	-16
EW09-SS-511	03/05/09 1404	1268002	214972	1267999	214970	1.2	-9

Sampling Location	Date and Time	Target Location[a]		Actual Location[a]		Distance from Target (m)	Water Depth (m)
		(X)	(Y)	(X)	(Y)		
EW09-SS-512	03/05/09 1414	1268089	215024	1268089	215023	0.3	-14
EW09-SS-513	03/05/09 1423	1267330	215140	1267329	215143	0.8	-16
EW09-SS-514	03/05/09 1432	1267593	215235	1267595	215240	1.6	-16
EW09-SS-515	03/05/09 1440	1267582	215504	1267580	215500	1.4	-16
EW09-SS-516	03/05/09 1450	1267221	215544	1267223	215543	0.8	-16
EW09-SS-517	03/05/09 1459	1267608	215917	1267608	215915	0.6	-16
EW09-SS-518	03/06/09 0836	1267228	215991	1267227	215992	0.6	-16
EW09-SS-519	03/05/09 1516	1267681	216258	1267682	216260	0.7	-16
EW09-SS-520	03/05/09 1525	1267338	216715	1267342	216708	2.3	-16
EW09-SS-521	03/06/09 0900	1267665	217049	1267663	217052	1.1	-16
EW09-SS-522	03/05/09 0918	1267772	217451	1267772	217455	1.3	-15
EW09-SS-523	03/05/09 0928	1267668	217763	1267669	217764	0.6	-16
EW09-SS-524	03/05/09 0936	1267565	218061	1267564	218065	1.4	-16
EW09-SS-525	03/05/09 0949	1267606	218283	1267605	218283	0.3	-16
EW09-SS-526	03/06/09 1020	1267399	218511	1267397	218506	1.7	-18
EW09-SS-527	03/06/09 1028	1267405	218820	1267406	218816	1.2	-17
EW09-SS-528	06/22/09 1057	1268682	218940	1268685	218966	7.9	-12
EW09-SS-529	06/22/09 1047	1268475	218967	1268478	218970	1.3	-11
EW09-SS-530	06/22/09 1109	1268871	219023	1268866	219035	4.0	-10
EW09-SS-531	06/22/09 0955	1268039	219050	1268037	219041	2.8	-12
EW09-SS-532	06/22/09 1027	1268313	219064	1268314	219068	1.4	-11
EW09-SS-533	03/06/09 1047	1267411	219112	1267412	219111	0.5	-18
EW09-SS-534	03/06/09 1105	1267665	219261	1267664	219260	0.5	-16
EW09-SS-535	03/06/09 0847	1267419	215558	1267419	215558	0.1	-16
EW09-SS-536	03/06/09 0909	1267279	217057	1267283	217063	2.1	-16
EW09-SS-537	03/06/09 0957	1267838	218078	1267841	218078	0.9	-12

[a] Coordinates given in NAD83 horizontal datum; X-Y coordinates in Washington State Plane N (US ft).
NAD83 – North American Datum of 1983

2.2.3 Intertidal MIS composite

Intertidal MIS samples were collected from August 17 to 20, 2009. The rationale for selecting sediment sampling locations is presented in the MIS QAPP (Windward 2009a). As described in the MIS QAPP, 11 intertidal areas were sampled using a grid technique, with a total of 140 samples collected to form the three area-wide and one public access intertidal MIS composite sample. Sampling areas and locations for individual sediment samples are shown on Map 2-3.

2.3 SAMPLE COLLECTION METHODS

2.3.1 Surface sediment samples

Sediment samples were collected following standardized procedures provided in the surface sediment QAPP (Windward 2009b). Surface sediments were collected from each location using a 0.1-m^2 single or double van Veen grab sampler (228 surface sediment grab samples), a 20-cm diameter (8 diver-collected samples), or a pre-cleaned stainless steel spoon (12 intertidal locations).

Each successful grab sample was evaluated for acceptability in accordance with the surface sediment QAPP (Windward 2009b). Sediment from the first acceptable grab at each location was collected for ammonia and total sulfides analyses prior to the collection and homogenization of sediment for the remaining chemical and toxicity analyses. At each grab location, one to two acceptable grab samples were collected, depending on the volume of sediments retrieved in the grab sampler and the volume needed for chemical analyses (e.g., extra volume was needed at locations where field duplicates were collected). At all locations, sediment was taken from the 0-to-10-cm depth interval, when possible, and homogenized in a clean, stainless steel bowl or stockpot using a stainless steel spoon until the texture and color were homogenous. The sediment penetration depths for each grab are included in Appendix E. Homogenized sediment was then split into the appropriate sample containers for chemical and toxicity analyses.

Subtidal composite samples were created at Analytical Resources, Inc. (ARI), using equal volumes of homogenized sediment from the 8 to 10 locations identified for each composite sample (Map 2-2). Composites were homogenized in a clean stainless steel bowl and then split into appropriate containers for analysis.

2.3.2 Intertidal MIS samples

The intertidal MIS samples were collected following the protocols described in the MIS QAPP (Windward 2009a). A reconnaissance survey was conducted to identify all accessible intertidal areas in the EW; 11 intertidal areas were identified (Map 2-3).The intertidal areas were calculated for each exposed area in order to determine the appropriate number of individual samples to be collected in each area. The two largest areas identified were Areas 1 and 3, with over a 1,000 m^2 each. These two areas represent 50% of the total intertidal area in the EW.

Each MIS sample was created from individual samples collected from at least 30 discrete locations. Two different types of MIS samples were collected: area-wide samples created for the tribal clamming and habitat restoration worker scenarios, and one sample created for the public-access areas for the 7-days-per-year clamming scenario. Three replicate samples were created for the area-wide samples, and one sample was created for the public-access areas. The variance of the area-wide samples will be used to estimate the variance around the public-access area sample for the

purposes of calculating EPC values. Each area-wide MIS sample was created from 32 discrete samples, and the public-access area sample was created from 36 discrete samples.

The two largest sampling areas (Areas 1 and 3) were divided into three approximately equal subareas in the field. For all areas and subareas, the field crew measured the extent of the exposed intertidal area that had sediment that could be sampled. This area did not include intertidal areas that contained only riprap or cobble. The sampling area was then divided into grid cells based on the number of samples required for the area. Individual samples were collected from each grid cell. The grids established in the field were specific to the intertidal area on the day of sampling. The sampling locations for the intertidal MIS samples are shown on Map 2-3.

The target sediment depth for the discrete samples was 0.3 m (12 in.) in all areas except the southernmost subarea in Area 1, where the target depth was 0.46 m (18 in.). The sediment depths are consistent with potential sediment depths for clams and are therefore representative of potential clamming exposure. The southernmost portion of Area 1 is the only area where *Mya arenaria* were collected during the clam survey. This species can be found at depths greater than those of other clam species, so the target depth in that area was 0.46 m, rather than 0.3 m. The sediment samples were collected from the perimeter of a hole dug to the target depth with a shovel. The samples were collected using a stainless steel spoon, and every effort was made to sample an equal volume throughout the depth of the sample. If the target depth could not be achieved, then another attempt was made within the sample grid. If the target depth was not achieved after two attempts, then the sample was collected from the deepest available sediment depth.

The coordinates of the sampling location were recorded. At each discrete sampling location, the sediment sample was homogenized following protocols in the surface sediment QAPP (Windward 2009b), and two 8-oz jars were filled. Large rocks and shell debris were excluded from the homogenized sample to the extent practicable. One jar was used to create the MIS composite sample at ARI, and the other jar was archived for potential future analysis.

2.3.3 Field deviations from the QAPP

Field deviations from the surface sediment QAPP (Windward 2009b) included modifications to grab locations and acceptable sample penetration depths. These field deviations did not affect the data quality. The deviations were as follows:

- Samples collected at locations EW09-SS-039, EW09-SS-203, EW09-SS-218, EW09-SS-222, and EW09-SS-223 did not meet the 10-cm minimum penetration depth requirement because of the coarse bottom substrate. Multiple unsuccessful attempts were made before accepting grabs that did not meet the penetration depth requirements.

- Nine samples were collected from locations further than 10 m from their target sampling locations. Table 2-3 provides the rationale for these field deviations.
- There were difficulties in obtaining accurate global positioning system (GPS) coordinates at the head of the waterway because of overhead structures (e.g., bridges). Sampling locations were determined based on the sample location maps and relative distance to landmarks or the shoreline. For one location (SS-010), the location was identified based on the position relative to the shoreline and bridge structures because of problems with the GPS coordinates. Coordinates were plotted and reviewed relative to the field notes regarding the sample location in order to ensure the accuracy of the coordinates in areas where there were difficulties with the GPS.
- Thirty-eight additional subtidal samples were collected instead of the nineteen specified by the QAPP (Windward 2009b).
- To create the subtidal composites, four archived T-30 samples were included to represent the T-30 area.

Table 2-3. Actual sampling locations that were > 10 m from their target sampling locations

Sampling Location	Distance from Target (m)	Rationale
EW09-SS-009	11	Unable to obtain accurate GPS reading because target location was near or under bridge structures. Sample was collected as close to target location as possible, as positioned with GPS unit.
EW09-SS-012	24	Unable to obtain accurate GPS reading because target location was located near or under bridge structures. Sample was collected as close to target location as possible, as positioned with GPS unit.
EW09-SS-036	20	Unable to obtain accurate GPS reading because target location was located near or under dock structures. Sample was collected as close to target location as possible, as positioned with GPS unit.
EW09-SS-039	13	Cargo container was blocking the target location. Sample was collected at location closest to target coordinates.
EW09-SS-102	12	Unable to obtain accurate GPS reading because target location was located near or under dock structures. Sample was collected as close to target location as possible, as positioned with GPS unit.
EW09-SS-115	12	Unable to obtain accurate GPS reading because target location was located near or under dock structures. Sample was collected as close to target location as possible, as positioned with GPS unit.
EW09-SS-203	14	Coarse substrate prevented successful grabs at the target location and surrounding area. First acceptable grab was collected from beyond a 10-m radius.
EW09-SS-206	16	Intertidal location was dominated by riprap and gravel. Sample was collected at location closest to target coordinates that had available sediment.
EW09-SS-208	40	Intertidal location was dominated by riprap and gravel. Sample was collected at location closest to target coordinates that had available sediment.

GPS – global positioning system

3 Laboratory Methods

This section briefly describes the methods used to chemically analyze sediment samples and conduct sediment toxicity testing; these methods are described in detail in the surface sediment QAPP (Windward 2009b) and T-30 PDM plan (Windward and Anchor 2008). This section also summarizes any laboratory deviations from the QAPP.

3.1 METHODS FOR CHEMICAL ANALYSES

Table 3-1 summarizes, by type of analysis, the number of sediment samples analyzed for surface sediment samples, subtidal composite samples, and intertidal MIS samples. Table 3-2 lists the analyses conducted for each sample.

Table 3-1. Summary of sediment samples and analyses

Chemical Group	No. of Samples Analyzed				
	Surface Sediment Grabs			Subtidal Composites	MIS Intertidal Composites
	Bioassay Reference	Rounds 1 and 2	T-30		
Metals		104	17		4
Butyltins		49			4
SVOCs		105	17		4
PCB Aroclors		105	17	13	4
Pesticides		29			4
Grain size	6	104	10		
Total solids and TOC	6	105	17	13	4
Ammonia and total sulfides	6	104			
PCB congeners				13	4
Dioxins and furans				13	4

MIS – multi-increment sampling
PCB – polychlorinated biphenyl
SVOC – semivolatile organic compound
T-30 – Terminal 30
TOC – total organic carbon

Table 3-2. Surface sediment chemical analyses

Sample ID	Metals	SVOCs	PCB Aroclors	Ammonia and Total Sulfides	TOC and Total Solids	Grain Size	Butyltins	Pesticides	Dioxins and Furans	PCB Congeners
Bioassay Reference Sediments										
CI09-SS-020-010				X	X	X				
CI09-SS-060-010				X	X	X				
CI09-SS-080-010				X	X	X				
CI09-SS-120-010				X	X	X				
CI09-SS-140-010				X	X	X				
CI09-SS-180-010				X	X	X				
Surface Sediment Grab Samples										
EW09-SS-001-010	X	X	X	X	X	X				
EW09-SS-002-010	X	X	X	X	X	X				
EW09-SS-003-010	X	X	X	X	X	X	X			
EW09-SS-004-010	X	X	X	X	X	X	X			
EW09-SS-005-010	X	X	X	X	X	X				
EW09-SS-006-010	X	X	X	X	X	X	X			
EW09-SS-007-010	X	X	X	X	X	X				
EW09-SS-008-010	X	X	X	X	X	X		X		
EW09-SS-009-010	X	X	X	X	X	X				
EW09-SS-010-010	X	X	X	X	X	X	X			
EW09-SS-011-010	X	X	X	X	X	X		X		
EW09-SS-012-010	X	X	X	X	X	X				
EW09-SS-013-010	X	X	X	X	X	X	X	X		
EW09-SS-014-010	X	X	X	X	X	X				
EW09-SS-015-010	X	X	X	X	X	X		X		
EW09-SS-016-010	X	X	X	X	X	X				
EW09-SS-017-010	X	X	X	X	X	X	X			
EW09-SS-018-010	X	X	X	X	X	X				
EW09-SS-019-010	X	X	X	X	X	X				

Sample ID	Metals	SVOCs	PCB Aroclors	Ammonia and Total Sulfides	TOC and Total Solids	Grain Size	Butyltins	Pesticides	Dioxins and Furans	PCB Congeners
EW09-SS-020-010	X	X	X	X	X	X				
EW09-SS-021-010	X	X	X	X	X	X		X		
EW09-SS-022-010	X	X	X	X	X	X	X			
EW09-SS-023-010	X	X	X	X	X	X		X		
EW09-SS-024-010	X	X	X	X	X	X	X			
EW09-SS-025-010	X	X	X	X	X	X				
EW09-SS-026-010	X	X	X	X	X	X				
EW09-SS-027-010	X	X	X	X	X	X	X			
EW09-SS-028-010	X	X	X	X	X	X				
EW09-SS-029-010	X	X	X	X	X	X	X			
EW09-SS-030-010	X	X	X	X	X	X	X	X		
EW09-SS-031-010	X	X	X	X	X	X				
EW09-SS-032-010	X	X	X	X	X	X				
EW09-SS-033-010	X	X	X	X	X	X	X	X		
EW09-SS-034-010	X	X	X	X	X	X	X			
EW09-SS-035-010	X	X	X	X	X	X				
EW09-SS-036-010	X	X	X	X	X	X	X			
EW09-SS-037-010	X	X	X	X	X	X				
EW09-SS-038-010	X	X	X	X	X	X	X	X		
EW09-SS-039-010	X	X	X	X	X	X				
EW09-SS-040-010	X	X	X	X	X	X				
EW09-SS-100-010	X	X	X	X	X	X	X			
EW09-SS-101-010	X	X	X	X	X	X				
EW09-SS-102-010	X	X	X	X	X	X				
EW09-SS-103-010	X	X	X	X	X	X				
EW09-SS-104-010	X	X	X	X	X	X				
EW09-SS-105-010	X	X	X	X	X	X	X	X		
EW09-SS-106-010	X	X	X	X	X	X	X	X		
EW09-SS-107-010	X	X	X	X	X	X	X			

Sample ID	Metals	SVOCs	PCB Aroclors	Ammonia and Total Sulfides	TOC and Total Solids	Grain Size	Butyltins	Pesticides	Dioxins and Furans	PCB Congeners
EW09-SS-108-010	X	X	X	X	X	X	X			
EW09-SS-109-010	X	X	X	X	X	X				
EW09-SS-110-010	X	X	X	X	X	X	X	X		
EW09-SS-111-010	X	X	X	X	X	X				
EW09-SS-112-010	X	X	X	X	X	X				
EW09-SS-113-010	X	X	X	X	X	X	X	X		
EW09-SS-114-010	X	X	X	X	X	X	X			
EW09-SS-115-010	X	X	X	X	X	X	X			
EW09-SS-116-010	X	X	X	X	X	X				
EW09-SS-118-010	X	X	X	X	X	X	X	X		
EW09-SS-119-010	X	X	X	X	X	X	X			
EW09-SS-120-010	X	X	X	X	X	X				
EW09-SS-121-010	X	X	X	X	X	X				
EW09-SS-122-010	X	X	X	X	X	X	X	X		
EW09-SS-123-010	X	X	X	X	X	X	X	X		
EW09-SS-124-010	X	X	X	X	X	X	X	X		
EW09-SS-125-010	X	X	X	X	X	X				
EW09-SS-126-010	X	X	X	X	X	X	X			
EW09-SS-127-010	X	X	X	X	X	X	X			
EW09-SS-128-010	X	X	X	X	X	X				
EW09-SS-129-010	X	X	X	X	X	X	X	X		
EW09-SS-130-010	X	X	X	X	X	X				
EW09-SS-131-010	X	X	X	X	X	X				
EW09-SS-132-010	X	X	X	X	X	X				
EW09-SS-133-010	X	X	X	X	X	X	X			
EW09-SS-134-010	X	X	X	X	X	X				
EW09-SS-200-010	X	X	X	X	X	X	X	X		
EW09-SS-201-010	X	X	X	X	X	X	X			
EW09-SS-202-010	X	X	X	X	X	X				

Sample ID	Metals	SVOCs	PCB Aroclors	Ammonia and Total Sulfides	TOC and Total Solids	Grain Size	Butyltins	Pesticides	Dioxins and Furans	PCB Congeners
EW09-SS-203-010	X	X	X	X	X	X	X	X		
EW09-SS-204-010	X	X	X	X	X	X	X	X		
EW09-SS-205-010	X	X	X	X	X	X	X	X		
EW09-SS-206-010	X	X	X	X	X	X		X		
EW09-SS-207-010	X	X	X	X	X	X	X			
EW09-SS-208-010	X	X	X	X	X	X		X		
EW09-SS-209-010	X	X	X	X	X	X				
EW09-SS-210-010	X	X	X	X	X	X				
EW09-SS-211-010	X	X	X	X	X	X	X			
EW09-SS-212-010	X	X	X	X	X	X	X			
EW09-SS-213-010	X	X	X	X	X	X		X		
EW09-SS-214-010	X	X	X	X	X	X	X			
EW09-SS-215-010	X	X	X	X	X	X	X			
EW09-SS-216-010	X	X	X	X	X	X	X			
EW09-SS-217-010	X	X	X	X	X	X				
EW09-SS-218-010	X	X	X	X	X	X	X			
EW09-SS-219-010	X	X	X	X	X	X	X			
EW09-SS-220-010	X	X	X	X	X	X	X	X		
EW09-SS-221-010	X	X	X	X	X	X				
EW09-SS-222-010	X	X	X	X	X	X				
EW09-SS-223-010	X	X	X	X	X	X				
EW09-SS-300-010	X	X	X	X	X	X	X	X		
EW09-SS-301-010	X	X	X	X	X	X				
EW09-SS-302-010	X	X	X	X	X	X				
EW09-SS-303-010	X	X	X	X	X	X				
EW09-SS-304-010	X	X	X	X	X	X	X	X		
EW09-SS-305-010	X	X	X	X	X	X		X		
LSO-01SE-080723[a]		X			X					

Sample ID	Metals	SVOCs	PCB Aroclors	Ammonia and Total Sulfides	TOC and Total Solids	Grain Size	Butyltins	Pesticides	Dioxins and Furans	PCB Congeners
Subtidal Composite Samples										
EW09-CS-001-010			X		X				X	X
EW09-CS-002-010			X		X				X	X
EW09-CS-003-010			X		X				X	X
EW09-CS-004-010			X		X				X	X
EW09-CS-005-010			X		X				X	X
EW09-CS-006-010			X		X				X	X
EW09-CS-007-010			X		X				X	X
EW09-CS-008-010			X		X				X	X
EW09-CS-009-010			X		X				X	X
EW09-CS-010-010			X		X				X	X
EW09-CS-011-010			X		X				X	X
EW09-CS-012-010			X		X				X	X
EW09-CS-013-010			X		X				X	X
MIS Intertidal Composite Samples										
EW09-ITSED-AWMIS-01	X	X	X		X		X	X	X	X
EW09-ITSED-AWMIS-02	X	X	X		X		X	X	X	X
EW09-ITSED-AWMIS-03	X	X	X		X		X	X	X	X
EW09-ITSED-PAMIS-01	X	X	X		X		X	X	X	X
T-30 PDM Samples										
T30-09-01	X	X	X		X	X				
T30-09-03	X	X	X		X	X				
T30-09-04	X	X	X		X					
T30-09-06	X	X	X		X					
T30-09-07	X	X	X		X	X				
T30-09-09	X	X	X		X	X				
T30-09-13	X	X	X		X					
T30-09-101	X	X	X		X	X				
T30-09-14	X	X	X		X	X				

Sample ID	Metals	SVOCs	PCB Aroclors	Ammonia and Total Sulfides	TOC and Total Solids	Grain Size	Butyltins	Pesticides	Dioxins and Furans	PCB Congeners
T30-09-20	X	X	X		X	X				
T30-09-21	X	X	X		X	X				
T30-09-24	X	X	X		X					
T30-09-26	X	X	X		X	X				
T30-09-27	X	X	X		X					
T30-09-28	X	X	X		X					
T30-09-29	X	X	X		X	X				
T30-09-31	X	X	X		X					
Total	**125**	**126**	**138**	**110**	**145**	**120**	**53**	**33**	**17**	**17**

[a] Sample LSO-01-SE-080723 was collected by Anchor and analyzed for metals by Brooks Rand Laboratories (Anchor 2008). It was collected prior to the T-30 dredging project and represents pre-dredge conditions consistent with the rockfish sample collected in this area prior to dredging.

Anchor – Anchor Environmental LLC
ID – identification
PCB – polychlorinated biphenyl
PDM – post-dredge monitoring
SVOC – semivolatile organic compound
T-30 – Terminal 30
TOC – total organic carbon

All results presented in this data report are from analyses conducted by ARI. The results of dioxin/furan and polychlorinated biphenyl (PCB) congener analyses of surface sediment composite samples, which are currently being conducted by Analytical Perspectives (AP), will be presented in the draft final data report. Sample LSO-01SE-080723 was collected by Anchor Environmental LLC (Anchor) on July 23, 2008, for metals analysis by Brooks Rand Laboratories (Anchor 2008). This sample was selected for analysis because it was collected prior to the T-30 dredging project and represents pre-dredge conditions consistent with the rockfish sample collected in this area prior to dredging. The remaining archived sample volume was transferred from Brooks Rand Laboratories to ARI for the analysis of semivolatile organic compounds (SVOCs), PCB Aroclors, total organic carbon (TOC), and total solids. Analytical methods are presented in Table 3-3.

Table 3-3. Laboratory analytical methods for surface sediment samples

Parameter	Laboratory	Method	Reference
PCBs as Aroclors	ARI	GC/ECD	EPA 8082
PCB congeners	AP	HRGC/HRMS	EPA 1668
Dioxins and furans	AP	HRGC/HRMS	EPA 1613B
SVOCs (including PAHs)[a]	ARI	GC/MS	EPA 8270D
Selected SVOCs[b]	ARI	GC/MS	EPA 8270D-SIM
Organochlorine pesticides[c]	ARI	GC/ECD	EPA 8081A
Mercury	ARI	CVAA	EPA 7471A
Other metals[d]	ARI	ICP-AES and ICP-MS	EPA 6010B and EPA 200.8
Tributyltin, dibutyltin, monobutyltin (as ions)	ARI	GC/MS-SIM	Krone et al. (1989)
Grain size	ARI	sieve/pipette	PSEP (1986)
TOC	ARI	combustion	Plumb (1981)
Total solids	ARI	oven-dried	PSEP (1986)
Total sulfides	ARI	distillation/ spectro-photometric	EPA 376.2 (modified)
Ammonia	ARI	automated phenate	EPA 350.1 (modified)

[a] Target PAHs include: 1-methylnaphthalene, 2-chloronaphthalene, 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene.

[b] Selected SVOCs by SIM include: 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 2,4-dimethylphenol, 2-methylphenol, benzyl alcohol, butyl benzyl phthalate, di-ethyl phthalate, di-methyl phthalate, hexachlorobenzene, hexachlorobutadiene, n-nitrosodimethylamine, n-nitrosodiphenylamine, n-nitroso-di-n-propylamine, and pentachlorophenol.

[c] Target pesticides include: 2,4′-DDT, 2,4′-DDE, 2,4′-DDD, 4,4′-DDT, 4,4′-DDE, 4,4′-DDD, aldrin, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC, oxychlordane, alpha- and gamma-chlordane, cis- and trans-nonachlor, dieldrin, alpha-endosulfan, beta-endosulfan, endosulfan sulfate, endrin, endrin aldehyde, endrin ketone, heptachlor, heptachlor epoxide, hexachlorobenzene, methoxychlor, Mirex, and toxaphene.

[d] For the EW surface sediment samples, arsenic, selenium, and thallium were analyzed by EPA 200.8 using ICP-MS; antimony, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, vanadium,

and zinc were analyzed by EPA 6010B using ICP-AES. For the T-30 surface sediment samples, antimony, arsenic, cadmium, chromium, copper, lead, nickel, silver, and zinc were analyzed by EPA 6010B using ICP-AES.

AP – Analytical Perspectives
ARI – Analytical Resources, Inc.
BHC – benzene hexachloride
CVAA – cold vapor atomic absorption
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
EPA – US Environmental Protection Agency
EW – East Waterway
GC/ECD – gas chromatography/electron capture detection
GC/MS – gas chromatography/mass spectrometry
HRGC/HRMS – high-resolution gas chromatography/ high-resolution mass spectrometry
ICP-AES – inductively coupled plasma-atomic emission spectrometry
ICP-MS – inductively coupled plasma-mass spectrometry
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PSEP – Puget Sound Estuary Program
SIM – selected ion monitoring
SVOC – semivolatile organic compound
T-30 – Terminal 30
TOC – total organic carbon

3.2 METHODS FOR TOXICITY TESTING

Sediment samples were selected for toxicity testing in consultation with EPA based on an evaluation of preliminary, unvalidated chemical concentrations. Samples were selected for toxicity testing if the chemical analysis results identified sediment quality standards (SQS) exceedances but no cleanup screening level (CSL) exceedances for all chemicals other than PCBs. Three standard SMS sediment toxicity tests were conducted with split sediment samples from each of nine selected locations from Round 1 and two selected locations from Round 2. These tests were:

- Acute 10-day amphipod (*Eohaustorius estuarius*) mortality test
- Acute 48-hr bivalve larvae (*Mytilus galloprovincialis* or *Crassostrea gigas*) normal survival test
- Chronic 20-day juvenile polychaete (*Neanthes arenaceodentata*) survival and growth test

Northwestern Aquatic Sciences conducted all the sediment toxicity tests. Sediment collected in Round 1 was tested with *Mytilus galloprovincialis,* and sediment collected in Round 2 was tested with *Crassostrea gigas.* Two different species were used because of seasonality in spawning and quality of the eggs and sperms. The toxicity tests were conducted in accordance with *Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments* (PSEP 1995), with modifications as periodically specified in Sediment Management Annual Review Meetings. The toxicity test methods are presented in detail in the surface sediment QAPP (Windward 2009b). The sediment toxicity tests were conducted in two rounds (Table 3-4).

Table 3-4. Toxicity test schedule

Test Round	Selected Sampling Locations	Amphipod Tests	Polychaete Tests	Bivalve Larvae Tests
Round 1	EW09-SS-005-010 EW09-SS-030-010 EW09-SS-032-010 EW09-SS-033-010 EW09-SS-034-010 EW09-SS-035-010 EW09-SS-217-010 EW09-SS-218-010 EW09-SS-220-010	Start Date: April 21, 2009 End Date: May 1, 2009	Start Date: April 17, 2009 End Date: May 7, 2009	Start Date: April 22, 2009 End Date: April 24, 2009
Round 2	EW09-SS-015-010 EW09-SS-215-010	Start Date: August 11, 2009 End Date: August 21, 2009	Start Date: August 11, 2009 End Date: August 31, 2009	Start Date: August 12, 2009 End Date: August 14, 2009

None of the samples were purged prior to the performance of the toxicity tests. All samples were aerated during testing according to the surface sediment QAPP (Windward 2009b).

The negative control sediment for the amphipod and polychaete tests was collected from the lower Yaquina Bay in Oregon, sieved through a 0.5--mm stainless steel screen, and stored at 4°C in the dark until test initiation.

The positive control tests were performed concurrently with the sediment toxicity tests. Reference toxicants were ammonia as ammonium chloride for the amphipod and polychaete tests and cadmium chloride for the bivalve larvae tests. The positive control test duration was 4 days for the amphipod and polychaete tests and 48 hours for the bivalve larvae tests.

Toxicity testing protocols require that test sediments be matched and tested simultaneously with appropriate reference sediment to account for potential sediment grain-size and TOC effects on test organisms (PSEP 1995). Reference sediments are then used in statistical comparisons to determine whether test sediments are toxic. Three reference sediment samples were collected from the northern end of Carr Inlet on March 12, 2009, by Windward Environmental LLC (Windward) and Gravity Consulting for the Round 1 tests (CI09-SS-020-010, CI09-SS-060-010, and CI09-SS-080-010) and on July 7, 2009, by Windward and Gravity Consulting for the Round 2 tests (CI09-SS-120-010, CI09-SS-140-010, and CI09-SS-160-010). Each of the EW sediment samples was matched with the reference sediment sample with the most similar percent fines, as shown in Table 3-5. The reference samples were also analyzed by ARI for SMS chemicals.

Table 3-5. EW sediment samples matched with reference sediment samples based on percent fines

EW Sample			Reference Sample			
Sample ID	TOC (% dw)	Percent Fines	Matched Sample ID	TOC (% dw)	Field-Measured Percent Fines	Laboratory-Measured Percent Fines[a]
EW09-SS-005-010	1.86	45.3	CI09-SS-060-010	0.367	60	8.2
EW09-SS-030-010	2.03	88.9	CI09-SS-080-010	0.210	80	4.3
EW09-SS-032-010	1.64	85	CI09-SS-080-010	0.210	80	4.3
EW09-SS-033-010	1.86	78.1	CI09-SS-080-010	0.210	80	4.3
EW09-SS-034-010	2.25	84.6	CI09-SS-080-010	0.210	80	4.3
EW09-SS-035-010	1.81	79.1	CI09-SS-080-010	0.210	80	4.3
EW09-SS-217-010	0.808	21.7	CI09-SS-020-010	0.605	20	5.5
EW09-SS-218-010	0.798	38	CI09-SS-020-010	0.605	20	5.5
EW09-SS-220-010	0.872	24.2	CI09-SS-020-010	0.605	20	5.5
EW09-SS-015-010	3.15	38	CI09-SS-120-010	0.453	20	nd
EW09-SS-215-010	3.37	24.2	CI09-SS-120-010	0.453	20	nd

[a] The laboratory percent fines results were not available until the conclusion of the testing. The disparity between the field-measurement and the lab-measurement is further discussed in Section 4.4. and Section 4.7

EW – East Waterway

ID – identification

nd – not detected

TOC – total organic carbon

All three reference sediment samples were included in the first round of toxicity tests. In the second round, two reference sediment samples were tested (CI09-SS-120-010 and CI09-SS-180-010), but only one reference sediment sample (CI09-SS-120-010) was used as a match for the test sediment samples that were tested.

The results from the three sediment toxicity tests were evaluated using the SMS rules for marine toxicity tests (Ecology 2008). The performance standards and biological effects criteria (SQS and CSLs of the SMS) are summarized in Table 3-6. The statistical analyses were conducted using the statistical package included in SedQual Release 5 (Ecology 2004).[1] Table 3-7 compares the results of the negative control and reference sediment toxicity tests to the SMS performance standards.

[1] Statistical analyses include Wilk-Shapiro's test for normality and Levene's test for equality of variances, followed by the appropriate statistical test for significance (i.e., Student's t-test, approximate t-test, or Mann-Whitney).

Table 3-6. SMS performance standards and biological effects criteria for sediment toxicity tests

Toxicity Test	SMS Performance Standards		Biological Effects Criteria	
	Negative Control	Reference Sediment	SQS	CSL
Amphipod	less than 10% mortality	less than 25% mortality	mean mortality > 25% on an absolute basis and statistically different from the reference sediment ($p \leq 0.05$)	mean mortality greater than the value in the reference sediment plus 30% and statistically different from the reference sediment ($p \leq 0.05$)
Polychaete	less than 10% mortality; mean individual growth rate ≥ 0.72 mg/day (test failure if mean individual growth rate < 0.38 mg/day)	mean individual growth rate of at least 80% of that of the negative control	mean individual growth rate < 70% of that of the reference sediment and statistically different ($p \leq 0.05$)	mean individual growth rate < 50% of that of the reference sediment and statistically different ($p \leq 0.05$)
Bivalve larvae	> 70% normal survivorship	no criterion[a]	mean normal survivorship < 85% of that of the reference sediment and statistically different ($p \leq 0.10$)	mean normal survivorship < 70% of that of the reference sediment and statistically different ($p \leq 0.10$)

[a] Ecology has guidance that states that reference sample normal development must be ≥ 65% of the normal development of the negative control (Gries 2005).

CSL – cleanup screening level

Ecology – Washington State Department of Ecology

SMS – Washington State Sediment Management Standards

SQS – sediment quality standards

Table 3-7. Toxicity test results for the negative control and reference sediments compared to SMS performance standards

Toxicity Test	Negative Controls		Reference Sediments	
	Test Results	SMS Performance Standards	Test Results	SMS Performance Standards
Amphipod	mortality was 0.0 ± 0.0 and 4.0 ± 5.5% in the two tests	< 10% mortality	mortality ranged from 2.0 ± 2.7 to 22.0 ± 10.4% in six reference samples	< 25% mortality
Polychaete	mortality was 0.0 ± 0.0% in both tests; mean individual growth rate was 1.19 ± 0.21 and 1.13 ± 0.19 mg/day	< 10% mortality; mean individual growth rate ≥ 0.72 mg/day	mean individual growth rate ranged from 96 to 113% of that of the negative control in the three reference samples	mean individual growth rate of at least 80% of that of the negative control
Bivalve larvae	normal survivorship was 91.1 ± 2.9 and 90.7 ± 9.3% in the two tests	> 70% normal survivorship	not applicable	no criterion[a]

[a] Ecology has guidance for reference sediments of ≥ 65% of the normal development exhibited by the negative control (Gries 2005); normal development in the reference sediment ranged from 74 to 96% of that of the negative control (see Appendix D-2).

3.3 LABORATORY DEVIATIONS FROM THE QAPP

This section discusses laboratory deviations from the surface sediment QAPP (Windward 2009b) for both sediment chemical analyses and sediment toxicity testing.

3.3.1 Surface sediment chemical analysis

The laboratory followed the methods and procedures described in the surface sediment QAPP (Windward 2009b), with the following exceptions:

- The surface sediment QAPP (Windward 2009b) specified that total metals would be analyzed by ARI using inductively coupled plasma-atomic emission spectrometry or inductively coupled plasma-mass spectrometry per EPA Methods 6010B or 6020, respectively. Total metals were analyzed by ARI using EPA 6010B and EPA 200.8, which is equivalent to EPA 6020.
- Butyltins were analyzed using gas chromatography/mass spectrometry with selected ion monitoring (SIM). The surface sediment QAPP (Windward 2009b) listed butyltin analysis using gas chromatography/flame photometric detection in error. The quality of the data has not been affected by this deviation.

3.3.2 Sediment toxicity testing

The laboratories followed the methods and procedures described in the surface sediment QAPP (Windward 2009b), with the exceptions summarized below. These minor salinity deviations did not affect the data quality. No deviations from the protocol occurred in the two bivalve larvae sediment toxicity tests.

Amphipod tests

- Round 1 – Several overlying water salinity measurements were slightly above the protocol-specified range of 28 ± 1.0 parts per thousand (ppt) (maximum 31.0 ppt).
- Round 1 – One dissolved oxygen measurement was inadvertently omitted on day 0.
- Round 2 – Several overlying water salinity measurements were slightly above the protocol-specified range of 28 ± 1.0 ppt (maximum 29.5 ppt).
- Round 2 – Occasionally, during the test, aeration to one or more beakers was interrupted. In those cases, dissolved oxygen was measured, aeration was restarted, and dissolved oxygen was measured again. Minimum dissolved oxygen was 6.4 mg/L.

Polychaete tests

- Round 1 – Several overlying water salinity measurements were slightly above the protocol-specified range of 20 ± 1.0 ppt (maximum 21.4 ppt).
- Round 1 – In two instances, aeration to a beaker was interrupted, and dissolved oxygen decreased (minimum 2.4 mg/L). In those cases, aeration was restarted immediately upon discovery of the interruption.
- Round 1—The control sediment had an interstitial salinity of less than 20 ppt (17.0 ppt) and should have been adjusted before the addition of the worms; however, the control sediment was sand with very little water content.
- Round 2—One salinity measurement (30.5 ppt) exceeded the protocol-specified range of 28 ± 2.0 ppt.
- Round 2—Water quality measurements were accidentally not taken on day 9 before water renewal. Measurements were taken on day 10 when the omission was discovered.

4 Results

This section presents the results of chemical analyses conducted on the surface sediment samples (Section 4.1), subtidal composite samples (Section 4.2), and intertidal MIS samples (Section 4.3), as well as the grain size results for surface sediment samples collected from reference locations in Carr Inlet (Section 4.4). The results of the data validation, which was conducted by EcoChem, are discussed in Section 4.5 and presented in full in Appendix C. Section 4.6 presents the results of the sediment toxicity tests.

Complete data tables and laboratory report forms are presented in Appendices A and D, respectively. A detailed discussion of the approach used to average laboratory replicate sample results is presented in Appendix B. Methods for calculating concentrations for total PCBs, total polycyclic aromatic hydrocarbons (PAHs), low-molecular-weight polycyclic aromatic hydrocarbons (LPAHs), high-molecular-weight polycyclic aromatic hydrocarbons (HPAHs), carcinogenic polycyclic aromatic hydrocarbons (cPAHs), total dichlorodiphenyltrichloroethanes (DDTs), and total chlordane are also presented in Appendix B. The number of significant figures shown for each concentration in all results tables in this section was specified by the analytical laboratory, as described in Appendix B. There was no additional manipulation of significant figures.

4.1 EW Surface Sediment Grab Sample Chemistry Results

All surface sediment grab samples collected from the EW were analyzed by ARI for metals, SVOCs (including PAHs), PCBs as Aroclors, grain size, TOC, and percent solids; a subset of these samples was also analyzed for butyltins, and organochlorine

pesticides. The results of the analyses are discussed separately below by analyte group. In Section 4 maps, the field duplicate results are averaged with the original sample results for each of the locations where field duplicate samples were collected. Results for each field duplicate sample are summarized in this section and presented in Appendix A.

Chemical concentrations in the surface sediment grab samples were compared to SQS and CSL values of the SMS (Map 4-1). Concentrations of 10 chemicals not included in the SMS were compared with the screening level (SL) and maximum level (ML) of the Dredged Material Management Program (DMMP). If the TOC of a sediment sample was less than 0.5%, then organic carbon (OC) normalization was not appropriate, and the dry weight (dw) concentrations were compared to the lowest and second lowest apparent effects thresholds (AETs), which are analogous to the SQS and CSL, respectively. Appendix A contains detailed tables with results for each location compared to SMS, DMMP, or AET values. Map 4-1 provides the SMS exceedance status for each location based on comparison for all chemicals.

4.1.1 Metals

Table 4-1 presents a summary of results for the surface sediment samples that were analyzed for metals, including the number of detections, the range of detected concentrations, and the range of reporting limits (RLs) for chemicals reported as non-detects. Data tables containing metals results for each sample are presented in Appendix A. Table 4-1 also presents SQS/SL and CSL/ML values for comparison purposes. Mercury concentrations relative to SMS values are provided on Map 4-2.

Table 4-1. Summary of metal results in surface sediment samples

Chemical	Detection Frequency	Concentration (mg/kg dw)				
		Detected Concentration		RL or Range of RLs[a]	SQS/SL	CSL/ML
		Minimum	Maximum			
Antimony	1/121	7 J	7 J	0.3 – 30	150	200
Arsenic	111/121	2.3	26.2	6 – 8	57	93
Cadmium	71/121	0.3 J	5.7	0.2 – 1	5.1	6.7
Chromium	121/121	8	69	na	260	270
Cobalt	111/111	4	16	na	nc	nc
Copper	121/121	16.5	272 J	na	390	390
Lead	118/121	5 J	171 J	3 – 10	450	530
Mercury	121/121	0.02 J	1.07 J	na	0.41	0.59
Molybdenum	71/111	0.7	5	0.6 – 2	nc	nc
Nickel	120/121	9	42	6	140	370
Selenium	0/111	nd	nd	0.6 – 1	nc	nc
Silver	38/121	0.5	6	0.4 – 2	6.1	6.1

Chemical	Detection Frequency	Concentration (mg/kg dw)				
		Detected Concentration		RL or Range of RLs[a]	SQS/SL	CSL/ML
		Minimum	Maximum			
Thallium	0/111	nd	nd	0.2 – 0.5	nc	nc
Vanadium	111/111	24	94.1	na	nc	nc
Zinc	121/121	28	1,230 J	na	410	960

[a] RL range for non-detected samples only.

CSL – cleanup screening level
dw – dry weight
J – estimated concentration
ML – maximum level
na – not applicable
nc – no criterion available
nd – not detected
RL – reporting limit
SL – screening level
SQS – sediment quality standards

Six metals (chromium, cobalt, copper, mercury, vanadium, and zinc) were detected in all the surface sediment samples. Selenium and thallium were not detected in any of these samples. The sample collected at location EW09-SS-215 contained the highest concentrations of arsenic (26.2 mg/kg dw), chromium (69 mg/kg dw), copper (272 mg/kg dw), and lead (171 mg/kg dw). The sample collected at location EW09-SS-107 contained the highest concentrations of cadmium (5.7 mg/kg dw), molybdenum (5 mg/kg dw), and zinc (1,230 mg/kg dw). The highest concentrations of mercury (1.07 mg/kg dw) and nickel (42 mg/kg dw) were detected at location T30-07. The highest concentrations of cobalt (16 mg/kg dw), silver (6 mg/kg dw), antimony (7 mg/kg dw), and vanadium (94.1 mg/kg dw) were detected at locations EW09-SS-004, EW09-SS-018, EW09-SS-022, and EW09-SS-028, respectively.

Table 4-2 presents the number of samples with detected concentrations or RLs (for non-detected results) above the SQS/SL or CSL/ML for the 10 metals with SMS or DMMP values. Table A-1 in Appendix A presents the results for each sample and indicates which detected concentrations or RLs exceeded the SQS/SL or CSL/ML. Of the 10 metals with SMS or DMMP values, three metals (cadmium, mercury, and zinc) had at least one detected concentration that exceeded the SQS/SL, and two metals (mercury and zinc) had one or more detected concentrations that exceeded the CSL/ML. No RLs exceeded the SMS or DMMP criteria.

Table 4-2. Number of samples in each SQS/SL or CSL/ML category for detected concentrations and RLs for metals in surface sediment grab samples

Metal	Number of Samples					
	Detected Concentration			RL for Non-Detected Result		
	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML
Antimony	1	0	0	120	0	0
Arsenic	111	0	0	10	0	0
Cadmium	70	1	0	50	0	0

Metal	Number of Samples					
	Detected Concentration			RL for Non-Detected Result		
	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML
Chromium	121	0	0	0	0	0
Copper	121	0	0	0	0	0
Lead	118	0	0	3	0	0
Mercury	95	20	6	0	0	0
Nickel	120	0	0	1	0	0
Silver	38	0	0	83	0	0
Zinc	119	1	1	0	0	0

CSL – cleanup screening level
ML – maximum level
RL – reporting limit
SL – screening level
SQS – sediment quality standards

4.1.2 Butyltins

Table 4-3 presents a summary of butyltin results for the surface sediment grab samples analyzed for butyltins. Data tables with butyltin results for each sample, including field duplicate samples, are presented in Appendix A. Tributyltin (TBT) was detected in 42 of the 49 samples analyzed. Dibutyltin and monobutyltin were detected less frequently, in 16 and 4 samples respectively. The highest concentration of TBT (1,600 µg/kg dw) was detected at location EW09-SS-126. TBT concentrations for all locations are provided in Map 4-3.

Table 4-3. Summary of butyltin results in surface sediment grab samples

Chemical	Detection Frequency	Concentration (µg/kg dw)		
		Minimum Detected	Maximum Detected	Range of RLs[a]
Monobutyltin as ion	4/49	3.6	7.6	3.4 – 7.8
Dibutyltin as ion	16/49	5.9	25	4.8 – 11
Tributyltin as ion	42/49	4.1	1,600	3.4 – 3.7

[a] RL range for non-detected samples.
dw – dry weight
RL – reporting limit

4.1.3 SVOCs

Table 4-4 presents a summary of results for surface sediment samples that were analyzed for SVOCs and selected SVOCs using SIM. This table summarizes results from either Method 8270 or Method 8270-SIM according to rules presented in Appendix B for selecting a value when multiple results are reported for a single analyte in a single

sample. Data tables containing SVOC results for each sample, including the field duplicate samples, are presented in Appendix A.

Table 4-4. Summary of SVOC results in surface sediment grab samples

Chemical	Detection Frequency	Concentration (µg/kg dw)		
		Minimum Detected	Maximum Detected	RL or Range of RLs[a]
PAHs				
1-Methylnaphthalene	27/122	9.9 J	2,700	19 – 59
2-Chloronaphthalene	0/122	nd	nd	19 – 59
2-Methylnaphthalene	40/122	9.7 J	2,800	19 – 59
Acenaphthene	62/122	10 J	3,000	19 – 21
Acenaphthylene	52/122	9.9 J	630	19 – 44
Anthracene	112/122	13 J	6,500	19 – 20
Benzo(a)anthracene	118/122	9.8 J	9,000	19 - 20
Benzo(a)pyrene	116/122	29	7,800	19 – 20
Benzo(b)fluoranthene	117/122	14 J	6,600	19 – 20
Benzo(g,h,i)perylene	112/122	14 J	1,800	19 – 20
Benzo(k)fluoranthene	116/122	32	5,400	19 – 20
Total benzofluoranthenes	117/122	14 J	10,800	19 – 20
Chrysene	118/122	12 J	13,000	19 – 20
Dibenzo(a,h)anthracene	74/122	7.9 J	690	6.0 – 59
Dibenzofuran	56/122	11 J	1,100	19 – 21
Fluoranthene	119/122	12 J	75,000	20
Fluorene	75/122	10 J	3,800	19 – 20
Indeno(1,2,3-cd)pyrene	113/122	13 J	1,800	19 – 20
Naphthalene	55/122	10 J	3,000	19 – 58
Phenanthrene	118/122	21	24,000	19 – 20
Pyrene	121/122	18 J	41,000	20
Total HPAHs	121/122	21	148,000 J	20
Total LPAHs	118/122	21	41,000	19 – 20
Total cPAHs	118/122	15 J	10,000	17 – 18
Total PAHs	121/122	21	155,000 J	20
Phthalates				
Bis(2-ethylhexyl) phthalate	106/122	18 J	37,000	19 – 1,400
Butyl benzyl phthalate	60/122	15	290	14 – 16
Diethyl phthalate	16/122	18	74	14 – 46
Dimethyl phthalate	8/122	13 J	69	14 – 16

Chemical	Detection Frequency	Concentration (µg/kg dw)		
		Minimum Detected	Maximum Detected	RL or Range of RLs[a]
Di-n-butyl phthalate	21/122	17 J	48,000	19 – 59
Di-n-octyl phthalate	6/122	14 J	83	19 – 59
Other SVOCs				
1,2,4-Trichlorobenzene	2/122	7.2	8.5	3.0 – 6.2
1,2-Dichlorobenzene	0/122	nd	nd	5.8 – 6.2
1,3-Dichlorobenzene	0/122	nd	nd	19 – 59
1,4-Dichlorobenzene	79/122	5.9	4,200	5.8 – 6.2
2,4,5-Trichlorophenol	0/122	nd	nd	96 – 290
2,4,6-Trichlorophenol	0/122	nd	nd	96 – 290
2,4-Dichlorophenol	0/122	nd	nd	96 – 290
2,4-Dimethylphenol	10/122	6.1	17	5.8 – 6.2
2,4-Dinitrophenol	0/122	nd	nd	190 – 590
2,4-Dinitrotoluene	0/122	nd	nd	96 – 290
2,6-Dinitrotoluene	0/122	nd	nd	96 – 290
2-Chlorophenol	0/122	nd	nd	19 – 59
2-Methylphenol	2/122	13	21	5.8 – 6.2
2-Nitroaniline	0/122	nd	nd	96 – 290
2-Nitrophenol	0/122	nd	nd	96 – 290
3,3′-Dichlorobenzidine	0/115	nd	nd	96 – 290
3-Nitroaniline	0/120	nd	nd	96 – 290
4,6-Dinitro-o-cresol	0/122	nd	nd	190 – 590
4-Bromophenyl phenyl ether	0/122	nd	nd	19 – 59
4-Chloro-3-methylphenol	0/122	nd	nd	96 – 290
4-Chloroaniline	0/112	nd	nd	96 – 290
4-Chlorophenyl phenyl ether	0/122	nd	nd	19 – 59
4-Methylphenol	19/122	15 J	180	19 – 59
4-Nitroaniline	0/121	nd	nd	96 – 290
4-Nitrophenol	0/122	nd	nd	96 – 290
Aniline	0/104	nd	nd	19 – 59
Benzoic acid	3/122	230	340 J	190 – 590
Benzyl alcohol	1/111	38 J	38 J	19 – 58
bis(2-chloroethoxy)methane	0/122	nd	nd	19 – 59
bis(2-chloroethyl)ether	0/122	nd	nd	19 – 59
bis(2-chloroisopropyl)ether	1/122	38 J	38 J	19 – 59
Carbazole	73/112	9.8 J	2,200	19 – 20

Chemical	Detection Frequency	Concentration (µg/kg dw)		
		Minimum Detected	Maximum Detected	RL or Range of RLs[a]
Hexachlorobenzene	0/122	nd	nd	0.96 – 6.2
Hexachlorobutadiene	0/122	nd	nd	0.96 – 6.2
Hexachlorocyclopentadiene	0/119	nd	nd	96 – 290
Hexachloroethane	0/122	nd	nd	19 – 59
Isophorone	0/122	nd	nd	19 – 59
n-Nitroso-di-n-propylamine	0/122	nd	nd	29 – 31
n-Nitrosodimethylamine	0/121	nd	nd	29 – 31
n-Nitrosodiphenylamine	0/122	nd	nd	5.8 – 47
Nitrobenzene	0/122	nd	nd	19 – 59
Pentachlorophenol	2/122	59	72	29 – 31
Phenol	37/122	14 J	350	19 – 59

[a] RL range for non-detected samples.

cPAH – carcinogenic polycyclic aromatic hydrocarbon
dw – dry weight
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
J – estimated concentration
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
na – not applicable
nd – not detected
PAH – polycyclic aromatic hydrocarbon
RL – reporting limit
SVOC – semivolatile organic compound

All individual PAH compounds were detected in at least one sample, with the exception of 2-chloronaphthalene, which was never detected. The 11 PAHs most frequently detected (each detected in at least 112 samples) were anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. The remaining eight PAHs were each detected in 75 or fewer samples. Detected concentrations of total LPAHs ranged from 21 to 41,000 µg/kg dw (Map 4-4), with the highest concentration detected in the sample collected at EW09-SS-018. Detected concentrations of total HPAHs ranged from 21 to 148,000 µg/kg dw (Map 4-4), with the highest concentration detected in the sample collected at EW09-SS-200.

All six phthalates were detected in at least one sample. Bis(2-ethylhexyl) phthalate (BEHP), the most frequently detected phthalate compound, was detected in 106 of the 122 samples, with a maximum concentration of 37,000 µg/kg dw detected in the sample collected at location LSO-01 (Map 4-5). The second highest concentration of BEHP (1,000 µg/kg dw) was detected at EW09-SS-101. Di-n-butyl phthalate was the phthalate with the highest detected concentration (48,000 µg/kg dw), which was detected at EW09-SS-010. The second highest detected concentration of di-n-butyl phthalate was 280 µg/kg dw, which was detected at EW09-SS-002.

Two other SVOCs were detected in at least 70 of the surface sediment samples: dichlorobenzene with a maximum detected concentration of 4,200 µg/kg dw at location

EW09-SS-101, and carbazole with a maximum detected concentration of 2,200 µg/kg dw at location EW09-SS-018. Other SVOCs that were detected infrequently in the surface sediment samples include: 1,2,4-trichlorobenzene, 2-methylphenol, 2,4-dimethylphenol, 4-methylphenol, benzoic acid, benzyl alcohol, bis(2-chloroisopropyl)ether, pentachlorophenol (PCP), and phenol. The remaining 32 SVOCs were not detected in any samples.

Table 4-5 presents a summary of SVOC results expressed in appropriate units for comparison to SQS/SL and CSL/ML (i.e., OC-normalized for most of the SVOCs and dry weight for the remainder). Tables A-5-1 through A-5-7 in Appendix A present the SVOC results for each sample, including field duplicate samples, and indicate which concentrations exceeded the SQS/SL or CSL/ML. Surface sediment samples collected at two locations within the EW (EW09-SS-223 and T30-14) had TOC contents of less than 0.5%, so they were not compared to SQS or CSL values that were OC-normalized. Instead, the dry weight concentrations of the chemicals for those samples were compared to the lowest AET and second-lowest AET values, as presented in Table A-5-8 of Appendix A.

Table 4-5. Summary of SVOC results in surface sediment grab samples in comparison to SQS/SL and CSL/ML

Chemical	Unit	Detection Frequency	Detected Concentration		RL or Range of RLs[a]	SQS/SL	CSL/ML
			Minimum	Maximum			
PAHs							
2-Methylnaphthalene	mg/kg OC	40/120	0.39 J	85	0.59 – 4.9	38	64
Acenaphthene	mg/kg OC	61/120	0.45 J	130	0.69 – 3.5	16	57
Acenaphthylene	mg/kg OC	52/120	0.45 J	53	0.59 – 3.5	66	66
Anthracene	mg/kg OC	112/120	0.77 J	200	1.2 – 3.5	220	1,200
Benzo(a)anthracene	mg/kg OC	117/120	1.3	350	2.5 – 3.5	110	270
Benzo(a)pyrene	mg/kg OC	116/120	1.0	240	2.5 – 3.5	99	210
Benzo(g,h,i)perylene	mg/kg OC	112/120	0.41 J	55	1.2 – 3.5	31	78
Total benzofluoranthenes	mg/kg OC	117/120	2.5 J	915	2.5 – 3.5	230	450
Chrysene	mg/kg OC	117/120	2.0	1,100	2.5 – 3.5	110	460
Dibenzo(a,h)anthracene	mg/kg OC	74/120	0.25 J	21	0.75 – 3.5	12	33
Dibenzofuran	mg/kg OC	56/120	0.53 J	68 J	0.69 – 3.5	15	58
Fluoranthene	mg/kg OC	118/120	2.1 J	6,400	2.5 – 2.6	160	1,200
Fluorene	mg/kg OC	75/120	0.45 J	120	0.89 – 3.5	23	79
Indeno(1,2,3-cd)pyrene	mg/kg OC	113/120	0.38 J	58 J	1.4 – 3.5	34	88
Naphthalene	mg/kg OC	55/120	0.45 J	91	0.59 – 4.9	99	170
Phenanthrene	mg/kg OC	117/120	2.4	730	2.5 – 3.4	100	480
Pyrene	mg/kg OC	119/120	2.6	3,500	2.6	1,000	1,400
Total HPAHs	mg/kg OC	119/120	2.6	12,500 J	2.6	960	5,300
Total LPAHs	mg/kg OC	117/120	2.6	1,300	2.5 – 3.4	370	780

Chemical	Unit	Detection Frequency	Detected Concentration		RL or Range of RLs[a]	SQS/SL	CSL/ML
			Minimum	Maximum			
Phthalates							
Bis(2-ethylhexyl) phthalate	mg/kg OC	106/120	1.3	1,900	1.0 – 130	47	78
Butyl benzyl phthalate	mg/kg OC	60/120	0.69 J	14	0.44 – 2.8	4.9	64
Diethyl phthalate	mg/kg OC	15/120	0.82	5.3	0.45 – 2.9	61	110
Dimethyl phthalate	mg/kg OC	8/120	0.60 J	4.2	0.44 – 2.8	53	53
Di-n-butyl phthalate	mg/kg OC	20/120	0.79	2,600	0.60 – 4.9	220	1,700
Di-n-octyl phthalate	mg/kg OC	6/120	0.49 J	5.8	0.59 – 4.9	58	4,500
Other SVOCs							
1,2,4-Trichlorobenzene	mg/kg OC	2/120	0.43	0.46	0.18 – 1.1	0.81	1.8
1,2-Dichlorobenzene	mg/kg OC	0/120	nd	nd	0.18 – 1.1	2.3	2.3
1,3-Dichlorobenzene	µg/kg dw	0/120	nd	nd	19 – 59	170	nc
1,4-Dichlorobenzene	mg/kg OC	79/120	0.18	310	0.18 – 1.1	3.1	9
2,4-Dimethylphenol	µg/kg dw	10/120	6.1	17	5.8 – 6.2	29	29
2-Methylphenol	µg/kg dw	2/120	13	21	5.8 – 6.2	63	63
4-Methylphenol	µg/kg dw	19/120	15 J	180	19 – 59	670	670
Benzoic acid	µg/kg dw	3/120	230	340 J	190 – 590	650	650
Benzyl alcohol	µg/kg dw	1/110	38 J	38 J	19 – 58	57	73
Hexachlorobenzene	mg/kg OC	0/120	nd	nd	0.030 – 1.1	0.38	2.3
Hexachlorobutadiene	mg/kg OC	0/120	nd	nd	0.030 – 1.1	3.9	6.2
Hexachloroethane	µg/kg dw	0/120	nd	nd	19 – 59	1,400	14,000
n-Nitrosodiphenylamine	mg/kg OC	0/120	nd	nd	0.18 – 2.4	11	11
Pentachlorophenol	µg/kg dw	2/120	59	72	29 – 31	360	690
Phenol	µg/kg dw	37/120	14 J	350	19 – 59	420	1,200

[a] RL range for non-detect samples only.

CSL – cleanup screening level
dw – dry weight
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
J – estimated concentration
ML – maximum level
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
nc – no criterion
nd – not detected
PAH – polycyclic aromatic hydrocarbon
OC – organic carbon
RL – reporting limit
SL – screening level
SQS – sediment quality standards
SVOC – semivolatile organic compound

Table 4-6 presents the numbers of samples with detected concentrations (including J-qualified results) or final RLs (for non-detected results) above the SQS/SL or CSL/ML for the 40 SVOCs with SMS or DMMP values. Of the 40 SVOCs with SMS or DMMP values, 20 never had detected concentrations that exceeded the SQS/SL, 4 had detected concentrations that exceeded only the SQS/SL, and 16 had detected concentrations that exceeded the CSL/ML.

Table 4-6. Numbers of samples in each SQS/SL or CSL/ML category for detected concentrations and reporting limits for SVOCs for sediment grab samples

Chemical	Number of Samples					
	Detected Concentration			RL for Non-Detected Result		
	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML
PAHs						
2-Methylnaphthalene	39	0	1	82	0	0
Acenaphthene	55	5	2	60	0	0
Acenaphthylene	52	0	0	70	0	0
Anthracene	112	0	0	10	0	0
Benzo(a)anthracene	114	3	1	4	0	0
Benzo(a)pyrene	111	4	1	6	0	0
Benzo(g,h,i)perylene	109	3	0	10	0	0
Total benzofluoranthenes	112	4	1	5	0	0
Chrysene	113	4	1	4	0	0
Dibenzo(a,h)anthracene	71	3	0	48	0	0
Dibenzofuran	53	2	1	66	0	0
Fluoranthene	112	6	1	3	0	0
Fluorene	69	4	2	47	0	0
Indeno(1,2,3-cd)pyrene	109	4	0	9	0	0
Naphthalene	55	0	0	67	0	0
Phenanthrene	110	6	2	4	0	0
Pyrene	120	0	1	1	0	0
Total HPAHs	116	4	1	1	0	0
Total LPAHs	114	2	2	4	0	0
Phthalates						
Bis(2-ethylhexyl) phthalate	102	2	2	15	0	1
Butyl benzyl phthalate	55	5	0	62	0	0
Diethyl phthalate	16	0	0	106	0	0
Dimethyl phthalate	8	0	0	114	0	0
Di-n-butyl phthalate	20	0	1	101	0	0
Di-n-octyl phthalate	6	0	0	116	0	0
Other SVOCs						
1,2,4-Trichlorobenzene	2	0	0	115	5	0
1,2-Dichlorobenzene	0	0	0	122	0	0
1,3-Dichlorobenzene	0	0	0	122	0	0
1,4-Dichlorobenzene	70	4	5	43	0	0

Chemical	Number of Samples					
	Detected Concentration			RL for Non-Detected Result		
	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML	≤ SQS/SL	> SQS/SL ≤ CSL/ML	> CSL/ML
2,4-Dimethylphenol	10	0	0	112	0	0
2-Methylphenol	2	0	0	120	0	0
4-Methylphenol	19	0	0	103	0	0
Benzoic acid	3	0	0	119	0	0
Benzyl alcohol	1	0	0	109	1	0
Hexachlorobenzene	0	0	0	86	36	0
Hexachlorobutadiene	0	0	0	122	0	0
Hexachloroethane	0	0	0	122	0	0
n-Nitrosodiphenylamine	0	0	0	122	0	0
Pentachlorophenol	2	0	0	120	0	0
Phenol	37	0	0	85	0	0

CSL – cleanup screening level
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
ML – maximum level
PAH – polycyclic aromatic hydrocarbon
RL – reporting limit
SL – screening level
SQS – sediment quality standards
SVOC – semivolatile organic compound

Fourteen individual PAHs or PAH groups had a total of forty-nine detected concentrations that exceeded their respective SQS but not the CSL. Thirteen individual PAHs or PAH groups had a total of seventeen detected concentrations that exceeded their respective CSLs. All RLs for non-detected PAH results were less than the SMS criteria.

BEHP and butyl benzyl phthalate had a total of seven detected concentrations that exceeded their SQS but not their CSLs. Detected concentrations of BEHP exceeded the CSL in the samples collected at locations LSO-01 and EW09-SS-211. A detected concentration of di-n-butyl phthalate exceeded the CSL in the sample collected at location EW09-SS-010. All RLs for non-detected phthalate results were less than the SMS criteria.

Only one other SVOC, 1,4-dichlorobenzene, was detected at concentrations that exceeded its SQS and CSL. The concentrations of 1,4-dichlorobenzene exceeded the CSL in five samples, and only the SQS (not the CSL) was exceeded in four samples. Three other SVOCs (1,2,4-trichlorobenzene, benzyl alcohol, and hexachlorobenzene) were not detected but had RLs that exceeded their SQS/SL or CSL/ML values.

4.1.4 PCB Aroclors

Table 4-7 presents a summary of results for the surface sediment samples that were analyzed for PCB Aroclors. Results are presented for both individual Aroclors and total

PCBs. Total PCB concentrations for each location relative to SMS are provided on Map 4-6. Data tables that contain results for each sample are presented in Appendix A.

Table 4-7. Summary of PCB Aroclor results in surface sediment grab samples

Chemical	Detection Frequency	Concentration (µg/kg dw)		
		Minimum Detected	Maximum Detected	RL or Range of RLs[a]
Aroclor-1016	0/122	nd	nd	3.8 – 600
Aroclor-1221	0/122	nd	nd	3.8 – 600
Aroclor-1232	0/122	nd	nd	3.8 – 600
Aroclor-1242	5/122	21	57	3.8 – 600
Aroclor-1248	43/122	4.3	330	3.9 – 600
Aroclor-1254	90/122	6.0	1,100	3.9 – 760
Aroclor-1260	112/122	7.3	2,400	3.9 – 20
Aroclor-1262	0/122	nd	nd	3.8 – 600
Aroclor-1268	0/122	nd	nd	3.8 – 600
Total PCBs	113/122	6.0	3,200	3.9 – 20

[a] RL range for non-detected samples.
dw – dry weight
nd –not detected
PCB – polychlorinated biphenyl
RL – reporting limit

Four of the seven Aroclors were detected in at least one sediment sample. The most frequently detected were Aroclors 1254 and 1260. The maximum total PCB concentration (3,200 µg/kg dw) was detected in the sample collected at location EW09-SS-104. None of the Aroclors were detected at eight sampling locations.

Table 4-8 presents a summary of OC-normalized results for the samples with TOC contents ≥ 0.5%. Two samples with TOC contents < 0.5% were not OC-normalized and were compared to the SL/ML values on a dry weight basis.

Table 4-8. Summary of total PCB results for surface sediment grab samples in comparison with SQS and CSL

Chemical	Detection Frequency	Concentration (µg/kg dw)				
		Minimum Detected	Maximum Detected	Range of RLs[a]	SQS	CSL
Total PCBs	112/120	0.83	160	0.51 – 3.4	12	65

[a] RL range for only non-detected samples.

CSL – cleanup screening level
OC – organic carbon
PCB – polychlorinated biphenyl
RL – reporting limit
SQS – sediment quality standards

Table 4-9 presents the numbers of samples with detected PCB concentrations or RLs (for non-detected results) above the SQS or CSL. Table A-1 in Appendix A presents the

results for each sample and indicates which results exceeded the SQS or CSL. Total PCBs exceeded the SQS but were less than CSL in 56 samples and exceeded the CSL in 11 samples. RLs for non-detected total PCBs were all less than the SQS.

Table 4-9. Numbers of samples in each SQS or CSL category for detected concentrations and reporting limits for PCBs for surface sediment grab samples

Chemical	Number of Samples					
	Detected Concentration[a]			RL		
	≤ SQS	> SQS ≤ CSL	> CSL	≤ SQS	> SQS ≤ CSL	> CSL
Total PCBs	46	56	11	9	0	0

[a] The RL for total PCBs was given a value equal to the highest RL of the nine Aroclors for a given sample.
CSL – cleanup screening level
PCB – polychlorinated biphenyl
RL – reporting limit
SQS – sediment quality standards

4.1.5 Organochlorine pesticides

Table 4-10 presents a summary of results for the surface sediment grab samples that were analyzed for organochlorine pesticides. Data tables that contain results for each sample, including field duplicate samples, for pesticides are presented in Appendix A. Table 4-10 also presents SL and ML values for comparison purposes. Two organochlorine pesticides were detected in surface sediment samples. A component of total DDTs (4,4′-dichlorodiphenyldichloroethane [DDD]) was detected in four samples and a component of total chlordane (trans-nonachlor) was detected in one sample.

Table 4-10. Summary of organochlorine pesticide results in surface sediment grab samples

Chemical	Detection Frequency	Concentration (µg/kg dw)				
		Minimum Detected	Maximum Detected	RL or Range of RLs[a]	SL	ML
2,4′-DDD	0/29	nd	nd	1.9 – 30	nc	nc
2,4′-DDE	0/29	nd	nd	1.9 – 55	nc	nc
2,4′-DDT	0/29	nd	nd	1.9 – 30	nc	nc
4,4′-DDD	4/29	2.3	8.6 J	1.9 – 30	nc	nc
4,4′-DDE	0/29	nd	nd	1.9 – 30	nc	nc
4,4′-DDT	0/29	nd	nd	1.9 – 41	nc	nc
Total DDTs	4/29	2.3	8.6 J	1.9 – 55	6.9	69
Aldrin	0/29	nd	nd	0.96 – 270	10	nc
Dieldrin	0/29	nd	nd	1.9 – 41	10	nc
alpha-BHC	0/29	nd	nd	0.96 – 15	nc	nc

Chemical	Detection Frequency	Concentration (µg/kg dw)				
		Minimum Detected	Maximum Detected	RL or Range of RLs[a]	SL	ML
beta-BHC	0/29	nd	nd	0.96 – 15	nc	nc
gamma-BHC	0/29	nd	nd	0.96 – 15	10	nc
delta-BHC	0/29	nd	nd	0.96 – 15	nc	nc
alpha-Chlordane	0/29	nd	nd	0.96 – 15	nc	nc
gamma-Chlordane	0/29	nd	nd	0.96 – 15	nc	nc
Total chlordane	1/29	4.4	4.4	1.9 – 100	10	nc
alpha-Endosulfan	0/29	nd	nd	0.96 – 15	nc	nc
beta-Endosulfan	0/29	nd	nd	1.9 – 50	nc	nc
Endosulfan sulfate	0/29	nd	nd	1.9 – 30	nc	nc
Endrin	0/29	nd	nd	1.9 – 30	nc	nc
Endrin aldehyde	0/29	nd	nd	1.9 – 30	nc	nc
Endrin ketone	0/29	nd	nd	1.9 – 30	nc	nc
Heptachlor	0/29	nd	nd	0.96 – 15	10	nc
Heptachlor epoxide	0/29	nd	nd	0.96 – 29	nc	nc
Methoxychlor	0/29	nd	nd	9.6 – 150	nc	nc
Mirex	0/29	nd	nd	1.9 – 85	nc	nc
cis-Nonachlor	0/29	nd	nd	1.9 – 30	nc	nc
Oxychlordane	0/29	nd	nd	1.9 – 30	nc	nc
Toxaphene	0/29	nd	nd	96 – 1,500	nc	nc
trans-Nonachlor	1/29	4.4	4.4	1.9 – 100	nc	nc

[a] RL range for non-detected samples.

BHC – benzene hexachloride
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
dw – dry weight
J – estimated concentration
ML – maximum level
nc – no criterion
nd – not detected
RL – reporting limit
SL – screening level

There are no SMS values for pesticides; instead, results for six pesticides were compared to the available SL and ML values. Table 4-11 presents the number of samples with detected pesticide concentrations or RLs (for non-detected results) above the SL or ML. Table A-1 in Appendix A presents the results for each sample, including field duplicate samples; one detected concentration exceeded the SL for total DDTs. RLs for all six pesticides exceeded the SL but not the ML at one or more locations.

Table 4-11. Numbers of samples in each SL or ML category for detected concentrations and reporting limits for organochlorine pesticides for surface sediment grab samples

Chemical	Number of Samples					
	Detected Concentration			RL		
	≤ SL	> SL ≤ ML	> ML	≤ SL	> SL ≤ ML	>ML
Total DDTs	3	1	0	18[a]	7[a]	0
Aldrin	0	0	na	25	4	na
Dieldrin	0	0	na	22	7	na
gamma-BHC (Lindane)	0	0	na	28	1	na
Total chlordane	0	0	na	26[b]	3[b]	na
Heptachlor	0	0	na	28	1	na

[a] The RL for total DDTs was assigned a concentration equal to the highest RL of the six DDT isomers for a given sample.

[b] The RL for total chlordane was assigned a concentration equal to the highest RL of the chlordane components for a given sample.

BHC – benzene hexachloride
DDT – dichlorodiphenyltrichloroethane
ML – maximum level
na – not applicable
RL – reporting limit
SL – screening level

4.1.6 Conventional parameters

Table 4-12 presents a summary of results for surface sediment samples for the following conventional parameters: grain size, TOC, total solids, sulfides, and ammonia. Data tables that contain results for each sample, including field duplicate samples, are presented in Appendix A.

Table 4-12. Summary of grain size and conventional parameter results in surface sediment samples

Parameter	Unit	Detection Frequency	Detected Concentration		RL or Range of RLs[a]
			Minimum	Maximum	
Sediment Grain Size					
Gravel	% dw	107/114	0.1	68.1	0.1
Sand	% dw	114/114	8.1	86.9	na
Silt	% dw	112/112	3.0	58.8	na
Clay	% dw	112/112	1.9	34.9	na
Fines	% dw	112/112	4.9	92.0	na
Conventional Parameters					
TOC	% dw	122/122	0.192	3.40 J	na
Total solids	% ww	122/122	40.60	78.60	na
Total solids (preserved)	% ww	104/104	31.57	82.80	na
Sulfides (total)	mg/kg dw	102/104	1.30	3,250	1.49 – 8.41
Ammonia (total as nitrogen)	mg-N/kg dw	104/104	0.23	36.0	na

[a] RL range for non-detect samples.

dw – dry weight
J – estimated concentration
na – not applicable
RL – reporting limit
TOC – total organic carbon
ww – wet weight

Percent fines in surface sediment samples collected in the EW ranged widely from 4.9% (at EW09-SS-012) to 92.0% (at EW09-SS-023). TOC ranged from 0.192% (at EW09-SS-223) to 3.40% (at T30-07). The maximum concentration of sulfides (3,250 mg/kg dw) and ammonia (36.0 mg-N/kg) were detected in the sample collected at location EW09-SS-105.

4.2 INTERTIDAL MIS SAMPLES

The MIS intertidal composite samples were analyzed for metals, butyltins, SVOCs, PCBs, pesticides and dioxin/furans. These samples were collected for the purpose of assessing the human health risk associated with direct contact sediment exposure. Accordingly, these samples were not compared with the SMS because the samples were not collected to assess benthic invertebrate exposures, and it is not appropriate to compare composites that covered large spatial areas to the SMS. Therefore, the results of these samples are provided on a dry weight-basis only.

4.2.1 Metals

Table 4-13 presents the results for the MIS intertidal surface sediment composite samples that were analyzed for metals. Four metals were not detected in any of the samples, these being antimony, selenium, silver, and thallium. All other metals were detected in all of the samples, with the exception of cadmium, which was detected in the area-wide samples but not in the public access sample.

Table 4-13. Metals results for MIS intertidal surface sediment composite samples

Chemical	Concentration (mg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Antimony	6 UJ	6 UJ	6 UJ	6 UJ
Arsenic	9.1	7.9	13.3	7.7
Cadmium	0.5	0.6	0.6	0.3 U
Chromium	21.5	27.3	44.8	20.5
Cobalt	5.7	6.2	6.8	5.0
Copper	36.2	40.8	41.4	28.0
Lead	50	60	49	23
Mercury	0.06	0.08	0.10	0.08
Molybdenum	1.5	2.0	2.2	1.3
Nickel	21	24	27	20

Chemical	Concentration (mg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Selenium	0.6 U	0.6 U	0.6 U	0.6 U
Silver	0.4 U	0.4 U	0.4 U	0.4 U
Thallium	0.3 U	0.3 U	0.3 U	0.2 U
Vanadium	34.3 J	43.4 J	45.5 J	30.6 J
Zinc	100	113	117	57

dw – dry weight
J – estimated concentration
MIS – multi-increment sampling
U – not detected at reporting limit shown

4.2.2 Butyltins

The results for butyltins in the MIS samples are presented in Table 4-14. TBT was detected in all four samples with concentrations ranging from 7.9 to 11 µg/kg dw.

Table 4-14. Butyltin results for MIS intertidal surface sediment composite samples

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Monobutyltin as ion	3.7 U	3.5 U	3.6 U	3.6 U
Dibutyltin as ion	5.3 UJ	5.0 UJ	5.3 J	5.1 UJ
Tributyltin as ion	8.8 J	7.9 J	8.9 J	11 J

dw – dry weight
J – estimated concentration
MIS – multi-increment sampling
U – not detected at reporting limit shown

4.2.3 SVOCs

The results for SVOCs analyzed in the MIS intertidal surface sediment composite samples are presented below by PAHs, phthalates, and other SVOCs. PAH results for the four MIS samples are presented in Table 4-15. All of the PAHs, except for 2-chloronaphthalene, were detected in the MIS samples. The public access area MIS composite sample had lower LPAH and HPAH concentrations than the area-wide MIS composite samples.

Table 4-15. PAH results for MIS intertidal surface sediment composite samples

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
1-Methylnaphthalene	35	57	640	690
2-Chloronaphthalene	20 U	19 U	20 U	20 U
2-Methylnaphthalene	35	61	740	11 J
Acenaphthene	44	74	820	29
Acenaphthylene	62	40	20 U	19 J
Anthracene	240	170 J	1,100	140
Benzo(a)anthracene	480	320	1,500	290
Benzo(a)pyrene	550	320	1,400	270
Benzo(b)fluoranthene	550	300	1,000	310
Benzo(g,h,i)perylene	170	110	440	58
Benzo(k)fluoranthene	550	300	1,000	310
Total benzofluoranthenes	1,100	600	2,000	620
Chrysene	740	450 J	1,500	440
Dibenzo(a,h)anthracene	110	60	260	45
Dibenzofuran	27	44	340	10 J
Fluoranthene	790	850 J	3,700	580
Fluorene	74	100	940	20
Indeno(1,2,3-cd)pyrene	200	120	480	71
Naphthalene	28	85 J	850	14 J
Phenanthrene	560	800 J	5,100	180
Pyrene	690	720	3,900	510
Total HPAHs	4,830	3,550 J	15,200	2,880
Total LPAHs	1,010	1,270 J	8,800	400 J
Total cPAHs	780	450 J	1,900	390
Total PAHs	5,840	4,820 J	24,000	3,290 J

DL – detection limit
dw – dry weight
cPAH – carcinogenic polycyclic aromatic hydrocarbon
HPAH – high-molecular-weight polycyclic aromatic hydrocarbon
J – estimated concentration
LPAH – low-molecular-weight polycyclic aromatic hydrocarbon
MIS – multi-increment sampling
PAH – polycyclic aromatic hydrocarbon
U – not detected at reporting limit shown

All of the phthalates except for BEHP and di-n-octylphthalate were detected in at least one sample (Table 4-16). Butyl benzyl phthalate was the only phthalate detected in all of the MIS samples. The other SVOCs that were detected were 1,4-dichlorobenzene, 4-methyl phenol, carbazole, PCP, and phenol (Table 4-17). For the phthalates or other

SVOCs that were detected at least once, the detected concentration tended to be similar to the RLs for the non-detected compounds.

Table 4-16. Phthalate results for MIS intertidal surface sediment composite samples

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Bis(2-ethylhexyl) phthalate	410 U	280 U	330 U	330 U
Butyl benzyl phthalate	31	82	18	17
Diethyl phthalate	15 U	19 U	12 J	15 U
Dimethyl phthalate	15 U	11 J	15 U	15 U
Di-n-butyl phthalate	17 J	19 U	20 U	20 U
Di-n-octyl phthalate	20 U	19 U	20 U	20 U

dw – dry weight
J – estimated concentration
MIS – multi-increment sampling
U – not detected at reporting limit shown

Table 4-17. Other SVOC results for MIS intertidal surface sediment composite samples

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
1,2,4-Trichlorobenzene	5.9 U	5.8 U	6.0 U	6.0 U
1,2-Dichlorobenzene	5.9 U	5.8 U	6.0 U	6.0 U
1,3-Dichlorobenzene	20 U	19 U	20 U	20 U
1,4-Dichlorobenzene	12	5.8 U	6.0 U	13 J
2,4,5-Trichlorophenol	97 U	96 U	98 U	99 U
2,4,6-Trichlorophenol	97 U	96 U	98 U	99 U
2,4-Dichlorophenol	97 U	96 U	98 U	99 U
2,4-Dimethylphenol	5.9 UJ	5.8 UJ	6.0 UJ	6.0 UJ
2,4-Dinitrophenol	200 U	190 U	200 U	200 U
2,4-Dinitrotoluene	97 U	96 U	98 U	99 U
2,6-Dinitrotoluene	97 U	96 U	98 U	99 U
2-Chlorophenol	20 U	19 U	20 U	20 U
2-Methylphenol	5.9 U	5.8 U	6.0 U	6.0 U
2-Nitroaniline	97 U	96 U	98 U	99 U
2-Nitrophenol	97 U	96 U	98 U	99 U
3,3′-Dichlorobenzidine	97 U	96 U	98 U	99 U
3-Nitroaniline	97 U	96 U	98 U	99 U
4,6-Dinitro-o-cresol	200 U	190 U	200 U	200 U

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
4-Bromophenyl phenyl ether	20 U	19 U	20 U	20 U
4-Chloro-3-methylphenol	97 U	96 U	98 U	99 U
4-Chloroaniline	97 U	96 UJ	98 U	99 U
4-Chlorophenyl phenyl ether	20 U	19 U	20 U	20 U
4-Methylphenol	20 U	11 J	24	20 U
4-Nitroaniline	97 U	96 U	98 U	99 U
4-Nitrophenol	97 U	96 U	98 U	99 U
Aniline	20 U	R	20 U	20 U
Benzoic acid	200 U	190 U	200 U	200 U
Benzyl alcohol	20 U	19 U	20 U	20 U
bis(2-chloroethoxy)methane	20 U	19 U	20 U	20 U
bis(2-chloroethyl)ether	20 U	19 U	20 U	20 U
bis(2-chloroisopropyl)ether	20 U	19 U	20 U	20 U
Carbazole	84	110 J	980	82
Hexachlorobenzene	0.86 U	2.1 U	1.4 U	1.4 U
Hexachlorobutadiene	0.86 U	2.1 U	1.4 U	1.4 U
Hexachlorocyclopentadiene	97 U	R	98 U	99 U
Hexachloroethane	20 U	19 U	20 U	20 U
Isophorone	20 U	19 U	20 U	20 U
n-Nitroso-di-n-propylamine	30 U	29 U	30 U	30 U
n-Nitrosodimethylamine	30 U	29 U	30 U	30 U
n-Nitrosodiphenylamine	8.3 U	9.8 U	8.3 U	6.0 U
Nitrobenzene	20 U	19 U	20 U	20 U
Pentachlorophenol	30 U	42 J	30 U	30 U
Phenol	210	110	140	98

dw – dry weight
J – estimated concentration
MIS – multi-increment sampling
R – result rejected due to low LCS recoveries (Section 4.6)
U – not detected at reporting limit shown

4.2.4 PCB Aroclors

The PCB Aroclor concentrations in the MIS intertidal surface sediment composite samples are provided in Table 4-18. PCB Aroclors were detected in all of the MIS samples. The most commonly detected PCB Aroclors were Aroclor 1254 and Aroclor 1260.

Table 4-18. PCB Aroclor results for MIS intertidal surface sediment composite samples

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Aroclor 1016	27 U	36 U	27 U	20 U
Aroclor 1221	27 U	36 U	27 U	20 U
Aroclor 1232	27 U	36 U	27 U	20 U
Aroclor 1242	96	680	27 U	20 U
Aroclor 1248	27 U	36 U	140	71
Aroclor 1254	220	550	320	150
Aroclor 1260	220	360	310	150
Aroclor 1262	27 U	36 U	27 U	20 U
Aroclor 1268	27 U	36 U	27 U	20 U
Total PCBs	540	1,590	770	370

dw – dry weight
PCB – polychlorinated biphenyl
MIS – multi-increment sampling
U – not detected at reporting limit shown

4.2.5 Organochlorine pesticides

No organochlorine pesticides were detected in the MIS samples (Table 4-19).

Table 4-19. Organochlorine pesticide results for MIS intertidal surface sediment composite samples

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
2,4′-DDD	1.7 U	4.2 U	2.7 U	2.7 U
2,4′-DDE	1.7 U	20 U	9.7 U	2.7 U
2,4′-DDT	1.7 U	4.2 U	2.7 U	2.7 U
4,4′-DDD	3.2 U	4.2 U	2.7 U	2.7 U
4,4′-DDE	1.7 U	4.2 U	2.7 U	2.7 U
4,4′-DDT	1.7 U	4.2 U	29 U	2.7 U
Total DDTs	3.2 U	20 U	29 U	2.7 U
Aldrin	0.86 U	2.1 U	1.4 U	1.4 U
Dieldrin	1.7 U	4.2 U	2.7 U	2.7 U
Total aldrin/dieldrin	1.7 U	4.2 U	2.7 U	2.7 U
alpha-BHC	0.86 U	2.1 U	1.4 U	1.4 U
beta-BHC	0.86 U	2.1 U	1.4 U	1.4 U
gamma-BHC	0.86 U	2.1 U	1.4 U	1.4 U

Chemical	Concentration (µg/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
delta-BHC	1.8 U	20 U	1.4 U	1.4 U
alpha-Chlordane	0.86 U	2.1 U	1.4 U	1.4 U
gamma-Chlordane	0.86 U	2.1 U	1.4 U	1.4 U
Total chlordane	1.7 U	4.2 U	2.7 U	2.7 U
alpha-Endosulfan	0.86 U	5.7 U	1.4 U	1.4 U
beta-Endosulfan	1.7 U	4.2 U	2.7 U	2.7 U
Endosulfan sulfate	1.7 U	4.2 U	8.2 U	2.7 U
Endrin	1.7 U	4.2 U	2.7 U	2.7 U
Endrin aldehyde	9.5 U	4.2 U	2.7 U	2.7 U
Heptachlor	0.86 U	3.4 U	1.4 U	1.4 U
Heptachlor epoxide	5.3 U	21 U	1.4 U	1.4 U
Methoxychlor	8.6 U	21 U	14 U	14 U
Mirex	1.7 U	4.2 U	2.7 U	2.7 U
cis-Nonachlor	1.7 U	4.2 U	2.7 U	2.7 U
Oxychlordane	1.7 U	4.2 U	2.7 U	2.7 U
Toxaphene	340 U	840 U	540 U	540 U
trans-Nonachlor	1.7 U	4.2 U	2.7 U	2.7 U

dw – dry weight
BHC – benzene hexachloride
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
MIS – multi-increment sampling
U – not detected at reporting limit shown

4.2.6 Dioxins and furans

The MIS intertidal surface sediment composite samples were analyzed for dioxins and furans (Table 4-20), which were detected in all four MIS samples. Dioxin toxic equivalent (TEQ) values were calculated following the protocols provided in the Data Management appendix (Appendix B). The dioxin TEQ values calculated with the full RL, half RL, and zero as the value for non-detected results are provided in Table 4-20. Because of the high detection frequencies for the dioxin and furan congeners, the TEQ values do not change substantially due to the treatment of non-detected values.

Table 4-20. Dioxin/furan results in MIS intertidal surface sediment composite samples

Chemical	Concentration (ng/kg dw)			
	Area-wide MIS samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
2,3,7,8-TCDD	0.248 J	0.300 U	0.495 J	0.328 J
1,2,3,7,8-PeCDD	1.46 J	1.09 U	1.54 J	1.00 J

Chemical	Concentration (ng/kg dw)			
	Area-wide MIS samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
1,2,3,4,7,8-HxCDD	2.36 J	2.25 J	1.66 J	1.41 J
1,2,3,6,7,8-HxCDD	14.4	9.52	10.4	6.42
1,2,3,7,8,9-HxCDD	5.88	3.74	4.54	2.91
1,2,3,4,6,7,8-HpCDD	544	363	311	201
OCDD	4,670	2,860	2,770	1,820
2,3,7,8-TCDF	4.78	3.43	8.66	6.26
1,2,3,7,8-PeCDF	1.70 J	1.12 U	2.62	1.70 J
2,3,4,7,8-PeCDF	2.42 U	2.44 U	7.70	4.10
1,2,3,4,7,8-HxCDF	5.31	4.54	6.10	3.88
1,2,3,6,7,8-HxCDF	2.74	2.16 J	2.88	2.12 J
1,2,3,7,8,9-HxCDF	2.42 U	2.44 U	2.49 U	2.42 U
2,3,4,6,7,8-HxCDF	4.10	3.44	4.54	3.25
1,2,3,4,6,7,8-HpCDF	63.3	50.5	74.3	52.9
1,2,3,4,7,8,9-HpCDF	3.55	3.12	4.19 U	3.43
OCDF	197	179	326	146
Total TCDD	10.9 U	18.1 U	13.1 U	9.74 U
Total PeCDD	20.0 U	21.4 U	21.2 U	13.0 U
Total HxCDD	176	125	107	59.1
Total HpCDD	1,810	1,340	965	540
Total TCDF	41.4 U	38.1 U	167 U	35.7 U
Total PeCDF	50.1 U	43.2 U	77.5 U	37.3 U
Total HxCDF	95.7 U	80.3	104 U	67.8
Total HpCDF	224 U	190	294 U	167
Dioxin/furan TEQ (zero RL)	13.3 J	7.99 J	13.1 J	8.40 J
Dioxin/furan TEQ (half RL)	13.8 J	9.19 J	13.2 J	8.52 J
Dioxin/furan TEQ (full RL)	14.3 J	10.4 J	13.4 J	8.64 J

dw – dry weight
HpCDD – heptachlorodibenzo-*p*-dioxin
HpCDF – heptachlorodibenzofuran
HxCDD – hexachlorodibenzo-*p*-dioxin
HxCDF – hexachlorodibenzofuran
J – estimated concentration
MIS – multi-increment sampling
OCDD – octachlorodibenzo-*p*-dioxin
OCDF – octachlorodibenzofuran
PCB – polychlorinated biphenyl
PeCDD – pentachlorodibenzo-*p*-dioxin
PeCDF – pentachlorodibenzofuran
TCDD – tetrachlorodibenzo-*p*-dioxin
TCDF – tetrachlorodibenzofuran
TEQ – toxic equivalent
U – not detected at reporting limit shown

4.2.7 PCB congeners

The MIS intertidal surface sediment composite samples were analyzed for PCB congeners. The coplanar PCB congeners, the PCB TEQ, and the total PCBs based on the

sum of detected congeners are presented in Table 4-21. The TEQ values were calculated following the protocols provided in the Data Management appendix (Appendix B). The total PCB concentrations calculated as the sum of detected congeners were comparable to the total PCB concentrations calculated as the sum of Aroclors. For the MIS samples, the total PCBs (sum of congeners) ranged from 432.7 to 1,129 µg/kg dw (Table 4-21), and the total PCBs (sum of Aroclors) ranged from 370 to 1,590 µg/kg dw (Table 4-18). Full congener results can be found in Table A-4 in Appendix A. PCB congener TEQ values calculated using zero, half RL and full RL for the non-detected values are similar (Table 4-21) due to the high detection frequency of the TEQ congeners and low RL values for individual congeners. The only exception is the Public Access Area sample TEQ which ranges from 0.380 to 2.42 ng/kg dw due to the fact that PCB 126 was not detected in this sample. This PCB congener has a substantial influence on the TEQ due to the relatively high TEF value of 0.1.

Table 4-21. PCB coplanar, total, and TEQ congener results in MIS intertidal surface sediment composite samples

Chemical	Concentration (ng/kg dw)			
	Area-Wide MIS Samples			Public Access Area Sample
	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB 077	613	1,820	592	406
PCB 081	22.2	69.8	20.2	16.3
PCB 105	5,120 J	4,490 J	2,730	1,740
PCB 114	292	301	145	94.0
PCB 118	15,600 J	15,700 J	8,090 J	5,840 J
PCB 123	253	291	135	86.0
PCB 126	29.2	53.1	27.7	19.8 U
PCB 156	3,960 C	2,900 C	2,030 C	1,940 C
PCB 157	C156	C156	C156	C156
PCB 167	1,860	1,420	979	908
PCB 169	1.99 U	1.96 U	1.98 U	1.95 U
PCB 189	894	627 J	434	521 J
Total PCB congeners[a]	791,900 J	1,128,800 J	451,300 J	432,700 J
PCB TEQ (zero RL)	3.83 J	6.28 J	3.27 J	0.380 J
PCB TEQ (half RL)	3.86 J	6.31 J	3.30 J	1.40 J
PCB TEQ (full RL)	3.89 J	6.34 J	3.33 J	2.42 J

[a] Sum of detected PCB congeners following summation protocol in Appendix B.

C – PCB congener co-elution, concentration represents combined result for co-eluting congeners

dw – dry weight

MIS – multi-increment sampling

PCB – polychlorinated biphenyl

TEQ – toxic equivalent

J – estimated concentration

U – not detected at given concentration

4.2.8 Conventional parameters

MIS intertidal surface sediment composite samples were analyzed for TOC and total solids (Table 4-22). The TOC ranged from 1.38 to 2.59% dw and total solids ranged from 72.1 to 75.4% ww.

Table 4-22. Conventional parameters in MIS intertidal surface sediment composite samples

Conventionals	Unit	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
		EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
TOC	% dw	2.59	2.22	2.03	1.38
Total solids	% ww	73.40	72.10	75.40	72.50

dw – dry weight
TOC – total organic carbon
ww – wet weight

4.3 SURFACE SEDIMENT SUBTIDAL COMPOSITE SAMPLES

4.3.1 PCB Aroclors

A summary of the PCB Aroclor detection frequencies, minimum and maximum concentrations, and ranges of RLs for the subtidal surface sediment composite samples are provided in Table 4-23. PCB Aroclors 1248, 1254, and 1260 were detected in at least one of the composite samples. The most commonly detected PCB Aroclors were Aroclor 1254 and Aroclor 1260, with Aroclor 1260 being detected in all samples. The total PCBs ranged 146 to 1,080 µg/kg dw.

Table 4-23. Summary of PCB Aroclor results in subtidal composite surface sediment samples

Chemical	Detection Frequency	Concentration (µg/kg dw)		
		Minimum Detected	Maximum Detected	RL or Range of RLs[a]
Aroclor 1016	0/13	nd	nd	7.8 – 39
Aroclor 1221	0/13	nd	nd	7.8 – 39
Aroclor 1232	0/13	nd	nd	7.8 – 39
Aroclor 1242	0/13	nd	nd	7.8 – 39
Aroclor 1248	1/13	110	110	24 – 190
Aroclor 1254	10/13	73	340	250 – 410
Aroclor 1260	13/13	73	910	na
Aroclor 1262	0/13	nd	nd	7.8 – 39
Aroclor 1268	0/13	nd	nd	7.8 – 39
Total PCBs	13/13	146	1,080	na

[a] RL range for non-detected samples.

dw – dry weight
nd –not detected
PCB – polychlorinated biphenyl
RL – reporting limit

4.3.2 Dioxins and furans

A summary of the dioxin and furan detection frequencies, minimum and maximum concentrations, and ranges of RLs for the subtidal surface sediment composite samples are provided in Table 4-24.Dioxins and furans were detected in all 13 MIS samples. The dioxin/furan TEQs ranged from 4.15 to 30.7 ng TEQ/kg dw.

Table 4-24. Dioxin and furan results for subtidal composite surface sediment samples

Chemical	Detection Frequency	Concentration (ng/kg dw)		
		Minimum Detected	Maximum Detected	Range of RLs[a]
2,3,7,8-TCDD	7/13	0.422 J	1.31	0.239 – 0.839
1,2,3,7,8-PeCDD	9/13	1.83 J	4.51	0.748 – 2.69
1,2,3,4,7,8-HxCDD	8/13	1.04 J	5.72	1.86 – 2.64
1,2,3,6,7,8-HxCDD	13/13	3.01	24.4	na
1,2,3,7,8,9-HxCDD	12/13	1.69 J	12.9	3.81
1,2,3,4,6,7,8-HpCDD	13/13	85.9	673	na
OCDD	13/13	693	5,620	na
2,3,7,8-TCDF	13/13	1.24	14.7	na
1,2,3,7,8-PeCDF	10/13	0.775 J	3.34	0.548 – 2.33
2,3,4,7,8-PeCDF	13/13	3.02	18.2	na
1,2,3,4,7,8-HxCDF	13/13	2.73	17.7	na
1,2,3,6,7,8-HxCDF	12/13	1.22 J	7.55	4.01
1,2,3,7,8,9-HxCDF	13/13	2.33	2.50	na
2,3,4,6,7,8-HxCDF	12/13	2.52	12.9	1.49
1,2,3,4,6,7,8-HpCDF	13/13	21.9	156	na
1,2,3,4,7,8,9-HpCDF	11/13	1.88 J	10.5	4.70 – 4.79
OCDF	13/13	74.0	516	na
Dioxin/furan TEQ	13/13	4.15 J	30.7	na

[a] RL range for non-detect samples.

dw – dry weight
HpCDD – heptachlorodibenzo-*p*-dioxin
HpCDF – heptachlorodibenzofuran
HxCDD – hexachlorodibenzo-*p*-dioxin
HxCDF – hexachlorodibenzofuran
J – estimated concentration
na – not applicable
OCDD – octachlorodibenzo-*p*-dioxin
OCDF – octachlorodibenzofuran
PeCDD – pentachlorodibenzo-*p*-dioxin
PeCDF – pentachlorodibenzofuran
RL – reporting limit
TCDD – tetrachlorodibenzo-*p*-dioxin
TCDF – tetrachlorodibenzofuran
TEQ – toxic equivalent

The dioxin TEQ values for each subtidal composite sample calculated with the full RL, half RL, and zero as the value for non-detected results are provided in Table 4-25.

Because of the high detection frequencies for the dioxin and furan congeners, the TEQ values do not change substantially due to the treatment of non-detected values. The highest TEQ value was calculated for the subtidal composite sample CS-06, which included samples from throughout Slip 27. The dioxin and furan TEQ concentrations for each subtidal composite area are provided on Map 4-7.

Table 4-25. Dioxin/furan TEQ calculated with RL as zero, half RL, and full RL

Sample ID	Concentration (ng/kg dw)		
	Dioxin/Furan TEQ – Mammal (zero RL)	Dioxin/Furan TEQ – Mammal (half RL)	Dioxin/Furan TEQ – Mammal (full RL)
EW09-CS-001-010	17.0 J	17.4 J	17.8 J
EW09-CS-002-010	24.0	24.2	24.3
EW09-CS-003-010	15.9	18.1	20.2
EW09-CS-004-010	9.54 J	10.1 J	10.6 J
EW09-CS-005-010	13.9 J	14.1 J	14.4 J
EW09-CS-006-010	30.4	30.6	30.7
EW09-CS-007-010	18.5	19.2	19.8
EW09-CS-008-010	15.4 J	15.6 J	15.7 J
EW09-CS-009-010	16.2 J	17.1 J	18.1 J
EW09-CS-010-010	13.8 J	14.0 J	14.3 J
EW09-CS-011-010	3.31 J	4.02 J	4.73 J
EW09-CS-012-010	5.02 J	5.69 J	6.37 J
EW09-CS-013-010	14.1 J	14.3 J	14.5 J

dw – dry weight
ID – identification
J – estimated concentration
RL – reporting limit
TEQ – toxic equivalent

4.3.3 PCB congeners

A summary of coplanar PCB detection frequencies, PCB TEQ detection frequencies, and minimum and maximum concentrations for the subtidal surface sediment composite samples are provided in Table 4-26. All of the coplanar PCBs, except PCB-169, were detected in all samples. Full congener results can be found in TableA-5 in Appendix A.

Table 4-26. Summary of PCB coplanar and TEQ congener results in subtidal composite surface sediment samples

Chemical	Detection Frequency	Detected Concentration (ng/kg dw)		Range of RLs[a]
		Minimum	Maximum	
PCB 077	13/13	183	945	na
PCB 081	13/13	8.23	40.9	na
PCB 105	13/13	883	8,520 J	na
PCB 114	13/13	53.0	495	na

Chemical	Detection Frequency	Detected Concentration (ng/kg dw)		Range of RLs[a]
		Minimum	Maximum	
PCB 118	13/13	3,290	26,400 J	na
PCB 123	13/13	49.3	390	na
PCB 126	13/13	8.61	82.2	na
PCB 156	13/13	805 C	16,800 CJ	na
PCB 157	13/13	C156	C156	na
PCB 167	13/13	371	8,260 J	na
PCB 169	0/13	nd	nd	1.90 – 1.99
PCB 189	13/13	150	4,680 J	na
Total PCB Congeners[b]	13 / 13	168,200 J	2,859,000 J	na
PCB TEQ	13/13	1.08	9.50 J	na

[a] RL range for non-detect samples.

[b] Sum of detected PCB congeners following summation protocol in Appendix B. C – PCB congener co-elution, concentration represents combined result for co-eluting congeners

dw – dry weight
J – estimated concentration
na – not applicable
nd – not detected
PCB – polychlorinated biphenyl
RL – reporting limit
TEQ – toxic equivalent

The PCB TEQ ranged from 1.08 to 9.5 ng TEQ/kg dw. PCB congener TEQ values were calculated following the protocols provided in the Data Management appendix (Appendix B). The PCB congener TEQ values calculated with the full RL, half RL, and zero as the value for non-detected results are provided in Table 4-27. Because of the high detection frequencies for the PCB congeners, the TEQ values do not change substantially due to the treatment of non-detected values. The highest TEQ value was calculated for subtidal composite sample CS-06, which included samples from throughout Slip 27. The PCB TEQ concentrations for each subtidal composite area are provided on Map 4-7.

Table 4-27. PCB congener TEQ calculated with RL as zero, half RL, and full RL

Sample ID	Concentration (ng/kg dw)		
	PCB TEQ – Mammal (zero RL)	PCB TEQ – Mammal (half RL)	PCB TEQ – Mammal (full RL)
EW09-CS-001-010	3.23 J	3.26 J	3.29 J
EW09-CS-002-010	6.56 J	6.59 J	6.62 J
EW09-CS-003-010	5.25 J	5.28 J	5.31 J
EW09-CS-004-010	2.70 J	2.73 J	2.75 J
EW09-CS-005-010	4.28 J	4.31 J	4.34 J
EW09-CS-006-010	9.47 J	9.50 J	9.53 J
EW09-CS-007-010	5.69 J	5.72 J	5.75 J
EW09-CS-008-010	7.93 J	7.96 J	7.99 J
EW09-CS-009-010	3.39 J	3.42 J	3.45 J
EW09-CS-010-010	2.63 J	2.66 J	2.69 J

Sample ID	Concentration (ng/kg dw)		
	PCB TEQ – Mammal (zero RL)	PCB TEQ – Mammal (half RL)	PCB TEQ – Mammal (full RL)
EW09-CS-011-010	1.05	1.08	1.11
EW09-CS-012-010	1.33	1.35	1.38
EW09-CS-013-010	2.86 J	2.89 J	2.92 J

dw – dry weight
ID – identification
J – estimated concentration
PCB – polychlorinated biphenyl
RL – reporting limit
TEQ – toxic equivalent

4.3.4 Conventional parameters

Subtidal composite samples were analyzed for TOC and total solids (Table 4-28). The TOC ranged from 1.05 to 2.55% dw and total solids ranged from 52.3 to 70.3% ww.

Table 4-28. Summary of conventional parameter results in subtidal composite surface sediment samples

Parameter	Unit	Detection Frequency	Detected Concentration		Range of RLs[a]
			Minimum	Maximum	
TOC	% dw	13/13	1.05	2.55	na
Total solids	% ww	13/13	52.30	70.30	na

[a] RL range for non-detect samples.

dw – dry weight
na – not applicable
RL – reporting limit
TOC – total organic carbon
ww – wet weight

4.4 Comparison of Total PCBs Calculated as the Sum of PCB Aroclors and as the Sum of PCB Congeners

The total PCBs based on the sum of detected PCB Aroclors and the sum of detected PCB congeners for each subtidal composite sample are shown in Table 4-29. The total PCB concentrations calculated as the sum of congeners were comparable to the total PCB concentrations calculated as the sum of Aroclors. For the subtidal composite samples, the total PCBs (sum of congeners) ranged from 168.2 to 2,859 µg/kg dw and the total PCBs (sum of Aroclors) ranged from 146 to 1,080 µg/kg dw. A plot of total PCBs (sum of congeners) and total PCBs (sum of Aroclors) is provided in Figure 4-1. One sample (EW09-CS-008-010) had a much higher total PCB concentration from the sum of congeners (2,860 µg/kg dw) relative to the sum of Aroclors (630 µg/kg dw). ARI confirmed the Aroclor result, and it is likely that the results reflect sample heterogeneity. There is no evidence of a systemic bias between the two methods for these samples.

Table 4-29. Total PCB concentrations calculated as the sum of PCB Aroclors and the sum of PCB congeners.

Sample	Concentrations (µg/kg dw)	
	Total PCBs (sum of PCB Aroclors)	Total PCBs (sum of PCB congeners)
Subtidal Composite Samples		
EW09-CS-001-010	410	340
EW09-CS-002-010	670	819
EW09-CS-003-010	820	821
EW09-CS-004-010	290	400
EW09-CS-005-010	740	837
EW09-CS-006-010	1,080	1,080
EW09-CS-007-010	590	863
EW09-CS-008-010	630	2,860
EW09-CS-009-010	910	932
EW09-CS-010-010	380	405
EW09-CS-011-010	640	236
EW09-CS-012-010	146	168
EW09-CS-013-010	400	403
Intertidal MIS Composite Samples		
EW09-ITSED-AWMIS-01	540	792
EW09-ITSED-AWMIS-02	1,590	1,130
EW09-ITSED-AWMIS-03	770	451
EW09-ITSED-PAMIS-01	370	433

dw – dry weight
PCB – polychlorinated biphenyl
MIS – multi-increment sampling

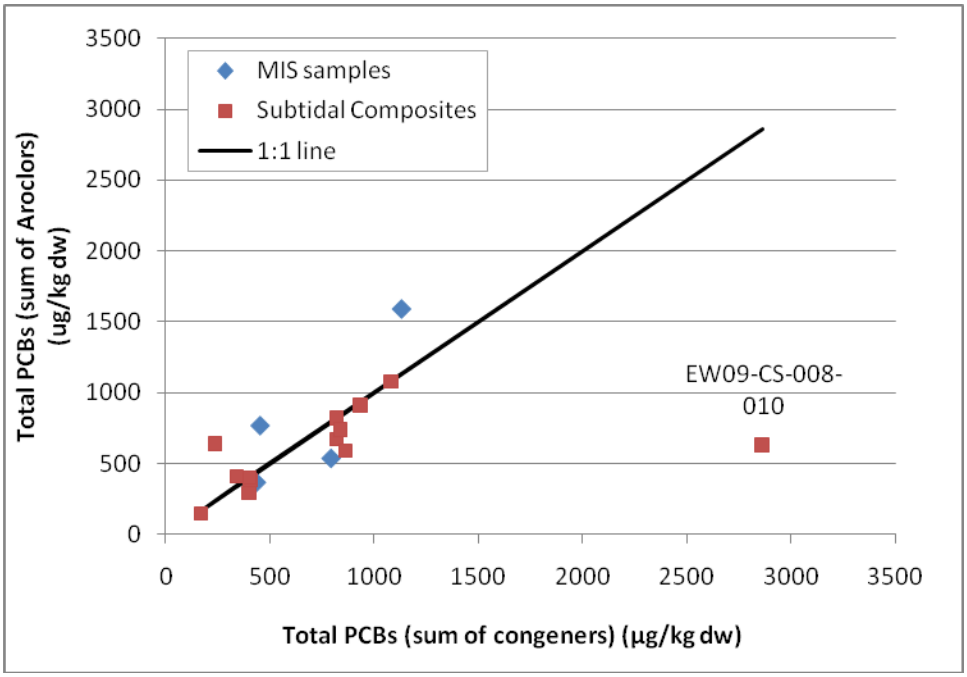

Figure 4-1.Total PCBs (sum of Aroclors) vs. total PCBs (sum of congeners)

4.5 REFERENCE SEDIMENT CHEMICAL RESULTS

Table 4-30 presents a summary of results for the six sediment samples collected from Carr Inlet reference locations (CI09-SS-020, CI09-SS-060, CI09-SS-080, CI09-SS-120, CI09-SS-140, and CI09-SS-180) for use in the laboratory toxicity tests. Grain size results from ARI were not consistent with the field-measured grain size results. All the reference samples had lower percent fines than indicated by the field measurements. All samples had relatively low TOC concentrations (< 1%).

Table 4-30. Summary of reference sample results

Parameter	Unit	Detection Frequency	Detected Concentration		RL or Range of RLs[a]
			Minimum	Maximum	
Sediment Grain Size					
Gravel	% dw	5/6	0.1	16.1	0.1
Sand	% dw	6/6	11.5	96.8	na
Silt	% dw	5/5	2.7	22.7	na
Clay	% dw	5/5	1.6	62.6	na
Fines (percent silt+clay)	% dw	5/5	4.3	85.4	na
Conventional Parameters					
TOC	% dw	6/6	0.210	0.605	na
Total solids	% ww	6/6	63.10	74.83	na
Total solids (preserved)	% ww	6/6	69.80	77.33	na

Parameter	Unit	Detection Frequency	Detected Concentration		RL or Range of RLs[a]
			Minimum	Maximum	
Total sulfides	mg/kg dw	4/6	4.38	54.5 J	1.15 – 1.36
Ammonia (total as nitrogen)	mg-N/kg dw	6/6	0.39	12.8	na

[a] RL range for non-detect samples.

dw – dry weight
na – not applicable
RL – reporting limit
TOC – total organic carbon
ww – wet weight

4.6 COMPARISON OF NON-DETECTED RESULTS WITH ANALYTICAL CONCENTRATION GOALS

This section compares RLs and method detection limits (MDLs) of non-detected concentrations for all surface sediment samples (including intertidal MIS samples and subtidal composite samples) with site-specific analytical concentration goals (ACGs). These goals were presented in Appendix C of the EW surface sediment QAPP (Windward 2009b)and Appendix D of the EW clam survey QAPP (Windward 2008).

Actual MDLs and RLs may differ from the target detection limits as a result of necessary analytical dilutions or the adjustment of extracted sample volumes of some samples based on a preliminary screen of the sample prior to analysis. When sample extracts were diluted because the concentrations for one or more target analytes exceeded the upper end of the calibration curve, RLs from the original, undiluted extract were reported for chemicals other than the target analytes that required dilution. The sample-specific RL is based on the lowest point of the calibration curve associated with each analysis, whereas the MDL is statistically derived following EPA methods (40 Code of Federal Regulations [CFR] 136). Both the RL and MDL will be elevated in cases where the sample extracts required dilution. Detected concentrations between the MDL and RL were reported by the laboratories and flagged with J-qualifiers to indicate that the reported concentration was an estimate because it fell below the lowest point on the calibration curve. Non-detected results were reported at the RLs. The analytical laboratory performed the appropriate sample cleanups to achieve the lowest possible detection limits.

All RLs and MDLs for surface sediment samples were lower than the risk-based ACGs developed for human health with indirect exposure, with the exception of the non-detected results listed in Table 4-31. These chemicals were identified in the project QAPP (Windward 2009a, b) as having target RLs and MDLs above the ACGs for human health with indirect exposure, with the exception of the results for BEHP, Aroclor 1016, PCB-126, endrin, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD), 1,2,3,7,8-pentachlorodibenzo-*p*-dioxin (PeCDD), and 1,2,3,4,7,8-hexachlorodibenzo-*p*-dioxin (HxCDD). The RLs for these chemicals were elevated because of analytical dilutions and/or analytical interferences.

Table 4-31. Number of RLs and MDLs above the human health ACGs for indirect exposure (updated)

Chemical	Unit	Number of Detected Results	Range of Detected Results	Number of Non-Detected Results	Range of RLs for Non-Detected Results	Number of RLs > ACG	Range of MDLs for Non-Detected Results	Number of MDLs > ACG	Target MDL	Target RL	Human Health ACG with Indirect Exposure
Metals											
Arsenic	mg/kg dw	115	2.3 – 26.2	10	6 – 8	10	0.64 – 0.88	10	0.17	0.5	0.006
Cadmium	mg/kg dw	74	0.3 – 5.7	51	0.2 – 1	51	0.024 – 0.12	51	0.016	0.2	0.003
Organometals											
Tributyltin as ion	µg/kg dw	46	4.1 – 1,600	7	3.4 – 3.7	7	1.6 – 1.7	7	1.2	4.0	0.28
PAHs											
Benzo(a)anthracene	µg/kg dw	122	9.8 – 9,000	4	19 – 20	4	4.1 – 5.9	2	5.9	20	5.2
Benzo(a)pyrene	µg/kg dw	120	29 – 7,800	6	19 – 20	6	3.5 – 8.1	6	8.2	20	0.76
Benzo(b)fluoranthene	µg/kg dw	121	14 – 6,600	5	19 – 20	5	7.6 – 9.4	5	9.5	20	4.7
Indeno(1,2,3-cd)pyrene	µg/kg dw	117	13 – 1,800	9	19 – 20	9	4.8 – 8.5	9	8.6	20	2.9
Phthalates											
Bis(2-ethylhexyl) phthalate	µg/kg dw	106	18 – 37,000	20	19 – 1,400	11	3.6 – 11	0	27	67	120
PCBs											
Aroclor 1016	µg/kg dw	0	nd	139	3.8 – 600	127	2.1 – 320	127	1.3	4.0	6.1
Aroclor 1221	µg/kg dw	0	nd	139	3.8 – 600	139	2.1 – 320	139	1.3	4.0	0.21
Aroclor 1232	µg/kg dw	0	nd	139	3.8 – 600	139	2.1 – 320	139	1.3	4.0	0.21
Aroclor 1242	µg/kg dw	7	21 – 680	132	3.8 – 600	1320	2.1 – 320	132	2.8	4.0	0.21
Aroclor 1248	µg/kg dw	46	4.3 – 330	93	3.9 – 600	93	2.1 – 320	93	2.8	4.0	0.21
Aroclor 1254	µg/kg dw	104	6.0 – 1,100	35	3.9 – 760	35	2.1 – 260	35	2.8	4.0	0.21
Aroclor 1260	µg/kg dw	129	7.3 – 2,400	10	3.9 – 20	10	2.1 – 18	10	2.8	4.0	0.21
Total PCBs	µg/kg dw	130	6 – 3,200	9	3.9 – 20	9	2.1 – 18	9	2.8	4.0	0.21
PCB-126	ng/kg dw	16	8.61 – 82.2	1	19.8	1	3.85	1	0.42	1.0	3.5
Pesticides											
2,4′-DDD	µg/kg dw	0	nd	33	1.7 – 30	4	0.68 – 10	1	15	20	8.3
2,4′-DDE	µg/kg dw	0	nd	33	1.7 – 55	10	0.85 – 13	7	12	20	2.6

Chemical	Unit	Number of Detected Results	Range of Detected Results	Number of Non-Detected Results	Range of RLs for Non-Detected Results	Number of RLs > ACG	Range of MDLs for Non-Detected Results	Number of MDLs > ACG	Target MDL	Target RL	Human Health ACG with Indirect Exposure
2,4′-DDT	µg/kg dw	0	nd	33	1.7 – 30	33	0.52 – 8.0	26	13	20	0.92
4,4′-DDD	µg/kg dw	4	2.3 – 8.6	29	1.9 – 30	4	0.31 – 4.7	0	15	20	8.3
4,4′-DDE	µg/kg dw	0	nd	33	1.7 – 30	13	0.35 – 5.4	2	12	20	2.6
4,4′-DDT	µg/kg dw	0	nd	33	1.7 – 41	33	0.35 – 5.4	10	13	20	0.92
Total DDTs	µg/kg dw	4	2.3 – 8.6	29	1.9 – 55	29	0.52 – 8.0	26	15	20	0.92
Aldrin	µg/kg dw	0	nd	33	0.86 – 270	33	0.23 – 3.6	33	5.7	10	0.063
Dieldrin	µg/kg dw	0	nd	33	1.7 – 41	33	0.33 – 5.1	33	12	20	0.033
beta-BHC	µg/kg dw	0	nd	33	0.86 – 15	33	0.28 – 4.3	10	3.9	10	0.63
gamma-BHC	µg/kg dw	0	nd	33	0.86 – 15	33	0.13 – 2.0	2	5.0	10	0.83
Total chlordane	µg/kg dw	1	4.4 – 4.4	32	1.7 – 100	31	0.51 – 8.0	9	60	10	1.7
Endrin	µg/kg dw	0	nd	33	1.7 – 30	1	0.51 – 7.9	0	15	20	27
Heptachlor	µg/kg dw	0	nd	33	0.86 – 15	33	0.23 – 3.6	28	5.6	10	0.25
Dioxin/Furan											
2,3,7,8-TCDD	ng/kg dw	10	0.248 – 1.31	7	0.239 – 0.839	4	0.062 – 0.176	0	0.0740	0.500	0.35
1,2,3,7,8-PeCDD	ng/kg dw	12	1.00 – 4.51	5	0.748 – 2.69	5	0.140 – 0.454	2	0.210	2.50	0.35
1,2,3,4,7,8-HxCDD	ng/kg dw	12	1.04 – 5.72	5	1.86 – 2.64	5	0.322 – 0.782	1	0.260	2.50	0.7
1,2,3,7,8,9-HxCDD	ng/kg dw	16	1.69 – 12.9	1	3.81	1	0.458	0	0.248	2.50	3.5

ACG – analytical concentration goal
BHC – benzene hexachloride
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
dw – dry weight
HxCDD – hexachlorodibenzo-*p*-dioxin
HxCDF – hexachlorodibenzofuran
MDL – method detection limit
nd – not detected
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
PeCDD – pentachlorodibenzo-*p*-dioxin
RL – reporting limit
TCDD – tetrachlorodibenzo-*p*-dioxin

All RLs for surface sediment samples were lower than the risk-based ACGs developed for human health with direct exposure, except for the results summarized in Table 4-32. All RLs and MDLs for antimony and n-nitrosodimethylamine were above the ACGs for human health with direct exposure. Both of these chemicals are known to be difficult to quantify in sediment. The RLs for six PCB Aroclors, aldrin, dieldrin, and Mirex—chemicals that were not identified in the QAPP (Windward 2009b) as having RLs above ACGs—were elevated because of analytical dilutions and/or analytical interferences.

Table 4-32. Number of RLs and MDLs above the human health ACGs for direct exposure

Chemical	Unit	Number of Detected Results	Range of Detected Results	Number of Non-Detected Results	Range of RLs for Non-Detected Results	Number of RLs > ACG	Range of MDLs for Non-Detected Results	Number of MDLs > ACG	Target MDL	Target RL	Human Health ACG with Direct Exposure
Metals											
Antimony	mg/kg dw	1	7 – 7	124	6 – 30	117	0.11 – 2.3	0	0.013	0.2	3.1
Arsenic	mg/kg dw	115	2.3 – 26.2	10	6 – 8	10	0.64 – 0.88	10	0.17	0.5	0.39
PAHs											
Benzo(a)pyrene	µg/kg dw	120	29 – 7,800	6	19 – 20	6	3.5 – 8.1	0	8.2	20	15
Dibenzo(a,h)anthracene	µg/kg dw	78	7.9 – 690	48	6.0 – 59	46	2.3 – 25	1	8.6	20	15
Other SVOCs											
n-Nitrosodimethylamine	µg/kg dw	0	nd	125	29 – 31	125	21 – 22	125	8.6	33	2.3
PCBs											
Aroclor 1016	µg/kg dw	0	nd	139	3.8 – 600	1	2.1 – 320	0	1.3	4.0	390
Aroclor 1221	µg/kg dw	0	nd	139	3.8 – 600	17	2.1 – 320	2	1.3	4.0	170
Aroclor 1232	µg/kg dw	0	nd	139	3.8 – 600	17	2.1 – 320	2	1.3	4.0	170
Aroclor 1242	µg/kg dw	7	21 – 680	132	3.8 – 600	2	2.1 – 320	1	2.8	4.0	220
Aroclor 1248	µg/kg dw	46	5.2 – 330	93	3.9 – 600	2	2.1 – 320	1	2.8	4.0	220
Aroclor 1254	µg/kg dw	104	6 – 1,100	35	3.9 – 760	9	2.1 – 260	1	2.8	4.0	220
Pesticides											
Aldrin	µg/kg dw	0	nd	33	0.86 – 270	2	0.23 – 3.6	0	5.7	10	29
Dieldrin	µg/kg dw	0	nd	33	1.7 – 41	2	0.33 – 5.1	0	12	20	30
Mirex	µg/kg dw	0	nd	33	1.7 – 85	2	0.62 – 9.6	0	20	20	27
Toxaphene	µg/kg dw	0	nd	33	96 – 1,500	7	33 – 520	1	1,000	1,000	440

ACG – analytical concentration goal
dw – dry weight
MDL – method detection limit
nd – not detected
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
RL – reporting limit
SVOC – semivolatile organic compound

Table 4-33 lists 21 chemicals with RLs above applicable ACGs for benthic invertebrates. None of these chemicals had MDLs above their respective ACGs, with the exception of two results for total DDTs. Twelve chemicals had RLs above the ACGs that were not anticipated in the QAPP (Windward 2009b) (2-methylnapthalene, acenaphthene, aldrin, benzyl alcohol, dibenzofuran, dieldrin, gamma-benzene hexachloride (BHC), heptachlor, hexachlorobutadiene, total chlordane, total DDTs, and total PCBs); however, these ACGs were met by the associated MDLs for all results, with the exception of two results for total DDTs. The RLs for these chemicals were elevated because of analytical dilutions and/or analytical interferences.

The SQS for some chemicals are expressed on an OC-normalized basis; a lower than average OC content of 0.5% was assumed in the ACG derivation to convert the SQS to its dry-weight equivalent. This decision to use a low TOC content for the calculation was made to ensure that RLs would be sufficiently low for samples with such low TOC content. In actuality, only two surface sediment samples collected in the EW had a TOC concentration below 0.5%, and the mean TOC concentration was 1.7%.

Table 4-33. Number of RLs and MDLs above the benthic ACGs

Chemical	Unit	Number of Detected Results	Range of Detected Results	Number of Non-Detected Results	Range of RLs for Non-Detected Results	Number of RLs > ACG	Range of MDLs for Non-Detected Results	Number of MDLs > ACG	Target MDL	Target RL	Benthic Invertebrate ACG[a]
PAHs											
2-Methylnaphthalene	mg/kg OC	44	9.7 – 2,800	80	19 – 59	3	0.24 – 2.0	0	na[b]	na[b]	38
Acenaphthene	mg/kg OC	65	11 – 3,000	59	19 – 21	59	0.28 – 1.4	0	na[b]	na[b]	16
Dibenzo(a,h)anthracene	mg/kg OC	78	7.9 – 690	46	6.0 – 59	45	0.31 – 1.5	0	na[b]	na[b]	12
Dibenzofuran	mg/kg OC	60	10 – 1,100	64	19 – 21	64	0.26 – 1.3	0	na[b]	na[b]	15
Phthalates											
bis(2-ethylhexyl) phthalate	mg/kg OC	106	18 – 37,000	18	34 – 1,400	15	0.14 – 1.7	0	na[b]	na[b]	47
Butyl benzyl phthalate	mg/kg OC	64	15 – 290	60	14 – 15	60	0.11 – 0.67	0	na[b]	na[b]	4.9
Di-n-octyl phthalate	mg/kg OC	6	14 – 83	118	19 – 59	2	0.12 – 2	0	na[b]	na[b]	58
Other SVOCs											
1,2,4-Trichlorobenzene	mg/kg OC	2	7.2 – 8.5	122	3.0 – 6.2	122	0.058 – 0.37	0	na[b]	na[b]	0.81
1,2-Dichlorobenzene	mg/kg OC	0	nd	124	5.8 – 6.2	124	0.035 – 0.22	0	na[b]	na[b]	2.3
1,4-Dichlorobenzene	mg/kg OC	81	5.9 – 4,200	43	5.8 – 6.2	43	0.059 – 0.37	0	na[b]	na[b]	3.1
Benzyl Alcohol	µg/kg dw	1	38 – 38	113	19 – 58	1	12 – 42	0	na[b]	15/20	57
Hexachlorobenzene	mg/kg OC	0	nd	124	0.86 – 6.2	124	0.0057 – 0.33	0	na[b]	na[b]	0.38
Hexachlorobutadiene	mg/kg OC	0	nd	124	0.86 – 6.2	95	0.0045 – 0.48	0	na[b]	na[b]	3.9
n-Nitrosodiphenylamine	mg/kg OC	0	nd	124	5.8 – 47	7	0.079 – 0.50	0	na[b]	na[b]	11
PCBs											
Total PCBs	mg/kg OC	129	14.1 – 3,200	8	3.9 – 20	7	0.27 – 1.8	0	na[b]	na[b]	12
Pesticides											
Total DDTs	µg/kg dw	4	2.3 – 8.6	29	1.9 – 55	9	0.52 – 8.0	2	1.3	2.0	6.9
Aldrin	µg/kg dw	0	nd	33	0.86 – 270	4	0.23 – 3.6	0	0.48	1.0	10
Dieldrin	µg/kg dw	0	nd	33	1.7 – 41	7	0.33 – 5.1	0	0.84	2.0	10
gamma-BHC	µg/kg dw	0	nd	33	0.86 – 15	1	0.13 – 2.0	0	0.49	1.0	10

Chemical	Unit	Number of Detected Results	Range of Detected Results	Number of Non-Detected Results	Range of RLs for Non-Detected Results	Number of RLs > ACG	Range of MDLs for Non-Detected Results	Number of MDLs > ACG	Target MDL	Target RL	Benthic Invertebrate ACG[a]
Total chlordane	µg/kg dw	1	nd	32	1.7 – 100	3	0.51 – 8.0	0	1.0	2.0	10
Heptachlor	µg/kg dw	0	nd	33	0.86 – 15	1	0.23 – 3.6	0	0.40	1.0	10

[a] In Appendix D of the QAPP (Windward 2009b), the OC-normalized ACGs were converted to dry weight for comparison to dry-weight RLs and MDLs using an OC content of 0.5%. In the comparison presented in this table, the RLs and MDLs are converted to OC-normalized values using sample-specific TOC contents for comparison to OC-normalized ACGs.

[b] The target RLs and MDLs presented in the QAPP (Windward 2009b) are dry-weight values.

ACG – analytical concentration goal
dw – dry weight
BHC – benzene hexachloride
DDT – dichlorodiphenyltrichloroethane
MDL – method detection limit
na – not applicable
nd – not detected
OC – organic carbon
QAPP – quality assurance project plan
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
RL – reporting limit
SVOC – semivolatile organic compound
TOC – total organic carbon

4.7 CHEMICAL DATA VALIDATION RESULTS

The analyses were conducted using the sample delivery group (SDG) assignments listed in Table 4-34.

Table 4-34. SDGs and level of data validation

Sampling Event	SDG	Number of Sediment Samples	Level of Data Validation	Analyses [a, b]
2009 T-30 PDM	ON35	8	full	SMS chemistry
	ON50	2	full	SMS chemistry
	QF22	7	summary	SMS chemistry
EW Round 1	OO97	16	summary	SMS chemistry, butyltins, pesticides
	OP22	6	summary	SMS chemistry, butyltins, pesticides
	OP33	7	full – pesticides; summary – rest of data	SMS chemistry, pesticides
	OP35	21	full	SMS chemistry, butyltins, pesticides
	OP65	4	summary	SMS chemistry, pesticides
	OQ68	3	summary	grain size, conventionals
	OQ77	1	summary	pesticides, butyltins
EW Round 2	PD95	13	full	SMS chemistry, butyltins, pesticides
	PD97[c]	10	summary	SMS chemistry, butyltins, pesticides
	PE07	10	summary	SMS chemistry, butyltins, pesticides
	PE14	12	summary	SMS chemistry, butyltins, pesticides
	PE25[d]	10	summary	SMS chemistry, butyltins
	PE40[d]	5	summary	SMS chemistry, butyltins
	PG13	3	summary	grain size, conventionals
	PH64	1	summary	butyltins
EW MIS intertidal and subtidal composites	QC54	17	full	SMS chemistry, butyltins, pesticides
	P1855	4	full	PCB congeners and dioxins/furans
	P1940	13	full	PCB congeners and dioxins/furans

[a] SMS chemistry parameters include SVOCs, selected SVOCs by SIM, PCB Aroclors, mercury, other metals, grain size, and conventional parameters on all samples. Pesticides and butyltins were also analyzed in select samples as listed in Table 3-2.

[b] Conventional parameters included TOC, total solids, total preserved solids, total sulfides, and ammonia (total as nitrogen).

[c] One sample from PD97 was reanalyzed for copper in SDG PG50.

[d] One sample from PE25 and five samples from PE40 were reanalyzed for SVOCs in SDGs PH67 and PH68, respectively.

EW – East Waterway
MIS – multi-increment sampling
PCB – polychlorinated biphenyl
PDM – post-dredge monitoring
SDG – sample delivery group
SIM – selected ion monitoring
SMS – Washington State Sediment Management Standards
SVOC – semivolatile organic compound
T-30 – Terminal 30
TOC – total organic carbon

Independent data validation was performed on all results by EcoChem. A minimum of 20% of sediment results per analysis underwent full-level data validation; the rest of the sediment results underwent summary-level data validation. The level of data validation performed by EcoChem meets the requirements specified in the surface sediment QAPP (Windward 2009b), the intertidal MIS QAPP (Windward 2009a), and the T-30 PDM plan (Windward and Anchor 2008). The data validation included a review of all quality control (QC) summary forms, including initial calibration, continuing calibration verification (CCV), internal standard, surrogate, laboratory control sample (LCS), laboratory control sample duplicate (LCSD), matrix spike (MS), matrix spike duplicate (MSD), standard reference material (SRM), and interference check sample (ICS) summary forms. The majority of the data did not require qualification or were qualified with a J, indicating an estimated value. Fifty-two results for eight chemicals were rejected as a result of data validation. Rejected results will not be used for any purpose. Based on the information reviewed, the overall data quality was considered acceptable for all uses, as qualified. Issues that resulted in the qualification of data are summarized below. Detailed information regarding every qualified sample is presented in Appendix C.

SVOCs and organometals

- Ten results each for aniline and benzyl alcohol were rejected because of extremely low LCS recoveries (less than 10%). These chemicals are known to be difficult to quantify in sediment, so no reanalyses were performed.
- Results for the following chemicals were rejected because of extremely low MS/MSD recoveries (less than 10%): 10 results for 4-chloroaniline; 9 results for aniline; 7 results for 3,3-dichlorobenzidine; 3 results for hexachlorocyclopentadiene; 2 results for 3-nitroaniline ; and 1 result each for 4-nitroaniline, benzyl alcohol, and n-nitrosodimethylamine. Associated LCS recoveries were acceptable, so no reanalyses were performed. Only the results for the sample spiked to create the MS/MSD were rejected; other samples in the batch were not qualified.
- Final results for the following two phthalates, which are common laboratory contaminants, were requalified as non-detected (U-qualified) because of method blank contamination: 19 results for BEHP, ranging from 34 to 1,400 µg/kg dw; and 10 results for diethylphthalate, ranging from 15 to 46 µg/kg dw. Diethyl phthalate was analyzed by both EPA 8270D and EPA 8270D-SIM. Method blank contamination was prevalent in the EPA 8270D-SIM analysis, but was rarely found in the EPA 8270D analysis. The final results for this chemical were selected in accordance with the data management rules presented in Appendix B; therefore, when the EPA 8270D-SIM analysis resulted in higher RLs because of method blank contamination, the final results for diethyl phthalate were preferentially selected from the EPA 8270D analysis. The availability and use of

EPA 8270D data for diethyl phthalate largely compensates for the method blank contamination issue in the EPA 8270D-SIM analysis.

- Results for various chemicals were qualified as estimated (J- or UJ-qualified) because CCV, LCS/LCSD, MS/MSD, SRM, or surrogate percent recoveries or relative percent differences (RPDs) were outside of control limits. Results qualified as estimated included the following: 56 results for benzo(g,h,i)perylene; 52 results for indeno(1,2,3-cd)pyrene; 29 results for dibenzo(a,h)anthracene; 23 results for aniline; 18 results for benzyl alcohol; 17 results for benzoic acid; 12 results for 3-nitroaniline; 8 results each for hexachlorocyclopentadiene and TBT; 11 results for PCP; 10 results each for 2,4-dimethylphenol, 2-methylphenol, and 4-nitrophenol; 7 results each for 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol; 5 results for dibutyltin, 4 results for benzo(b)fluoranthene; 2 results each for 4-chloroaniline, butyl benzyl phthalate, 3,3′-dichlorobenzidine, carbazole, and fluoranthene; and 1 result each for 4-nitroaniline, acenaphthylene, anthracene, BEHP, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, dibenzofuran, dibutyltin, diethyl phthalate, fluorene, hexachloroethane, naphthalene, and phenanthrene.
- Results for various chemicals (i.e., perylene-d12, chrysene-d12, and/or di-n-octylphthalate) were J- or UJ-qualified as estimated because the associated internal standard recoveries were outside of control limits. The following results were J- or UJ-qualified as estimated: seven results for dibenz(a,h)anthracene, two results for benzo(g,h,i)perylene, and one result each for di-n-octyl phthalate and indeno(1,2,3-cd)pyrene.
- Four results for phenol were qualified by ARI to indicate an estimated concentration with a low spectral match (M-qualified). These results were qualified during data validation to indicate an estimated concentration with tentative ID (JN-qualified).
- Three other SVOCs were qualified by ARI to indicate that chromatographic interference in the sample prevented adequate resolution of the compound at the standard RLs (Y-qualified). The Y-qualified results were U-qualified during data validation, including: 14 results for n-nitrosodiphenylamine, 4 results for 2-chlorophenol, and 1 result for hexachlorobutadiene.

Metals

- Results for various chemicals were J- or UJ-qualified as estimated because ICS, LCS/LCSD, MS/MSD, laboratory replicate, contract-required detection limit standard recoveries, or RPDs were outside of control limits. J- or UJ-qualified results qualified as estimated include: 135 results for antimony, 63 results for mercury, 29 results for zinc, 19 results for molybdenum, 12 results for cadmium, 11 results each for cobalt and lead, 10 results for copper, 5 results for silver, and 4 results for vanadium.

- Seven mercury results were J-qualified as estimated because analysis occurred after the 6-month holding time. The affected samples were all archived T-30 post-dredge monitoring samples.
- Results for all SRM samples were reviewed. One detected result for TBT was J-qualified as estimated because the associated SRM result was outside of acceptance limits.

PCBs and pesticides

- The RPDs between the results of dual-column analyses for Aroclor 1254 and 4,4′-dichlorodiphenyldichloroethylene (DDE), in one sample for each chemical, were greater than the control limit of ± 40%. These results were J-qualified to indicate estimated concentrations.
- Two detected results for 4,4′-DDD were J-qualified as estimated because the internal standard recoveries for hexabromobiphenyl were outside of control limits.
- When more than one Aroclor is present in a sample, the potential exists for a high bias from the contribution of one Aroclor to another caused by common peaks or peaks that cannot be completely resolved. Analytical peaks are selected, and Aroclor ID is made based on the best resolution possible for that particular sample. In this analysis, Aroclor concentrations were reported based on the individual Aroclors that provided the best match to the observed sample pattern. One-hundred-fourteen results for twenty different Aroclors or pesticides were Y-qualified by the laboratory as non-detects at elevated RLs because of overlapping Aroclor patterns. The Y-qualifier indicated that chromatographic interference in the sample prevented adequate resolution of the compound at the standard RLs. These results were U-qualified during data validation.

Conventionals and grain size

- The TOC and total solids results for eight samples were J-qualified as estimated because analysis occurred after the 6-month holding time for these analyses.
- Seventy-two total sulfides results, fourteen TOC results, and four grain-size results were J-qualified because the laboratory replicate or MS/MSD (total sulfides and TOC only) percent recoveries and/or RPDs were outside of QC limits.

PCB congeners and dioxins/furans

- Eighty-nine PCB congner results were J- or UJ-qualified as estimated because labeled compound recoveries were outside of QC limits. One result, PCB-001 in sample EW09-CS-012-010, was rejected because there was no recovery (0%) of the associated labeled compound.

- One-hundred-sixty-seven PCB congener results had secondary ion traces that had significantly elevated noise levels relative to the lock mass compounds. The concentrations for these analytes were calculated using the primary ion areas only and were consequently J-qualified as estimated.
- Five results for PCB-011 were requalified as non-detect at RLs ranging from 51.9 to 63.2 ng/kg dw because of method blank contamination.
- Numerous PCB congener results (638) were J-qualified as estimated because they were above the calibrated range of the instrument; all results were within the linear operating range of the instrument.

4.8 SEDIMENT TOXICITY TESTING RESULTS

This section presents the results of the sediment toxicity tests performed with amphipods (*Eohaustorius estuarius*), polychaetes (*Neanthes arenaceodentata*), and bivalve larvae (*Mytilus galloprovincialis* and *Crassostrea gigas*). The results for each location are provided in Map 4-8. The complete laboratory toxicity test reports are presented in Appendix D-2, and raw data summaries from the laboratory are presented in Appendix D-3.

4.8.1 Amphipod tests

Mean mortality results from the 10-day sediment toxicity tests with the amphipod *Eohaustorius estuarius* are presented in Table 4-35. The mean mortality in the test sediment samples ranged from 0% in EW09-SS-220-010 to 35% in EW09-SS-033-010.

Table 4-35. Percent mean mortality in the amphipod sediment toxicity tests and exceedances of the SMS biological effects criteria

Sample ID	Reference Sediment Match	Percent Mean Mortality ± SD	SMS Exceedance[a]
Round 1			
Negative control	na	0.0 ± 0.0	na
CI09-SS-020-010 (ref)	na	2.0 ± 2.7	na
CI09-SS-060-010 (ref)	na	6.0 ± 4.2	na
CI09-SS-080-010 (ref)	na	2.0 ± 2.7	na
EW09-SS-005-010	CI09-SS-060-010	10.0 ± 6.1	no exceedances
EW09-SS-030-010	CI09-SS-080-010	26.0 ± 8.2	SQS
EW09-SS-032-010	CI09-SS-080-010	14.0 ± 5.5	no exceedances
EW09-SS-033-010	CI09-SS-080-010	35.0 ± 5.0	CSL[b]
EW09-SS-034-010	CI09-SS-080-010	18.0 ± 11.0	no exceedances
EW09-SS-035-010	CI09-SS-080-010	33.0 ± 16.8	CSL[b]
EW09-SS-217-010	CI09-SS-020-010	2.0 ± 2.7	no exceedances
EW09-SS-218-010	CI09-SS-020-010	3.0 ± 2.7	no exceedances
EW09-SS-220-010	CI09-SS-020-010	0.0 ± 0.0	no exceedances

Sample ID	Reference Sediment Match	Percent Mean Mortality ± SD	SMS Exceedance[a]
Round 2			
Negative control	na	4.0 ± 5.5	na
CI09-SS-120-010 (ref)	na	6.0 ± 4.2	na
CI09-SS-180-010 (ref)	na	22.0 ± 10.4	na
EW09-SS-015-010	CI09-SS-120-010	6.0 ± 5.5	no exceedances
EW09-SS-215-010	CI09-SS-120-010	13.0 ± 7.6	no exceedances

[a] Statistical analyses in SedQual Release 5 include Wilk-Shapiro test for normality and Levene's test for equality of variances, followed by the appropriate statistical test for significance (i.e., Student's t-test, approximate t-test, or Mann-Whitney).

[b] Mean mortality greater than the value in the reference sediment plus 30%, and statistically different from the reference sediment ($p \leq 0.05$).

CSL – cleanup screening level
ID – identification
na – not applicable
SD – standard deviation
SMS – Washington State Sediment Management Standards
SQS – sediment quality standards

The mean mortality in the negative control was 0 and 4% in Rounds 1 and 2, and the mean mortality in the reference sediments ranged from 2 to 22%. The negative control and reference sediments met the performance standards of less than 10 and 25% mortality, respectively (Table 3-7).

The LC50 (concentration that is lethal to 50% of an exposed population) values from the positive control tests were within the laboratory warning limits of two standard deviations (SDs) of the control chart mean of previous LC50 values, indicating that the test organisms were similar in sensitivity to those previously tested at the laboratory. Further details on the positive control and calculation of the LC50 values are presented in Appendix D.

Results were compared to SMS biological effects criteria for amphipod toxicity tests (Table 3-7); two test sediment samples, EW09-SS-033-010 and EW09-SS-035-010, were classified as CSL exceedances using the statistical package included in SEDQUAL Release 5 (Table 4-35).

Water quality results for the amphipod toxicity tests are summarized in Table 4-36. All water quality parameters in the two rounds were within protocol-specified ranges, with the exception of the salinity measurements listed in Section 3.3.2. As discussed in that section, these salinity deviations did not affect the data quality. The water quality results are presented in detail in Appendices D-2 and D-3.

Table 4-36. Water quality measurements for the amphipod sediment toxicity tests

Parameter	Unit	Round 1			Round 2		
		Mean ± SD	Minimum	Maximum	Mean ± SD	Minimum	Maximum
Overlying Water							
Temperature	°C	15.7 ± 0.2	15.0	16.0	15.7 ± 0.1	15.4	16.0

Parameter	Unit	Round 1			Round 2		
		Mean ± SD	Minimum	Maximum	Mean ± SD	Minimum	Maximum
Dissolved oxygen	mg/L	7.8 ± 0.4	6.6	9.2	7.8 ± 0.4	6.4	8.5
Salinity	ppt	28.9 ± 0.1	27.0	31.0	28.5 ± 0.6	27.0	29.5
pH	na	8.1 ± 0.2	7.8	8.7	8.3 ± 0.2	8.0	8.7
Interstitial Water							
Salinity	ppt	28.7 ± 1.2	26.5	30.5	28.2 ± 0.4	28.0	29.0
pH	na	7.3 ± 0.3	7.0	8.0	7.4 ± 0.3	7.0	7.8

C – centigrade
na – not applicable
ppt – parts per thousand
SD – standard deviation

Sulfides and ammonia results for the amphipod tests are summarized in Table 4-37. Positive control tests for ammonia were conducted concurrently with the sediment toxicity tests. The LC50 values for the Rounds 1 and 2 were 183 mg/L and 226 mg/L total ammonia-N, respectively. All ammonia concentrations in the water overlying the test sediment samples were well below the LC50 concentrations.

Table 4-37. Sulfides and ammonia measurements for the amphipod sediment toxicity tests

Parameter	Unit	Round 1		Round 2	
		Minimum	Maximum	Minimum	Maximum
Overlying Water					
Dissolved sulfides	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Total ammonia-N	mg/L	< 0.1	1.8	< 0.1	6.0
Un-ionized ammonia	mg/L	< 0.003	0.148	< 0.003	0.670
Interstitial Water					
Total ammonia-N	mg/L	< 0.1	5.6	< 0.5	18.1
Un-ionized ammonia	mg/L	< 0.003	0.148	< 0.007	0.155

4.8.2 Polychaete tests

Mortality and growth rate results for the 20-day sediment toxicity test with the polychaete *Neanthes arenaceodentata* are presented in Table 4-38. A mortality rate of 8% was observed in one of the sediment test samples (EW09-SS-032-010); no mortality was observed in the other polychaete test samples. The mean individual growth rate in the sediment test samples ranged from 0.69 mg/day for EW09-SS-015-010 to 1.25 mg/day for EW09-SS-218-010.

Table 4-38. Mean mortality and individual growth rate in the polychaete sediment toxicity tests and exceedances of the SMS biological effects criteria

Sample ID	Reference Sediment Match	Mean Mortality ± SD	Mean Individual Growth Rate (mg/day) ± SD	SMS Exceedance[a]
Round 1				
Negative control	na	0.0 ± 0.0	1.19 ± 0.21	na
CI09-SS-020-010 (ref)	na	0.0 ± 0.0	1.15 ± 0.20	na
CI09-SS-060-010 (ref)	na	0.0 ± 0.0	1.21 ± 0.24	na
CI09-SS-080-010 (ref)	na	0.0 ± 0.0	1.35 ± 0.11	na
EW09-SS-005-010	CI09-SS-060-010	0.0 ± 0.0	1.06 ± 0.24	no exceedances
EW09-SS-030-010	CI09-SS-080-010	0.0 ± 0.0	0.98 ± 0.12	no exceedances
EW09-SS-032-010	CI09-SS-080-010	8.0 ± 11.0	1.10 ± 0.11	no exceedances
EW09-SS-033-010	CI09-SS-080-010	0.0 ± 0.0	1.06 ± 0.09	no exceedances
EW09-SS-034-010	CI09-SS-080-010	0.0 ± 0.0	1.19 ± 0.10	no exceedances
EW09-SS-035-010	CI09-SS-080-010	0.0 ± 0.0	1.02 ± 0.17	no exceedances
EW09-SS-217-010	CI09-SS-020-010	0.0 ± 0.0	1.18 ± 0.22	no exceedances
EW09-SS-218-010	CI09-SS-020-010	0.0 ± 0.0	1.25 ± 0.11	no exceedances
EW09-SS-220-010	CI09-SS-020-010	0.0 ± 0.0	1.06 ± 0.11	no exceedances
Round 2				
Negative control	na	0.0 ± 0.0	1.13 ± 0.19	na
CI09-SS-120-010 (ref)	na	0.0 ± 0.0	1.16 ± 0.11	na
CI09-SS-180-010 (ref)	na	0.0 ± 0.0	1.08 ± 0.07	na
EW09-SS-015-010	CI09-SS-120-010	0.0 ± 0.0	0.69 ± 0.12	SQS[b]
EW09-SS-215-010	CI09-SS-120-010	0.0 ± 0.0	0.89 ± 0.14	no exceedances

[a] Statistical analyses in SedQual Release 5 include Wilk-Shapiro test for normality and Levene's test for equality of variances, followed by the appropriate statistical test for significance (i.e., Student's t-test, approximate t-test, or Mann-Whitney).

[b] Mean individual growth rate < 70% of that of the reference sediment and statistically different ($p \leq 0.05$).

ID – identification

na – not applicable

SD – standard deviation

SMS – Washington State Sediment Management Standards

SQS – sediment quality standards

In Rounds 1 and two, the mean individual growth rates in the negative control were 1.19 and 1.13 mg/day, and the mean individual growth rate in the reference sediments ranged from 1.08 to 1.35 mg/day. The negative controls met the performance criteria of less than 10% mortality (0%) and a mean individual target growth rate of at least 0.72 mg/day (Table 3-7), and the reference sediments met the performance criterion of an individual growth rate of at least 80% of the negative control (Table 3-7).

The LC50 values from the positive control tests were within the laboratory warning limits of two SDs of the control chart mean of previous LC50 values, indicating that the test organisms were of similar sensitivity to those previously tested at the laboratory. Based on a comparison with SMS biological effects criteria for polychaete toxicity tests,

one test sediment sample was classified as exceeding SQS, and no samples exceeded the CSL. There are no SMS standards for mortality in the polychaete toxicity test (Table 4-38).

Water quality results for the 20-day polychaete toxicity test are summarized in Table 4-39. All water quality parameters in Rounds 1 and 2 were within protocol-specified ranges, except for one salinity value (see Section 3.3.2). The water quality results are presented in detail in Appendices D-2 and D-3.

Table 4-39. Water quality measurements for overlying water for the polychaete sediment toxicity tests

Parameter	Unit	Round 1			Round 2		
		Mean ± SD	Minimum	Maximum	Mean ± SD	Minimum	Maximum
Temperature	°C	19.92 ± 0.6	19.2	21.4	20.1 ± 0.3	19.4	20.6
Dissolved oxygen	mg/L	6.5 ± 0.7	2.4	7.3	6.8 ± 0.5	5.7	7.5
Salinity	ppt	28.3 ± 1.0	26.0	30.0	29.2 ± 0.8	28.0	30.5
pH	na	7.9 ± 0.2	7.4	8.4	8.1 ± 0.2	7.7	8.6

C – Celsius
na – not applicable
ppt – parts per thousand
SD – standard deviation

The sulfides and ammonia results for the polychaete tests are summarized in Table 4-40. Positive control tests for ammonia were conducted concurrently with the sediment toxicity tests. The LC50 values for Rounds 1 and 2 were 259 mg/L and 234 mg/L total ammonia-N, respectively. All ammonia concentrations in the water overlying the test sediment samples were well below the LC50 concentrations.

Table 4-40. Sulfides and ammonia measurements for the polychaete sediment toxicity tests

Parameter	Unit	Round 1		Round 2	
		Minimum	Maximum	Minimum	Maximum
Dissolved sulfides	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Total ammonia-N	mg/L	< 0.1	9.8	< 0.1	10.0
Un-ionized ammonia	mg/L	< 0.002	0.283	< 0.005	0.482

4.8.3 Bivalve larvae tests

Results for the 48-hr sediment toxicity test with the bivalve larvae *Mytilus galloprovincialis* and *Crassostrea gigas* are presented in Table 4-41. The Round 1 sediments were tested with *Mytilus galloprovincialis,* and the Round 2 sediments were tested with *Crassostrea gigas.* The mean normal survivorship in the test sediment samples ranged from 80.1% in EW09-SS-215-010 to 96.7% in EW09-SS-217-010.

Table 4-41. Percent mean normal survivorship in the bivalve larvae sediment toxicity tests and exceedances of the SMS biological effects criteria

Sample ID	Reference Sediment Match	Percent Mean Normal Survivorship ± SD[a]	Percent Mean Effective Mortality ± SD[b]	SMS Exceedance[c]
Round 1				
Negative control	na	100.0 ± 3.2	0.0 ± 3.2	na
CI09-SS-020-010 (ref)	na	95.8 ± 6.0	4.2 ± 6.0	na
CI09-SS-060-010 (ref)	na	89.6 ± 7.1	10.4 ± 7.1	na
CI09-SS-080-010 (ref)	na	88.5 ± 10.0	11.5 ± 10.0	na
EW09-SS-005-010	CI09-SS-060-010	92.7 ± 8.4	9.7 ± 8.4	no exceedances
EW09-SS-030-010	CI09-SS-080-010	90.3 ± 5.0	9.7 ± 5.0	no exceedances
EW09-SS-032-010	CI09-SS-080-010	87.4 ± 11.0	12.6 ± 11.0	no exceedances
EW09-SS-033-010	CI09-SS-080-010	90.7 ± 4.3	9.3 ± 4.3	no exceedances
EW09-SS-034-010	CI09-SS-080-010	84.0 ± 3.8	16.0 ± 3.8	no exceedances
EW09-SS-035-010	CI09-SS-080-010	84.0 ± 9.4	16.0 ± 9.4	no exceedances
EW09-SS-217-010	CI09-SS-020-010	96.7 ± 8.3	3.3 ± 8.3	no exceedances
EW09-SS-218-010	CI09-SS-020-010	94.9 ± 5.6	5.1 ± 5.6	no exceedances
EW09-SS-220-010	CI09-SS-020-010	89.1 ± 8.6	10.9 ± 8.6	no exceedances
Round 2				
Negative control	na	100.0 ± 10.2	0.0 ± 10.2	na
CI09-SS-120-010 (ref)	na	84.4 ± 12.2	15.6 ± 6.3	na
CI09-SS-180-010 (ref)	na	74.3 ± 12.2	25.7 ± 9.2	na
EW09-SS-215-010	CI09-SS-120-010	80.1 ± 6.3	19.9 ± 16.7	no exceedances
EW09-SS-015-010	CI09-SS-120-010	86.4 ± 1.6	13.6 ± 6.1	no exceedances

[a] Percent mean normal survivorship was calculated by the toxicity testing laboratory by dividing the number of normal survivors in each test sample by the initial stocking density according to PSEP (1995). However, percent normal survivorship can also be calculated by dividing the number of normal survivors in each test sample by the number of survivors in the negative (sea water) control, as is done, for example, for the purposes of dredged material evaluation and disposal (USACE et al. 2000). To have calculated normal survivorship in this way would have resulted in slightly higher percent survivorship values but would not have changed any of the SMS exceedance results.

[b] Effective mortality as reported by the laboratory is a combination of larval mortality and abnormality and is the complement of normal survivorship (i.e., 100% - effective mortality% = normal survivorship%), which is the metric used in the SQS (mean normal survivorship < 85% of that of the reference sediment and statistically different [$p \leq 0.10$]) and CSL (mean normal survivorship < 70% of that of the reference sediment and statistically different [$p \leq 0.10$]) biological effects criteria of the SMS.

[c] Statistical analyses in SedQual Release 5 include Wilk-Shapiro test for normality and Levene's test for equality of variances, followed by the appropriate statistical test for significance (i.e., Student's t-test, approximate t-test, or Mann-Whitney).

CSL – cleanup screening level
ID – identification
na – not applicable
PSEP – Puget Sound Estuary Program
SD – standard deviation
SQS – sediment quality standards
SMS – Washington State Sediment Management Standards

The results for mean normal survivorship in the negative controls were 100.0% in both Rounds 1 and 2, and the results for mean normal survivorship in the reference sediments ranged from 74.30 to 95.8%. The negative controls in the two rounds met the performance standard of > 70% mean normal survivorship (Table 3-7). There is no SMS performance standard for reference sediments for use in the bivalve larvae test, although the Washington State Department of Ecology (Ecology) has guidance stating that normal development in the reference sample must be ≥ 65% of the normal development in the negative control (Gries 2005). Normal development in the reference sediments ranged from 74 to 96% of that of the negative control (see Appendix D-2).

The EC50 (concentration that causes a non-lethal effect in 50% of an exposed population) values from the positive control tests were within the laboratory warning limits of one SD of the control chart mean of previous EC50 values, indicating that the test organisms were of similar sensitivity to those previously tested at the laboratory. Based on a comparison to SMS biological effects criteria for bivalve larvae toxicity tests, none of the samples exceeded the SQS or the CSL criterion (Table 4-41).

Water quality results for the 48-hr bivalve larvae toxicity test are summarized in Table 4-42. All water quality parameters in Rounds 1 and 2 were within protocol-specified ranges. The water quality results are presented in detail in Appendices D-2 and D-3.

Table 4-42. Water quality measurements for the bivalve larvae sediment toxicity tests

Parameter	Unit	Round 1			Round 2		
		Mean ± SD	Minimum	Maximum	Mean ±SD	Minimum	Maximum
Temperature	°C	15.5 ± 0.2	15.1	15.9	19.8 ± 0.6	19.0	20.9
Dissolved oxygen	mg/L	7.8 ± 0.2	7.2	8.2	7.2 ± 0.3	6.5	7.6
Salinity	ppt	27.7 ± 0.3	27.5	28.5	28.8 ± 0.3	28.5	29.0
pH	na	8.0 ± 0.1	7.8	8.1	8.1 ± 0.1	7.9	8.1

C – centigrade
na – not applicable
ppt – parts per thousand
SD – standard deviation

The sulfides and ammonia results for the 48-hr bivalve larvae toxicity test are summarized in Table 4-43. Positive control tests for copper and cadmium were conducted concurrently with the sediment toxicity tests. The EC50 value for copper and *Mytilus galloprovincialis* was 9.82 mg/L, and the EC50 value for cadmium and *Crassostrea gigas* was 1.14 mg/L.

Table 4-43. Sulfides and ammonia measurements for overlying water in the bivalve larvae sediment toxicity tests

Parameter	Unit	Round 1		Round 2	
		Minimum	Maximum	Minimum	Maximum
Dissolved sulfides	mg/L	< 0.02	< 0.1	0.004	0.155
Total ammonia-N	mg/L	< 0.1	0.4	< 0.1	0.54

4.9 SUMMARY OF TOXICITY TEST RESULTS

Table 4-44 presents results from the comparison between SMS biological effects criteria and each of the three toxicity tests. One sediment sample exceeded the SQS, and two sediment samples exceeded the CSL. According to SMS rules, if two toxicity tests exceed SQS in the same sample, the exceedances for that sample would be a CSL. This exceedance pattern did not occur in any of the samples. There is some uncertainty associated with the fact that the grain size of the reference sediments measured in the laboratory was not consistent with grain size of the same sediments measured in the field. The reference sediments contained less fines than the test sediments; therefore the test exceedances represent a conservative estimate of toxicity due to chemical concentrations, because the reference sediment did not control the effects due to elevated fines in the sediment.

Table 4-44. Summary of SMS biological effects criteria exceedances for the three toxicity tests

Sample ID	Individual Test Exceedances			Overall Exceedance
	Amphipod Test	Polychaete Test	Bivalve Larvae Test	
EW09-SS-005-010	ne	ne	ne	ne
EW09-SS-030-010	ne	ne	ne	ne
EW09-SS-032-010	ne	ne	ne	ne
EW09-SS-033-010	CSL	ne	ne	CSL
EW09-SS-034-010	ne	ne	ne	ne
EW09-SS-035-010	CSL	ne	ne	CSL
EW09-SS-217-010	ne	ne	ne	ne
EW09-SS-218-010	ne	ne	ne	ne
EW09-SS-220-010	ne	ne	ne	ne
EW09-SS-215-010	ne	ne	ne	ne
EW09-SS-015-010	ne	SQS	ne	SQS

ne – no exceedance
CSL – cleanup screening level
ID – identification
SMS – Washington State Sediment Management Standards
SQS – sediment quality standards

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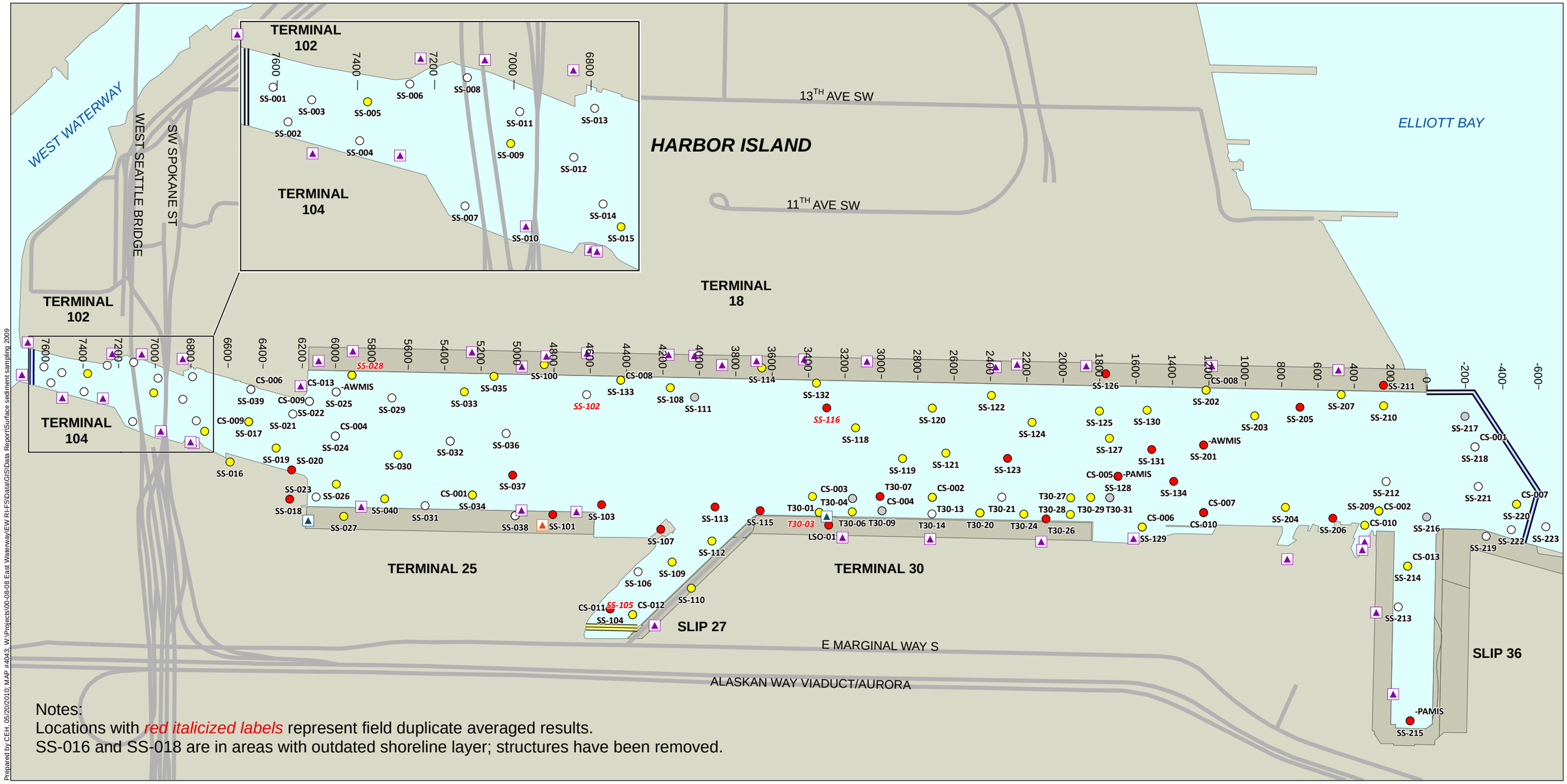

Notes:
Locations with *red italicized labels* represent field duplicate averaged results.
SS-016 and SS-018 are in areas with outdated shoreline layer; structures have been removed.

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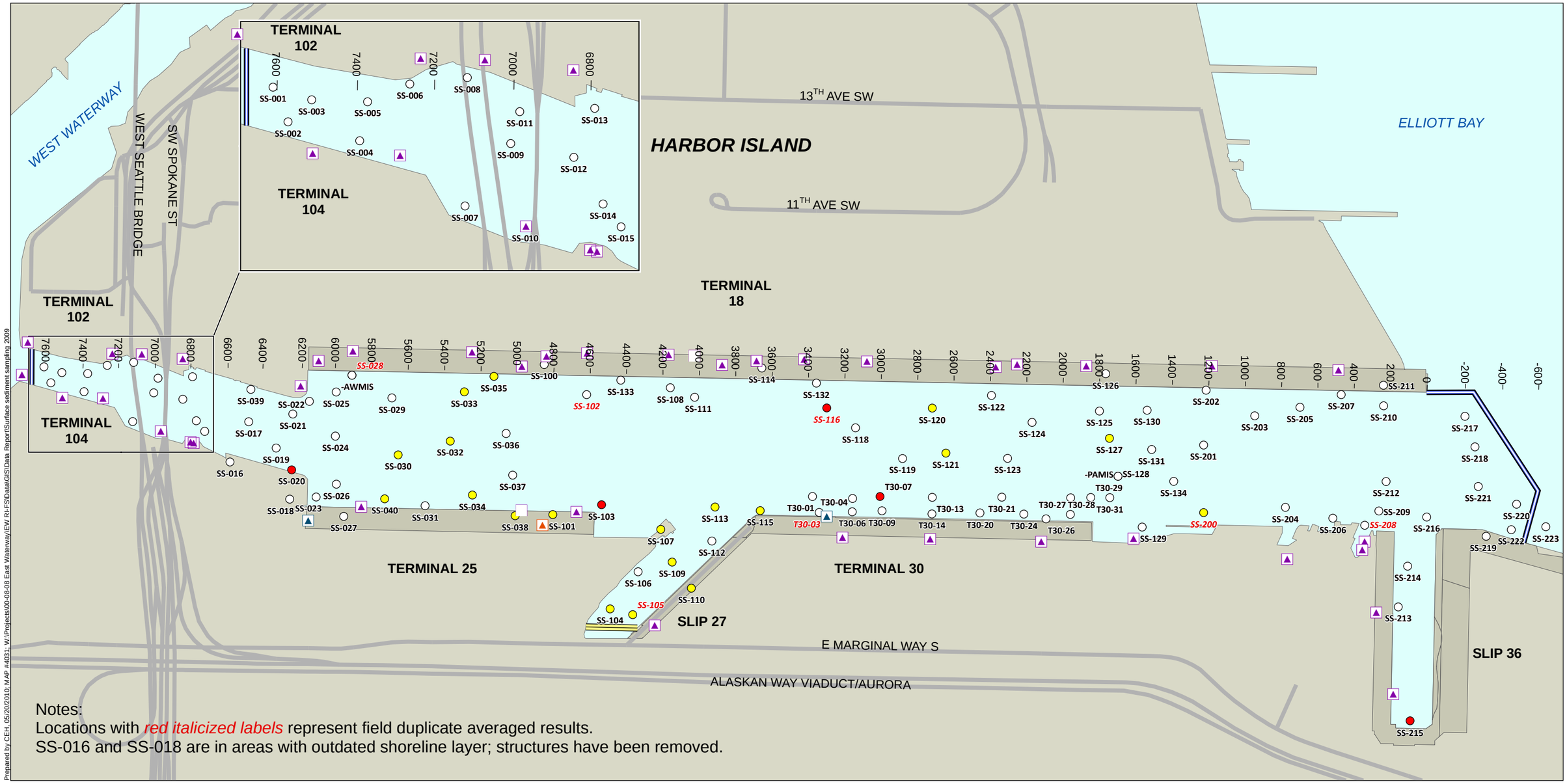
Exceedances of SQS/SL or CSL/ML
- > CSL/ML, detect
- > SQS/SL and ≤ CSL/ML, detect
- > SQS/SL and ≤ CSL/ML, non-detect
- ≤ SQS/SL, detect

- CSO
- Storm Drain
- CSO/Storm Drain
- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

0 600
Scale in feet

Map 4-1
Exceedances of SQS/SL or CSL/ML by All Chemicals in Surface Sediment Samples
Surface Sediment Draft Data Report
East Waterway Study Area



Notes:
Locations with *red italicized labels* represent field duplicate averaged results.
SS-016 and SS-018 are in areas with outdated shoreline layer; structures have been removed.

SQS/CSL Categories for Mercury in Surface Sediment
- > CSL, detect
- > SQS and ≤ CSL, detect
- ≤ SQS, detect

- CSO
- Storm Drain
- CSO/Storm Drain
- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

0 600
Scale in feet

Map 4-2
Mercury Concentrations in Surface Sediment
Samples Based on SMS Comparisons
Surface Sediment Draft Data Report
East Waterway Study Area

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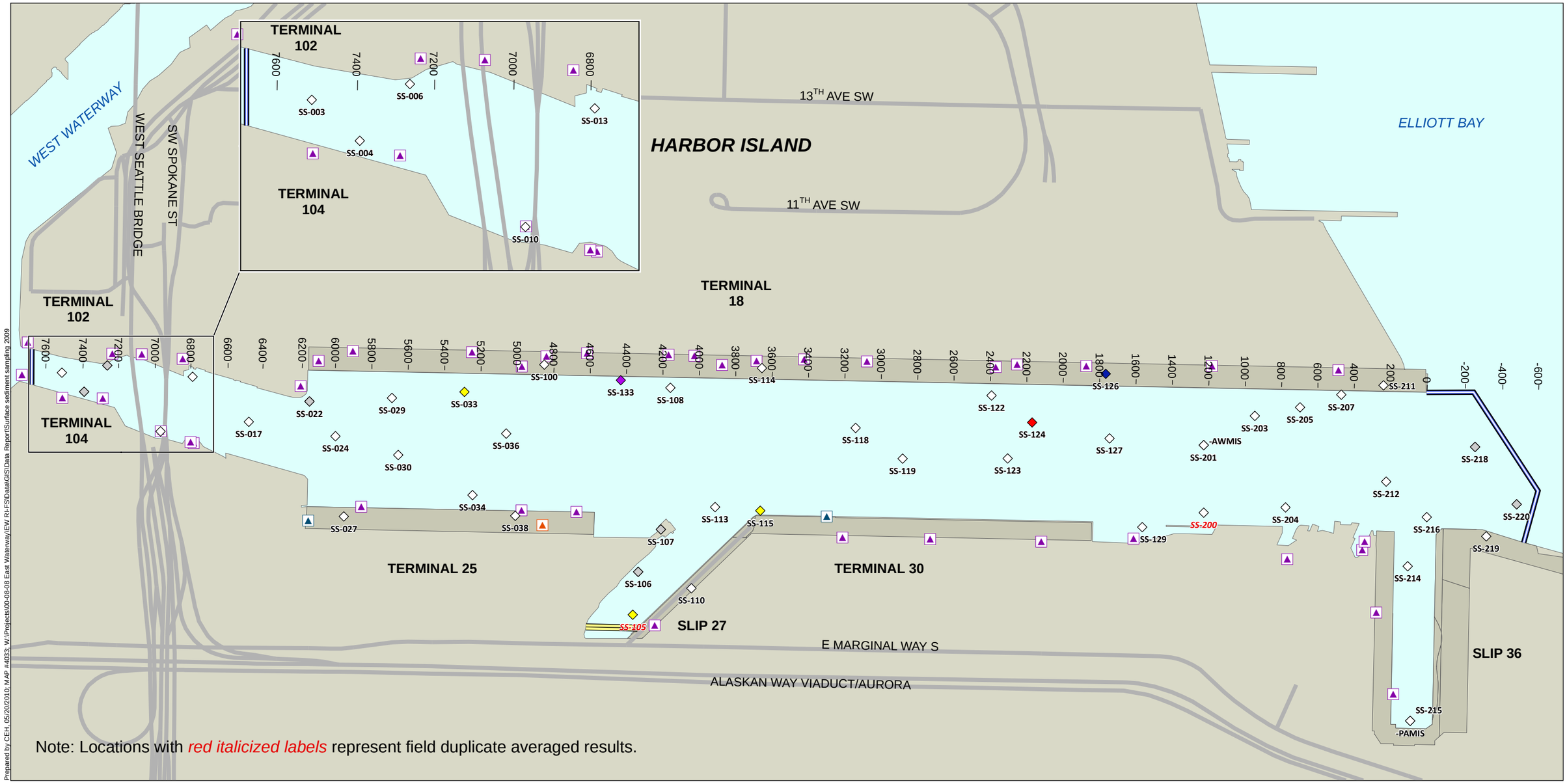

Note: Locations with *red italicized labels* represent field duplicate averaged results.

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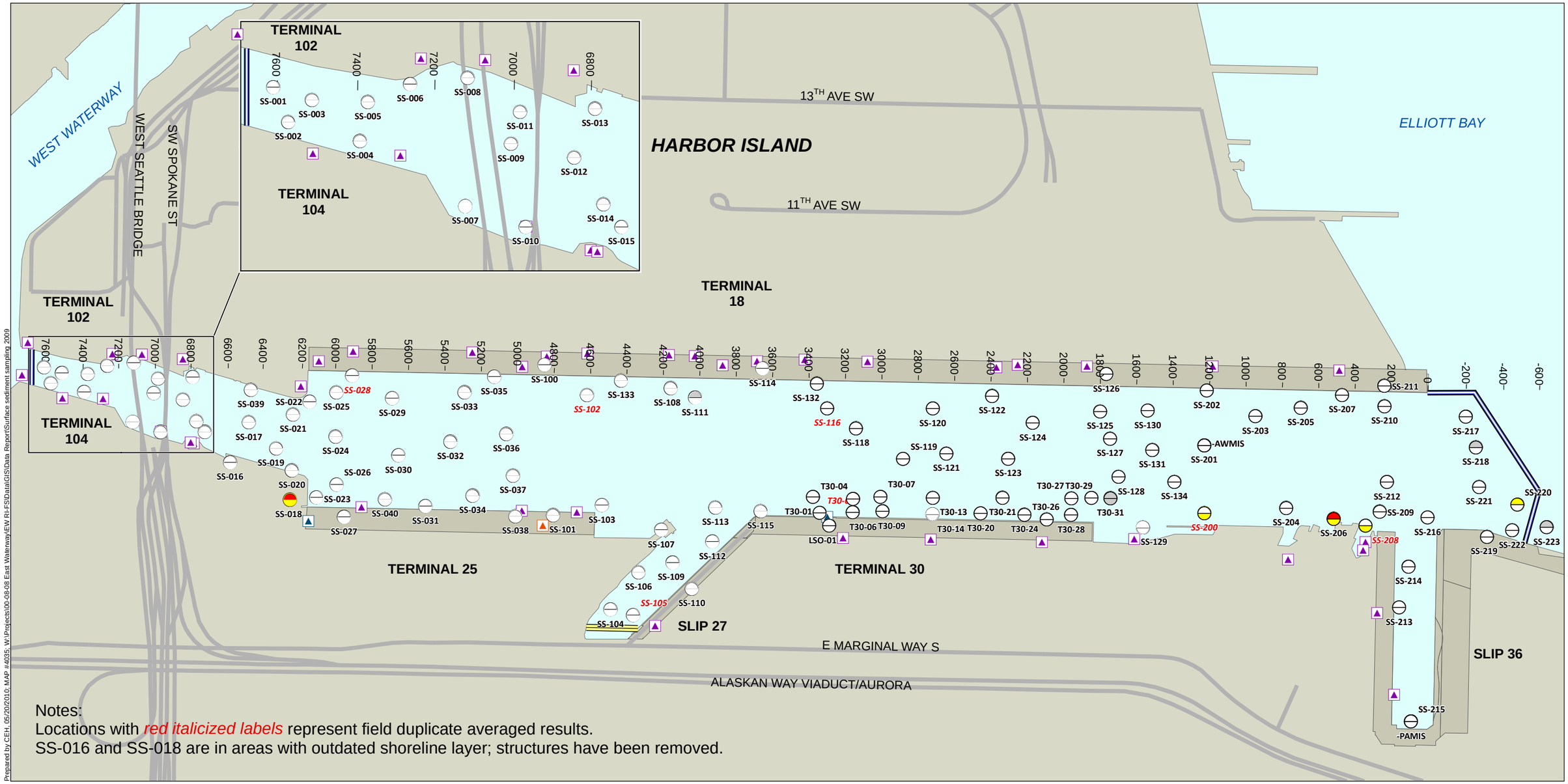
Tributyltin as Ion (µg/kg dw)[a]
Concentrations in Surface Sediment

- > 1,000 detect
- > 500 and ≤ 1,000 detect
- > 200 and ≤ 500 detect
- > 100 and ≤ 200 detect
- ≤ 100 detect
- Non-detect

- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

0 600
Scale in feet

Map 4-3
TBT Concentrations in Surface Sediment Samples
Surface Sediment Draft Data Report
East Waterway Study Area



Notes:
Locations with *red italicized labels* represent field duplicate averaged results.
SS-016 and SS-018 are in areas with outdated shoreline layer; structures have been removed.

SQS/CSL Categories for Total Low-Molecular-Weight Polycyclic Aromatic Hydrocarbons in Surface Sediment

- > CSL, detect
- > SQS and ≤ CSL, detect
- ≤ SQS, detect
- ≤ SQS, non-detect

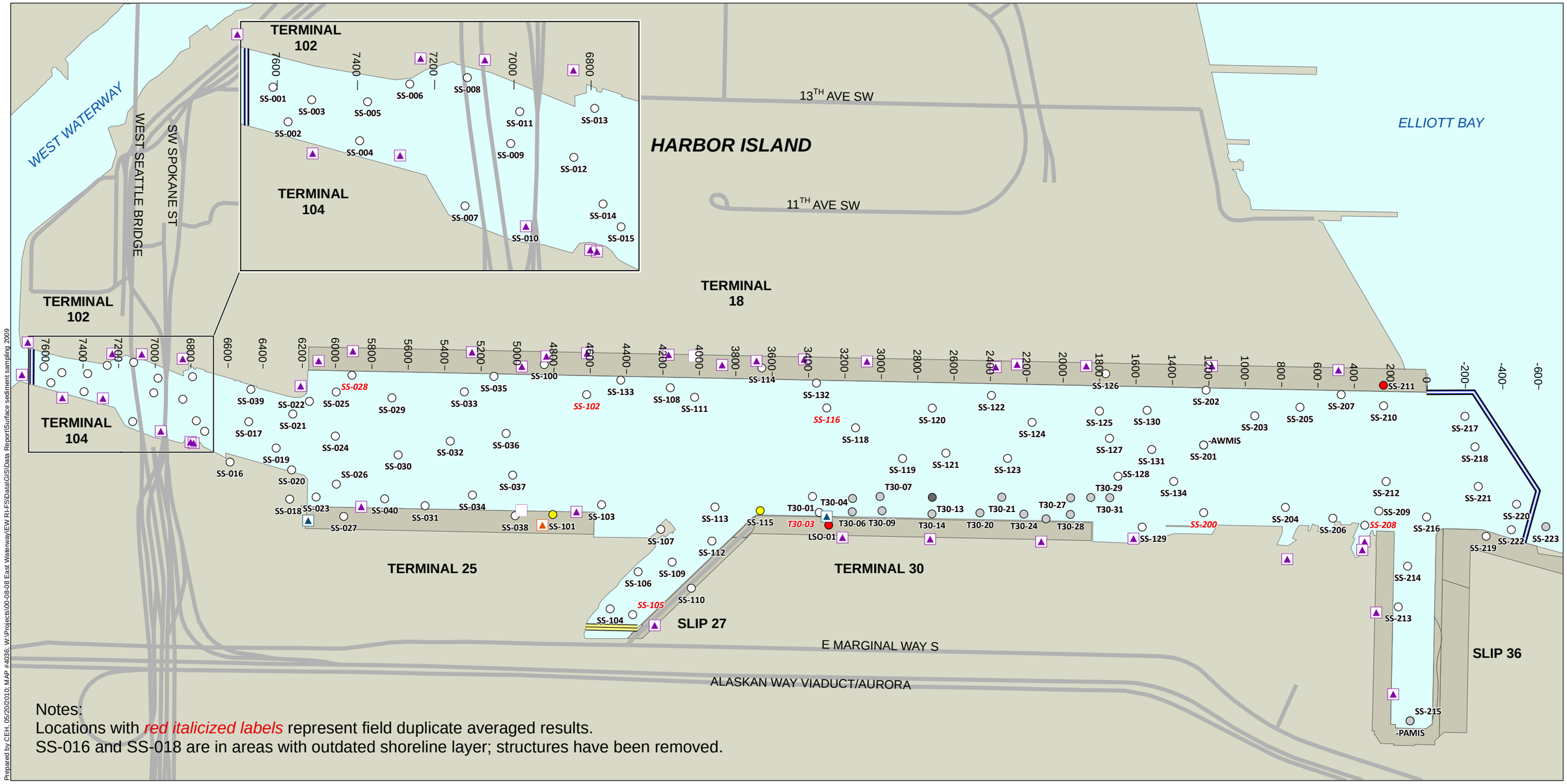
SQS/CSL Categories for Total High-Molecular-Weight Polycyclic Aromatic Hydrocarbons in Surface Sediment

- > SQS and ≤ CSL, detect
- ≤ SQS, detect
- ≤ SQS, non-detect

- CSO
- Storm Drain
- CSO/Storm Drain
- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

0 600
Scale in feet

Map 4-4
Total LPAH and Total HPAH Concentrations in Surface Sediment Samples Based on SMS Comparisons
Surface Sediment Draft Data Report
East Waterway Study Area



Notes:
Locations with *red italicized labels* represent field duplicate averaged results.
SS-016 and SS-018 are in areas with outdated shoreline layer; structures have been removed.

SQS/CSL Categories for Bis(2-ethylhexyl) phthalate in Surface Sediment

- > CSL, detect
- > SQS and ≤ CSL, detect
- > CSL, non-detect
- ≤ SQS, detect
- ≤ SQS, non-detect

- CSO
- Storm Drain
- CSO/Storm Drain
- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

0 600
Scale in feet

Map 4-5
BEHP Concentrations in Surface Sediment Samples Based on SMS Comparisons
Surface Sediment Draft Data Report
East Waterway Study Area

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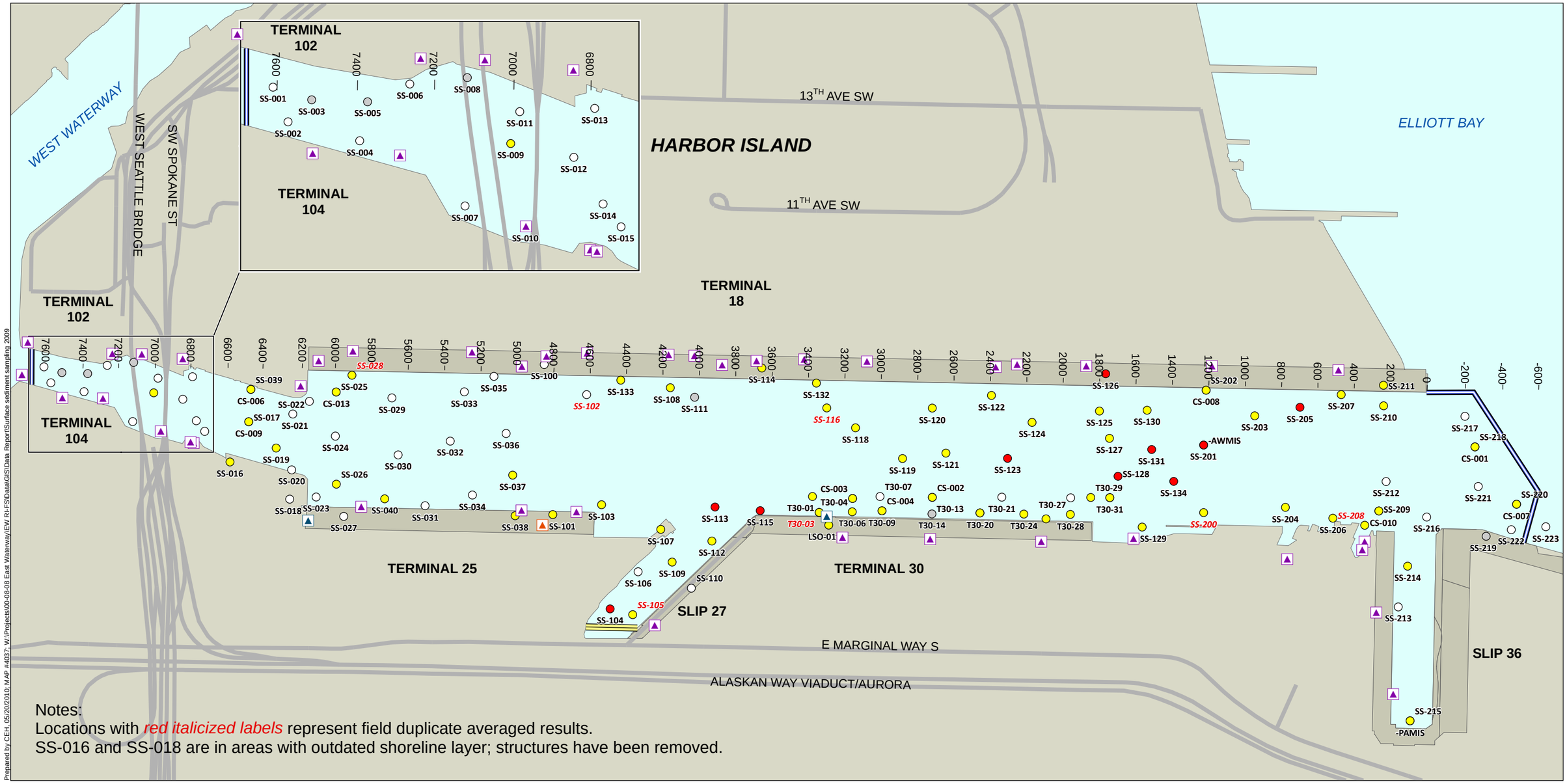

Notes:
Locations with *red italicized labels* represent field duplicate averaged results.
SS-016 and SS-018 are in areas with outdated shoreline layer; structures have been removed.

SQS/CSL Categories for Total Polychlorinated Biphenyls in Surface Sediment

- > CSL, detect
- > SQS and ≤ CSL, detect
- ≤ SQS, detect
- ≤ SQS, non-detect

- CSO
- Storm Drain
- CSO/Storm Drain
- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

0 600
Scale in feet

Map 4-6
Total PCB Concentrations in Surface Sediment Samples Based on SMS Comparisons
Surface Sediment Draft Data Report
East Waterway Study Area

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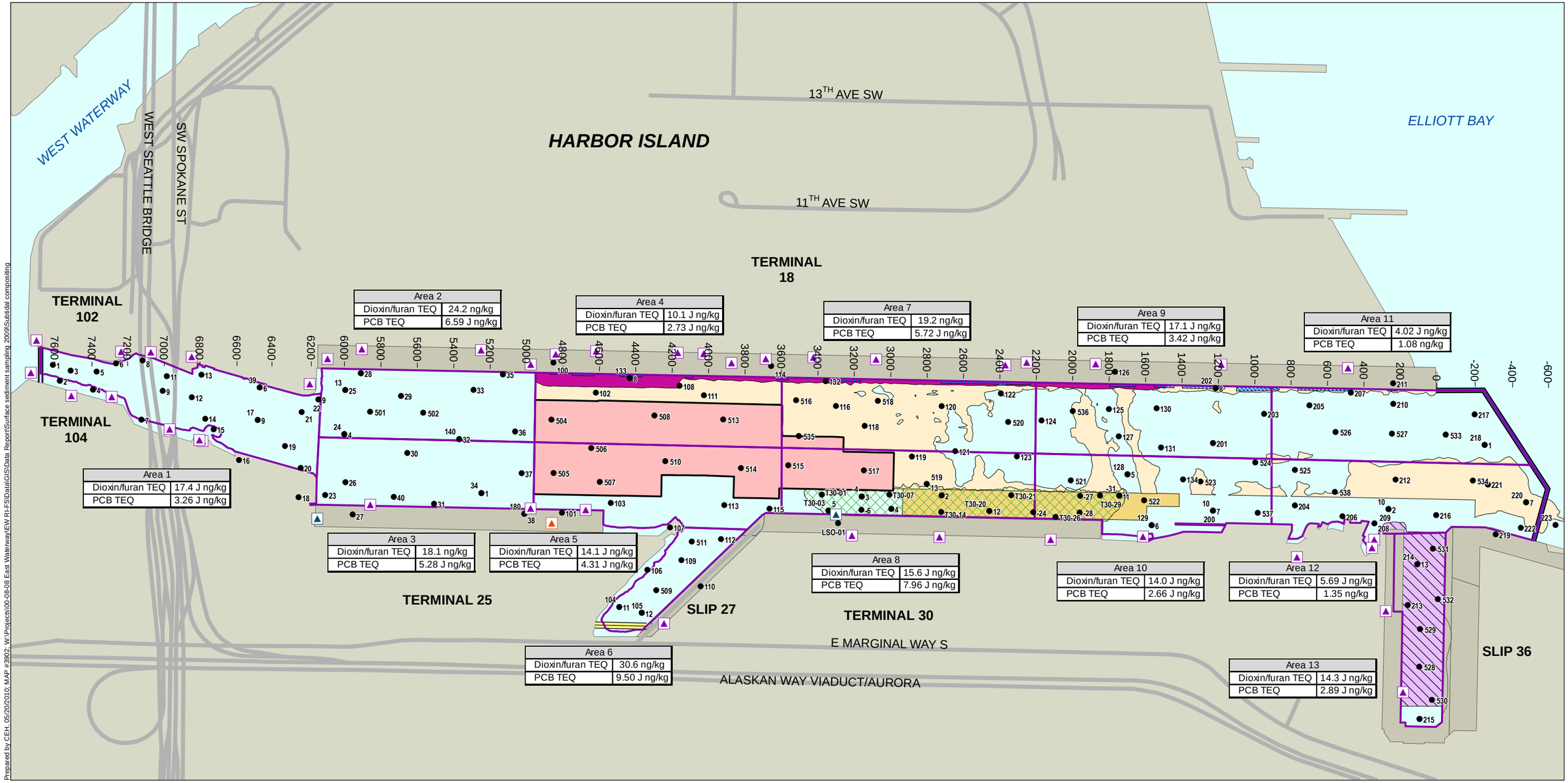

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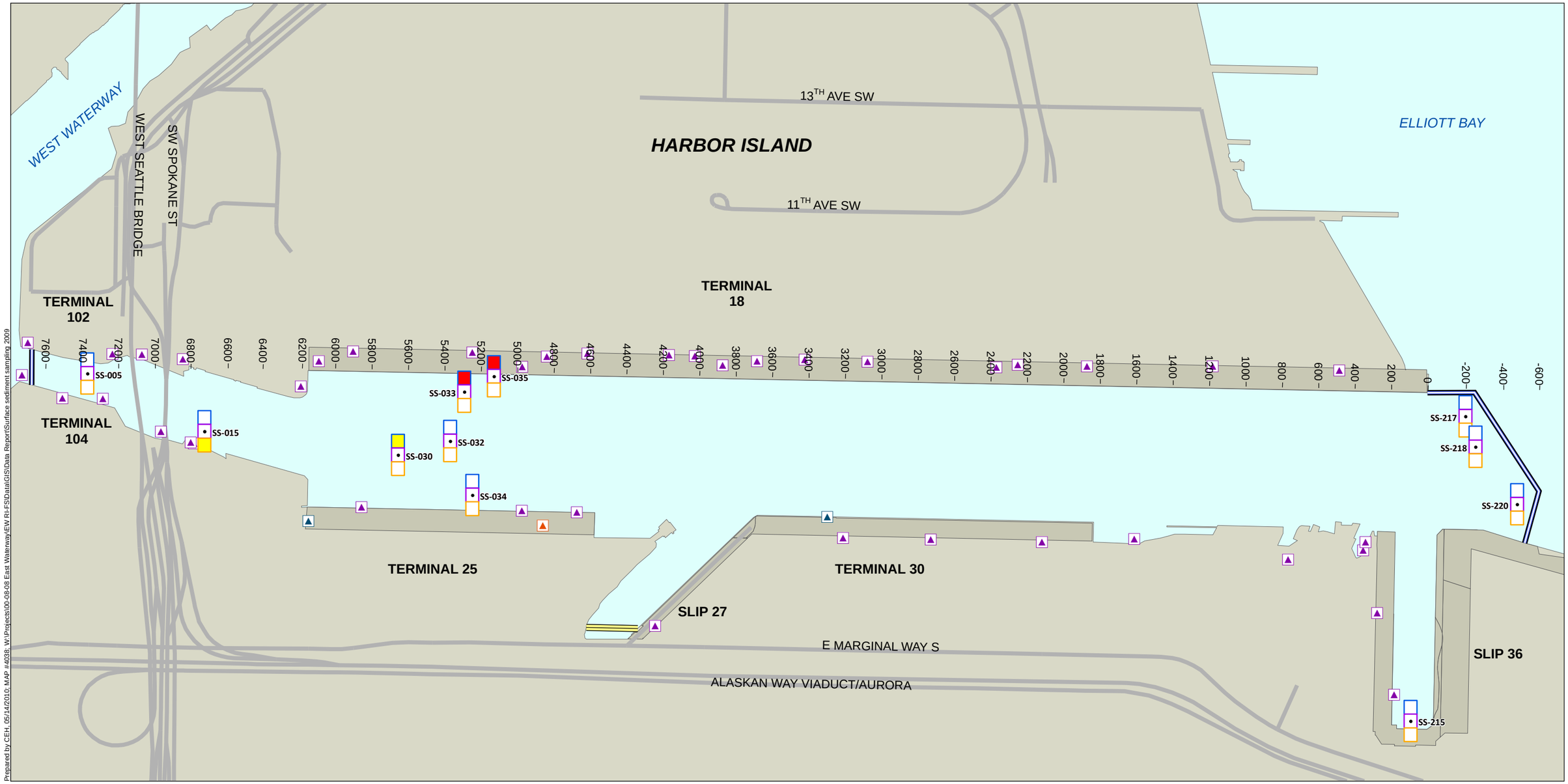
- Subtidal Composite Sampling Location
- Subtidal Composite Area with Dioxin TEQ
- CSO
- Storm Drain
- CSO/Storm Drain
- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

Dredge Events (Completion Date)

- Terminal 18 Maintenance Dredging (Completed 2009, -51 MLLW)
- Terminal 30 Maintenance Dredging (Completed 2009, -51 MLLW)
- Terminal 18 Dredging, Berths 2 through 5 (Completed 2006, -51 MLLW)
- Slip 36 Dredging (Completed 2005, -40 MLLW)
- Phase 1 Removal Action Boundary (Completed 2005, -51 MLLW)
- Stage 1 Navigational Dredging (Completed 2000, -51 MLLW)
- Terminal 30 Berth Dredging (Completed 2002, -44 MLLW)

0 600
Scale in feet

Map 4-7
Dioxin and Furan TEQs and PCB Congener TEQs in Surface Sediment
Surface Sediment Draft Data Report
East Waterway Study Area



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Toxicity Test Results

- Amphipod
- Bivalve Larvae
- Polychaete
- > CSL
- > SQS and ≤ CSL
- ≤ SQS
- CSO
- Storm Drain
- CSO/Storm Drain
- Dock/Pier
- Road
- Slip 27 Bridge
- East Waterway Study Area Boundary

0 600
Scale in feet

Map 4-8
Surface Sediment Toxicity Testing Results Relative to SMS
Surface Sediment Draft Data Report
East Waterway Study Area

APPENDIX A

Chemistry Data Tables

Appendix A Chemistry Data Tables

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Table A-1a. 2009 Round 1 and Round 2 surface sediment samples, SS-001–SS-010

Analyte	Location ID	EW09-SS-001	EW09-SS-002	EW09-SS-003	EW09-SS-004	EW09-SS-005	EW09-SS-006	EW09-SS-007	EW09-SS-008	EW09-SS-009	EW09-SS-010
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010	EW09-SS-010-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/24/09	3/4/09	6/24/09	3/4/09	6/24/09	6/24/09	3/4/09	6/23/09	6/24/09
Metals											
Antimony	mg/kg dw	10 UJ	20 UJ	20 UJ	20 UJ	20 UJ	7 UJ	9 UJ	10 UJ	9 UJ	7 UJ
Arsenic	mg/kg dw	12.7	14.3	9.8	6.7	12.6	10.2	6.1	16.5	10.7	8.4
Cadmium	mg/kg dw	0.4 U	0.7 U	0.8 U	0.6 U	0.9 U	0.3 U	0.4	0.7	0.4	0.4
Chromium	mg/kg dw	28	34	27	19	26	17.3	28.1	44	36.4	31.0
Cobalt	mg/kg dw	8.9	14	9	16	8	9.6	6.3	10.1	8.3	5.6
Copper	mg/kg dw	59.4	70.3	55.7	55.5	56.1	51.2	45.4	117	71.6	54.9
Lead	mg/kg dw	36	28	29	12	28	18	29	75	55	54
Mercury	mg/kg dw	0.18 J	0.06	0.12 J	0.03	0.16 J	0.05	0.07	0.3 J	0.20 J	0.11
Molybdenum	mg/kg dw	1 U	2 U	2 U	2 U	2 U	0.7 U	2.2	1 UJ	2.5	2.4
Nickel	mg/kg dw	20	36	24	30	18	20	21	26	21	18
Selenium	mg/kg dw	0.9 U	0.7 U	0.8 U	0.6 U	0.9 U	0.6 U	0.9 U	1 U	0.8 U	0.7 U
Silver	mg/kg dw	0.6 U	1 U	1 U	1 U	1 U	0.4 U	0.6 U	0.7 U	0.5 U	0.4 U
Thallium	mg/kg dw	0.4 U	0.3 U	0.3 U	0.2 U	0.4 U	0.2 U	0.4 U	0.5 U	0.3 U	0.3 U
Vanadium	mg/kg dw	70.5	67	65	62	63	43.5	52.3	89.7	60.3	43.7
Zinc	mg/kg dw	139	126	104	93	110	80	97	206	148 J	123
Organometals											
Monobutyltin as ion	µg/kg dw	na	na	3.6	3.6 U	na	3.7 U	na	na	na	3.6 U
Dibutyltin as ion	µg/kg dw	na	na	5.1 U	5.1 U	na	5.2 U	na	na	na	11
Tributyltin as ion	µg/kg dw	na	na	19	3.4 U	na	3.5 U	na	na	na	12
PAHs											
1-Methylnaphthalene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	17 J	20 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	32	20 U
Acenaphthene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	49	14 J
Acenaphthylene	µg/kg dw	20 U	20 U	19 U	19 U	42	19 U	13 J	37	31	24
Anthracene	µg/kg dw	20 U	13 J	55	19 U	120	30	53	210	160	100
Benzo(a)anthracene	µg/kg dw	55	37	130	26	500	93	120	380	300	200
Benzo(a)pyrene	µg/kg dw	55	43	120	29	400	92	150	470	360	370
Benzo(b)fluoranthene	µg/kg dw	88	60	180	36	800	130	200	680	680	440

Table A-1a, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-001–SS-010

Analyte	Location ID	EW09-SS-001	EW09-SS-002	EW09-SS-003	EW09-SS-004	EW09-SS-005	EW09-SS-006	EW09-SS-007	EW09-SS-008	EW09-SS-009	EW09-SS-010
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010	EW09-SS-010-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/24/09	3/4/09	6/24/09	3/4/09	6/24/09	6/24/09	3/4/09	6/23/09	6/24/09
Benzo(g,h,i)perylene	µg/kg dw	20 U	26	46 J	14 J	130 J	27	42	140 J	110 J	100
Benzo(k)fluoranthene	µg/kg dw	69	60	210	36	760	130	200	560	420	440
Total benzofluoranthenes	µg/kg dw	157	120	390	72	1,560	260	400	1,240	1,100	880
Chrysene	µg/kg dw	92	73	330	49	1,400	220	330	1,000	640	420
Dibenzo(a,h)anthracene	µg/kg dw	20 U	10 J	19 U	19 U	57	14 J	19 J	65	41 J	49
Dibenzofuran	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20	43	13 J
Fluoranthene	µg/kg dw	110	82	550	49	5,000	200	240	840	1,100	430
Fluorene	µg/kg dw	20 U	20 U	19 U	19 U	20	10 J	13 J	46	69	23
Indeno(1,2,3-cd)pyrene	µg/kg dw	20 J	27	48	14 J	150	30	46	160	110	100
Naphthalene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	13 J	20 U	86	13 J
Phenanthrene	µg/kg dw	57	46	160	35	330	72	97	300	390	200
Pyrene	µg/kg dw	83	72	380	45	2,400	140	210	980	850	490
Total HPAHs	µg/kg dw	570 J	490 J	1,990 J	298 J	11,600 J	1,080 J	1,560 J	5,300 J	4,600 J	3,040
Total LPAHs	µg/kg dw	57	59 J	220	35	510	112 J	189 J	590	790	370 J
Total cPAHs	µg/kg dw	83.0 J	66.0 J	180	44.0 J	660	138 J	220 J	680	530 J	510
Total PAHs	µg/kg dw	630 J	549 J	2,210 J	333 J	12,100 J	1,190 J	1,750 J	5,900 J	5,400 J	3,410 J
Phthalates											
Bis(2-ethylhexyl)phthalate	µg/kg dw	100	64	230	74	330	52	210	540	430	520
Butyl benzyl phthalate	µg/kg dw	29	15 U	18	15 U	15 U	15 U	20 J	27	51	76
Diethyl phthalate	µg/kg dw	36	20 J	15 U	15 U	15 U	15 U	15 U	15 U	15 U	20 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	30	15 U	15 U	28	39
Di-n-butyl phthalate	µg/kg dw	20 U	280	19 U	19 U	20 U	19 U	42	20 U	20 U	48,000
Di-n-octyl phthalate	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	24
Other SVOCs											
1,2,4-Trichlorobenzene	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	3.0 UJ	6.1 U	6.1 U	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	6.1 U	6.1 U	6.1 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	6.1 U	6.1 U	10
2,4,5-Trichlorophenol	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
2,4-Dichlorophenol	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
2,4-Dimethylphenol	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	6.1 U	6.1 U	6.1 U

Table A-1a, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-001–SS-010

Analyte	Location ID	EW09-SS-001	EW09-SS-002	EW09-SS-003	EW09-SS-004	EW09-SS-005	EW09-SS-006	EW09-SS-007	EW09-SS-008	EW09-SS-009	EW09-SS-010
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010	EW09-SS-010-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/24/09	3/4/09	6/24/09	3/4/09	6/24/09	6/24/09	3/4/09	6/23/09	6/24/09
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	190 U	190 U	200 U	190 U	210 U	200 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
2,6-Dinitrotoluene	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
2-Chlorophenol	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
2-Methylphenol	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	6.1 U	6.1 U	6.1 U
2-Nitroaniline	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
2-Nitrophenol	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	99 U	100 U	96 U	97 U	98 U	R	100 U	100 U	98 U	98 U
3-Nitroaniline	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	190 U	190 U	200 U	190 U	210 U	200 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
4-Chloroaniline	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
4-Methylphenol	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
4-Nitroaniline	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
4-Nitrophenol	µg/kg dw	99 U	100 U	96 UJ	97 U	98 UJ	96 U	100 U	100 UJ	98 U	98 U
Aniline	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 UJ	21 U	20 U	R	20 U
Benzoic acid	µg/kg dw	200 U	230	190 U	190 U	200 U	260	210 U	200 U	200 UJ	200 U
Benzyl alcohol	µg/kg dw	20 U	20 U	19 UJ	19 U	20 UJ	19 U	21 U	20 UJ	20 U	20 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
Carbazole	µg/kg dw	20 U	20 U	28	19 U	83	15 J	23	68	95	58
Hexachlorobenzene	µg/kg dw	6.1 U	6.1 U	6.0 U	3.0 UJ	6.2 U	1.7 UJ	6.1 U	0.99 U	6.1 U	6.1 U
Hexachlorobutadiene	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	0.99 U	6.1 U	6.1 U
Hexachlorocyclopentadiene	µg/kg dw	99 U	100 U	96 U	97 U	98 U	96 U	100 U	100 U	98 U	98 U
Hexachloroethane	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
Isophorone	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	31 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	31 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	6.1 U	6.1 U	6.1 U

Table A-1a, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-001–SS-010

Analyte	Location ID	EW09-SS-001	EW09-SS-002	EW09-SS-003	EW09-SS-004	EW09-SS-005	EW09-SS-006	EW09-SS-007	EW09-SS-008	EW09-SS-009	EW09-SS-010
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010	EW09-SS-010-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/24/09	3/4/09	6/24/09	3/4/09	6/24/09	6/24/09	3/4/09	6/23/09	6/24/09
Nitrobenzene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U	20 U
Pentachlorophenol	µg/kg dw	31 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U	30 U
Phenol	µg/kg dw	24	20 U	26	32	22	15 J	58	47	82 JN	320
PCBs											
Aroclor-1016	µg/kg dw	20 U	4.0 U	19 U	3.9 U	19 U	3.9 U	76 U	20 U	28 U	110 U
Aroclor-1221	µg/kg dw	20 U	4.0 U	19 U	3.9 U	19 U	3.9 U	76 U	20 U	28 U	110 U
Aroclor-1232	µg/kg dw	24 U	4.0 U	19 U	3.9 U	19 U	3.9 U	76 U	20 U	28 U	110 U
Aroclor-1242	µg/kg dw	20 U	4.0 U	19 U	3.9 U	19 U	3.9 U	76 U	20 U	28 U	110 U
Aroclor-1248	µg/kg dw	31	4.0 U	19 U	3.9 U	19 U	3.9 U	76 U	20 U	130	110 U
Aroclor-1254	µg/kg dw	51	11	19 U	7.2	19 U	9.7	100	20 U	230	330
Aroclor-1260	µg/kg dw	62	16	19 U	11	19 U	14	260	20 U	190	800
Aroclor-1262	µg/kg dw	20 U	4.0 U	19 U	3.9 U	19 U	3.9 U	76 U	20 U	28 U	110 U
Aroclor-1268	µg/kg dw	20 U	4.0 U	19 U	3.9 U	19 U	3.9 U	76 U	20 U	28 U	110 U
Total PCBs	µg/kg dw	144	27	19 U	18	19 U	24	360	20 U	550	1,130
Pesticides											
2,4'-DDD	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
2,4'-DDE	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
2,4'-DDT	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
4,4'-DDD	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
4,4'-DDE	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
4,4'-DDT	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Total DDTs	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Aldrin	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
Dieldrin	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
alpha-BHC	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
beta-BHC	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
gamma-BHC	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
delta-BHC	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
alpha-Chlordane	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
gamma-Chlordane	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
Total chlordane	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
alpha-Endosulfan	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na

Table A-1a, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-001–SS-010

Analyte	Location ID	EW09-SS-001	EW09-SS-002	EW09-SS-003	EW09-SS-004	EW09-SS-005	EW09-SS-006	EW09-SS-007	EW09-SS-008	EW09-SS-009	EW09-SS-010
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010	EW09-SS-010-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/24/09	3/4/09	6/24/09	3/4/09	6/24/09	6/24/09	3/4/09	6/23/09	6/24/09
beta-Endosulfan	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Endosulfan sulfate	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Endrin	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Endrin aldehyde	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Endrin ketone	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Heptachlor	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
Heptachlor epoxide	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na	na
Methoxychlor	µg/kg dw	na	na	na	na	na	na	na	9.9 U	na	na
Mirex	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
cis-Nonachlor	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Oxychlordane	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Toxaphene	µg/kg dw	na	na	na	na	na	na	na	99 U	na	na
trans-Nonachlor	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na	na
Grain size											
Fractional % phi >-1 (>2000 microns)	% dw	3.3	23.3	12.6	53.7	29.8	68.1	67.7	0.7	3.6	36.7
Fractional % phi -1-0 (1000-2000 microns)	% dw	2.5	8.0	6.8	9.3	11.3	8.6	1.8	0.8	2.8	6.2
Fractional % phi 0-1 (500-1000 microns)	% dw	1.8	9.6	6.2	6.0	3.5	6.1	2.8	0.8	7.1	7.1
Fractional % phi 1-2 (250-500 microns)	% dw	24.2	21.4	15.2	8.9	3.6	5.6	6.4	1.0	24.7	15.5
Fractional % phi 2-3 (125-250 microns)	% dw	9.2	16.2	11.9	10.7	4.1	2.9	4.4	1.8	17.1	10.2
Fractional % phi 3-4 (62.5-125 microns)	% dw	4.1	3.4	4.1	2.9	2.3	0.9	3.3	5.3	6.3	7.7
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	4.8	1.3	6.3	2.2	3.1	0.5	0.8	7.6	3.0	4.2
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	5.7	2.6	3.9	0.3	6.8	1.1	3.8	13.4	6.1	2.8
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	10.3	2.8	8.5	1.1	9.4	1.2	3.0	16.6	9.1	2.0
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	10.6	3.1	7.7	1.3	8.1	1.4	1.8	18.5	5.9	2.1

Table A-1a, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-001–SS-010

Analyte	Location ID	EW09-SS-001	EW09-SS-002	EW09-SS-003	EW09-SS-004	EW09-SS-005	EW09-SS-006	EW09-SS-007	EW09-SS-008	EW09-SS-009	EW09-SS-010
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010	EW09-SS-010-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/24/09	3/4/09	6/24/09	3/4/09	6/24/09	6/24/09	3/4/09	6/23/09	6/24/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	7.9	2.8	5.5	1.2	5.6	1.1	1.2	10.8	3.8	1.8
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	5.9	2.5	4.3	1.0	4.5	1.1	1.1	8.8	4.1	1.5
Fractional % phi 10+ (<0.98 micron)	% dw	9.5	3.0	7.1	1.4	7.8	1.4	2.0	13.9	6.4	2.2
Total gravel	% dw	3.3	23.3	12.6	53.7	29.8	68.1	67.7	0.7	3.6	36.7
Total sand	% dw	41.8	58.6	44.2	37.8	24.8	24.1	18.7	9.7	58.0	46.7
Total silt	% dw	31.4	9.8	26.4	4.9	27.4	4.2	9.4	56.1	24.1	11.1
Total clay	% dw	23.3	8.3	16.9	3.6	17.9	3.6	4.3	33.5	14.3	5.5
Total fines (percent silt+clay)	% dw	54.7	18.1	43.3	8.5	45.3	7.8	13.7	89.6	38.4	16.6
Conventionals											
Ammonia	mg-N/kg dw	6.16	2.30	7.79	5.51	9.11	3.06	15.6	6.48	4.64	4.73
Total organic carbon (TOC)	% dw	1.69	1.68	1.75	1.19	1.86	0.716	2.91	2.37	2.57	1.83
Total solids	% ww	53.90	70.00	55.20	72.10	49.30	70.00	61.00	44.10	60.10	70.00
Total solids (preserved)	% ww	38.23	62.50	44.80	71.80	42.20	66.80	62.40	40.20	59.80	74.60
Total sulfides	mg/kg dw	8.65 J	28.2	92.0 J	6.16	7.15 J	22.8	313	1,290 J	656 J	14.8

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1b. 2009 Round 1 and Round 2 surface sediment samples, SS-010–SS-020

Analyte	Location ID	EW09-SS-011	EW09-SS-012	EW09-SS-013	EW09-SS-014	EW09-SS-015	EW09-SS-016	EW09-SS-017	EW09-SS-018	EW09-SS-019	EW09-SS-020
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010	EW09-SS-019-010	EW09-SS-020-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/23/09	3/4/09	3/5/09	6/23/09	6/22/09	6/22/09	6/22/09	3/5/09	3/4/09
Metals											
Antimony	mg/kg dw	8 UJ	30 UJ	20 UJ	9 UJ	20 UJ	7 UJ	9 UJ	20 UJ	10 UJ	10 UJ
Arsenic	mg/kg dw	19.6	6.0	10.1	13.8	8.2	4.8	14.0	5.8	13.9	12.9
Cadmium	mg/kg dw	0.5	1 U	0.8 U	0.4	0.8 U	0.3 U	0.7	0.7 U	0.7	0.8
Chromium	mg/kg dw	30.2	8	16	29.2	23	33.6	37.2	25	39	34
Cobalt	mg/kg dw	6.9	4	5	7.7	5	6.6 J	9.4	6 J	9.1	8.1
Copper	mg/kg dw	73.5	21	36.0	66.8	43.9	38.6 J	73.4	35.2	93.6	83.9
Lead	mg/kg dw	88	10 U	20	50	32	35 J	68	88 J	60	54
Mercury	mg/kg dw	0.20 J	0.02 J	0.08 J	0.30 J	0.11 J	0.08	0.25 J	0.11	0.3 J	0.75 J
Molybdenum	mg/kg dw	0.8 UJ	3	2 U	1.6 J	3	2.7 J	1.8	4 J	3	1 UJ
Nickel	mg/kg dw	18	6 U	10	20	15	26	23	20	26	21
Selenium	mg/kg dw	0.8 U	0.6 U	0.8 U	0.9 U	0.8 U	0.7 U	0.9 U	0.7 U	1 U	1 U
Silver	mg/kg dw	0.5 U	2 U	1 U	0.5 U	1 U	0.4 U	0.6	6	0.6 U	0.6 U
Thallium	mg/kg dw	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.4 U	0.3 U	0.4 U	0.4 U
Vanadium	mg/kg dw	57.5	24	44	60.7	41	46.6	64.1	38	70.4	67.7
Zinc	mg/kg dw	138	31 J	65	127	89 J	94 J	148	235 J	205	155
Organometals											
Monobutyltin as ion	µg/kg dw	na	na	3.4 U	na	na	na	7.6	na	na	na
Dibutyltin as ion	µg/kg dw	na	na	4.8 U	na	na	na	22	na	na	na
Tributyltin as ion	µg/kg dw	na	na	4.1	na	na	na	80 J	na	na	na
PAHs											
1-Methylnaphthalene	µg/kg dw	19 U	20 U	20	19 U	90	20 U	20 U	2,700	20 U	20 U
2-Chloronaphthalene	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	19 U	20 U	33	19 U	120	20 U	20 U	2,800	20 U	20 U
Acenaphthene	µg/kg dw	28	18 J	120	19 U	230	32	20 U	3,000	21	60
Acenaphthylene	µg/kg dw	22	20 U	19 U	19 U	70	89	25	350	32	73
Anthracene	µg/kg dw	87	110	240	120	290	290	120	6,500	160	390
Benzo(a)anthracene	µg/kg dw	190	290	510	170	430	410	270	9,000	290	740
Benzo(a)pyrene	µg/kg dw	360	230	480	200	480	440	300	7,800	280	760
Benzo(b)fluoranthene	µg/kg dw	380	200	580	280	870	420	330	5,400	410	890

Table A-1b, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-010–SS-020

Analyte	Location ID	EW09-SS-011	EW09-SS-012	EW09-SS-013	EW09-SS-014	EW09-SS-015	EW09-SS-016	EW09-SS-017	EW09-SS-018	EW09-SS-019	EW09-SS-020
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010	EW09-SS-019-010	EW09-SS-020-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/23/09	3/4/09	3/5/09	6/23/09	6/22/09	6/22/09	6/22/09	3/5/09	3/4/09
Benzo(g,h,i)perylene	µg/kg dw	110 J	74	230 J	81 J	140	100	110	1,800	84 J	330 J
Benzo(k)fluoranthene	µg/kg dw	380	200	480	200	520	420	330	5,400	280	740
Total benzofluoranthenes	µg/kg dw	760	400	1,060	480	1,390	840	660	10,800	690	1,630
Chrysene	µg/kg dw	450	320	780	360	1,200	590	460	11,000	450	1,400
Dibenzo(a,h)anthracene	µg/kg dw	41	33	120	35 J	58 J	27	49	690	31 J	140 J
Dibenzofuran	µg/kg dw	19 U	14 J	98	19 U	330	26	20 U	1,100	21	46
Fluoranthene	µg/kg dw	500	780	1,200	410	2,900	830	540	20,000	620	2,100
Fluorene	µg/kg dw	25	20 J	140	24	290	65	29	3,800	49	110
Indeno(1,2,3-cd)pyrene	µg/kg dw	120	86	260	82 J	150	110	110	1,800	92 J	330 J
Naphthalene	µg/kg dw	19 U	20 U	33	19 U	210	20 U	21	3,000	20 U	22
Phenanthrene	µg/kg dw	240	210	980	120	3,400	310	220	24,000	240	740
Pyrene	µg/kg dw	730	470	860	240	1,600	820	520	20,000	450	1,500
Total HPAHs	µg/kg dw	3,260 J	2,680	5,500 J	2,060 J	8,300 J	4,170	3,020	83,000	2,990 J	8,900 J
Total LPAHs	µg/kg dw	400	360 J	1,510	260	4,500	790	420	41,000	500	1,400
Total cPAHs	µg/kg dw	490	320	720	290 J	710 J	590	430	10,300	400 J	1,100 J
Total PAHs	µg/kg dw	3,660 J	3,040 J	7,000 J	2,320 J	12,800 J	4,950	3,430	124,000	3,490 J	10,300 J
Phthalates											
Bis(2-ethylhexyl)phthalate	µg/kg dw	370	36	130	190	220	200	410	300	180	240
Butyl benzyl phthalate	µg/kg dw	18	15 U	15 U	26	47	15 U	21	15 U	22	27
Diethyl phthalate	µg/kg dw	19 U	15 U	19 U	19 U	15 U	20 U	16 U	46 U	20 U	15 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	19 U	20 U	19 U	19 U	20 U	55	20 U	59 U	20 U	20 U
Di-n-octyl phthalate	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
Other SVOCs											
1,2,4-Trichlorobenzene	µg/kg dw	5.9 U	5.8 U	5.9 U	6.1 U	6.1 U	6.0 U	6.1 U	5.9 U	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/kg dw	5.9 U	5.8 U	5.9 U	6.1 U	6.1 U	6.0 U	6.1 U	5.9 U	6.1 U	6.1 U
1,3-Dichlorobenzene	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	5.9 U	5.8 U	5.9 U	13	6.7	6.0 U	14	5.9 U	20	15
2,4,5-Trichlorophenol	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
2,4-Dichlorophenol	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
2,4-Dimethylphenol	µg/kg dw	16	5.8 U	5.9 U	6.1 U	6.1 U	6.0 U	6.1 U	15	6.1 U	6.1 U

Table A-1b, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-010–SS-020

Analyte	Location ID	EW09-SS-011	EW09-SS-012	EW09-SS-013	EW09-SS-014	EW09-SS-015	EW09-SS-016	EW09-SS-017	EW09-SS-018	EW09-SS-019	EW09-SS-020
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010	EW09-SS-019-010	EW09-SS-020-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/23/09	3/4/09	3/5/09	6/23/09	6/22/09	6/22/09	6/22/09	3/5/09	3/4/09
2,4-Dinitrophenol	µg/kg dw	190 U	200 U	190 U	190 U	200 U	200 U	200 U	590 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
2,6-Dinitrotoluene	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
2-Chlorophenol	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
2-Methylphenol	µg/kg dw	21	5.8 U	5.9 U	6.1 U	6.1 U	6.0 U	6.1 U	13	6.1 U	6.1 U
2-Nitroaniline	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
2-Nitrophenol	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
3-Nitroaniline	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
4,6-Dinitro-o-cresol	µg/kg dw	190 U	200 U	190 U	190 U	200 U	200 U	200 U	590 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
4-Chloroaniline	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
4-Chlorophenyl phenyl ether	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
4-Methylphenol	µg/kg dw	19 U	20 U	21	19 U	20 U	20 U	20 U	76	20 U	30
4-Nitroaniline	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
4-Nitrophenol	µg/kg dw	96 UJ	99 U	96 UJ	96 U	100 U	98 U	100 U	290 U	98 U	98 UJ
Aniline	µg/kg dw	19 U	R	19 U	19 U	R	20 UJ	20 U	59 UJ	20 U	20 U
Benzoic acid	µg/kg dw	190 U	200 UJ	190 U	190 U	200 UJ	200 U	200 U	590 U	200 U	200 U
Benzyl alcohol	µg/kg dw	19 UJ	20 U	19 UJ	19 U	20 U	20 U	20 U	30 U	20 U	20 UJ
bis(2-chloroethoxy)methane	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
Carbazole	µg/kg dw	50	15 J	170	36	260	66	42	2,200	35	110
Hexachlorobenzene	µg/kg dw	0.97 U	5.8 U	0.97 U	6.1 U	5.0 U	6.0 U	6.1 U	5.9 U	6.1 U	6.1 U
Hexachlorobutadiene	µg/kg dw	0.97 U	5.8 U	0.97 U	6.1 U	5.0 U	6.0 U	6.1 U	5.9 U	6.1 U	6.1 U
Hexachlorocyclopentadiene	µg/kg dw	96 U	99 U	96 U	96 U	100 U	98 U	100 U	290 U	98 U	98 U
Hexachloroethane	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
Isophorone	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	29 U	29 U	31 U	30 U	30 U	31 U	30 U	30 U	31 U
n-Nitrosodimethylamine	µg/kg dw	30 U	29 U	29 U	31 U	30 U	30 U	31 U	30 U	30 U	31 U
n-Nitrosodiphenylamine	µg/kg dw	5.9 U	8.2 U	5.9 U	6.1 U	6.1 U	6.0 U	6.1 U	47 U	6.1 U	6.1 U

Table A-1b, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-010–SS-020

Analyte	Location ID	EW09-SS-011	EW09-SS-012	EW09-SS-013	EW09-SS-014	EW09-SS-015	EW09-SS-016	EW09-SS-017	EW09-SS-018	EW09-SS-019	EW09-SS-020
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010	EW09-SS-019-010	EW09-SS-020-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/23/09	3/4/09	3/5/09	6/23/09	6/22/09	6/22/09	6/22/09	3/5/09	3/4/09
Nitrobenzene	µg/kg dw	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U	20 U	20 U
Pentachlorophenol	µg/kg dw	30 U	29 U	29 U	31 U	30 U	30 U	31 U	30 U	30 U	31 U
Phenol	µg/kg dw	19 U	20 U	270	19 U	20 U	20 U	68	140	20 U	20
PCBs											
Aroclor-1016	µg/kg dw	20 U	4.0 U	19 U	20 U	13 U	23 U	16 U	10 U	200 U	19 U
Aroclor-1221	µg/kg dw	20 U	4.0 U	19 U	20 U	13 U	23 U	16 U	10 U	200 U	19 U
Aroclor-1232	µg/kg dw	20 U	4.0 U	19 U	20 U	13 U	23 U	16 U	10 U	200 U	19 U
Aroclor-1242	µg/kg dw	20 U	4.0 U	19 U	21	13 U	51	16 U	10 U	200 U	19 U
Aroclor-1248	µg/kg dw	34	15	35	20 U	48	23 U	160	25	200 U	19 U
Aroclor-1254	µg/kg dw	42	32	57	84	120	370	250	92	200 U	19 U
Aroclor-1260	µg/kg dw	46	31	87	130	170	420	240	140	360	29
Aroclor-1262	µg/kg dw	20 U	4.0 U	19 U	20 U	13 U	23 U	16 U	10 U	200 U	19 U
Aroclor-1268	µg/kg dw	20 U	4.0 U	19 U	20 U	13 U	23 U	16 U	10 U	200 U	19 U
Total PCBs	µg/kg dw	122	78	179	240	340	840	650	260	360	29
Pesticides											
2,4'-DDD	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
2,4'-DDE	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
2,4'-DDT	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
4,4'-DDD	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
4,4'-DDE	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
4,4'-DDT	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Total DDTs	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Aldrin	µg/kg dw	0.97 U	na	0.97 U	na	270 U	na	na	na	na	na
Dieldrin	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
alpha-BHC	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na
beta-BHC	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na
gamma-BHC	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na
delta-BHC	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na
alpha-Chlordane	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na
gamma-Chlordane	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na
Total chlordane	µg/kg dw	1.9 U	na	4.4	na	10 U	na	na	na	na	na
alpha-Endosulfan	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na

Table A-1b, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-010–SS-020

Analyte	Location ID	EW09-SS-011	EW09-SS-012	EW09-SS-013	EW09-SS-014	EW09-SS-015	EW09-SS-016	EW09-SS-017	EW09-SS-018	EW09-SS-019	EW09-SS-020
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010	EW09-SS-019-010	EW09-SS-020-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/23/09	3/4/09	3/5/09	6/23/09	6/22/09	6/22/09	6/22/09	3/5/09	3/4/09
beta-Endosulfan	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Endosulfan sulfate	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Endrin	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Endrin aldehyde	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Endrin ketone	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Heptachlor	µg/kg dw	0.97 U	na	0.97 U	na	5.0 U	na	na	na	na	na
Heptachlor epoxide	µg/kg dw	2.0 U	na	2.0 U	na	5.0 U	na	na	na	na	na
Methoxychlor	µg/kg dw	9.7 U	na	9.7 U	na	50 U	na	na	na	na	na
Mirex	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
cis-Nonachlor	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Oxychlordane	µg/kg dw	1.9 U	na	1.9 U	na	10 U	na	na	na	na	na
Toxaphene	µg/kg dw	97 U	na	97 U	na	500 U	na	na	na	na	na
trans-Nonachlor	µg/kg dw	1.9 U	na	4.4	na	10 U	na	na	na	na	na
Grain size											
Fractional % phi >-1 (>2000 microns)	% dw	4.0	32.5	16.9	0.7	32.5	55.8	11.7	32.0	3.7	3.5
Fractional % phi -1-0 (1000-2000 microns)	% dw	2.7	9.7	6.8	1.2	8.2	5.8	2.0	8.1	2.1	2.4
Fractional % phi 0-1 (500-1000 microns)	% dw	4.5	12.0	10.8	4.5	5.7	10.3	6.2	10.6	2.2	1.5
Fractional % phi 1-2 (250-500 microns)	% dw	18.4	32.2	31.2	17.9	12.3	15.8	13.9	23.5	7.1	3.1
Fractional % phi 2-3 (125-250 microns)	% dw	21.2	7.9	13.6	17.8	10.3	8.5	8.4	18.3	8.2	6.4
Fractional % phi 3-4 (62.5-125 microns)	% dw	8.8	0.8	1.8	6.0	4.3	1.8	3.7	3.3	5.2	5.0
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	4.1	0.5	2.6	5.0	3.7	na	2.9	na	7.4	7.8
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	4.6	0.6	1.6	5.4	5.4	na	7.7	na	10.8	8.7
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	8.0	0.9	2.9	9.2	4.6	na	9.1	na	14.5	15.0
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	7.0	1.0	3.5	9.5	3.2	na	10.2	na	12.3	13.8

Table A-1b, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-010–SS-020

Analyte	Location ID	EW09-SS-011	EW09-SS-012	EW09-SS-013	EW09-SS-014	EW09-SS-015	EW09-SS-016	EW09-SS-017	EW09-SS-018	EW09-SS-019	EW09-SS-020
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010	EW09-SS-019-010	EW09-SS-020-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	6/23/09	3/4/09	3/5/09	6/23/09	6/22/09	6/22/09	6/22/09	3/5/09	3/4/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	5.4	0.6	2.6	6.9	2.6	na	7.0	na	8.5	10.3
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	4.5	0.4	2.1	5.5	2.8	na	5.8	na	6.6	7.8
Fractional % phi 10+ (<0.98 micron)	% dw	6.7	0.9	3.6	10.5	4.3	na	11.4	na	11.4	14.8
Total gravel	% dw	4.0	32.5	16.9	0.7	32.5	55.8	11.7	32.0	3.7	3.5
Total sand	% dw	55.6	62.6	64.2	47.4	40.8	42.2	34.2	63.8	24.8	18.4
Total silt	% dw	23.7	3.0	10.6	29.1	16.9	na	29.9	na	45.0	45.3
Total clay	% dw	16.6	1.9	8.3	22.9	9.7	na	24.2	na	26.5	32.9
Total fines (percent silt+clay)	% dw	40.3	4.9	18.9	52.0	26.6	na	54.1	na	71.5	78.2
Conventionals											
Ammonia	mg-N/kg dw	2.57	0.23	11.7	17.5	7.57	3.68	10.3	3.71	8.16	18.8
Total organic carbon (TOC)	% dw	1.59	1.73	2.11	2.24	3.15	1.47	2.71	3.28	2.31	2.58
Total solids	% ww	59.60	72.70	63.00	55.37	60.50	66.40	57.00	69.90	45.50	47.20
Total solids (preserved)	% ww	56.80	65.80	61.90	53.67	60.80	76.00	47.00	73.00	42.70	44.60
Total sulfides	mg/kg dw	1,840 J	260 J	23.5 J	922	156 J	745 J	285	1,790 J	368	1,030 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1c. 2009 Round 1 and Round 2 surface sediment samples, SS-021–SS-029

Analyte	Location ID	EW09-SS-021	EW09-SS-022	EW09-SS-023	EW09-SS-024	EW09-SS-025	EW09-SS-026	EW09-SS-027	EW09-SS-028	EW09-SS-028	EW09-SS-029
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010	EW09-SS-028-010	EW09-SS-303-010	EW09-SS-029-010
	Sample Type	N	N	N	N	N	N	N	N	FD	N
	Unit/ Sample Date	3/5/09	6/22/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	3/4/09
Metals											
Antimony	mg/kg dw	7 UJ	7 J	10 UJ	9 UJ	9 UJ	8 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Arsenic	mg/kg dw	11.4	12.1	13.2	10.3	11.6	9.1	12.1	12.1	10.7	11.5
Cadmium	mg/kg dw	0.3 U	0.3 U	1.0	0.7	0.6	0.3 U	0.7	0.7	0.9	1.0
Chromium	mg/kg dw	17.3	22.6	44	30.5	26.3	26.8	43	50	56	40
Cobalt	mg/kg dw	5.8	6.8 J	9.8	7.5	6.6	7.3	9.6	11.8 J	13.2 J	9.0
Copper	mg/kg dw	34.8	49.7 J	104	73.5	71.1	51.5	106	127 J	139 J	101
Lead	mg/kg dw	18	31 J	65	52	51	35	89	71 J	80 J	71
Mercury	mg/kg dw	0.09 J	0.04	0.4 J	0.31 J	0.32 J	0.28 J	0.4 J	0.40	0.36	0.4 J
Molybdenum	mg/kg dw	1.5	3.1 J	1 U	0.9 U	0.9 U	1.4	1 UJ	2 J	2 J	1 U
Nickel	mg/kg dw	14	13	26	20	17	19	26	31	35	25
Selenium	mg/kg dw	0.7 U	0.7 U	1 U	0.9 U	0.9 U	0.8 U	1 U	1 U	1 U	1 U
Silver	mg/kg dw	0.4 U	0.4 U	0.7 U	0.6 U	0.6 U	0.5 U	0.7 U	0.8	0.8	0.7 J
Thallium	mg/kg dw	0.3 U	0.3 U	0.5 U	0.4 U	0.4 U	0.3 U	0.5 U	0.4 U	0.5 U	0.4 U
Vanadium	mg/kg dw	44.6	48.0	78.6	61.1	51.6	53.9	72.3	85.1	94.1	71.1
Zinc	mg/kg dw	72	136 J	196	124	122	87	214	182 J	206 J	163
Organometals											
Monobutyltin as ion	µg/kg dw	na	3.9 U	na	3.7 U	na	na	3.8 U	na	na	3.6 U
Dibutyltin as ion	µg/kg dw	na	5.5 U	na	5.2 U	na	na	5.3 U	na	na	6.9
Tributyltin as ion	µg/kg dw	na	3.7 U	na	38	na	na	30	na	na	76
PAHs											
1-Methylnaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acenaphthene	µg/kg dw	20 U	32	20 U	20 U	20 U	20 U	20	20 U	21	20
Acenaphthylene	µg/kg dw	20 U	20 U	26	20 U	23	20 U	35	37	41	20 U
Anthracene	µg/kg dw	23	22	88	52	59	74	140	150	290	64
Benzo(a)anthracene	µg/kg dw	48	38	200	110	180	140	240	310	390	140
Benzo(a)pyrene	µg/kg dw	59	50	220	140	240	190	300	340	450	190
Benzo(b)fluoranthene	µg/kg dw	99	77	290	250	350	210	390	480	510	280

Table A-1c, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-021–SS-029

	Location ID	EW09-SS-021	EW09-SS-022	EW09-SS-023	EW09-SS-024	EW09-SS-025	EW09-SS-026	EW09-SS-027	EW09-SS-028	EW09-SS-028	EW09-SS-029
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010	EW09-SS-028-010	EW09-SS-303-010	EW09-SS-029-010
	Sample Type	N	N	N	N	N	N	N	N	FD	N
Analyte	Unit/ Sample Date	3/5/09	6/22/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	3/4/09
Benzo(g,h,i)perylene	µg/kg dw	23 J	20 U	75 J	51 J	79 J	75	140 J	71	110	68 J
Benzo(k)fluoranthene	µg/kg dw	58	49	340	150	280	210	370	370	510	220
Total benzofluoranthenes	µg/kg dw	157	126	630	400	630	420	760	850	1,020	500
Chrysene	µg/kg dw	78	62	380	220	330	270	540	560	660	230
Dibenzo(a,h)anthracene	µg/kg dw	20 U	20 U	31 J	20 U	22 J	28	62 J	23	41	20 U
Dibenzofuran	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	24	20 U
Fluoranthene	µg/kg dw	120	180	480	220	340	230	590	670	780	280
Fluorene	µg/kg dw	20 U	27	26	20 U	20 U	23	34	29	59	21
Indeno(1,2,3-cd)pyrene	µg/kg dw	23 J	20 U	76 J	53 J	82 J	82	140 J	81	130	72 J
Naphthalene	µg/kg dw	20 U	20 U	20	20 U	20 U	20 U	20 U	22	27	20 U
Phenanthrene	µg/kg dw	48	130	180	88	120	120	270	180	320	170
Pyrene	µg/kg dw	94	110	350	190	310	220	500	370	570	300
Total HPAHs	µg/kg dw	600 J	570	2,440 J	1,380 J	2,210 J	1,660	3,270 J	3,280	4,150	1,780 J
Total LPAHs	µg/kg dw	71	210	340	140	200	220	500	420	760	280
Total cPAHs	µg/kg dw	87.0 J	72.0	330 J	200 J	340 J	270	440 J	480	630	270 J
Total PAHs	µg/kg dw	670 J	780	2,780 J	1,520 J	2,420 J	1,870	3,770 J	3,690	4,910	2,060 J
Phthalates											
Bis(2-ethylhexyl)phthalate	µg/kg dw	97	140	200	140	170	150	310	280	390	170
Butyl benzyl phthalate	µg/kg dw	15 U	15 U	27	21	15 U	16	200	46	46	29
Diethyl phthalate	µg/kg dw	24	20 U	15 U	15 U	15 U	16 U	15 U	20 U	20 U	20 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	27	26	20 U
Di-n-octyl phthalate	µg/kg dw	20 U	83	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Other SVOCs											
1,2,4-Trichlorobenzene	µg/kg dw	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.1 U	6.0 U	6.2 U	6.1 U	6.0 U
1,2-Dichlorobenzene	µg/kg dw	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.1 U	6.0 U	6.2 U	6.1 U	6.0 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	9.6	6.1 U	18	19	16	16	6.0 U	36	25	17
2,4,5-Trichlorophenol	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
2,4-Dichlorophenol	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
2,4-Dimethylphenol	µg/kg dw	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.1 U	6.0 U	6.2 U	6.1 U	6.0 U

Table A-1c, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-021–SS-029

Analyte	Location ID	EW09-SS-021	EW09-SS-022	EW09-SS-023	EW09-SS-024	EW09-SS-025	EW09-SS-026	EW09-SS-027	EW09-SS-028	EW09-SS-028	EW09-SS-029
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010	EW09-SS-028-010	EW09-SS-303-010	EW09-SS-029-010
	Sample Type	N	N	N	N	N	N	N	N	FD	N
	Unit/ Sample Date	3/5/09	6/22/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	3/4/09
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
2,6-Dinitrotoluene	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
2-Chlorophenol	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-Methylphenol	µg/kg dw	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.1 U	6.0 U	6.2 U	6.1 U	6.0 U
2-Nitroaniline	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
2-Nitrophenol	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
3,3'-Dichlorobenzidine	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
3-Nitroaniline	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
4-Chloroaniline	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Methylphenol	µg/kg dw	20 U	20 U	24	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Nitroaniline	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
4-Nitrophenol	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
Aniline	µg/kg dw	20 U	20 UJ	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ	20 U
Benzoic acid	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Benzyl alcohol	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Carbazole	µg/kg dw	20 U	20 U	40	20 U	24	20	62	37	78	25
Hexachlorobenzene	µg/kg dw	0.96 U	3.1 UJ	0.98 U	6.1 U	3.0 UJ	6.1 U	6.0 U	6.2 U	6.1 U	6.0 U
Hexachlorobutadiene	µg/kg dw	0.96 U	6.1 U	0.98 U	6.1 U	6.0 U	6.1 U	6.0 U	6.2 U	6.1 U	6.0 U
Hexachlorocyclopentadiene	µg/kg dw	98 U	98 U	99 U	98 U	98 U	98 U	98 U	100 U	98 U	99 U
Hexachloroethane	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Isophorone	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	30 U	31 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	30 U	30 U	31 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.0 U	6.1 U	6.8 U	6.1 U	6.0 U	6.1 U	6.0 U	6.2 U	6.1 U	6.0 U

Table A-1c, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-021–SS-029

Analyte	Location ID	EW09-SS-021	EW09-SS-022	EW09-SS-023	EW09-SS-024	EW09-SS-025	EW09-SS-026	EW09-SS-027	EW09-SS-028	EW09-SS-028	EW09-SS-029
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010	EW09-SS-028-010	EW09-SS-303-010	EW09-SS-029-010
	Sample Type	N	N	N	N	N	N	N	N	FD	N
	Unit/ Sample Date	3/5/09	6/22/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	3/4/09
Nitrobenzene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Pentachlorophenol	µg/kg dw	30 U	30 U	31 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U
Phenol	µg/kg dw	20 U	29	20 U	20 U	20 U	31	20 U	26	49	20 U
PCBs											
Aroclor-1016	µg/kg dw	19 U	11 U	20 U	20 U	20 U	13 U	20 U	19 U	19 U	20 U
Aroclor-1221	µg/kg dw	19 U	11 U	20 U	20 U	20 U	13 U	20 U	19 U	19 U	20 U
Aroclor-1232	µg/kg dw	19 U	11 U	20 U	20 U	20 U	13 U	20 U	19 U	19 U	20 U
Aroclor-1242	µg/kg dw	19 U	11 U	20 U	20 U	20 U	13 U	20 U	19 U	19 U	20 U
Aroclor-1248	µg/kg dw	19 U	14	20 U	20 U	20 U	35	20 U	60	63	20 U
Aroclor-1254	µg/kg dw	35	23	20 U	21	28	100	32 J	150	150	45
Aroclor-1260	µg/kg dw	57	25	24	34	42	170	130	210	280	75
Aroclor-1262	µg/kg dw	19 U	11 U	20 U	20 U	20 U	13 U	20 U	19 U	19 U	20 U
Aroclor-1268	µg/kg dw	19 U	11 U	20 U	20 U	20 U	13 U	20 U	19 U	19 U	20 U
Total PCBs	µg/kg dw	92	62	24	55	70	310	160 J	420	490	120
Pesticides											
2,4'-DDD	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
2,4'-DDE	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
2,4'-DDT	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
4,4'-DDD	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
4,4'-DDE	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
4,4'-DDT	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Total DDTs	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Aldrin	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
Dieldrin	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
alpha-BHC	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
beta-BHC	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
gamma-BHC	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
delta-BHC	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
alpha-Chlordane	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
gamma-Chlordane	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
Total chlordane	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
alpha-Endosulfan	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na

Table A-1c, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-021–SS-029

Analyte	Location ID	EW09-SS-021	EW09-SS-022	EW09-SS-023	EW09-SS-024	EW09-SS-025	EW09-SS-026	EW09-SS-027	EW09-SS-028	EW09-SS-028	EW09-SS-029
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010	EW09-SS-028-010	EW09-SS-303-010	EW09-SS-029-010
	Sample Type	N	N	N	N	N	N	N	N	FD	N
	Unit/ Sample Date	3/5/09	6/22/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	3/4/09
beta-Endosulfan	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Endosulfan sulfate	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Endrin	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Endrin aldehyde	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Endrin ketone	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Heptachlor	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
Heptachlor epoxide	µg/kg dw	0.96 U	na	0.98 U	na	na	na	na	na	na	na
Methoxychlor	µg/kg dw	9.6 U	na	9.8 U	na	na	na	na	na	na	na
Mirex	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
cis-Nonachlor	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Oxychlordane	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Toxaphene	µg/kg dw	96 U	na	98 U	na	na	na	na	na	na	na
trans-Nonachlor	µg/kg dw	1.9 U	na	2.0 U	na	na	na	na	na	na	na
Grain size											
Fractional % phi >-1 (>2000 microns)	% dw	5.8	6.4	0.1 U	0.4	0.1 U	0.4	11.6	0.4	0.1	0.1 U
Fractional % phi -1-0 (1000-2000 microns)	% dw	6.7	3.5	0.8	0.8	0.3	0.6	2.5	1.7	1.3	0.6
Fractional % phi 0-1 (500-1000 microns)	% dw	20.2	18.0	1.0	3.2	2.0	3.4	1.9	1.4	1.5	0.7
Fractional % phi 1-2 (250-500 microns)	% dw	34.7	48.2	0.8	12.5	14.0	23.7	2.4	1.9	2.5	2.1
Fractional % phi 2-3 (125-250 microns)	% dw	10.3	13.8	1.5	9.1	11.3	20.8	3.4	3.6	3.9	4.4
Fractional % phi 3-4 (62.5-125 microns)	% dw	1.4	1.4	4.0	6.2	6.5	6.9	5.2	7.3	7.0	7.4
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	2.7	0.4	8.7	10.4	10.9	5.1	6.3	10.3	14.0	12.5
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	1.3	0.9	12.2	10.2	11.2	6.7	14.8	16.3	13.2	11.9
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	3.3	1.3	19.7	12.2	4.5	7.7	15.0	16.1	16.9	17.4
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	3.8	1.4	16.9	11.0	16.4	7.3	11.0	12.3	12.1	11.7

Table A-1c, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-021–SS-029

	Location ID	EW09-SS-021	EW09-SS-022	EW09-SS-023	EW09-SS-024	EW09-SS-025	EW09-SS-026	EW09-SS-027	EW09-SS-028	EW09-SS-028	EW09-SS-029
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010	EW09-SS-028-010	EW09-SS-303-010	EW09-SS-029-010
	Sample Type	N	N	N	N	N	N	N	N	FD	N
Analyte	Unit/ Sample Date	3/5/09	6/22/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	3/4/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	3.1	1.3	11.0	7.7	7.0	5.2	8.0	9.0	8.1	9.4
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	2.2	1.3	8.3	6.2	5.8	4.4	7.1	7.1	7.0	7.8
Fractional % phi 10+ (<0.98 micron)	% dw	4.4	2.1	15.2	10.1	10.1	7.8	10.7	12.5	12.2	14.0
Total gravel	% dw	5.8	6.4	0.1 U	0.4	0.1 U	0.4	11.6	0.4	0.1	0.1 U
Total sand	% dw	73.3	84.9	8.1	31.8	34.1	55.4	15.4	15.9	16.2	15.2
Total silt	% dw	11.1	4.0	57.5	43.8	43.0	26.8	47.1	55.0	56.2	53.5
Total clay	% dw	9.7	4.7	34.5	24.0	22.9	17.4	25.8	28.6	27.3	31.2
Total fines (percent silt+clay)	% dw	20.8	8.7	92.0	67.8	65.9	44.2	72.9	83.6	83.5	84.7
Conventionals											
Ammonia	mg-N/kg dw	5.45	8.72	9.48	3.88	3.24	1.83	4.20	21.6	18.6	3.69
Total organic carbon (TOC)	% dw	1.55	1.44	2.90	1.85	2.21	1.91	2.60	2.37	1.73	2.03
Total solids	% ww	72.00	66.40	41.80	51.70	53.90	61.20	44.40	40.60	42.90	48.40
Total solids (preserved)	% ww	75.10	67.30	37.90	42.00	47.10	50.60	43.50	35.50	37.80	44.30
Total sulfides	mg/kg dw	50.1	204 J	250 J	65.6 J	106 J	69.2	1,250 J	466 J	552 J	280 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1d. 2009 Round 1 and Round 2 surface sediment samples, SS-030–SS-039

Analyte	Location ID	EW09-SS-030	EW09-SS-031	EW09-SS-032	EW09-SS-033	EW09-SS-034	EW09-SS-035	EW09-SS-036	EW09-SS-037	EW09-SS-038	EW09-SS-039
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/4/09	6/22/09
Metals											
Antimony	mg/kg dw	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	9 UJ	10 UJ	9 UJ	9 UJ	7 UJ
Arsenic	mg/kg dw	10.4	11.4	9.6	11.2	10.4	10.1	9.0	7.7	9.1	18.1
Cadmium	mg/kg dw	0.9	0.8	0.8	2.2	1.4	0.9	0.9	0.7	1.8 J	0.3
Chromium	mg/kg dw	37	35	36	40	40	36.8	37	33.9	40.6	20.8
Cobalt	mg/kg dw	8.7	8.7	8.5	8.7	8.8	8.8	8.5	7.6	8.0	6.7 J
Copper	mg/kg dw	88.2	86.5	87.0	107	93.2	132	85.2	67.5	113	42.6 J
Lead	mg/kg dw	59	53	54	76	72	68	60	55	76	30 J
Mercury	mg/kg dw	0.5 J	0.40 J	0.45 J	0.50 J	0.53 J	0.47 J	0.40 J	0.36 J	0.46	0.09
Molybdenum	mg/kg dw	1 U	1 U	1 U	1 U	1 U	0.9 U	1 U	2.0	3.9	2 J
Nickel	mg/kg dw	24	22	22	25	26	24	24	21	26	15
Selenium	mg/kg dw	1 U	1 U	1 U	0.9 U	1 U	0.9 U	1 U	0.9 U	0.9 U	0.7 U
Silver	mg/kg dw	0.6 U	0.7 U	0.6 U	0.8 J	1.0 J	0.7 J	0.9 J	2.3	1	0.4 U
Thallium	mg/kg dw	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
Vanadium	mg/kg dw	68.1	69.0	66.9	68.8	69.1	68.6	65.5	54.7	61.4	46.6
Zinc	mg/kg dw	153	145	138	157	164	156	146	124	179	130 J
Organometals											
Monobutyltin as ion	µg/kg dw	3.8 U	na	na	3.8 U	3.6 U	na	3.7 U	na	3.7 U	na
Dibutyltin as ion	µg/kg dw	5.4 U	na	na	16	5.0 U	na	5.2 U	na	5.2 U	na
Tributyltin as ion	µg/kg dw	27	na	na	170	30	na	39 J	na	48	na
PAHs											
1-Methylnaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	11 J	20 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	22	18 J	20 U
Acenaphthene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	25	18 J	20 U
Acenaphthylene	µg/kg dw	20 U	21	20 U	20 U	20 U	20 U	20 U	20 U	25	20 U
Anthracene	µg/kg dw	36	78	36	27	20	39	42	110	94	67
Benzo(a)anthracene	µg/kg dw	100	210	110	76	54	95	87	240	360	140
Benzo(a)pyrene	µg/kg dw	130	220	130	100	66	130	100	280	360	140
Benzo(b)fluoranthene	µg/kg dw	200	340	150	150	100	200	140 J	320	460	180

Table A-1d, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-030–SS-039

Analyte	Location ID	EW09-SS-030	EW09-SS-031	EW09-SS-032	EW09-SS-033	EW09-SS-034	EW09-SS-035	EW09-SS-036	EW09-SS-037	EW09-SS-038	EW09-SS-039
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/4/09	6/22/09
Benzo(g,h,i)perylene	µg/kg dw	48 J	72 J	51 J	43 J	29 J	50 J	52 J	88	120 J	37 J
Benzo(k)fluoranthene	µg/kg dw	150	280	210	130	68	140	110	320	410	180
Total benzofluoranthenes	µg/kg dw	350	620	360	280	170	340	250 J	640	870	360
Chrysene	µg/kg dw	200	420	200	130	96	180	160	400	560	250
Dibenzo(a,h)anthracene	µg/kg dw	20 U	34 J	20 J	20 U	20 U	20 U	23 J	38	29	20 U
Dibenzofuran	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	15 J	20 U
Fluoranthene	µg/kg dw	200	370	200	140	120	210	160 J	350	850	450
Fluorene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	36	19 J	23
Indeno(1,2,3-cd)pyrene	µg/kg dw	48 J	74 J	49 J	41 J	28 J	51 J	51 J	90	120 J	38 J
Naphthalene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	22	25	20 U
Phenanthrene	µg/kg dw	84	150	79	55	57	77	77	200	160	140
Pyrene	µg/kg dw	190	300	180	170	120	260	160	380	970	250
Total HPAHs	µg/kg dw	1,270 J	2,320 J	1,300 J	980 J	680 J	1,320 J	1,040 J	2,510	4,240 J	1,670 J
Total LPAHs	µg/kg dw	120	250	115	82	77	116	119	390	340 J	230
Total cPAHs	µg/kg dw	190 J	330 J	190 J	150 J	96.0 J	180 J	150 J	400	510 J	200 J
Total PAHs	µg/kg dw	1,390 J	2,570 J	1,420 J	1,060 J	760 J	1,430 J	1,160 J	2,900	4,580 J	1,900 J
Phthalates											
Bis(2-ethylhexyl)phthalate	µg/kg dw	160	200	180	130	110	120	160	480	340	250
Butyl benzyl phthalate	µg/kg dw	20	36	24	15 U	15 U	15 U	15 U	36	120	22
Diethyl phthalate	µg/kg dw	15 U	20 U	20 U	15 U	15 U	15 U	15 U	20	31 J	15 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	15 U	16	17 J	15 U
Di-n-butyl phthalate	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	67	20 U	20 U
Di-n-octyl phthalate	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	14 J	20 U
Other SVOCs											
1,2,4-Trichlorobenzene	µg/kg dw	6.0 U	6.1 U	6.1 U	6.0 U	5.9 U	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U
1,2-Dichlorobenzene	µg/kg dw	6.0 U	6.1 U	6.1 U	6.0 U	5.9 U	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	21	31	48	6.0 U	21	6.7	22	240	460	6.0 U
2,4,5-Trichlorophenol	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
2,4-Dichlorophenol	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
2,4-Dimethylphenol	µg/kg dw	6.0 U	6.1 U	6.1 U	6.0 U	5.9 U	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U

Table A-1d, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-030–SS-039

Analyte	Location ID	EW09-SS-030	EW09-SS-031	EW09-SS-032	EW09-SS-033	EW09-SS-034	EW09-SS-035	EW09-SS-036	EW09-SS-037	EW09-SS-038	EW09-SS-039
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/4/09	6/22/09
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
2,6-Dinitrotoluene	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
2-Chlorophenol	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	21 U	20 U	20 U
2-Methylphenol	µg/kg dw	6.0 U	6.1 U	6.1 U	6.0 U	5.9 U	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U
2-Nitroaniline	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
2-Nitrophenol	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	R	99 U	98 U	R
3-Nitroaniline	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	R	99 U	98 U	98 UJ
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
4-Chloroaniline	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	R	99 U	98 U	R
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Methylphenol	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20	20 U
4-Nitroaniline	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	R	99 U	98 U	98 U
4-Nitrophenol	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 U
Aniline	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	R	20 U	20 U	20 UJ
Benzoic acid	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Benzyl alcohol	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	R	20 U	20 U	20 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Carbazole	µg/kg dw	20	29	20 U	20 U	20 U	20 U	20 U	36	42	20 U
Hexachlorobenzene	µg/kg dw	0.99 U	6.1 U	6.1 U	0.98 U	5.9 U	6.1 U	3.1 UJ	6.1 U	0.98 U	6.0 U
Hexachlorobutadiene	µg/kg dw	0.99 U	6.1 U	6.1 U	0.98 U	5.9 U	6.1 U	6.2 U	6.1 U	0.98 U	6.0 U
Hexachlorocyclopentadiene	µg/kg dw	98 U	98 U	98 U	98 U	99 U	98 U	98 U	99 U	98 U	98 UJ
Hexachloroethane	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Isophorone	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	31 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	30 U	31 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U	R
n-Nitrosodiphenylamine	µg/kg dw	6.0 U	6.1 U	6.1 U	6.0 U	5.9 U	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U

Table A-1d, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-030–SS-039

Analyte	Location ID	EW09-SS-030	EW09-SS-031	EW09-SS-032	EW09-SS-033	EW09-SS-034	EW09-SS-035	EW09-SS-036	EW09-SS-037	EW09-SS-038	EW09-SS-039
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/4/09	6/22/09
Nitrobenzene	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Pentachlorophenol	µg/kg dw	30 U	31 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U
Phenol	µg/kg dw	350	20 U	20 U	20 U	20 U	20 U	20 U	20 U	14 J	53
PCBs											
Aroclor-1016	µg/kg dw	20 U	20 U	20 U	20 U	20 U	180 U	20 U	30 U	200 U	12 U
Aroclor-1221	µg/kg dw	20 U	20 U	20 U	20 U	20 U	180 U	20 U	30 U	200 U	12 U
Aroclor-1232	µg/kg dw	20 U	20 U	20 U	20 U	30 U	180 U	20 U	30 U	200 U	12 U
Aroclor-1242	µg/kg dw	20 U	20 U	20 U	20 U	20 U	180 U	20 U	57	200 U	12 U
Aroclor-1248	µg/kg dw	20 U	20 U	20 U	20 U	20 U	180 U	20 U	30 U	200 U	24
Aroclor-1254	µg/kg dw	26	22	36	52	51	180 U	23	280	480	37
Aroclor-1260	µg/kg dw	40	50	69	83	86	200	43	380	1,100	36
Aroclor-1262	µg/kg dw	20 U	20 U	20 U	20 U	20 U	180 U	20 U	30 U	200 U	12 U
Aroclor-1268	µg/kg dw	20 U	20 U	20 U	20 U	20 U	180 U	20 U	30 U	200 U	12 U
Total PCBs	µg/kg dw	66	72	105	135	137	200	66	720	1,600	97
Pesticides											
2,4'-DDD	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
2,4'-DDE	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
2,4'-DDT	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
4,4'-DDD	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
4,4'-DDE	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
4,4'-DDT	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Total DDTs	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Aldrin	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na
Dieldrin	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
alpha-BHC	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na
beta-BHC	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 UJ	na
gamma-BHC	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na
delta-BHC	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na
alpha-Chlordane	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na
gamma-Chlordane	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na
Total chlordane	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
alpha-Endosulfan	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na

Table A-1d, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-030–SS-039

Analyte	Location ID	EW09-SS-030	EW09-SS-031	EW09-SS-032	EW09-SS-033	EW09-SS-034	EW09-SS-035	EW09-SS-036	EW09-SS-037	EW09-SS-038	EW09-SS-039
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/4/09	6/22/09
beta-Endosulfan	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Endosulfan sulfate	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Endrin	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Endrin aldehyde	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Endrin ketone	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Heptachlor	µg/kg dw	0.99 U	na	na	0.98 U	na	na	na	na	0.98 U	na
Heptachlor epoxide	µg/kg dw	1.3 U	na	na	2.1 U	na	na	na	na	2.3 U	na
Methoxychlor	µg/kg dw	9.9 U	na	na	9.8 U	na	na	na	na	9.8 U	na
Mirex	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
cis-Nonachlor	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Oxychlordane	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Toxaphene	µg/kg dw	99 U	na	na	98 U	na	na	na	na	98 U	na
trans-Nonachlor	µg/kg dw	2.0 U	na	na	2.0 U	na	na	na	na	2.0 U	na
Grain size											
Fractional % phi >-1 (>2000 microns)	% dw	0.1	0.2	0.1 U	0.1 U	0.2	0.6	0.1	0.5	2.1	7.0 J
Fractional % phi -1-0 (1000-2000 microns)	% dw	0.4	1.0	0.5	0.7	0.7	0.6	0.1	1.3	1.0	2.4
Fractional % phi 0-1 (500-1000 microns)	% dw	0.6	0.8	0.7	1.1	0.9	0.7	0.3	4.1	0.9	11.2
Fractional % phi 1-2 (250-500 microns)	% dw	0.6	0.6	0.7	3.2	1.3	1.6	0.9	9.6	2.1	33.7
Fractional % phi 2-3 (125-250 microns)	% dw	1.9	2.2	3.1	7.2	3.8	6.5	4.7	14.4	11.2	20.0
Fractional % phi 3-4 (62.5-125 microns)	% dw	7.4	7.8	10.0	9.8	8.5	10.9	11.3	13.5	16.3	3.5
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	11.8	13.7	15.0	11.2	13.3	12.2	15.0	9.0	13.9	2.9
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	14.9	13.5	13.3	15.4	13.8	15.3	15.1	10.2	16.9	2.1
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	18.3	15.8	13.0	13.4	17.2	14.3	14.0	9.1	15.5	3.6
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	13.8	13.6	14.7	10.8	12.1	11.0	11.3	8.4	5.4	3.4

Table A-1d, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-030–SS-039

Analyte	Location ID	EW09-SS-030	EW09-SS-031	EW09-SS-032	EW09-SS-033	EW09-SS-034	EW09-SS-035	EW09-SS-036	EW09-SS-037	EW09-SS-038	EW09-SS-039
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010
	Sample Type	N	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/4/09	6/22/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	9.3	9.4	8.8	7.8	8.9	7.3	7.7	5.7	3.7	2.9
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	7.7	8.4	7.3	7.1	7.2	7.0	7.5	4.4	3.8	2.7
Fractional % phi 10+ (<0.98 micron)	% dw	13.1	12.9	12.9	12.4	12.1	12.0	11.5	9.7	7.1	4.6
Total gravel	% dw	0.1	0.2	0.1 U	0.1 U	0.2	0.6	0.1	0.5	2.1	7.0 J
Total sand	% dw	10.9	12.4	15.0	22.0	15.2	20.3	17.3	42.9	31.5	70.8
Total silt	% dw	58.8	56.6	56.0	50.8	56.4	52.8	55.3	36.7	51.7	12.0
Total clay	% dw	30.1	30.7	29.0	27.3	28.2	26.3	26.7	19.8	14.6	10.2
Total fines (percent silt+clay)	% dw	88.9	87.3	85.0	78.1	84.6	79.1	82.0	56.5	66.3	22.2
Conventionals											
Ammonia	mg-N/kg dw	5.74	10.3	4.16	2.86	5.13	3.86	4.79	5.23	14.8	13.6
Total organic carbon (TOC)	% dw	2.03	2.04	1.64	1.86	2.25	1.81	2.21	2.43	2.83	2.67
Total solids	% ww	45.00	43.10	47.00	50.30	46.00	51.40	47.90	53.40	54.03	67.10
Total solids (preserved)	% ww	38.40	39.40	43.60	46.80	40.20	49.70	44.23	41.50	53.13	68.20
Total sulfides	mg/kg dw	97.5 J	86.9 J	163 J	219 J	179 J	696 J	250 J	295	1,850	41.5 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1e. 2009 Round 1 and Round 2 surface sediment samples, SS-040, SS-100–SS-106

Analyte	Location ID	EW09-SS-040	EW09-SS-100	EW09-SS-101	EW09-SS-102	EW09-SS-102	EW09-SS-103	EW09-SS-104	EW09-SS-105	EW09-SS-105	EW09-SS-106
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010	EW09-SS-106-010
	Sample Type	N	N	N	N	FD	N	N	N	FD	N
	Unit/ Sample Date	6/22/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	6/23/09
Metals											
Antimony	mg/kg dw	10 UJ	8 UJ	9 UJ	9 UJ	9 UJ	10 UJ	10 UJ	10 UJ	10 UJ	6 UJ
Arsenic	mg/kg dw	11.5	6.8	7.5	6.7	7.0	9.5	15.6	12.9	12.9	4.1
Cadmium	mg/kg dw	0.7	0.6 J	0.9 J	0.5	0.5	0.7	2.3	1.7	1.4	0.2 U
Chromium	mg/kg dw	41	30.2	33.8	26.9	25.3	34	43	49	47	16.8
Cobalt	mg/kg dw	10	6.9	5.9	7.0	6.6	8.2	7.9	9.8	9.7	4.8
Copper	mg/kg dw	99.6	205	89.2	67.9	64.8	75.7	208	125	118	37.0
Lead	mg/kg dw	60	73	58	35	33	48	98	85	79	23
Mercury	mg/kg dw	0.50 J	0.29	0.47	0.24 J	0.35 J	0.67 J	0.59	0.55 J	0.50 J	0.08 J
Molybdenum	mg/kg dw	2	2.3	0.9 U	0.9 U	0.9 U	2	1 UJ	3	3	1.6
Nickel	mg/kg dw	27	20	26	19	17	22	23	28	28	10
Selenium	mg/kg dw	1 U	0.8 U	0.9 U	0.9 U	0.9 U	1 U	0.9 U	1 U	1 U	0.6 U
Silver	mg/kg dw	0.7 U	0.5	0.8	0.5 U	0.5 U	0.6 U	1.2	0.9	0.8	0.4 U
Thallium	mg/kg dw	0.5 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
Vanadium	mg/kg dw	72.2	57.4	46.7	55.9	52.2	59.6	64.7	71.3	69.8	38.8
Zinc	mg/kg dw	155	159	179	96	91	135	354 J	246	222	85 J
Organometals											
Monobutyltin as ion	µg/kg dw	na	3.6 U	na	na	na	na	na	4.6	7.7 U	3.8 U
Dibutyltin as ion	µg/kg dw	na	7.7	na	na	na	na	na	22	13	5.4 U
Tributyltin as ion	µg/kg dw	na	59	na	na	na	na	na	140	120	3.6 U
PAHs											
1-Methylnaphthalene	µg/kg dw	20 U	11 J	16 J	20 U	20 U	20 U	20 U	20 U	20	35
2-Chloronaphthalene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	23	15 J	27	20 U	20 U	20 U	12 J	26	29	36
Acenaphthene	µg/kg dw	23	15 J	34	20 U	20 U	24	14 J	32	35	110
Acenaphthylene	µg/kg dw	32	18 J	21	20 U	20 U	24	35	41	50	16 J
Anthracene	µg/kg dw	150	80	130	34	30	110	190	140	180	110
Benzo(a)anthracene	µg/kg dw	280	170	280	88	64	260	740	250	300	180
Benzo(a)pyrene	µg/kg dw	350	240	320	110	74	300	740	360	450	160
Benzo(b)fluoranthene	µg/kg dw	390 J	250 J	390	130	97	360	1,100	580	680	230

Table A-1e, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-040, SS-102–SS-106

Analyte	Location ID	EW09-SS-040	EW09-SS-100	EW09-SS-101	EW09-SS-102	EW09-SS-102	EW09-SS-103	EW09-SS-104	EW09-SS-105	EW09-SS-105	EW09-SS-106
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010	EW09-SS-106-010
	Sample Type	N	N	N	N	FD	N	N	N	FD	N
	Unit/ Sample Date	6/22/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	6/23/09
Benzo(g,h,i)perylene	µg/kg dw	120	97 J	96 J	60 J	42 J	91	260	170	210	40
Benzo(k)fluoranthene	µg/kg dw	390 J	300	450	130	94	360	570	360	460	190
Total benzofluoranthenes	µg/kg dw	780 J	550 J	840	260	191	720	1,700	940	1,140	420
Chrysene	µg/kg dw	550	290	460	170	130	500	1,000	550	620	240
Dibenzo(a,h)anthracene	µg/kg dw	46	29 J	36 J	21 J	20 U	30	140	59 U	64	12 J
Dibenzofuran	µg/kg dw	21	15 J	30	20 U	20 U	26	18 J	28	32	77
Fluoranthene	µg/kg dw	400	370	510	150	180	480	810	560	480	470
Fluorene	µg/kg dw	38	23	50	20 U	20 U	36	45	34	47	69
Indeno(1,2,3-cd)pyrene	µg/kg dw	130	92 J	98 J	53 J	40 J	97	290	160	200	44
Naphthalene	µg/kg dw	22	28	34	20 U	20 U	31	19 J	29	33	36
Phenanthrene	µg/kg dw	220	190	360	75	69	280	310	270	260	220
Pyrene	µg/kg dw	440	380	540	160	150	500	860	800	890	400
Total HPAHs	µg/kg dw	3,100 J	2,220 J	3,180 J	1,070 J	870 J	2,980	6,500	3,790	4,350	1,970 J
Total LPAHs	µg/kg dw	490	350 J	630	109	99	510	610 J	550	610	560 J
Total cPAHs	µg/kg dw	490 J	340 J	460 J	160 J	109 J	420	1,080	510	650	230 J
Total PAHs	µg/kg dw	3,580 J	2,570 J	3,810 J	1,180 J	970 J	3,480	7,100 J	4,340	4,960	2,530 J
Phthalates											
Bis(2-ethylhexyl)phthalate	µg/kg dw	440	320	1,000	130	100	490	82	420	460	59
Butyl benzyl phthalate	µg/kg dw	37	190 J	71	15 U	15 U	46	15 U	65	44	15 U
Diethyl phthalate	µg/kg dw	20 U	15 U	26	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	69	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	20 U	20 U	17 J	20 U	20 U	20	20 U	20 U	20 U	20 U
Di-n-octyl phthalate	µg/kg dw	20 U	20 U	21	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Other SVOCs											
1,2,4-Trichlorobenzene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	57	24	4,200	11	6.1 U	320	6.1 U	30	25	6.1
2,4,5-Trichlorophenol	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
2,4-Dichlorophenol	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
2,4-Dimethylphenol	µg/kg dw	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1	6.1	6.1 U

Table A-1e, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-040, SS-102–SS-106

Analyte	Location ID	EW09-SS-040	EW09-SS-100	EW09-SS-101	EW09-SS-102	EW09-SS-102	EW09-SS-103	EW09-SS-104	EW09-SS-105	EW09-SS-105	EW09-SS-106
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010	EW09-SS-106-010
	Sample Type	N	N	N	N	FD	N	N	N	FD	N
	Unit/ Sample Date	6/22/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	6/23/09
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
2,6-Dinitrotoluene	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
2-Chlorophenol	µg/kg dw	23 U	20 U	19 U	20 U	20 U	20 U	20 U	24 U	20 U	20 U
2-Methylphenol	µg/kg dw	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
2-Nitroaniline	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
2-Nitrophenol	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	R	R	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
3-Nitroaniline	µg/kg dw	98 UJ	R	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
4-Chloroaniline	µg/kg dw	R	R	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Methylphenol	µg/kg dw	20 U	20 U	81	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Nitroaniline	µg/kg dw	98 U	98 UJ	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
4-Nitrophenol	µg/kg dw	98 U	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
Aniline	µg/kg dw	R	R	19 U	20 U	20 U	20 U	20 U	20 U	20 U	R
Benzoic acid	µg/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	200 U	200 U	200 UJ
Benzyl alcohol	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Carbazole	µg/kg dw	41	29	53	20 U	20 U	35	32	49	54	20
Hexachlorobenzene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	0.98 U	0.99 U	0.98 U
Hexachlorobutadiene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	0.98 U	0.99 U	0.98 U
Hexachlorocyclopentadiene	µg/kg dw	R	98 U	97 U	99 U	98 U	98 U	99 U	98 U	99 U	98 U
Hexachloroethane	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Isophorone	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	31 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	31 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	14 U

Table A-1e, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-040, SS-102–SS-106

Analyte	Location ID	EW09-SS-040	EW09-SS-100	EW09-SS-101	EW09-SS-102	EW09-SS-102	EW09-SS-103	EW09-SS-104	EW09-SS-105	EW09-SS-105	EW09-SS-106
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010	EW09-SS-106-010
	Sample Type	N	N	N	N	FD	N	N	N	FD	N
	Unit/ Sample Date	6/22/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	6/23/09
Nitrobenzene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Pentachlorophenol	µg/kg dw	31 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U	30 U	30 U
Phenol	µg/kg dw	20 U	20 U	18 J	25	20 U	20 U	20 U	20 U	100	20 U
PCBs											
Aroclor-1016	µg/kg dw	19 U	97 U	97 U	20 U	20 U	16 U	600 U	18 U	18 U	3.8 U
Aroclor-1221	µg/kg dw	19 U	97 U	97 U	20 U	20 U	16 U	600 U	18 U	18 U	3.8 U
Aroclor-1232	µg/kg dw	19 U	97 U	97 U	20 U	20 U	16 U	600 U	18 U	18 U	3.8 U
Aroclor-1242	µg/kg dw	19 U	97 U	97 U	20 U	20 U	38	600 U	18 U	18 U	3.8 U
Aroclor-1248	µg/kg dw	61	97 U	97 U	20 U	20 U	16 U	600 U	100	100	30
Aroclor-1254	µg/kg dw	190 U	97 U	120	25	25	250 U	920	260	260	47
Aroclor-1260	µg/kg dw	380	160	190	37	48	710	2,300	360	440	52
Aroclor-1262	µg/kg dw	19 U	97 U	97 U	20 U	20 U	16 U	600 U	18 U	18 U	3.8 U
Aroclor-1268	µg/kg dw	19 U	97 U	97 U	20 U	20 U	16 U	600 U	18 U	18 U	3.8 U
Total PCBs	µg/kg dw	440	160	310	62	73	750	3,200	720	800	129
Pesticides											
2,4'-DDD	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
2,4'-DDE	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
2,4'-DDT	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
4,4'-DDD	µg/kg dw	na	na	na	na	na	na	na	7.9 U	2.0 U	2.0 U
4,4'-DDE	µg/kg dw	na	na	na	na	na	na	na	13 U	12 U	2.0 U
4,4'-DDT	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
Total DDTs	µg/kg dw	na	na	na	na	na	na	na	13 U	12 U	2.0 U
Aldrin	µg/kg dw	na	na	na	na	na	na	na	2.9 U	2.8 U	0.98 U
Dieldrin	µg/kg dw	na	na	na	na	na	na	na	21 U	19 U	2.0 U
alpha-BHC	µg/kg dw	na	na	na	na	na	na	na	0.98 U	0.99 U	0.98 U
beta-BHC	µg/kg dw	na	na	na	na	na	na	na	0.98 U	0.99 U	0.98 U
gamma-BHC	µg/kg dw	na	na	na	na	na	na	na	0.98 U	0.99 U	0.98 U
delta-BHC	µg/kg dw	na	na	na	na	na	na	na	0.98 U	0.99 U	0.98 U
alpha-Chlordane	µg/kg dw	na	na	na	na	na	na	na	0.98 U	6.8 U	0.98 U
gamma-Chlordane	µg/kg dw	na	na	na	na	na	na	na	8.2 U	8.9 U	0.98 U
Total chlordane	µg/kg dw	na	na	na	na	na	na	na	8.2 U	8.9 U	2.0 U
alpha-Endosulfan	µg/kg dw	na	na	na	na	na	na	na	0.98 U	0.99 U	0.98 U

Table A-1e, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-040, SS-102–SS-106

Analyte	Location ID	EW09-SS-040	EW09-SS-100	EW09-SS-101	EW09-SS-102	EW09-SS-102	EW09-SS-103	EW09-SS-104	EW09-SS-105	EW09-SS-105	EW09-SS-106
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010	EW09-SS-106-010
	Sample Type	N	N	N	N	FD	N	N	N	FD	N
	Unit/ Sample Date	6/22/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	6/23/09
beta-Endosulfan	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
Endosulfan sulfate	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
Endrin	µg/kg dw	na	na	na	na	na	na	na	6.8 U	6.0 U	2.0 U
Endrin aldehyde	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
Endrin ketone	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
Heptachlor	µg/kg dw	na	na	na	na	na	na	na	2.4 U	1.4 U	0.98 U
Heptachlor epoxide	µg/kg dw	na	na	na	na	na	na	na	10 U	9.6 U	0.98 U
Methoxychlor	µg/kg dw	na	na	na	na	na	na	na	9.8 U	9.9 U	9.8 U
Mirex	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
cis-Nonachlor	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
Oxychlordane	µg/kg dw	na	na	na	na	na	na	na	2.0 U	2.0 U	2.0 U
Toxaphene	µg/kg dw	na	na	na	na	na	na	na	390 U	400 U	98 U
trans-Nonachlor	µg/kg dw	na	na	na	na	na	na	na	5.4 U	6.3 U	2.0 U
Grain size											
Fractional % phi >-1 (>2000 microns)	% dw	0.1	7.4	4.5	0.2	0.2	0.2	12.5	0.5	1.3	19.3
Fractional % phi -1-0 (1000-2000 microns)	% dw	2.1	1.6	2.0	0.2	0.5	0.8	2.8	1.0	1.3	7.6
Fractional % phi 0-1 (500-1000 microns)	% dw	2.6	2.4	1.5	1.3	1.6	1.6	2.8	2.0	1.9	8.4
Fractional % phi 1-2 (250-500 microns)	% dw	2.3	9.5	6.6	7.3	7.8	3.6	10.2	3.6	3.5	27.9
Fractional % phi 2-3 (125-250 microns)	% dw	2.0	19.0	21.9	20.3	20.9	12.4	6.9	3.4	3.6	21.5
Fractional % phi 3-4 (62.5-125 microns)	% dw	4.9	13.7	16.3	15.3	16.1	16.3	5.1	6.4	6.8	5.0
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	9.6	10.3	7.9	9.9	10.3	11.5	4.6	9.4	8.5	2.6
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	14.9	6.1	10.3	9.6	8.2	11.6	10.2	14.1	14.2	3.5
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	17.7	7.4	12.0	8.7	7.5	11.2	12.3	17.5	16.1	1.5
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	13.6	6.2	4.5	8.0	7.4	9.0	9.4	13.0	13.6	0.6

Table A-1e, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-040, SS-102–SS-106

Analyte	Location ID	EW09-SS-040	EW09-SS-100	EW09-SS-101	EW09-SS-102	EW09-SS-102	EW09-SS-103	EW09-SS-104	EW09-SS-105	EW09-SS-105	EW09-SS-106
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010	EW09-SS-106-010
	Sample Type	N	N	N	N	FD	N	N	N	FD	N
	Unit/ Sample Date	6/22/09	3/4/09	3/4/09	3/4/09	3/4/09	6/22/09	3/2/09	6/22/09	6/22/09	6/23/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	8.8	5.1	3.0	5.6	5.8	5.8	7.6	7.8	8.5	0.4
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	8.1	4.1	3.1	5.0	5.0	5.3	6.2	7.2	7.1	0.5
Fractional % phi 10+ (<0.98 micron)	% dw	13.6	7.2	6.5	8.5	8.6	10.7	9.5	13.9	13.6	1.2
Total gravel	% dw	0.1	7.4	4.5	0.2	0.2	0.2	12.5	0.5	1.3	19.3
Total sand	% dw	13.9	46.2	48.3	44.4	46.9	34.7	27.8	16.4	17.1	70.4
Total silt	% dw	55.7	30.0	34.7	36.2	33.4	43.3	36.5	54.0	52.4	8.2
Total clay	% dw	30.5	16.4	12.6	19.1	19.4	21.8	23.3	28.9	29.2	2.1
Total fines (percent silt+clay)	% dw	86.2	46.4	47.3	55.3	52.8	65.1	59.8	82.9	81.6	10.3
Conventionals											
Ammonia	mg-N/kg dw	14.9	2.14	13.6	3.70	3.66	11.0	13.0	29.6	36.0	7.00
Total organic carbon (TOC)	% dw	3.04	1.76	1.37	1.70	1.91	2.52	3.09	2.07	2.59	3.31
Total solids	% ww	42.93	58.50	58.70	54.50	54.50	47.90	47.50	44.90	44.00	73.70
Total solids (preserved)	% ww	31.57	57.00	55.60	44.90	46.40	37.70	48.30	39.30	38.70	72.90
Total sulfides	mg/kg dw	300	695	3,030	65.1 J	91.6 J	879	1,040	450	3,250	752 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1f. 2009 Round 1 and Round 2 surface sediment samples, SS-107–SS-115

Analyte	Location ID	EW09-SS-107	EW09-SS-108	EW09-SS-109	EW09-SS-110	EW09-SS-111	EW09-SS-112	EW09-SS-113	EW09-SS-114	EW09-SS-115
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/22/09	3/2/09	3/4/09	3/2/09	6/22/09	3/2/09	3/4/09	6/22/09
Metals										
Antimony	mg/kg dw	20 UJ	6 UJ	10 UJ	10 UJ	6 UJ	10 UJ	8 UJ	9 UJ	9 UJ
Arsenic	mg/kg dw	9.9	3.1	10.9	9.2	3.4	9.8	9.9	22.7	11.7
Cadmium	mg/kg dw	5.7	0.3 U	1.6	1.3 J	0.2 U	1.0	1.3	0.6 J	1.8
Chromium	mg/kg dw	55	19.4	45	45	15.7	41	36.6	33.8	50.5
Cobalt	mg/kg dw	8	5.3	9.0	8.7	4.8	8.8	8.9	7.7	9.4
Copper	mg/kg dw	117	23.3	104	121	21.4	88.1	63.7	90.3	101
Lead	mg/kg dw	168	9	75	84	5	61	63	58	103
Mercury	mg/kg dw	0.53 J	0.11 J	0.48	0.48	0.07	0.40 J	0.54	0.32	0.48 J
Molybdenum	mg/kg dw	5	0.6 U	1	3	0.6 U	3	1.3	2.7	3.1
Nickel	mg/kg dw	28	14	26	27	14	25	28	23	28
Selenium	mg/kg dw	0.7 U	0.6 U	1 U	1 U	0.6 U	1 U	0.8 U	0.9 U	0.9 U
Silver	mg/kg dw	1	0.4 U	1.0	0.9	0.4 U	0.7	0.8	0.6 U	1.1
Thallium	mg/kg dw	0.3 U	0.3 U	0.4 U	0.4 U	0.2 U	0.4 U	0.3 U	0.4 U	0.4 U
Vanadium	mg/kg dw	55	42.8	69.9	70.0	47.8	65.5	64.8	60.6	66.8
Zinc	mg/kg dw	1,230 J	42	218 J	239	37 J	162	175 J	126	210
Organometals										
Monobutyltin as ion	µg/kg dw	3.7 U	7.8 U	na	3.8 U	na	na	3.7 U	3.9 U	7.7 U
Dibutyltin as ion	µg/kg dw	5.2 UJ	11 U	na	9.2	na	na	5.3 U	7.3	17
Tributyltin as ion	µg/kg dw	3.5 U	31	na	48	na	na	6.3	96	180
PAHs										
1-Methylnaphthalene	µg/kg dw	21	20 U	20 U	20 U	19 U	20 U	20 U	9.9 J	20 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	42	20 U	20 U	13 J	19 U	25	13 J	12 J	29
Acenaphthene	µg/kg dw	50	20 U	20 U	14 J	19 U	24	15 J	29	27
Acenaphthylene	µg/kg dw	44	20 U	10 J	24	19 U	30	9.9 J	17 J	31
Anthracene	µg/kg dw	380	33	41	88	19 U	240	38	61	120
Benzo(a)anthracene	µg/kg dw	450	36	130	150	9.8 J	260	78	110	160
Benzo(a)pyrene	µg/kg dw	520	37	130	220	19 U	350	75	190	320
Benzo(b)fluoranthene	µg/kg dw	840	50	180	270	14 J	410	83	280	500

Table A-1f, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-107–SS-115

Analyte	Location ID	EW09-SS-107	EW09-SS-108	EW09-SS-109	EW09-SS-110	EW09-SS-111	EW09-SS-112	EW09-SS-113	EW09-SS-114	EW09-SS-115
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/22/09	3/2/09	3/4/09	3/2/09	6/22/09	3/2/09	3/4/09	6/22/09
Benzo(g,h,i)perylene	µg/kg dw	140	20 U	54	68 J	19 U	110	38	58 J	160
Benzo(k)fluoranthene	µg/kg dw	730	50	120	380	19 U	410	84	230	290
Total benzofluoranthenes	µg/kg dw	1,570	100	300	650	14 J	820	167	510	790
Chrysene	µg/kg dw	840	86	190	280	12 J	530	110	200	360
Dibenzo(a,h)anthracene	µg/kg dw	40 J	20 U	20	28 J	19 U	45	11 J	18 J	60 J
Dibenzofuran	µg/kg dw	54	20 U	20 U	14 J	19 U	27	14 J	22	28
Fluoranthene	µg/kg dw	1,700	53	220	320	12 J	460	210	210	420
Fluorene	µg/kg dw	68	20 U	10 J	18 J	19 U	55	21	19 J	41
Indeno(1,2,3-cd)pyrene	µg/kg dw	140	20 U	53	72 J	19 U	120	33	57 J	140
Naphthalene	µg/kg dw	100	20 U	11 J	22	19 U	25	22	27	31
Phenanthrene	µg/kg dw	340	60	73	140	19 U	260	80	100	230
Pyrene	µg/kg dw	1,900	65	200	330	18 J	590	230	350	960
Total HPAHs	µg/kg dw	7,300 J	377	1,300	2,120 J	66 J	3,290	950 J	1,700 J	3,370 J
Total LPAHs	µg/kg dw	980	93	145 J	310 J	19 U	630	186 J	250 J	480
Total cPAHs	µg/kg dw	760 J	56.0	190	320 J	17.7 J	490	108 J	270 J	460 J
Total PAHs	µg/kg dw	8,300 J	470	1,440 J	2,420 J	66 J	3,920	1,140 J	1,960 J	3,850 J
Phthalates										
Bis(2-ethylhexyl)phthalate	µg/kg dw	460	260	69	180	18 J	380	66	230	660
Butyl benzyl phthalate	µg/kg dw	20	15 U	15 U	20	15 U	20	24	17 J	39
Diethyl phthalate	µg/kg dw	16 U	20 U	15 U	15 U	15 U	15 U	15 U	15 U	43
Dimethyl phthalate	µg/kg dw	16 U	15 U	15 U	13 J	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	180	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20
Di-n-octyl phthalate	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
Other SVOCs										
1,2,4-Trichlorobenzene	µg/kg dw	6.2 U	6.1 U	6.1 U	6.0 U	6.0 U	6.0 U	8.5	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/kg dw	6.2 U	6.1 U	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	7.4	6.1 U	6.1 U	17 J	6.0 U	30	18	10 J	26
2,4,5-Trichlorophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
2,4-Dichlorophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
2,4-Dimethylphenol	µg/kg dw	6.2 U	6.1 U	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U

Table A-1f, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-107–SS-115

Analyte	Location ID	EW09-SS-107	EW09-SS-108	EW09-SS-109	EW09-SS-110	EW09-SS-111	EW09-SS-112	EW09-SS-113	EW09-SS-114	EW09-SS-115
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/22/09	3/2/09	3/4/09	3/2/09	6/22/09	3/2/09	3/4/09	6/22/09
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	200 U	200 U	190 U	200 U	200 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
2,6-Dinitrotoluene	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
2-Chlorophenol	µg/kg dw	20 U	20 U	20 U	20 U	19 U	27 U	20 U	20 U	20 U
2-Methylphenol	µg/kg dw	6.2 U	6.1 U	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U
2-Nitroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
2-Nitrophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 UJ	98 U	98 U
3-Nitroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 UJ	98 U	98 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	200 U	200 U	190 U	200 U	200 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
4-Chloroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	R	98 U	98 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
4-Methylphenol	µg/kg dw	16 J	20 U	20 U	20 U	19 U	20 U	31	20 U	20 U
4-Nitroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
4-Nitrophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
Aniline	µg/kg dw	R	20 U	20 U	20 U	19 U	20 U	R	20 U	20 U
Benzoic acid	µg/kg dw	200 UJ	200 U	200 U	200 U	190 U	200 U	200 U	200 U	200 U
Benzyl alcohol	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
Carbazole	µg/kg dw	160	20 U	11 J	37	19 U	88	20 U	24	39
Hexachlorobenzene	µg/kg dw	6.2 U	6.1 U	6.1 U	0.97 U	1.8 UJ	6.0 U	1.0 U	6.1 U	6.1 U
Hexachlorobutadiene	µg/kg dw	6.2 U	6.1 U	6.1 U	0.97 U	6.0 U	6.0 U	1.1 U	6.1 U	6.1 U
Hexachlorocyclopentadiene	µg/kg dw	98 U	97 U	98 U	98 U	96 U	99 U	99 U	98 U	98 U
Hexachloroethane	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
Isophorone	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	31 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	31 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.2 U	6.1 U	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U

Table A-1f, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-107–SS-115

Analyte	Location ID	EW09-SS-107	EW09-SS-108	EW09-SS-109	EW09-SS-110	EW09-SS-111	EW09-SS-112	EW09-SS-113	EW09-SS-114	EW09-SS-115
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/22/09	3/2/09	3/4/09	3/2/09	6/22/09	3/2/09	3/4/09	6/22/09
Nitrobenzene	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	20 U
Pentachlorophenol	µg/kg dw	31 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
Phenol	µg/kg dw	76 JN	20 U	20 U	24	19 U	20 U	20 U	20 U	20 U
PCBs										
Aroclor-1016	µg/kg dw	20 U	3.9 U	200 U	98 U	19 U	17 U	330 U	20 U	30 U
Aroclor-1221	µg/kg dw	20 U	3.9 U	200 U	98 U	19 U	17 U	330 U	20 U	30 U
Aroclor-1232	µg/kg dw	20 U	3.9 U	200 U	98 U	19 U	17 U	330 U	20 U	30 U
Aroclor-1242	µg/kg dw	20 U	3.9 U	200 U	98 U	19 U	17 U	330 U	20 U	30 U
Aroclor-1248	µg/kg dw	330	13	200 U	98 U	19 U	87	330 U	26	180
Aroclor-1254	µg/kg dw	480	40	260	98 U	19 U	230	660	73	320
Aroclor-1260	µg/kg dw	470	63	450	140	19 U	460	1,300	120	440
Aroclor-1262	µg/kg dw	20 U	3.9 U	200 U	98 U	19 U	17 U	330 U	20 U	30 U
Aroclor-1268	µg/kg dw	20 U	3.9 U	200 U	98 U	19 U	17 U	330 U	20 U	30 U
Total PCBs	µg/kg dw	1,280	116	710	140	19 U	780	2,000	220	940
Pesticides										
2,4'-DDD	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
2,4'-DDE	µg/kg dw	na	na	na	2.0 U	na	na	55 U	na	na
2,4'-DDT	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
4,4'-DDD	µg/kg dw	na	na	na	2.0 U	na	na	2.0 UJ	na	na
4,4'-DDE	µg/kg dw	na	na	na	2.0 U	na	na	2.0 UJ	na	na
4,4'-DDT	µg/kg dw	na	na	na	2.0 U	na	na	2.0 UJ	na	na
Total DDTs	µg/kg dw	na	na	na	2.0 U	na	na	55 U	na	na
Aldrin	µg/kg dw	na	na	na	0.97 U	na	na	1.0 U	na	na
Dieldrin	µg/kg dw	na	na	na	2.0 U	na	na	33 UJ	na	na
alpha-BHC	µg/kg dw	na	na	na	0.97 U	na	na	1.0 U	na	na
beta-BHC	µg/kg dw	na	na	na	0.97 U	na	na	1.0 U	na	na
gamma-BHC	µg/kg dw	na	na	na	0.97 U	na	na	1.0 U	na	na
delta-BHC	µg/kg dw	na	na	na	0.97 U	na	na	1.0 U	na	na
alpha-Chlordane	µg/kg dw	na	na	na	0.97 U	na	na	1.0 U	na	na
gamma-Chlordane	µg/kg dw	na	na	na	0.97 U	na	na	14 U	na	na
Total chlordane	µg/kg dw	na	na	na	2.0 U	na	na	14 U	na	na
alpha-Endosulfan	µg/kg dw	na	na	na	0.97 U	na	na	1.0 UJ	na	na

Table A-1f, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-107–SS-115

Analyte	Location ID	EW09-SS-107	EW09-SS-108	EW09-SS-109	EW09-SS-110	EW09-SS-111	EW09-SS-112	EW09-SS-113	EW09-SS-114	EW09-SS-115
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/22/09	3/2/09	3/4/09	3/2/09	6/22/09	3/2/09	3/4/09	6/22/09
beta-Endosulfan	µg/kg dw	na	na	na	2.0 U	na	na	39 UJ	na	na
Endosulfan sulfate	µg/kg dw	na	na	na	2.0 U	na	na	2.0 UJ	na	na
Endrin	µg/kg dw	na	na	na	2.0 U	na	na	2.0 UJ	na	na
Endrin aldehyde	µg/kg dw	na	na	na	2.0 U	na	na	22 UJ	na	na
Endrin ketone	µg/kg dw	na	na	na	2.0 U	na	na	2.0 UJ	na	na
Heptachlor	µg/kg dw	na	na	na	0.97 U	na	na	1.0 U	na	na
Heptachlor epoxide	µg/kg dw	na	na	na	1.5 U	na	na	23 UJ	na	na
Methoxychlor	µg/kg dw	na	na	na	9.7 U	na	na	10 UJ	na	na
Mirex	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
cis-Nonachlor	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
Oxychlordane	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
Toxaphene	µg/kg dw	na	na	na	97 U	na	na	100 U	na	na
trans-Nonachlor	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
Grain size										
Fractional % phi >-1 (>2000 microns)	% dw	31.3	5.1	0.9	5.0	16.4	0.1 U	35.2	3.5	0.1
Fractional % phi -1-0 (1000-2000 microns)	% dw	14.4	13.1	0.6	1.9	22.9	0.9	2.2	1.7	0.6
Fractional % phi 0-1 (500-1000 microns)	% dw	9.9	19.2	0.6	1.3	12.5	1.3	2.7	2.8	1.4
Fractional % phi 1-2 (250-500 microns)	% dw	15.2	22.7	1.0	1.4	4.5	2.0	5.1	9.8	6.6
Fractional % phi 2-3 (125-250 microns)	% dw	9.7	19.9	3.2	3.4	4.5	6.6	5.1	17.5	11.9
Fractional % phi 3-4 (62.5-125 microns)	% dw	5.2	4.6	10.1	7.7	10.4	12.0	3.7	11.9	11.0
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	2.4	3.9	13.0	9.5	11.7	11.7	4.0 J	9.1	10.6
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	3.1	1.9	16.0	10.3	6.3	14.6	7.9 J	7.6	11.2
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	3.1	2.3	14.9	13.9	3.2	12.6	9.7	9.6	12.7
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	1.5	2.4	12.6	12.8	2.2	11.4	7.9	7.8	10.1

Table A-1f, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-107–SS-115

Analyte	Location ID	EW09-SS-107	EW09-SS-108	EW09-SS-109	EW09-SS-110	EW09-SS-111	EW09-SS-112	EW09-SS-113	EW09-SS-114	EW09-SS-115
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/22/09	3/2/09	3/4/09	3/2/09	6/22/09	3/2/09	3/4/09	6/22/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	1.0	1.3	8.6	9.6	1.5	7.5	6.1	5.5	6.5
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	1.2	1.4	6.8	8.7	1.3	6.5	5.0	4.8	6.0
Fractional % phi 10+ (<0.98 micron)	% dw	2.0	2.2	11.7	14.4	2.5	12.9	5.5	8.3	11.6
Total gravel	% dw	31.3	5.1	0.9	5.0	16.4	0.1 U	35.2	3.5	0.1
Total sand	% dw	54.4	79.5	15.5	15.7	54.8	22.8	18.7	43.7	31.5
Total silt	% dw	10.1	10.5	56.5	46.5	23.4	50.3	29.4 J	34.1	44.6
Total clay	% dw	4.2	4.9	27.1	32.7	5.3	26.9	16.7	18.6	24.1
Total fines (percent silt+clay)	% dw	14.3	15.4	83.6	79.2	28.7	77.2	46.1 J	52.7	68.7
Conventionals										
Ammonia	mg-N/kg dw	8.34	4.09	4.06	3.05	1.45	15.1	3.43	2.97	5.28
Total organic carbon (TOC)	% dw	2.32	0.924	1.85	1.87	0.560	2.37	1.85	1.42	1.28
Total solids	% ww	69.70	73.40	47.80	48.70	78.60	48.80	63.27	56.30	49.50
Total solids (preserved)	% ww	62.70	62.60	44.00	46.70	82.80	39.80	56.07	52.90	46.00
Total sulfides	mg/kg dw	232 J	17.3	561	1,320	1.30	78.2	248	2,060	241

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1g. 2009 Round 1 and Round 2 surface sediment samples, SS-116–SS-125

Analyte	Location ID	EW09-SS-116	EW09-SS-116	EW09-SS-118	EW09-SS-119	EW09-SS-120	EW09-SS-121	EW09-SS-122	EW09-SS-123	EW09-SS-124	EW09-SS-125
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-116-010	EW09-SS-301-010	EW09-SS-118-010	EW09-SS-119-010	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/2/09	3/2/09	6/22/09	3/1/09	3/1/09	6/22/09	3/1/09	6/23/09	6/23/09	6/23/09
Metals											
Antimony	mg/kg dw	9 UJ	9 UJ	9 UJ	9 UJ	8 UJ	9 UJ	8 UJ	9 UJ	8 UJ	8 UJ
Arsenic	mg/kg dw	12.6	12.7	8.9	7.6	8.4	9.5	6.8	6.7	5.9	5.1
Cadmium	mg/kg dw	1.8	1.7	0.7	1.1	1.6	1.3	0.5	0.5	0.3 U	0.3 U
Chromium	mg/kg dw	48.4	46.5	38.4	37.7	46.3	44.4	32.9	33.1	26.1	21.4
Cobalt	mg/kg dw	9.4	9.6	9.6	8.6	8.5	9.1	8.5	8.0	6.4	5.8
Copper	mg/kg dw	101	94.3	62.4	73.1	74.1	77.5	73.2	63.3	54.2	35.7
Lead	mg/kg dw	94	85	48	56	73	72	48	41	35	22
Mercury	mg/kg dw	0.72	0.64	0.37 J	0.37	0.42	0.44 J	0.31	0.26	0.28	0.14
Molybdenum	mg/kg dw	1.9	1.8	2.1	0.9	1.4	3.6	1.0	2.0	1.8	1.1
Nickel	mg/kg dw	27	27	28	21	26	27	21	21	17	15
Selenium	mg/kg dw	0.9 U	0.9 U	0.9 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	0.8 U	0.8 U
Silver	mg/kg dw	1.6	1.3	0.5 U	0.8	1.2	0.9	0.6	0.5 U	0.5 U	0.5 U
Thallium	mg/kg dw	0.4 U	0.3 U	0.3 U	0.4 U	0.3 U	0.4 U	0.3 U	0.4 U	0.3 U	0.3 U
Vanadium	mg/kg dw	69.8	70.6	67.3	64.7	65.0	64.0	64.4	59.9	50.1	46.6
Zinc	mg/kg dw	174 J	165 J	113	130	140	143	119	105	87	61
Organometals											
Monobutyltin as ion	µg/kg dw	na	na	7.4 U	3.7 U	na	na	3.8 U	3.9 U	3.5 U	na
Dibutyltin as ion	µg/kg dw	na	na	10 U	5.2 U	na	na	5.4 U	5.5 U	9.4	na
Tributyltin as ion	µg/kg dw	na	na	17	28	na	na	57	37	360	na
PAHs											
1-Methylnaphthalene	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	120
2-Chloronaphthalene	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
2-Methylnaphthalene	µg/kg dw	9.7 J	20 U	19 U	20 U	20 U	33	20 U	20 U	19 U	200
Acenaphthene	µg/kg dw	14 J	11 J	19 U	20 U	20 U	24	20 U	20 U	21	20 U
Acenaphthylene	µg/kg dw	11 J	20 U	19 U	20 U	20 U	26	20 U	25	19 U	20 U
Anthracene	µg/kg dw	40	36	41	27	20 U	86	20	79	65	44
Benzo(a)anthracene	µg/kg dw	65	59	70	65	41	140	53	150 J	110	82
Benzo(a)pyrene	µg/kg dw	100	89	61	94	67	260	76	250	190	160
Benzo(b)fluoranthene	µg/kg dw	130	130	74	140	89	290	120	570	450	270

Table A-1g, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-116–SS-125

Analyte	Location ID	EW09-SS-116	EW09-SS-116	EW09-SS-118	EW09-SS-119	EW09-SS-120	EW09-SS-121	EW09-SS-122	EW09-SS-123	EW09-SS-124	EW09-SS-125
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-116-010	EW09-SS-301-010	EW09-SS-118-010	EW09-SS-119-010	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/2/09	3/2/09	6/22/09	3/1/09	3/1/09	6/22/09	3/1/09	6/23/09	6/23/09	6/23/09
Benzo(g,h,i)perylene	µg/kg dw	54	46	27 J	27 J	20 U	120	26 J	68	48	35
Benzo(k)fluoranthene	µg/kg dw	100	76	67	100	69	290	90	550	440	190
Total benzofluoranthenes	µg/kg dw	230	210	141	240	158	580	210	1,120	890	460
Chrysene	µg/kg dw	120	100	92	110	61	220	95	240	180	160
Dibenzo(a,h)anthracene	µg/kg dw	11 J	14 J	19 UJ	20 U	20 U	34 J	20 U	20	19 U	20 U
Dibenzofuran	µg/kg dw	13 J	12 J	19 U	20 U	20 U	24	20 U	20 U	19 U	20 U
Fluoranthene	µg/kg dw	100	88	170	100	110	260	97	290	230	240
Fluorene	µg/kg dw	15 J	13 J	22	20 U	20 U	35	20 U	24	23	20 U
Indeno(1,2,3-cd)pyrene	µg/kg dw	45	39	24 J	28 J	20 U	110	25 J	70	53	40
Naphthalene	µg/kg dw	23	23	19 U	20 U	20 U	28	20 U	20 U	19 U	52
Phenanthrene	µg/kg dw	71	56	70	53	56	160	40	150	130	82
Pyrene	µg/kg dw	300	310	190	130	150	630	150	300 J	260 J	220 J
Total HPAHs	µg/kg dw	1,030 J	950 J	780 J	790 J	590	2,350 J	730 J	2,510 J	1,960 J	1,400 J
Total LPAHs	µg/kg dw	174 J	139 J	133	80	56	360	60	280	240	178
Total cPAHs	µg/kg dw	140 J	126 J	89.0 J	132 J	93.0	360 J	110 J	390 J	300	220
Total PAHs	µg/kg dw	1,200 J	1,090 J	910 J	870 J	640	2,710 J	790 J	2,790 J	2,200 J	1,580 J
Phthalates											
Bis(2-ethylhexyl)phthalate	µg/kg dw	150	130	45	150	130	520	66	190	250	89
Butyl benzyl phthalate	µg/kg dw	15 U	15 U	15 U	22	15 U	15	17	21	16	15 U
Diethyl phthalate	µg/kg dw	15 U	15 U	15 U	20 U	20 U	18 U	20 U	15 U	15 U	15 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	16 U	15 U	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Di-n-octyl phthalate	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Other SVOCs											
1,2,4-Trichlorobenzene	µg/kg dw	6.1 U	6.1 U	7.2	6.2 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U
1,2-Dichlorobenzene	µg/kg dw	6.1 U	6.1 U	6.0 U	6.2 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U
1,3-Dichlorobenzene	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
1,4-Dichlorobenzene	µg/kg dw	6.1 U	6.1 U	7.2	31	9.0	18	14	25	86	13
2,4,5-Trichlorophenol	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
2,4-Dichlorophenol	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
2,4-Dimethylphenol	µg/kg dw	6.1 U	6.1 U	6.0 U	6.2 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U

Table A-1g, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-116–SS-125

Analyte	Location ID	EW09-SS-116	EW09-SS-116	EW09-SS-118	EW09-SS-119	EW09-SS-120	EW09-SS-121	EW09-SS-122	EW09-SS-123	EW09-SS-124	EW09-SS-125
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-116-010	EW09-SS-301-010	EW09-SS-118-010	EW09-SS-119-010	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/2/09	3/2/09	6/22/09	3/1/09	3/1/09	6/22/09	3/1/09	6/23/09	6/23/09	6/23/09
2,4-Dinitrophenol	µg/kg dw	190 U	200 U	190 U	200 U	200 U	200 U	200 U	200 U	190 U	200 U
2,4-Dinitrotoluene	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
2,6-Dinitrotoluene	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
2-Chlorophenol	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
2-Methylphenol	µg/kg dw	6.1 U	6.1 U	6.0 U	6.2 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U
2-Nitroaniline	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
2-Nitrophenol	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
3-Nitroaniline	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
4,6-Dinitro-o-cresol	µg/kg dw	190 U	200 U	190 U	200 U	200 U	200 U	200 U	200 U	190 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
4-Chloroaniline	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
4-Chlorophenyl phenyl ether	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
4-Methylphenol	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20	20 U	20 U	19 U	20 U
4-Nitroaniline	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
4-Nitrophenol	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
Aniline	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 UJ	19 UJ	20 UJ
Benzoic acid	µg/kg dw	190 U	200 U	190 U	200 U	200 U	200 U	200 U	200 U	190 U	200 U
Benzyl alcohol	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 UJ	19 UJ	38 J
bis(2-chloroethoxy)methane	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Carbazole	µg/kg dw	10 J	20 U	19 U	20 U	20 U	27	20 U	27	23	20 U
Hexachlorobenzene	µg/kg dw	6.1 U	6.1 U	1.6 U	6.2 U	6.0 U	6.0 U	0.99 U	1.7 U	4.8 U	6.0 U
Hexachlorobutadiene	µg/kg dw	6.1 U	6.1 U	1.6 U	6.2 U	6.0 U	6.0 U	0.99 U	1.7 U	4.8 U	6.0 U
Hexachlorocyclopentadiene	µg/kg dw	97 U	97 U	97 U	99 U	98 U	98 U	98 U	98 U	97 U	98 U
Hexachloroethane	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Isophorone	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.1 U	6.1 U	6.0 U	6.2 U	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U

Table A-1g, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-116–SS-125

Analyte	Location ID	EW09-SS-116	EW09-SS-116	EW09-SS-118	EW09-SS-119	EW09-SS-120	EW09-SS-121	EW09-SS-122	EW09-SS-123	EW09-SS-124	EW09-SS-125
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-116-010	EW09-SS-301-010	EW09-SS-118-010	EW09-SS-119-010	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/2/09	3/2/09	6/22/09	3/1/09	3/1/09	6/22/09	3/1/09	6/23/09	6/23/09	6/23/09
Nitrobenzene	µg/kg dw	19 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Pentachlorophenol	µg/kg dw	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U	30 U	30 U
Phenol	µg/kg dw	19 U	14 J	44	20 U	20 U	58	20 U	20 U	19 U	20 U
PCBs											
Aroclor-1016	µg/kg dw	59 U	190 U	27 U	200 U	200 U	15 U	200 U	59 U	20 U	20 U
Aroclor-1221	µg/kg dw	59 U	190 U	27 U	200 U	200 U	15 U	200 U	59 U	20 U	20 U
Aroclor-1232	µg/kg dw	59 U	190 U	27 U	200 U	200 U	15 U	200 U	59 U	20 U	20 U
Aroclor-1242	µg/kg dw	59 U	190 U	27 U	200 U	200 U	15 U	200 U	59 U	26	20 U
Aroclor-1248	µg/kg dw	120	200	27 U	200 U	200 U	210	200 U	59 U	20 U	20 U
Aroclor-1254	µg/kg dw	240	400	140 U	270	310	330	200 U	400 U	200 U	170 U
Aroclor-1260	µg/kg dw	280	620	220	520	290	380	550	1,100	570	480
Aroclor-1262	µg/kg dw	59 U	190 U	27 U	200 U	200 U	15 U	200 U	59 U	20 U	20 U
Aroclor-1268	µg/kg dw	59 U	190 U	27 U	200 U	200 U	15 U	200 U	59 U	20 U	20 U
Total PCBs	µg/kg dw	640	1,220	220	790	600	920	550	1,100	600	480
Pesticides											
2,4'-DDD	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
2,4'-DDE	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
2,4'-DDT	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
4,4'-DDD	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
4,4'-DDE	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
4,4'-DDT	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Total DDTs	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Aldrin	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
Dieldrin	µg/kg dw	na	na	3.2 U	na	na	na	6.3 U	17 U	9.7 U	na
alpha-BHC	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
beta-BHC	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
gamma-BHC	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
delta-BHC	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
alpha-Chlordane	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
gamma-Chlordane	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
Total chlordane	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
alpha-Endosulfan	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na

Table A-1g, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-116–SS-125

Analyte	Location ID	EW09-SS-116	EW09-SS-116	EW09-SS-118	EW09-SS-119	EW09-SS-120	EW09-SS-121	EW09-SS-122	EW09-SS-123	EW09-SS-124	EW09-SS-125
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-116-010	EW09-SS-301-010	EW09-SS-118-010	EW09-SS-119-010	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/2/09	3/2/09	6/22/09	3/1/09	3/1/09	6/22/09	3/1/09	6/23/09	6/23/09	6/23/09
beta-Endosulfan	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Endosulfan sulfate	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Endrin	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Endrin aldehyde	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Endrin ketone	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Heptachlor	µg/kg dw	na	na	1.6 U	na	na	na	0.99 U	1.7 U	4.8 U	na
Heptachlor epoxide	µg/kg dw	na	na	1.6 U	na	na	na	3.1 U	1.7 U	4.8 U	na
Methoxychlor	µg/kg dw	na	na	16 U	na	na	na	9.9 U	17 U	48 U	na
Mirex	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
cis-Nonachlor	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Oxychlordane	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Toxaphene	µg/kg dw	na	na	160 U	na	na	na	99 U	170 U	480 U	na
trans-Nonachlor	µg/kg dw	na	na	3.2 U	na	na	na	2.0 U	3.4 U	9.7 U	na
Grain size											
Fractional % phi >-1 (>2000 microns)	% dw	0.1 U	0.4	0.1	0.2	7.9	0.3	0.1	0.1	0.6	0.1
Fractional % phi -1-0 (1000-2000 microns)	% dw	0.3	0.2	0.4	0.4	1.1	0.9	0.5	0.5	0.9	0.5
Fractional % phi 0-1 (500-1000 microns)	% dw	1.3	1.3	0.8	1.1	1.6	2.5	1.3	0.9	1.2	1.1
Fractional % phi 1-2 (250-500 microns)	% dw	5.7	6.3	2.1	3.8	6.7	8.6	7.4	7.0	12.0	16.7
Fractional % phi 2-3 (125-250 microns)	% dw	8.9	9.1	3.6	10.0	14.1	11.4	17.2	18.6	29.6	34.0
Fractional % phi 3-4 (62.5-125 microns)	% dw	8.1	8.2	3.7	12.0	11.1	9.8	14.8	15.0	15.9	15.6
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	8.4	8.7	10.4	12.7	9.3	10.4	12.2	11.0	6.7	7.0
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	14.3	13.3	14.6	11.3	9.1	10.7	8.7	8.9	8.4	4.2
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	12.6	12.5	17.2	12.0	10.5	11.7	9.4	9.4	5.9	4.1
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	11.7	11.3	13.9	10.2	8.0	9.7	7.9	7.2	5.2	4.2

Table A-1g, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-116–SS-125

Analyte	Location ID	EW09-SS-116	EW09-SS-116	EW09-SS-118	EW09-SS-119	EW09-SS-120	EW09-SS-121	EW09-SS-122	EW09-SS-123	EW09-SS-124	EW09-SS-125
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-116-010	EW09-SS-301-010	EW09-SS-118-010	EW09-SS-119-010	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/2/09	3/2/09	6/22/09	3/1/09	3/1/09	6/22/09	3/1/09	6/23/09	6/23/09	6/23/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	8.9	9.4	10.2	8.2	6.1	7.0	6.1	6.6	3.7	3.7
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	6.9	6.8	7.9	6.6	5.7	5.7	5.2	4.7	3.5	3.0
Fractional % phi 10+ (<0.98 micron)	% dw	12.8	12.4	15.2	11.5	8.7	11.3	9.0	10.2	6.4	5.8
Total gravel	% dw	0.1 U	0.4	0.1	0.2	7.9	0.3	0.1	0.1	0.6	0.1
Total sand	% dw	24.3	25.1	10.6	27.3	34.6	33.2	41.2	42.0	59.6	67.9
Total silt	% dw	47.0	45.8	56.1	46.2	36.9	42.5	38.2	36.5	26.2	19.5
Total clay	% dw	28.6	28.6	33.3	26.3	20.5	24.0	20.3	21.5	13.6	12.5
Total fines (percent silt+clay)	% dw	75.6	74.4	89.4	72.5	57.4	66.5	58.5	58.0	39.8	32.0
Conventionals											
Ammonia	mg-N/kg dw	6.03	5.74	5.52	6.23	2.54	5.39	2.82	7.69	7.52	2.44
Total organic carbon (TOC)	% dw	2.16	1.87	1.69	1.31	1.43	2.04	1.65	1.47	1.08	1.48
Total solids	% ww	54.70	54.90	56.50	53.00	61.00	55.30	58.30	56.40	60.40	63.80
Total solids (preserved)	% ww	49.60	47.30	52.70	49.60	58.20	50.70	55.80	54.10	61.60	61.80
Total sulfides	mg/kg dw	606	548	537	153 J	136 J	448	784 J	239 J	341 J	10.7 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1h. 2009 Round 1 and Round 2 surface sediment samples, SS-126–SS-134

Analyte	Location ID	EW09-SS-126	EW09-SS-127	EW09-SS-128	EW09-SS-129	EW09-SS-130	EW09-SS-131	EW09-SS-132	EW09-SS-133	EW09-SS-134
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/5/09	3/1/09	6/23/09	3/1/09	3/1/09	6/23/09	3/1/09	6/22/09	6/23/09
Metals										
Antimony	mg/kg dw	7 UJ	8 UJ	8 UJ	8 UJ	8 UJ	8 UJ	8 UJ	8 UJ	8 UJ
Arsenic	mg/kg dw	6.4	7.1	6.1	5.8	6.2	6.2	6.3	5.3	5.7
Cadmium	mg/kg dw	0.3 U	0.6	0.3 U	0.3 U	0.3 U	0.3 U	0.5	0.3 U	0.3 U
Chromium	mg/kg dw	22.7	33.1	21.6	25.4	24.6	26.9	26.4	26.9	26.3
Cobalt	mg/kg dw	6.1	8.1	6.1	6.2	6.8	7.6	6.4	6.5	7.0
Copper	mg/kg dw	52.3	55.9	40.1	48.5	66.8	49.1	76.4	93.6	50.2
Lead	mg/kg dw	33	42	25	32	29	29	38	31	31
Mercury	mg/kg dw	0.17 J	0.43	0.24	0.23	0.23	0.21	0.24	0.27 J	0.27
Molybdenum	mg/kg dw	1.5 J	0.8 U	1.2	0.8 U	0.8 U	1.7	0.8 U	1.3	1.4
Nickel	mg/kg dw	18	24	15	15	17	19	16	17	18
Selenium	mg/kg dw	0.7 U	0.8 U	0.9 U	0.8 U	0.8 U	0.8 U	0.8 U	0.9 U	0.8 U
Silver	mg/kg dw	0.4 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U
Thallium	mg/kg dw	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Vanadium	mg/kg dw	47.4	60.6	45.8	50.8	54.6	56.0	51.4	50.9	54.1
Zinc	mg/kg dw	87	98	63	75	87	79	94	89	77
Organometals										
Monobutyltin as ion	µg/kg dw	6.7 U	3.6	na	3.8 U	na	na	na	7.6 U	na
Dibutyltin as ion	µg/kg dw	9.8	6.2	na	5.4 U	na	na	na	25	na
Tributyltin as ion	µg/kg dw	1,600	83	na	11	na	na	na	610	na
PAHs										
1-Methylnaphthalene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
2-Methylnaphthalene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Acenaphthene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Acenaphthylene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Anthracene	µg/kg dw	28	24	74	30	24	54	29	63	62
Benzo(a)anthracene	µg/kg dw	64	52	130	79	66	84	77	110	110
Benzo(a)pyrene	µg/kg dw	120	80	190	89	79	160	99	160	170
Benzo(b)fluoranthene	µg/kg dw	190 J	110	420	140	96	200	160	200	230

Table A-1h, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-126–SS-134

Analyte	Location ID	EW09-SS-126	EW09-SS-127	EW09-SS-128	EW09-SS-129	EW09-SS-130	EW09-SS-131	EW09-SS-132	EW09-SS-133	EW09-SS-134
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/5/09	3/1/09	6/23/09	3/1/09	3/1/09	6/23/09	3/1/09	6/22/09	6/23/09
Benzo(g,h,i)perylene	µg/kg dw	51 J	25 J	55	27 J	57 J	40	76 J	49	47
Benzo(k)fluoranthene	µg/kg dw	120	83	410	110	92	190	77	200	190
Total benzofluoranthenes	µg/kg dw	310 J	190	830	250	188	390	240	400	420
Chrysene	µg/kg dw	130	86	220	140	110	140	130	200	180
Dibenzo(a,h)anthracene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	23 J	19 U	20 U
Dibenzofuran	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Fluoranthene	µg/kg dw	150	110	230	290	190	150	120	190	210
Fluorene	µg/kg dw	20 U	20 U	24	20 U	20 U	20 U	20 U	19 U	20 U
Indeno(1,2,3-cd)pyrene	µg/kg dw	47 J	25 J	61	30 J	49 J	41	66 J	49	52
Naphthalene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Phenanthrene	µg/kg dw	54	48	120	120	63	84	63	91	110
Pyrene	µg/kg dw	210	120	220 J	210	150	200 J	120	240	180 J
Total HPAHs	µg/kg dw	1,080 J	690 J	1,940 J	1,120 J	890 J	1,210 J	950 J	1,400	1,370 J
Total LPAHs	µg/kg dw	82	72	220	150	87	138	92	154	170
Total cPAHs	µg/kg dw	170 J	112 J	300	130 J	114 J	220	147 J	220	230
Total PAHs	µg/kg dw	1,160 J	760 J	2,150 J	1,270 J	980 J	1,340 J	1,040 J	1,550	1,540 J
Phthalates										
Bis(2-ethylhexyl)phthalate	µg/kg dw	120	59	120	91	55	110	160	210	110
Butyl benzyl phthalate	µg/kg dw	22	15 U	24	30	15 U	20	25	15 U	17
Diethyl phthalate	µg/kg dw	15 U	17 U	16 U	15 U	15 U	15 U	15 U	21	15 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	16 U	15 U	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Di-n-octyl phthalate	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Other SVOCs										
1,2,4-Trichlorobenzene	µg/kg dw	6.0 U	6.0 U	6.2 U	6.1 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U
1,2-Dichlorobenzene	µg/kg dw	6.0 U	6.0 U	6.2 U	6.1 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
1,4-Dichlorobenzene	µg/kg dw	28	27	22	25	53	49	12	15	17
2,4,5-Trichlorophenol	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
2,4-Dichlorophenol	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
2,4-Dimethylphenol	µg/kg dw	6.0 U	6.0 U	6.2 U	6.1 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U

Table A-1h, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-126–SS-134

Analyte	Location ID	EW09-SS-126	EW09-SS-127	EW09-SS-128	EW09-SS-129	EW09-SS-130	EW09-SS-131	EW09-SS-132	EW09-SS-133	EW09-SS-134
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/5/09	3/1/09	6/23/09	3/1/09	3/1/09	6/23/09	3/1/09	6/22/09	6/23/09
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	190 U	200 U
2,4-Dinitrotoluene	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
2,6-Dinitrotoluene	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
2-Chlorophenol	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
2-Methylphenol	µg/kg dw	6.0 U	6.0 U	6.2 U	6.1 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U
2-Nitroaniline	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
2-Nitrophenol	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	99 UJ	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
3-Nitroaniline	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	190 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
4-Chloroaniline	µg/kg dw	R	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
4-Methylphenol	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
4-Nitroaniline	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
4-Nitrophenol	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
Aniline	µg/kg dw	R	20 U	19 UJ	20 U	20 U	20 UJ	20 U	19 U	20 UJ
Benzoic acid	µg/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	190 U	200 U
Benzyl alcohol	µg/kg dw	20 U	20 U	19 UJ	20 U	20 U	20 UJ	20 U	19 U	20 UJ
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Carbazole	µg/kg dw	16 J	11 J	20	15 J	10 J	20 U	10 J	19 U	20 U
Hexachlorobenzene	µg/kg dw	6.0 U	6.0 U	6.2 U	0.98 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U
Hexachlorobutadiene	µg/kg dw	6.0 U	6.0 U	6.2 U	0.98 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U
Hexachlorocyclopentadiene	µg/kg dw	99 U	98 U	97 U	98 U	99 U	97 U	99 U	96 U	98 U
Hexachloroethane	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Isophorone	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	30 U	31 U	30 U	30 U	31 U	30 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	30 U	30 U	31 U	30 U	30 U	31 U	30 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.0 U	6.0 U	6.2 U	6.1 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U

Table A-1h, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-126–SS-134

Analyte	Location ID	EW09-SS-126	EW09-SS-127	EW09-SS-128	EW09-SS-129	EW09-SS-130	EW09-SS-131	EW09-SS-132	EW09-SS-133	EW09-SS-134
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/5/09	3/1/09	6/23/09	3/1/09	3/1/09	6/23/09	3/1/09	6/22/09	6/23/09
Nitrobenzene	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U
Pentachlorophenol	µg/kg dw	30 U	30 U	31 U	30 U	30 U	31 U	30 U	30 U	30 U
Phenol	µg/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	67	20 U
PCBs										
Aroclor-1016	µg/kg dw	200 U	200 U	58 U	190 U	200 U	34 U	200 U	14 U	59 U
Aroclor-1221	µg/kg dw	200 U	200 U	58 U	190 U	200 U	34 U	200 U	14 U	59 U
Aroclor-1232	µg/kg dw	200 U	200 U	58 U	190 U	200 U	34 U	200 U	14 U	59 U
Aroclor-1242	µg/kg dw	200 U	200 U	58 U	190 U	200 U	34 U	200 U	14 U	59 U
Aroclor-1248	µg/kg dw	200 U	200 U	58 U	190 U	200 U	34 U	200 U	49	59 U
Aroclor-1254	µg/kg dw	200 U	230	340 U	190 U	230	390 U	220	120	410 U
Aroclor-1260	µg/kg dw	880	520	1,100	470	730	1,200	630	220	1,200
Aroclor-1262	µg/kg dw	200 U	200 U	58 U	190 U	200 U	34 U	200 U	14 U	59 U
Aroclor-1268	µg/kg dw	200 U	200 U	58 U	190 U	200 U	34 U	200 U	14 U	59 U
Total PCBs	µg/kg dw	880	750	1,100	470	960	1,200	850	390	1,200
Pesticides										
2,4'-DDD	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
2,4'-DDE	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
2,4'-DDT	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
4,4'-DDD	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
4,4'-DDE	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
4,4'-DDT	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Total DDTs	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Aldrin	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na
Dieldrin	µg/kg dw	na	na	na	41 U	na	na	na	na	na
alpha-BHC	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na
beta-BHC	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na
gamma-BHC	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na
delta-BHC	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na
alpha-Chlordane	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na
gamma-Chlordane	µg/kg dw	na	na	na	7.3 U	na	na	na	na	na
Total chlordane	µg/kg dw	na	na	na	7.3 U	na	na	na	na	na
alpha-Endosulfan	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na

Table A-1h, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-126–SS-134

Analyte	Location ID	EW09-SS-126	EW09-SS-127	EW09-SS-128	EW09-SS-129	EW09-SS-130	EW09-SS-131	EW09-SS-132	EW09-SS-133	EW09-SS-134
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/5/09	3/1/09	6/23/09	3/1/09	3/1/09	6/23/09	3/1/09	6/22/09	6/23/09
beta-Endosulfan	µg/kg dw	na	na	na	50 U	na	na	na	na	na
Endosulfan sulfate	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Endrin	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Endrin aldehyde	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Endrin ketone	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Heptachlor	µg/kg dw	na	na	na	0.98 U	na	na	na	na	na
Heptachlor epoxide	µg/kg dw	na	na	na	22 U	na	na	na	na	na
Methoxychlor	µg/kg dw	na	na	na	9.8 U	na	na	na	na	na
Mirex	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
cis-Nonachlor	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Oxychlordane	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Toxaphene	µg/kg dw	na	na	na	98 U	na	na	na	na	na
trans-Nonachlor	µg/kg dw	na	na	na	2.0 U	na	na	na	na	na
Grain size										
Fractional % phi >-1 (>2000 microns)	% dw	15.1	0.2	0.3	0.4	0.2	0.1	0.8	0.3	0.1
Fractional % phi -1-0 (1000-2000 microns)	% dw	4.8	0.8	0.6	0.4	0.3	0.5	0.6	0.6	0.6
Fractional % phi 0-1 (500-1000 microns)	% dw	4.4	1.3	1.5	0.7	0.8	1.0	1.0	3.4	0.9
Fractional % phi 1-2 (250-500 microns)	% dw	12.6	10.6	7.6	5.1	10.0	11.7	9.2	14.3	7.7
Fractional % phi 2-3 (125-250 microns)	% dw	19.7	22.5	24.0	22.4	27.2	29.2	24.4	26.4	25.2
Fractional % phi 3-4 (62.5-125 microns)	% dw	9.8	13.5	17.6	18.1	17.5	12.6	17.4	14.5	18.0
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	7.3	9.5	9.9	15.0	10.2	6.0	10.9	7.6	9.2
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	4.2	7.0	6.9	7.6	5.5	5.5	6.6	6.9	8.2
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	4.8	8.0	6.3	7.1	5.9	6.8	6.5	6.1	6.7
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	4.4	6.8	6.4	6.0	5.7	7.1	6.0	5.6	6.4

Table A-1h, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-126–SS-134

Analyte	Location ID	EW09-SS-126	EW09-SS-127	EW09-SS-128	EW09-SS-129	EW09-SS-130	EW09-SS-131	EW09-SS-132	EW09-SS-133	EW09-SS-134
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010
	Sample Type	N	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/5/09	3/1/09	6/23/09	3/1/09	3/1/09	6/23/09	3/1/09	6/22/09	6/23/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	3.9	5.9	5.5	4.9	4.8	5.6	4.8	3.8	4.7
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	3.2	5.2	4.9	4.6	4.4	4.6	4.5	3.7	4.3
Fractional % phi 10+ (<0.98 micron)	% dw	5.9	8.6	8.5	7.7	7.6	9.2	7.3	6.9	7.9
Total gravel	% dw	15.1	0.2	0.3	0.4	0.2	0.1	0.8	0.3	0.1
Total sand	% dw	51.3	48.7	51.3	46.7	55.8	55.0	52.6	59.2	52.4
Total silt	% dw	20.7	31.3	29.5	35.7	27.3	25.4	30.0	26.2	30.5
Total clay	% dw	13.0	19.7	18.9	17.2	16.8	19.4	16.6	14.4	16.9
Total fines (percent silt+clay)	% dw	33.7	51.0	48.4	52.9	44.1	44.8	46.6	40.6	47.4
Conventionals										
Ammonia	mg-N/kg dw	2.08	1.99	2.46	1.98	2.61	2.66	5.77	9.10	3.69
Total organic carbon (TOC)	% dw	1.34	1.62	1.35	1.30	1.49	1.62	1.60	1.51	1.26
Total solids	% ww	66.00	60.90	58.10	59.70	59.50	57.80	58.90	61.30	58.50
Total solids (preserved)	% ww	58.10	58.90	49.20	53.90	56.60	56.90	57.80	59.50	44.10
Total sulfides	mg/kg dw	493	38.5 J	80.8 J	23.2 J	127 J	126 J	96.8 J	399	4.74 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1i. 2009 Round 1 and Round 2 surface sediment samples, SS-200–SS-207

Analyte	Location ID	EW09-SS-200	EW09-SS-200	EW09-SS-201	EW09-SS-202	EW09-SS-203	EW09-SS-204	EW09-SS-205	EW09-SS-206	EW09-SS-207
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-200-010	EW09-SS-300-010	EW09-SS-201-010	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010
	Sample Type	N	FD	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	6/23/09	3/1/09	6/23/09	3/1/09	6/23/09	6/23/09	3/1/09
Metals										
Antimony	mg/kg dw	9 UJ	9 UJ	7 UJ	8 UJ	7 UJ	8 UJ	7 UJ	9 UJ	8 UJ
Arsenic	mg/kg dw	10.4	10.0	6.6	5.0	3.9	6.1	4.4	20.9	5.3
Cadmium	mg/kg dw	0.9	0.9	0.5	0.3 U	0.3 U	0.3 U	0.3 U	0.4 U	0.3 U
Chromium	mg/kg dw	38.2	37.1	29.3	21.0	16.7	24.8	18.8	34.3	21.9
Cobalt	mg/kg dw	8.7	8.1	6.7	6.0	5.0	6.4	5.7	7.4	6.1
Copper	mg/kg dw	79.6	77.3	53.4	124	26.6	48.6	30.5	84.2	43.8
Lead	mg/kg dw	75	72	45	20	16	32	12	64	23
Mercury	mg/kg dw	0.47	0.39	0.24	0.18	0.13	0.23	0.11	0.29 J	0.17
Molybdenum	mg/kg dw	2.2	1.9	2.5	0.8 U	1.6	0.8 U	1.2	3.6	0.8 U
Nickel	mg/kg dw	24	23	19	14	11	16	13	23	15
Selenium	mg/kg dw	0.9 U	0.8 U	0.7 U	0.8 U	0.7 U	0.8 U	0.8 U	0.9 U	0.8 U
Silver	mg/kg dw	0.8	0.8	0.5	0.5 U	0.4 U	0.5 U	0.4 U	0.5 U	0.5 U
Thallium	mg/kg dw	0.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.4 U	0.3 U
Vanadium	mg/kg dw	65.3	62.6	47.6	50.2	44.6	53.0	45.0	46.6	50.4
Zinc	mg/kg dw	131	125	85	83	46	84	50	162 J	69
Organometals										
Monobutyltin as ion	µg/kg dw	3.8 U	4.0 U	3.8 U	na	3.5 U	3.5 U	3.6 U	na	3.8 U
Dibutyltin as ion	µg/kg dw	5.4 U	5.9	5.3 U	na	5.0 U	5.0 U	5.1 U	na	5.4 U
Tributyltin as ion	µg/kg dw	28	29	32	na	5.5 J	8.9	7.8 J	na	7.6
PAHs										
1-Methylnaphthalene	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	190	20 U
2-Chloronaphthalene	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	170	20 U
Acenaphthene	µg/kg dw	19 U	120	19 U	19 U	19 U	19 U	19 U	1,900	20 U
Acenaphthylene	µg/kg dw	19 U	630	19 U	19 U	19 U	19 U	19 U	130 J	20 U
Anthracene	µg/kg dw	66	740	52	36	80	35	24	2,300	33
Benzo(a)anthracene	µg/kg dw	140	4,100	90	110	97	94	54	2,900	100
Benzo(a)pyrene	µg/kg dw	320	2,500	190	120	130	120	61	2,300 J	120
Benzo(b)fluoranthene	µg/kg dw	320	6,600	230	170	180	160	82	2,600	180

Table A-1i, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-200–SS-207

Analyte	Location ID	EW09-SS-200	EW09-SS-200	EW09-SS-201	EW09-SS-202	EW09-SS-203	EW09-SS-204	EW09-SS-205	EW09-SS-206	EW09-SS-207
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-200-010	EW09-SS-300-010	EW09-SS-201-010	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010
	Sample Type	N	FD	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	6/23/09	3/1/09	6/23/09	3/1/09	6/23/09	6/23/09	3/1/09
Benzo(g,h,i)perylene	µg/kg dw	74 J	520 J	48	46 J	34	55 J	22	350	59 J
Benzo(k)fluoranthene	µg/kg dw	360	4,200	280	100	130	100	55	2,400	100
Total benzofluoranthenes	µg/kg dw	680	10,800	510	270	310	260	137	5,000	280
Chrysene	µg/kg dw	310	13,000	140	160	250	150	73	3,600	160
Dibenzo(a,h)anthracene	µg/kg dw	34 J	180 J	19 U	22 J	19 U	19 U	19 U	100	20 U
Dibenzofuran	µg/kg dw	19 U	130	19 U	19 U	19 U	19 U	19 U	1,000 J	20 U
Fluoranthene	µg/kg dw	420	75,000	170	270	93	170	83	9,100	160
Fluorene	µg/kg dw	19 U	230	19 U	19 U	19 U	19 U	19 U	1,400 J	20 U
Indeno(1,2,3-cd)pyrene	µg/kg dw	75 J	690 J	55	48 J	42	55 J	24	430	61 J
Naphthalene	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	240	20 U
Phenanthrene	µg/kg dw	150	5,200	91	120	63	84	36	7,500	78
Pyrene	µg/kg dw	840	41,000	200 J	230	270 J	160	66 J	6,500	170
Total HPAHs	µg/kg dw	2,890 J	148,000 J	1,400 J	1,280 J	1,230 J	1,060 J	520 J	30,300 J	1,110 J
Total LPAHs	µg/kg dw	220	6,900	143	160	143	119	60	13,500 J	111
Total cPAHs	µg/kg dw	430 J	4,300 J	260	170 J	180	170 J	87.0	3,200 J	170 J
Total PAHs	µg/kg dw	3,110 J	155,000 J	1,550 J	1,430 J	1,370 J	1,180 J	580 J	43,800 J	1,220 J
Phthalates										
Bis(2-ethylhexyl)phthalate	µg/kg dw	150	200	110	75	59	63	35	400	56
Butyl benzyl phthalate	µg/kg dw	15 U	24	15 U	22	17	15 U	19	82 J	37
Diethyl phthalate	µg/kg dw	25	29 U	15 U	74	14 U	20	16 U	15 U	24
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	14 U	15 U	16 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
Di-n-octyl phthalate	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
Other SVOCs										
1,2,4-Trichlorobenzene	µg/kg dw	6.2 U	6.0 U	5.9 U	6.1 U	5.8 U	6.1 U	6.2 U	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/kg dw	6.2 U	6.0 U	5.9 U	6.1 U	5.8 U	6.1 U	6.2 U	6.1 U	6.1 U
1,3-Dichlorobenzene	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	10	19	33	65	10	22	30	7.9	10
2,4,5-Trichlorophenol	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
2,4,6-Trichlorophenol	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
2,4-Dichlorophenol	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
2,4-Dimethylphenol	µg/kg dw	6.2 U	6.0 U	5.9 U	6.1 U	5.8 U	6.1 U	6.2 U	10	6.1 U

Table A-1i, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-200–SS-207

Analyte	Location ID	EW09-SS-200	EW09-SS-200	EW09-SS-201	EW09-SS-202	EW09-SS-203	EW09-SS-204	EW09-SS-205	EW09-SS-206	EW09-SS-207
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-200-010	EW09-SS-300-010	EW09-SS-201-010	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010
	Sample Type	N	FD	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	6/23/09	3/1/09	6/23/09	3/1/09	6/23/09	6/23/09	3/1/09
2,4-Dinitrophenol	µg/kg dw	190 U	580 U	190 U	190 U	190 U	190 U	190 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
2,6-Dinitrotoluene	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
2-Chlorophenol	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
2-Methylphenol	µg/kg dw	6.2 U	6.0 U	5.9 U	6.1 U	5.8 U	6.1 U	6.2 U	6.1 U	6.1 U
2-Nitroaniline	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
2-Nitrophenol	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
3,3'-Dichlorobenzidine	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
3-Nitroaniline	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 UJ	99 U
4,6-Dinitro-o-cresol	µg/kg dw	190 U	580 U	190 U	190 U	190 U	190 U	190 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
4-Chloroaniline	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	R	99 U
4-Chlorophenyl phenyl ether	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
4-Methylphenol	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
4-Nitroaniline	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
4-Nitrophenol	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	98 U	99 U
Aniline	µg/kg dw	19 U	58 U	19 UJ	19 U	19 UJ	19 U	19 UJ	R	20 U
Benzoic acid	µg/kg dw	190 U	580 U	190 U	190 U	190 U	190 U	190 U	200 UJ	200 U
Benzyl alcohol	µg/kg dw	19 U	58 U	19 UJ	19 U	19 UJ	19 U	19 UJ	20 U	20 U
bis(2-chloroethoxy)methane	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
Carbazole	µg/kg dw	26	830	19 U	15 J	19 U	11 J	19 U	410 J	12 J
Hexachlorobenzene	µg/kg dw	0.97 U	0.97 U	5.9 U	6.1 U	0.96 U	0.96 U	6.2 U	4.9 U	6.1 U
Hexachlorobutadiene	µg/kg dw	0.97 U	0.97 U	5.9 U	6.1 U	0.96 U	0.96 U	6.2 U	4.9 U	6.1 U
Hexachlorocyclopentadiene	µg/kg dw	97 U	290 U	96 U	97 U	97 U	97 U	97 U	R	99 U
Hexachloroethane	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
Isophorone	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	31 U	30 U	30 U	30 U	29 U	30 U	31 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	31 U	30 U	30 U	30 U	29 U	30 U	31 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.2 U	6.0 U	5.9 U	6.1 U	5.8 U	6.1 U	6.2 U	6.1 U	6.1 U

Table A-1i, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-200–SS-207

Analyte	Location ID	EW09-SS-200	EW09-SS-200	EW09-SS-201	EW09-SS-202	EW09-SS-203	EW09-SS-204	EW09-SS-205	EW09-SS-206	EW09-SS-207
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-200-010	EW09-SS-300-010	EW09-SS-201-010	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010
	Sample Type	N	FD	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	6/23/09	3/1/09	6/23/09	3/1/09	6/23/09	6/23/09	3/1/09
Nitrobenzene	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	20 U	20 U
Pentachlorophenol	µg/kg dw	31 U	30 U	30 U	30 U	29 U	30 U	31 U	30 U	30 U
Phenol	µg/kg dw	19 U	58 U	19 U	19 U	19 U	19 U	19 U	74 JN	20 U
PCBs										
Aroclor-1016	µg/kg dw	180 U	200 U	97 U	100 U	78 U	58 U	79 U	14 U	59 U
Aroclor-1221	µg/kg dw	180 U	200 U	97 U	100 U	78 U	58 U	79 U	14 U	59 U
Aroclor-1232	µg/kg dw	180 U	200 U	97 U	100 U	78 U	58 U	79 U	14 U	59 U
Aroclor-1242	µg/kg dw	180 U	200 U	97 U	100 U	78 U	58 U	79 U	14 U	59 U
Aroclor-1248	µg/kg dw	180 U	200 U	97 U	100 U	78 U	58 U	79 U	68	59 U
Aroclor-1254	µg/kg dw	300	260	760 U	190	210	130	1,100	140	100
Aroclor-1260	µg/kg dw	640	440	2,400	200	280	400	400	130	280
Aroclor-1262	µg/kg dw	180 U	200 U	97 U	100 U	78 U	58 U	79 U	14 U	59 U
Aroclor-1268	µg/kg dw	180 U	200 U	97 U	100 U	78 U	58 U	79 U	14 U	59 U
Total PCBs	µg/kg dw	940	700	2,400	390	490	530	1,500	340	380
Pesticides										
2,4'-DDD	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
2,4'-DDE	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
2,4'-DDT	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
4,4'-DDD	µg/kg dw	2.0 U	1.9 U	na	na	2.3	1.9 U	30 U	9.7 U	na
4,4'-DDE	µg/kg dw	2.0 U	1.9 U	na	na	7.2 U	1.9 U	30 U	9.7 U	na
4,4'-DDT	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	41 UJ	na
Total DDTs	µg/kg dw	2.0 U	1.9 U	na	na	2.3	1.9 U	30 U	41 UJ	na
Aldrin	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	260 UJ	na
Dieldrin	µg/kg dw	9.1 U	6.7 U	na	na	24 U	6.2 U	30 U	9.7 U	na
alpha-BHC	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na
beta-BHC	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na
gamma-BHC	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na
delta-BHC	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na
alpha-Chlordane	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na
gamma-Chlordane	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na
Total chlordane	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	100 U	na
alpha-Endosulfan	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na

Table A-1i, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-200–SS-207

Analyte	Location ID	EW09-SS-200	EW09-SS-200	EW09-SS-201	EW09-SS-202	EW09-SS-203	EW09-SS-204	EW09-SS-205	EW09-SS-206	EW09-SS-207
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-200-010	EW09-SS-300-010	EW09-SS-201-010	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010
	Sample Type	N	FD	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	6/23/09	3/1/09	6/23/09	3/1/09	6/23/09	6/23/09	3/1/09
beta-Endosulfan	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
Endosulfan sulfate	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
Endrin	µg/kg dw	2.0 U	1.9 U	na	na	3.2 U	1.9 U	30 U	23 U	na
Endrin aldehyde	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
Endrin ketone	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	16 U	na
Heptachlor	µg/kg dw	0.97 U	0.97 U	na	na	0.96 U	0.96 U	15 U	4.9 U	na
Heptachlor epoxide	µg/kg dw	4.0 U	3.5 U	na	na	10 U	3.4 U	29 U	4.9 U	na
Methoxychlor	µg/kg dw	9.7 U	9.7 U	na	na	9.6 U	9.6 U	150 U	49 U	na
Mirex	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	85 U	na
cis-Nonachlor	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
Oxychlordane	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	9.7 U	na
Toxaphene	µg/kg dw	97 U	97 U	na	na	96 U	96 U	1,500 U	490 U	na
trans-Nonachlor	µg/kg dw	2.0 U	1.9 U	na	na	1.9 U	1.9 U	30 U	100 U	na
Grain size										
Fractional % phi >-1 (>2000 microns)	% dw	0.3	0.1	1.2	1.9	4.1	0.1	14.8	42.1	1.6
Fractional % phi -1-0 (1000-2000 microns)	% dw	0.6	0.4	1.5	3.5	0.8	0.4	0.6	5.2	0.6
Fractional % phi 0-1 (500-1000 microns)	% dw	0.7	0.6	2.1	3.9	1.9	0.5	1.0	2.8	1.1
Fractional % phi 1-2 (250-500 microns)	% dw	3.2	2.8	14.8	10.9	10.5	3.1	7.5	4.6	10.3
Fractional % phi 2-3 (125-250 microns)	% dw	14.8	13.7	31.0	27.6	16.4	22.9	18.8	11	28.8
Fractional % phi 3-4 (62.5-125 microns)	% dw	16.8	15.3	9.5	19.3	18.4	25.7	20.8	10	21.0
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	12.1	13.5	8.1	8.9	15.6	12.0	9.5	5.9 J	9.9
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	10.5	11.0	6.5	4.9	10.9	7.4	7.9	4.3	6.1
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	10.0	10.5	5.7	4.1	6.9	6.4	5.0	3.5	4.4
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	8.1	8.7	5.5	3.6	3.7	5.4	3.7	2.5	3.8

Table A-1i, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-200–SS-207

Analyte	Location ID	EW09-SS-200	EW09-SS-200	EW09-SS-201	EW09-SS-202	EW09-SS-203	EW09-SS-204	EW09-SS-205	EW09-SS-206	EW09-SS-207
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-200-010	EW09-SS-300-010	EW09-SS-201-010	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010
	Sample Type	N	FD	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	6/23/09	3/1/09	6/23/09	3/1/09	6/23/09	6/23/09	3/1/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	7.2	7.1	4.1	3.1	3.0	4.5	2.8	2.2	3.2
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	5.5	6.1	3.7	3.0	2.5	4.2	2.5	2.3	3.5
Fractional % phi 10+ (<0.98 micron)	% dw	10.2	10.2	6.5	5.3	5.3	7.3	5.2	3.9	5.7
Total gravel	% dw	0.3	0.1	1.2	1.9	4.1	0.1	14.8	42.1	1.6
Total sand	% dw	36.1	32.8	58.9	65.2	48.0	52.6	48.7	33	61.8
Total silt	% dw	40.7	43.7	25.8	21.5	37.1	31.2	26.1	16.1 J	24.2
Total clay	% dw	22.9	23.4	14.3	11.4	10.8	16.0	10.5	8.4	12.4
Total fines (percent silt+clay)	% dw	63.6	67.1	40.1	32.9	47.9	47.2	36.6	24.6 J	36.6
Conventionals										
Ammonia	mg-N/kg dw	3.23	3.04	2.26	3.33	13.2	3.28	2.85	7.50	2.67
Total organic carbon (TOC)	% dw	1.72	1.18	1.77 J	1.39	0.829 J	1.17	0.942 J	1.48 J	1.27
Total solids	% ww	55.30	55.50	65.90	62.90	66.60	60.50	62.20	61.00	63.50
Total solids (preserved)	% ww	48.00	51.10	57.80	60.20	64.70	49.20	58.90	62.83	53.90
Total sulfides	mg/kg dw	124 J	249 J	50.2 J	181 J	108 J	28.2 J	60.4 J	531 J	28.0 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1j. 2009 Round 1 and Round 2 surface sediment samples, SS-208–SS-216

Analyte	Location ID	EW09-SS-208	EW09-SS-208	EW09-SS-209	EW09-SS-210	EW09-SS-211	EW09-SS-212	EW09-SS-213	EW09-SS-214	EW09-SS-215	EW09-SS-216
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-208-010	EW09-SS-305-010	EW09-SS-209-010	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/23/09	6/23/09	6/23/09	3/4/09	6/23/09	6/22/09	6/22/09	6/22/09	3/1/09
Metals											
Antimony	mg/kg dw	9 UJ	9 UJ	8 UJ	7 UJ	8 UJ	7 UJ	8 UJ	7 UJ	10 UJ	7 UJ
Arsenic	mg/kg dw	5.8	6.1	5.2	4.1	3.6	3.4	8.4	10.1	26.2	4.6
Cadmium	mg/kg dw	0.4	0.3 U	0.3 U	0.3 U	0.3 UJ	0.3 U	0.6	0.5	1.3	0.3 U
Chromium	mg/kg dw	27.3	25.7	22.7	17.2	22.7	18.3	21.7	20.6	69	19.4
Cobalt	mg/kg dw	6.4	6.2	5.8	5.1	6.0	5.0	5.8 J	5.1 J	12.0 J	5.4
Copper	mg/kg dw	56.1	50.4	41.9	27.2	64.6	27.7	63.8 J	50.8 J	272 J	29.5
Lead	mg/kg dw	46	44	33	14	29	15	81 J	66 J	171 J	22
Mercury	mg/kg dw	0.21 J	0.26 J	0.25	0.10	0.17	0.13	0.25	0.20	0.70	0.20
Molybdenum	mg/kg dw	4.4	3.5	1.2	0.9	1.6	0.9	1.7 J	1.4 J	4 J	0.7 U
Nickel	mg/kg dw	19	17	16	12	18	14	14	14	39	15
Selenium	mg/kg dw	0.9 U	0.9 U	0.8 U	0.7 U	0.8 U	0.7 U	0.8 U	0.8 U	1 U	0.7 U
Silver	mg/kg dw	0.5 U	0.5 U	0.5 U	0.4 U	0.5 U	0.4 U	0.8	0.5	1.6	0.4 U
Thallium	mg/kg dw	0.4 U	0.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.4 U	0.3 U
Vanadium	mg/kg dw	53.4	50.2	46.0	40.8	50.5	40.4	50.0	45.4	91.5	45.3
Zinc	mg/kg dw	108 J	89 J	65	44	82	44	104 J	84 J	434 J	50
Organometals											
Monobutyltin as ion	µg/kg dw	na	na	na	na	3.6 U	4.0 U	na	3.8 U	3.8 U	3.9 U
Dibutyltin as ion	µg/kg dw	na	na	na	na	5.1 U	5.6 U	na	5.4 U	7.4	5.6 U
Tributyltin as ion	µg/kg dw	na	na	na	na	21	19	na	13	23	5.9
PAHs											
1-Methylnaphthalene	µg/kg dw	39	32	19 U	20 U	19 U	19 U	23	21	59 U	19 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
2-Methylnaphthalene	µg/kg dw	70	57	19 U	20 U	10 J	19 U	30	27	59 U	19 U
Acenaphthene	µg/kg dw	450	290	59	20 U	16 J	19 U	200	95	490	19 U
Acenaphthylene	µg/kg dw	130	120	26	20 U	20	19 U	60	67	260	19 U
Anthracene	µg/kg dw	2,100	1,500	160	40	63	46	410	270	1,400	42
Benzo(a)anthracene	µg/kg dw	3,600	2,000	320	75	130	86	670	430	2,400	91
Benzo(a)pyrene	µg/kg dw	2,800	1,800	370	95	210	110	930	720	2,800	93
Benzo(b)fluoranthene	µg/kg dw	3,800	2,400	450	120	320	130	780	650	2,500	110

Table A-1j, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-208–SS-216

Analyte	Location ID	EW09-SS-208	EW09-SS-208	EW09-SS-209	EW09-SS-210	EW09-SS-211	EW09-SS-212	EW09-SS-213	EW09-SS-214	EW09-SS-215	EW09-SS-216
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-208-010	EW09-SS-305-010	EW09-SS-209-010	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/23/09	6/23/09	6/23/09	3/4/09	6/23/09	6/22/09	6/22/09	6/22/09	3/1/09
Benzo(g,h,i)perylene	µg/kg dw	620	360	100	41	66 J	40	240	180	700	56 J
Benzo(k)fluoranthene	µg/kg dw	2,800	2,000	320	99	300	120	780	650	2,500	110
Total benzofluoranthenes	µg/kg dw	6,600	4,400	770	220	620	250	1,560	1,300	5,000	220
Chrysene	µg/kg dw	4,500	2,800	470	120	230	160	930	670	3,800	190
Dibenzo(a,h)anthracene	µg/kg dw	240	85 J	36	20 U	20 J	19 U	100	77	340	19 U
Dibenzofuran	µg/kg dw	260	180	30	20 U	14 J	19 U	72	62	150	19 U
Fluoranthene	µg/kg dw	7,500	4,300	610	160	300	300	1,200	780	4,300	130
Fluorene	µg/kg dw	670	430	57	20 U	18 J	19 U	140	84	340	19 U
Indeno(1,2,3-cd)pyrene	µg/kg dw	730	420	120	43	63 J	44	290	200	820	55 J
Naphthalene	µg/kg dw	200	110	26	20 U	23	19 U	100	120	86	19 U
Phenanthrene	µg/kg dw	4,100	2,300	370	80	140	140	800	370	2,400	87
Pyrene	µg/kg dw	5,600	3,900	490 J	110 J	300	190 J	2,300	2,700	4,400	130
Total HPAHs	µg/kg dw	32,200	20,100 J	3,290 J	860 J	1,940 J	1,180 J	8,200	7,100	24,600	970 J
Total LPAHs	µg/kg dw	7,700	4,800	700	120	280 J	190	1,710	1,010	5,000	129
Total cPAHs	µg/kg dw	4,000	2,500 J	510	134	300 J	150	1,230	950	3,800	135 J
Total PAHs	µg/kg dw	39,800	24,800 J	3,980 J	980 J	2,220 J	1,370 J	9,930	8,100	29,500	1,090 J
Phthalates											
Bis(2-ethylhexyl)phthalate	µg/kg dw	270	430	110	75	830	62	100	130	690	51
Butyl benzyl phthalate	µg/kg dw	290	15 U	15 U	15 U	22	15 U	15 U	15 U	43	15 U
Diethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	19 U	57	43 U	15 U
Dimethyl phthalate	µg/kg dw	15 U	15 U	22	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
Di-n-octyl phthalate	µg/kg dw	58 J	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
Other SVOCs											
1,2,4-Trichlorobenzene	µg/kg dw	6.0 U	6.1 U	6.0 U	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.0 U	6.0 U
1,2-Dichlorobenzene	µg/kg dw	6.0 U	6.1 U	6.0 U	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.0 U	6.0 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
1,4-Dichlorobenzene	µg/kg dw	15 J	10 J	11	6.1 U	10 J	8.4	17	30	10	6.6
2,4,5-Trichlorophenol	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
2,4-Dichlorophenol	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
2,4-Dimethylphenol	µg/kg dw	17	7.9	6.0 U	6.1 U	6.0 U	6.0 U	7.7	9.7	9.6	6.0 U

Table A-1j, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-208–SS-216

Analyte	Location ID	EW09-SS-208	EW09-SS-208	EW09-SS-209	EW09-SS-210	EW09-SS-211	EW09-SS-212	EW09-SS-213	EW09-SS-214	EW09-SS-215	EW09-SS-216
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-208-010	EW09-SS-305-010	EW09-SS-209-010	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/23/09	6/23/09	6/23/09	3/4/09	6/23/09	6/22/09	6/22/09	6/22/09	3/1/09
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	190 U	200 U	190 U	190 U	190 U	190 U	590 U	190 U
2,4-Dinitrotoluene	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
2,6-Dinitrotoluene	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
2-Chlorophenol	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
2-Methylphenol	µg/kg dw	6.0 U	6.1 U	6.0 U	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.0 U	6.0 U
2-Nitroaniline	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
2-Nitrophenol	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
3,3'-Dichlorobenzidine	µg/kg dw	98 U	97 U	97 U	R	97 U	97 U	97 U	97 U	290 U	R
3-Nitroaniline	µg/kg dw	98 U	97 U	97 U	98 UJ	97 U	97 U	97 U	97 U	290 U	96 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	190 U	200 U	190 U	190 U	190 U	190 U	590 U	190 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
4-Chloro-3-methylphenol	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
4-Chloroaniline	µg/kg dw	98 U	97 U	97 U	R	97 U	97 U	97 U	97 U	290 U	R
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
4-Methylphenol	µg/kg dw	15 J	16 J	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
4-Nitroaniline	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
4-Nitrophenol	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
Aniline	µg/kg dw	R	R	19 UJ	R	19 U	19 UJ	19 UJ	19 UJ	59 UJ	R
Benzoic acid	µg/kg dw	200 UJ	200 UJ	190 U	200 U	190 U	190 U	190 U	190 U	590 U	190 U
Benzyl alcohol	µg/kg dw	20 U	20 U	19 UJ	20 UJ	19 U	19 UJ	19 U	19 U	30 U	19 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	19 U	38 J	19 U	19 U	19 U	19 U	59 U	19 U
Carbazole	µg/kg dw	600	320	51	20 U	29	20	120	84	370	9.8 J
Hexachlorobenzene	µg/kg dw	0.98 U	0.97 U	6.0 U	6.1 U	6.0 U	3.0 UJ	0.97 U	6.1 U	6.0 U	6.0 U
Hexachlorobutadiene	µg/kg dw	0.98 U	0.97 U	6.0 U	6.1 U	6.0 U	6.0 U	0.97 U	6.1 U	6.0 U	6.0 U
Hexachlorocyclopentadiene	µg/kg dw	98 U	97 U	97 U	98 U	97 U	97 U	97 U	97 U	290 U	96 U
Hexachloroethane	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
Isophorone	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	20 U	6.1 U	6.0 U	6.1 U	6.0 U	6.0 U	6.6 U	6.1 U	6.0 U	6.0 U

Table A-1j, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-208–SS-216

Analyte	Location ID	EW09-SS-208	EW09-SS-208	EW09-SS-209	EW09-SS-210	EW09-SS-211	EW09-SS-212	EW09-SS-213	EW09-SS-214	EW09-SS-215	EW09-SS-216
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-208-010	EW09-SS-305-010	EW09-SS-209-010	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/23/09	6/23/09	6/23/09	3/4/09	6/23/09	6/22/09	6/22/09	6/22/09	3/1/09
Nitrobenzene	µg/kg dw	20 U	20 U	19 U	20 U	19 U	19 U	19 U	19 U	59 U	19 U
Pentachlorophenol	µg/kg dw	30 U	30 U	30 U	72	30 U	30 U	30 U	30 U	30 U	30 U
Phenol	µg/kg dw	75	20 U	19 U	20 U	40	19 U	19 U	200	59 U	37
PCBs											
Aroclor-1016	µg/kg dw	14 U	14 U	20 U	20 U	19 U	20 U	13 U	12 U	18 U	19 U
Aroclor-1221	µg/kg dw	14 U	14 U	20 U	20 U	19 U	20 U	13 U	12 U	18 U	19 U
Aroclor-1232	µg/kg dw	14 U	14 U	20 U	20 U	19 U	20 U	13 U	12 U	18 U	19 U
Aroclor-1242	µg/kg dw	14 U	14 U	20 U	20 U	19 U	20 U	13 U	12 U	18 U	19 U
Aroclor-1248	µg/kg dw	41	42	20 U	20 U	19 U	20 U	21	23	34	19 U
Aroclor-1254	µg/kg dw	100	100	84 U	38 U	38	36	13 U	150 U	110	37
Aroclor-1260	µg/kg dw	120	220	220	100	140	50	150	270	200	69
Aroclor-1262	µg/kg dw	14 U	14 U	20 U	20 U	19 U	20 U	13 U	12 U	18 U	19 U
Aroclor-1268	µg/kg dw	14 U	14 U	20 U	20 U	19 U	20 U	13 U	12 U	18 U	19 U
Total PCBs	µg/kg dw	260	360	220	100	180	86	170	290	340	106
Pesticides											
2,4'-DDD	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
2,4'-DDE	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
2,4'-DDT	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
4,4'-DDD	µg/kg dw	8.6 J	6.2 J	na	na	na	na	6.5	na	na	na
4,4'-DDE	µg/kg dw	6.3 U	1.9 U	na	na	na	na	1.9 U	na	na	na
4,4'-DDT	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Total DDTs	µg/kg dw	8.6 J	6.2 J	na	na	na	na	6.5	na	na	na
Aldrin	µg/kg dw	17 U	0.97 U	na	na	na	na	0.97 U	na	na	na
Dieldrin	µg/kg dw	6.4 U	1.9 U	na	na	na	na	5.6 U	na	na	na
alpha-BHC	µg/kg dw	0.98 U	0.97 U	na	na	na	na	0.97 U	na	na	na
beta-BHC	µg/kg dw	0.98 U	0.97 U	na	na	na	na	0.97 U	na	na	na
gamma-BHC	µg/kg dw	1.4 U	0.97 U	na	na	na	na	0.97 U	na	na	na
delta-BHC	µg/kg dw	0.98 U	0.97 U	na	na	na	na	0.97 U	na	na	na
alpha-Chlordane	µg/kg dw	0.98 U	0.97 U	na	na	na	na	0.97 U	na	na	na
gamma-Chlordane	µg/kg dw	3.4 U	3.5 U	na	na	na	na	0.97 U	na	na	na
Total chlordane	µg/kg dw	10 U	5.9 U	na	na	na	na	1.9 U	na	na	na
alpha-Endosulfan	µg/kg dw	0.98 U	0.97 U	na	na	na	na	0.97 U	na	na	na

Table A-1j, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-208–SS-216

Analyte	Location ID	EW09-SS-208	EW09-SS-208	EW09-SS-209	EW09-SS-210	EW09-SS-211	EW09-SS-212	EW09-SS-213	EW09-SS-214	EW09-SS-215	EW09-SS-216
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-208-010	EW09-SS-305-010	EW09-SS-209-010	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/23/09	6/23/09	6/23/09	3/4/09	6/23/09	6/22/09	6/22/09	6/22/09	3/1/09
beta-Endosulfan	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Endosulfan sulfate	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Endrin	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Endrin aldehyde	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Endrin ketone	µg/kg dw	2.1 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Heptachlor	µg/kg dw	0.98 U	0.97 U	na	na	na	na	0.97 U	na	na	na
Heptachlor epoxide	µg/kg dw	6.4 U	0.97 U	na	na	na	na	0.97 U	na	na	na
Methoxychlor	µg/kg dw	9.8 U	9.7 U	na	na	na	na	9.7 U	na	na	na
Mirex	µg/kg dw	6.7 U	2.9 U	na	na	na	na	1.9 U	na	na	na
cis-Nonachlor	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Oxychlordane	µg/kg dw	2.0 U	1.9 U	na	na	na	na	1.9 U	na	na	na
Toxaphene	µg/kg dw	98 U	97 U	na	na	na	na	97 U	na	na	na
trans-Nonachlor	µg/kg dw	10 U	5.9 U	na	na	na	na	1.9 U	na	na	na
Grain size											
Fractional % phi >-1 (>2000 microns)	% dw	0.9	1.6	0.2	0.3	3.4	0.1	0.1	0.2	1.7	0.1
Fractional % phi -1-0 (1000-2000 microns)	% dw	1.2	1.1	0.4	0.3	1.7	0.2	0.4	0.4	2.4	0.2
Fractional % phi 0-1 (500-1000 microns)	% dw	1.0	1.0	0.7	0.6	1.1	0.5	0.8	0.8	1.4	0.5
Fractional % phi 1-2 (250-500 microns)	% dw	4.0	4.0	4.8	13.3	5.2	8.8	7.1	10.7	2.7	8.4
Fractional % phi 2-3 (125-250 microns)	% dw	23.3	22.4	29.1	36.0	24.8	42.1	24.9	25.7	5.3	39.0
Fractional % phi 3-4 (62.5-125 microns)	% dw	28.0	27.4	28.4	25.1	27.6	25.4	22.7	21.1	10.6	25.7
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	11.6	13.7	10	7.3	9.4	6.9	14.2	14.3	12.3	7.7
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	7.4	6.7	6.2	3.4	4.7	3.9	9.1	9.4	15.7	4.2
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	8.1	10.3	4.3	2.6	3.7	3.0	5.2	4.9	16.1	2.8
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	3.7	2.9	3.8	2.4	4.6	2.5	4.2	3.4	8.3	2.6

Table A-1j, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-208–SS-216

Analyte	Location ID	EW09-SS-208	EW09-SS-208	EW09-SS-209	EW09-SS-210	EW09-SS-211	EW09-SS-212	EW09-SS-213	EW09-SS-214	EW09-SS-215	EW09-SS-216
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	EW09-SS-208-010	EW09-SS-305-010	EW09-SS-209-010	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010
	Sample Type	N	FD	N	N	N	N	N	N	N	N
	Unit/ Sample Date	6/23/09	6/23/09	6/23/09	6/23/09	3/4/09	6/23/09	6/22/09	6/22/09	6/22/09	3/1/09
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	2.2	1.9	3.1	2.1	4.0	1.7	2.7	2.3	5.9	2.2
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	2.8	2.2	3.2	2.2	3.2	1.9	2.8	1.9	6.1	2.5
Fractional % phi 10+ (<0.98 micron)	% dw	5.8	4.9	5.6	4.5	6.6	2.9	5.9	4.9	11.6	4.2
Total gravel	% dw	0.9	1.6	0.2	0.3	3.4	0.1	0.1	0.2	1.7	0.1
Total sand	% dw	57.5	55.9	63.4	75.3	60.4	77.0	55.9	58.7	22.4	73.8
Total silt	% dw	30.8	33.6	25	15.7	22.4	16.3	32.7	32.0	52.4	17.3
Total clay	% dw	10.8	9.0	11.9	8.8	13.8	6.5	11.4	9.1	23.6	8.9
Total fines (percent silt+clay)	% dw	41.6	42.6	37	24.5	36.2	22.8	44.1	41.1	76.0	26.2
Conventionals											
Ammonia	mg-N/kg dw	27.7	29.7	3.34	2.35	2.12	2.51	9.11	2.58	26.2	2.11
Total organic carbon (TOC)	% dw	2.11	1.79	0.715 J	0.797 J	0.934	0.807 J	1.74	1.09	3.37	0.921
Total solids	% ww	56.80	56.30	64.30	67.47	62.70	66.70	60.60	63.70	44.50	69.20
Total solids (preserved)	% ww	53.20	54.00	58.40	55.03	61.10	59.70	56.10	56.40	46.10	66.93
Total sulfides	mg/kg dw	1,990 J	2,770 J	8.41 UJ	4.90 J	355	7.88 J	440 J	133 J	1,500 J	2.25 J

dw - dry weight
FD - field duplicate sample
N - normal field sample
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-1k. 2009 Round 1 and Round 2 surface sediment samples, SS-217–LSO-01

Analyte	Location ID	EW09-SS-217	EW09-SS-218	EW09-SS-219	EW09-SS-220	EW09-SS-221	EW09-SS-222	EW09-SS-223	LSO-01
	Depth	0 - 10 cm	0 - 8.5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 7 cm	0 - 10 cm
	Sample ID	EW09-SS-217-010	EW09-SS-218-010	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	EW09-SS-223-010	LSO-01SE-080723
	Sample Type	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	3/4/09	3/1/09	6/23/09	6/23/09	6/22/09	7/23/08
Metals									
Antimony	mg/kg dw	7 UJ	7 UJ	7 UJ	7 UJ	7 UJ	7 UJ	7 UJ	nr
Arsenic	mg/kg dw	4.4	3.5	3.1	2.9	3.5	3.5	2.3	nr
Cadmium	mg/kg dw	0.3 U	0.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U	nr
Chromium	mg/kg dw	17.7	14.9	20.1	14.5	15.1	21.6	14.3	nr
Cobalt	mg/kg dw	4.9	4.9	5.0	4.7	4.7	5.4	4.3 J	nr
Copper	mg/kg dw	24.0	21.6	27.3	17.6	16.9	22.3	18.2 J	nr
Lead	mg/kg dw	15	7	17	9	13	8	5 J	nr
Mercury	mg/kg dw	0.11	0.07	0.16	0.14	0.07 J	0.06 J	0.04	nr
Molybdenum	mg/kg dw	0.7 U	0.7 U	0.8 J	0.7 U	0.7	1.4	0.7 UJ	nr
Nickel	mg/kg dw	12	11	19	12	13	18	10	nr
Selenium	mg/kg dw	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	nr
Silver	mg/kg dw	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	nr
Thallium	mg/kg dw	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	nr
Vanadium	mg/kg dw	43.8	45.8	42.1	42.8	37.4	37.7	40.2	nr
Zinc	mg/kg dw	42	34	54	33	52 J	233 J	29 J	nr
Organometals									
Monobutyltin as ion	µg/kg dw	na	3.8 U	3.9 U	3.6 U	na	na	na	na
Dibutyltin as ion	µg/kg dw	na	5.4 U	5.5 U	5.2 U	na	na	na	na
Tributyltin as ion	µg/kg dw	na	3.6 U	22	3.5 U	na	na	na	na
PAHs									
1-Methylnaphthalene	µg/kg dw	20 U	20 U	20 U	120	19 U	19 U	20 U	44 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
2-Methylnaphthalene	µg/kg dw	20 U	20 U	13 J	140	19 U	16 J	20 U	44 U
Acenaphthene	µg/kg dw	20 U	20 U	19 J	330	19 U	14 J	20 U	67
Acenaphthylene	µg/kg dw	20 U	20 U	16 J	20 U	19 U	19 U	20 U	44 U
Anthracene	µg/kg dw	20 U	20 U	130	270	25	24	20 U	140
Benzo(a)anthracene	µg/kg dw	25	20 U	120	510	44	36	20 U	300
Benzo(a)pyrene	µg/kg dw	31	20 U	140	620	61	39	20 U	380
Benzo(b)fluoranthene	µg/kg dw	25	20 U	190	390	59	40	20 U	340

Table A-1k, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-217–LSO-01

Analyte	Location ID	EW09-SS-217	EW09-SS-218	EW09-SS-219	EW09-SS-220	EW09-SS-221	EW09-SS-222	EW09-SS-223	LSO-01
	Depth	0 - 10 cm	0 - 8.5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 7 cm	0 - 10 cm
	Sample ID	EW09-SS-217-010	EW09-SS-218-010	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	EW09-SS-223-010	LSO-01SE-080723
	Sample Type	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	3/4/09	3/1/09	6/23/09	6/23/09	6/22/09	7/23/08
Benzo(g,h,i)perylene	µg/kg dw	25 J	20 U	41 J	420 J	34	22	20 U	140
Benzo(k)fluoranthene	µg/kg dw	51	20 U	160	470	59	40	20 U	340
Total benzofluoranthenes	µg/kg dw	76	20 U	350	860	118	80	20 U	680
Chrysene	µg/kg dw	41	20 U	170	680	63	58	20 U	480
Dibenzo(a,h)anthracene	µg/kg dw	20 U	20 U	13 J	160 J	12 J	19 U	20 U	65
Dibenzofuran	µg/kg dw	20 U	20 U	14 J	100	19 U	16 J	20 U	37 J
Fluoranthene	µg/kg dw	41	20 U	260	1,600	78	88	20 U	880
Fluorene	µg/kg dw	20 U	20 U	31	300	19 U	15 J	20 U	74
Indeno(1,2,3-cd)pyrene	µg/kg dw	20 J	20 U	39 J	330 J	33	17 J	20 U	140
Naphthalene	µg/kg dw	20 U	20 U	35	230	16 J	93	20 U	44 U
Phenanthrene	µg/kg dw	21	20 U	170	2,500	53	58	20 U	650
Pyrene	µg/kg dw	36	21	240	1,800	77	79	23	840
Total HPAHs	µg/kg dw	295 J	21	1,370 J	7,000 J	520 J	419 J	23	3,910
Total LPAHs	µg/kg dw	21	20 U	400 J	3,600	94 J	204 J	20 U	930
Total cPAHs	µg/kg dw	48.0 J	18.0 U	200 J	860 J	86.0 J	57.0 J	18.0 U	520
Total PAHs	µg/kg dw	316 J	21	1,770 J	10,600 J	614 J	623 J	23	4,840
Phthalates									
Bis(2-ethylhexyl)phthalate	µg/kg dw	25	120	56	30	26	24	20 U	37,000
Butyl benzyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	15 U	81
Diethyl phthalate	µg/kg dw	15 U	15 U	18	15 U	15 U	15 U	23	41 J
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
Di-n-octyl phthalate	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44
Other SVOCs									
1,2,4-Trichlorobenzene	µg/kg dw	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.1 U	5.9 U	6.1 U
1,2-Dichlorobenzene	µg/kg dw	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.1 U	5.9 U	6.1 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
1,4-Dichlorobenzene	µg/kg dw	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.1 U	5.9 U	20
2,4,5-Trichlorophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
2,4-Dichlorophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
2,4-Dimethylphenol	µg/kg dw	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.1 U	5.9 U	6.1 U

Table A-1k, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-217–LSO-01

Analyte	Location ID	EW09-SS-217	EW09-SS-218	EW09-SS-219	EW09-SS-220	EW09-SS-221	EW09-SS-222	EW09-SS-223	LSO-01
	Depth	0 - 10 cm	0 - 8.5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 7 cm	0 - 10 cm
	Sample ID	EW09-SS-217-010	EW09-SS-218-010	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	EW09-SS-223-010	LSO-01SE-080723
	Sample Type	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	3/4/09	3/1/09	6/23/09	6/23/09	6/22/09	7/23/08
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	200 U	200 U	190 U	190 U	200 U	440 U
2,4-Dinitrotoluene	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
2,6-Dinitrotoluene	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
2-Chlorophenol	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
2-Methylphenol	µg/kg dw	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.1 U	5.9 U	6.1 U
2-Nitroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
2-Nitrophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
3,3'-Dichlorobenzidine	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
3-Nitroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	200 U	200 U	190 U	190 U	200 U	440 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
4-Chloro-3-methylphenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
4-Chloroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
4-Methylphenol	µg/kg dw	20 U	20 U	16 J	20 U	19 U	19 U	20 U	59
4-Nitroaniline	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
4-Nitrophenol	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
Aniline	µg/kg dw	20 U	20 U	20 U	20 U	R	R	20 UJ	44 U
Benzoic acid	µg/kg dw	200 U	200 U	200 U	200 U	190 UJ	190 UJ	200 U	340 J
Benzyl alcohol	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	30 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
Carbazole	µg/kg dw	20 U	20 U	22	150	19 U	19 U	20 U	74
Hexachlorobenzene	µg/kg dw	6.1 U	1.8 UJ	1.8 UJ	0.97 U	6.0 U	1.8 UJ	5.9 U	6.1 U
Hexachlorobutadiene	µg/kg dw	6.1 U	6.1 U	6.1 U	0.97 U	6.0 U	6.1 U	5.9 U	6.1 U
Hexachlorocyclopentadiene	µg/kg dw	98 U	97 U	98 U	98 U	96 U	97 U	99 U	220 U
Hexachloroethane	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
Isophorone	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	31 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	30 U	31 U	30 U	30 U	30 U	30 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.1 U	5.9 U	6.1 U

Table A-1k, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-217–LSO-01

Analyte	Location ID	EW09-SS-217	EW09-SS-218	EW09-SS-219	EW09-SS-220	EW09-SS-221	EW09-SS-222	EW09-SS-223	LSO-01
	Depth	0 - 10 cm	0 - 8.5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 7 cm	0 - 10 cm
	Sample ID	EW09-SS-217-010	EW09-SS-218-010	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	EW09-SS-223-010	LSO-01SE-080723
	Sample Type	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	3/4/09	3/1/09	6/23/09	6/23/09	6/22/09	7/23/08
Nitrobenzene	µg/kg dw	20 U	20 U	20 U	20 U	19 U	19 U	20 U	44 U
Pentachlorophenol	µg/kg dw	30 U	31 U	30 U	30 U	30 U	30 U	30 U	59
Phenol	µg/kg dw	20 U	20 U	15 J	20 U	42 JN	19 U	20 U	72
PCBs									
Aroclor-1016	µg/kg dw	20 U	20 U	20 U	20 U	3.9 U	3.8 U	3.9 U	40 U
Aroclor-1221	µg/kg dw	20 U	20 U	20 U	20 U	3.9 U	3.8 U	3.9 U	40 U
Aroclor-1232	µg/kg dw	20 U	20 U	20 U	20 U	3.9 U	3.8 U	3.9 U	40 U
Aroclor-1242	µg/kg dw	20 U	20 U	20 U	20 U	3.9 U	3.8 U	3.9 U	40 U
Aroclor-1248	µg/kg dw	20 U	20 U	20 U	20 U	5.2	5.7	3.9 U	40 U
Aroclor-1254	µg/kg dw	30	20 U	20 U	20 U	12	9.8	6.0	120
Aroclor-1260	µg/kg dw	44	20 U	20 U	20 U	35	8.3	3.9 U	220
Aroclor-1262	µg/kg dw	20 U	20 U	20 U	20 U	3.9 U	3.8 U	3.9 U	40 U
Aroclor-1268	µg/kg dw	20 U	20 U	20 U	20 U	3.9 U	3.8 U	3.9 U	40 U
Total PCBs	µg/kg dw	74	20 U	20 U	20 U	52	23.8	6.0	340
Pesticides									
2,4'-DDD	µg/kg dw	na	na	na	1.9 U	na	na	na	na
2,4'-DDE	µg/kg dw	na	na	na	1.9 U	na	na	na	na
2,4'-DDT	µg/kg dw	na	na	na	1.9 U	na	na	na	na
4,4'-DDD	µg/kg dw	na	na	na	1.9 UJ	na	na	na	na
4,4'-DDE	µg/kg dw	na	na	na	1.9 UJ	na	na	na	na
4,4'-DDT	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Total DDTs	µg/kg dw	na	na	na	1.9 UJ	na	na	na	na
Aldrin	µg/kg dw	na	na	na	0.97 UJ	na	na	na	na
Dieldrin	µg/kg dw	na	na	na	1.9 UJ	na	na	na	na
alpha-BHC	µg/kg dw	na	na	na	0.97 U	na	na	na	na
beta-BHC	µg/kg dw	na	na	na	0.97 UJ	na	na	na	na
gamma-BHC	µg/kg dw	na	na	na	0.97 U	na	na	na	na
delta-BHC	µg/kg dw	na	na	na	0.97 UJ	na	na	na	na
alpha-Chlordane	µg/kg dw	na	na	na	0.97 UJ	na	na	na	na
gamma-Chlordane	µg/kg dw	na	na	na	0.97 U	na	na	na	na
Total chlordane	µg/kg dw	na	na	na	1.9 U	na	na	na	na
alpha-Endosulfan	µg/kg dw	na	na	na	0.97 U	na	na	na	na

Table A-1k, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-217–LSO-01

Analyte	Location ID	EW09-SS-217	EW09-SS-218	EW09-SS-219	EW09-SS-220	EW09-SS-221	EW09-SS-222	EW09-SS-223	LSO-01
	Depth	0 - 10 cm	0 - 8.5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 7 cm	0 - 10 cm
	Sample ID	EW09-SS-217-010	EW09-SS-218-010	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	EW09-SS-223-010	LSO-01SE-080723
	Sample Type	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	3/4/09	3/1/09	6/23/09	6/23/09	6/22/09	7/23/08
beta-Endosulfan	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Endosulfan sulfate	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Endrin	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Endrin aldehyde	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Endrin ketone	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Heptachlor	µg/kg dw	na	na	na	0.97 UJ	na	na	na	na
Heptachlor epoxide	µg/kg dw	na	na	na	0.97 UJ	na	na	na	na
Methoxychlor	µg/kg dw	na	na	na	9.7 U	na	na	na	na
Mirex	µg/kg dw	na	na	na	1.9 U	na	na	na	na
cis-Nonachlor	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Oxychlordane	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Toxaphene	µg/kg dw	na	na	na	97 UJ	na	na	na	na
trans-Nonachlor	µg/kg dw	na	na	na	1.9 U	na	na	na	na
Grain size									
Fractional % phi >-1 (>2000 microns)	% dw	0.3	0.4	17.8	5.9	0.1	5.5	3.0	na
Fractional % phi -1-0 (1000-2000 microns)	% dw	0.2	0.4	2.4	1.8	0.3	3.2	1.9	na
Fractional % phi 0-1 (500-1000 microns)	% dw	0.6	0.9	1.3	4.5	1.5	7.6	1.4	na
Fractional % phi 1-2 (250-500 microns)	% dw	14.0	13.0	8.2	20.6	22.5	26.9	2.7	na
Fractional % phi 2-3 (125-250 microns)	% dw	39.5	28.0	31.6	30.1	49.7	37.1	18.3	na
Fractional % phi 3-4 (62.5-125 microns)	% dw	23.6	19.1	22.6	12.8	12.9	9.4	30.2	na
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	7.2	13.6	4.5	8.0	2.6	2.2	16.8	na
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	3.2	7.9	1.9	4.9	1.7	1.4	10.0	na
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	1.9	5.2	1.7	3.4	1.8	1.4	4.9	na
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	2.1	3.4	1.8	2.1	2.0	1.5	3.1	na

Table A-1k, cont. 2009 Round 1 and Round 2 surface sediment samples, SS-217–LSO-01

Analyte	Location ID	EW09-SS-217	EW09-SS-218	EW09-SS-219	EW09-SS-220	EW09-SS-221	EW09-SS-222	EW09-SS-223	LSO-01
	Depth	0 - 10 cm	0 - 8.5 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 7 cm	0 - 10 cm
	Sample ID	EW09-SS-217-010	EW09-SS-218-010	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	EW09-SS-223-010	LSO-01SE-080723
	Sample Type	N	N	N	N	N	N	N	N
	Unit/ Sample Date	3/1/09	3/1/09	3/4/09	3/1/09	6/23/09	6/23/09	6/22/09	7/23/08
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	2.0	2.4	1.6	1.5	1.2	0.9	1.8	na
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	2.0	2.0	1.5	1.5	1.3	1.0	1.9	na
Fractional % phi 10+ (<0.98 micron)	% dw	3.3	3.5	3.1	2.8	2.3	2.0	4.2	na
Total gravel	% dw	0.3	0.4	17.8	5.9	0.1	5.5	3.0	na
Total sand	% dw	77.9	61.4	66.1	69.8	86.9	84.2	54.5	na
Total silt	% dw	14.4	30.1	9.9	18.4	8.1	6.5	34.8	na
Total clay	% dw	7.3	7.9	6.2	5.8	4.8	3.9	7.9	na
Total fines (percent silt+clay)	% dw	21.7	38.0	16.1	24.2	12.9	10.4	42.7	na
Conventionals									
Ammonia	mg-N/kg dw	1.63	1.58	2.40	1.53	1.96	3.23	3.57	na
Total organic carbon (TOC)	% dw	0.808	0.798	0.795	0.872	1.96	0.776	0.192	1.94 J
Total solids	% ww	71.10	69.70	71.90	75.00	68.80	72.20	65.90	65.90 J
Total solids (preserved)	% ww	66.10	67.70	68.70	68.20	65.10	72.40	63.70	na
Total sulfides	mg/kg dw	1.60 J	3.97 J	299	19.6 J	1.49 UJ	4.95 J	25.7 J	na

dw - dry weight
FD - field duplicate sample
N - normal field sample
na – not analyzed
nr – data not reported in this document
Data qualifiers:
- J – estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-2. Carr Inlet reference sediment samples (grain size and conventionals only)

Analyte	Location ID	CI09-SS-020	CI09-SS-060	CI09-SS-080	CI09-SS-120	CI09-SS-140	CI09-SS-180
	Depth	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
	Sample ID	CI09-SS-020-010	CI09-SS-060-010	CI09-SS-080-010	CI09-SS-120-010	CI09-SS-140-010	CI09-SS-180-010
	Sample Type	Fref	Fref	Fref	FRef	FRef	FRef
	Unit/Sample Date	3/12/09	3/12/09	3/12/09	7/7/09	7/7/09	7/7/09
Grain size							
Fractional % phi >-1 (>2000 microns)	% dw	0.1	16.1	0.1	0.1 U	0.1	3.2
Fractional % phi -1-0 (1000-2000 microns)	% dw	0.3	7.7	0.2	0.2	0.3	0.7
Fractional % phi 0-1 (500-1000 microns)	% dw	2.1	7.2	1.7	2.3	0.7	1.1
Fractional % phi 1-2 (250-500 microns)	% dw	19.8	18.8	16.6	30.0	6.3	4.0
Fractional % phi 2-3 (125-250 microns)	% dw	54.6	20.5	55.1	56.5	48.2	3.9
Fractional % phi 3-4 (62.5-125 microns)	% dw	17.6	21.6	22.0	7.8	34.9	1.8
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	1.4	2.9	1.5	na	4.5	2.3
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	0.7	1.6	0.6	na	1.4	5.0
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	0.5	0.8	0.3	na	0.7	4.6
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	0.4	0.6	0.3	na	0.4	10.8
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	0.5	0.5	0.2	na	0.4	18.3
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	0.4	0.3	0.2	na	0.4	15.1
Fractional % phi 10+ (<0.98 micron)	% dw	1.6	1.5	1.2	na	1.7	29.3
Total gravel	% dw	0.1	16.1	0.1	0.1 U	0.1	3.2
Total sand	% dw	94.4	75.8	95.6	96.8	90.4	11.5
Total silt	% dw	3.0	5.9	2.7	na	7.0	22.7
Total clay	% dw	2.5	2.3	1.6	na	2.5	62.6
Total fines (percent silt+clay)	% dw	5.5	8.2	4.3	na	9.5	85.4
Conventionals							
Ammonia	mg-N/kg dw	2.11	12.8	3.84	3.06	2.58	0.39
Total organic carbon (TOC)	% dw	0.605	0.367	0.210	0.453	0.378	0.438
Total solids	% ww	72.27	71.70	73.00	74.83	70.70	63.10
Total solids (preserved)	% ww	74.90	72.10	73.10	77.33	70.30	69.80
Total sulfides	mg/kg dw	1.15 UJ	54.5 J	1.36 UJ	27.9	14.9	4.38

dw - dry weight
Fref - field reference sample

Table A-3a. T30 PDM 2009 surface sediment samples: T30-09-01 through T30-09-14

Analyte	Location ID	T30-09-01	T30-09-03		T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Depth	0 – 10 cm	0 – 10 cm		0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	FD	N	N	N	N	N	N
	Sample ID	T30-09-01	T30-09-03	T30-09-101	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Metals										
Antimony	mg/kg dw	7 UJ	7 UJ	7 UJ	0.3 UJ	0.3 UJ	8 UJ	6 UJ	0.3 UJ	7 UJ
Arsenic	mg/kg dw	7 U	7 U	7 U	2.6	5.0	8 U	6 U	3.8	7 U
Cadmium	mg/kg dw	1.7	0.6	0.8	0.3 U	0.9	1.7	0.2 U	0.5 J	0.3 U
Chromium	mg/kg dw	29.0	22.5	20.6	14.4	24.5	48.8	15.2	18.0	13.3
Cobalt	mg/kg dw	na	na	na	5.0	6.4	na	na	5.1	na
Copper	mg/kg dw	40.0	36.2	32.4	20.1	39.0	69.5	22.2	23.5	16.5
Lead	mg/kg dw	53	18	16	5	23	115	8	13	3 U
Mercury	mg/kg dw	0.35 J	0.08 J	0.11 J	0.05 J	0.11 J	1.07 J	0.06 J	0.07 J	0.23 J
Molybdenum	mg/kg dw	na	na	na	0.9	1.5	na	na	1.2	na
Nickel	mg/kg dw	16	16	15	10	16	42	12	11	10
Selenium	mg/kg dw	na	na	na	0.7 U	0.8 U	na	na	0.7 U	na
Silver	mg/kg dw	0.7	0.4 U	0.4 U	0.4 U	0.5 U	1.7	0.4 U	0.4 U	0.4 U
Thallium	mg/kg dw	na	na	na	0.3 U	0.3 U	na	na	0.3 U	na
Vanadium	mg/kg dw	na	na	na	45.2	51.5	na	na	47.4	na
Zinc	mg/kg dw	126	67	86	32	74	246	39	47	28
PAHs										
1-Methylnaphthalene	µg/kg dw	39	12 J	12 J	19 U	31	20 U	12 J	19 U	19 U
2-Chloronaphthalene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
2-Methylnaphthalene	µg/kg dw	33	14 J	17 J	19 U	34	20 U	13 J	19 U	19 U
Acenaphthene	µg/kg dw	150	51	63	19 U	210	29	45	18 J	10 J
Acenaphthylene	µg/kg dw	20 U	20 U	19 U	19 U	35	20 U	19 U	19 U	19 U

Table A-3a, cont. T30 PDM 2009 surface sediment samples: T30-09-01 through T30-09-14

	Location ID	T30-09-01	T30-09-03		T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Depth	0 – 10 cm	0 – 10 cm		0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	FD	N	N	N	N	N	N
	Sample ID	T30-09-01	T30-09-03	T30-09-101	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
Analyte	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Anthracene	µg/kg dw	120	45	60	19 U	120	28	28	21	19 U
Benzo(a)anthracene	µg/kg dw	68	87	90	19 U	160	44	54	36	11 J
Benzo(a)pyrene	µg/kg dw	44	92	86	19 U	120	34	45	32	19 U
Benzo(b)fluoranthene	µg/kg dw	69	140	120	19 U	160	48	63	32	19 U
Benzo(g,h,i)perylene	µg/kg dw	22 J	39 J	32 J	19 U	51	14 J	16 J	16 J	19 UJ
Benzo(k)fluoranthene	µg/kg dw	43	98	110	19 U	160	39	42	32	19 U
Total benzofluoranthenes	µg/kg dw	112	240	230	19 U	320	87	105	64	19 U
Chrysene	µg/kg dw	90	130	120	19 U	270	67	76	45	13 J
Dibenzo(a,h)anthracene	µg/kg dw	7.9 J	15 J	17 J	19 U	26	8.4 J	6.0 U	19 U	6.2 U
Dibenzofuran	µg/kg dw	120	31	42	19 U	98	21	26	12 J	19 U
Fluoranthene	µg/kg dw	460	180	220	26	740	130	180	120	45
Fluorene	µg/kg dw	200	35	60	19 U	160	28	36	19	19 U
Indeno(1,2,3-cd)pyrene	µg/kg dw	19 J	35 J	30 J	19 U	52	13 J	16 J	15 J	19 UJ
Naphthalene	µg/kg dw	60	15 J	13 J	19 U	44	20 U	36	11 J	19 U
Phenanthrene	µg/kg dw	640	130	200	22	390	90	160	75	47
Pyrene	µg/kg dw	310	250	240	26	570	110	230	100	39
Total HPAHs	µg/kg dw	1,130 J	1,070 J	1,070 J	52	2,310	510 J	720 J	430 J	108 J
Total LPAHs	µg/kg dw	1,170	280 J	400 J	22	960	175	310	144 J	57 J
Total cPAHs	µg/kg dw	68 J	140 J	130 J	17 U	190	52 J	64 J	48 J	15 J
Total PAHs	µg/kg dw	2,300 J	1,340 J	1,460 J	74	3,270	680 J	1,027 J	570 J	165 J
Phthalates										
Bis(2-ethylhexyl)phthalate	µg/kg dw	200	210	140 U	190 U	360 U	34 U	35 U	1,400 UJ	19 U
Butyl benzyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	16 U
Diethyl phthalate	µg/kg dw	20 U	20 U	19 U	15 U	15 U	20 U	19 U	15 U	19 U

Table A-3a, cont. T30 PDM 2009 surface sediment samples: T30-09-01 through T30-09-14

	Location ID	T30-09-01	T30-09-03		T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Depth	0 – 10 cm	0 – 10 cm		0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	FD	N	N	N	N	N	N
	Sample ID	T30-09-01	T30-09-03	T30-09-101	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
Analyte	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Dimethyl phthalate	µg/kg dw	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	16 U
Di-n-butyl phthalate	µg/kg dw	48	41	41	19 U	20 U	44	44	19 U	34
Di-n-octyl phthalate	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
Other SVOCs										
1,2,4-Trichlorobenzene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.2 U
1,2-Dichlorobenzene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.2 U
1,3-Dichlorobenzene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
1,4-Dichlorobenzene	µg/kg dw	13	5.9	6.6	6.0 U	6.6	6.0 U	6.0 U	6.0 U	6.2 U
2,4,5-Trichlorophenol	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
2,4-Dichlorophenol	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
2,4-Dimethylphenol	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 UJ	6.0 U	6.2 UJ
2,4-Dinitrophenol	µg/kg dw	200 U	200 U	190 U	190 UJ	200 UJ	200 U	190 U	190 UJ	190 U
2,4-Dinitrotoluene	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
2,6-Dinitrotoluene	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
2-Chlorophenol	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
2-Methylphenol	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 UJ	6.0 U	6.2 UJ
2-Nitroaniline	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
2-Nitrophenol	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
3,3'-Dichlorobenzidine	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
3-Nitroaniline	µg/kg dw	98 U	97 U	97 U	97 UJ	98 UJ	98 U	96 U	97 UJ	97 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	200 U	190 U	190 UJ	200 UJ	200 U	190 U	190 UJ	190 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U

Table A-3a, cont. T30 PDM 2009 surface sediment samples: T30-09-01 through T30-09-14

	Location ID	T30-09-01	T30-09-03		T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Depth	0 – 10 cm	0 – 10 cm		0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	FD	N	N	N	N	N	N
	Sample ID	T30-09-01	T30-09-03	T30-09-101	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
Analyte	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
4-Chloro-3-methylphenol	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
4-Chloroaniline	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 UJ	R
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
4-Methylphenol	µg/kg dw	20 U	20 U	19 U	19 U	46	20 U	19 U	20	19 U
4-Nitroaniline	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
4-Nitrophenol	µg/kg dw	98 U	97 U	97 U	97 U	98 U	98 U	96 U	97 U	97 U
Aniline	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 UJ	R
Benzoic acid	µg/kg dw	200 U	200 U	190 U	190 UJ	200 UJ	200 U	190 U	190 UJ	190 U
Benzyl alcohol	µg/kg dw	R	R	R	19 U	20 U	R	R	19 U	R
bis(2-chloroethoxy) methane	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
Carbazole	µg/kg dw	na	na	na	19 U	65	na	na	19 U	na
Hexachlorobenzene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.2 U
Hexachlorobutadiene	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.2 U
Hexachlorocyclopentadiene	µg/kg dw	98 U	97 U	97 U	97 UJ	98 UJ	98 U	96 U	R	97 U
Hexachloroethane	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 UJ	19 U
Isophorone	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	29 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U
n-Nitrosodimethylamine	µg/kg dw	30 U	29 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U
n-Nitrosodiphenylamine	µg/kg dw	28 U	5.9 U	6.0 U	6.0 U	12 U	46 U	6.0 U	18 U	6.2 U
Nitrobenzene	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
Pentachlorophenol	µg/kg dw	30 U	29 U	30 U	30 U	30 U	30 U	30 UJ	30 U	31 UJ

Table A-3a, cont. T30 PDM 2009 surface sediment samples: T30-09-01 through T30-09-14

Analyte	Location ID	T30-09-01	T30-09-03		T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Depth	0 – 10 cm	0 – 10 cm		0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	FD	N	N	N	N	N	N
	Sample ID	T30-09-01	T30-09-03	T30-09-101	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Phenol	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U	19 U
PCB Aroclors										
Aroclor-1016	µg/kg dw	18 U	18 U	18 U	3.9 U	20 U	18 U	17 U	19 U	18 U
Aroclor-1221	µg/kg dw	18 U	18 U	18 U	3.9 U	20 U	18 U	17 U	19 U	18 U
Aroclor-1232	µg/kg dw	18 U	18 U	18 U	7.8 U	20 U	120 U	17 U	19 U	18 U
Aroclor-1242	µg/kg dw	18 U	18 U	18 U	3.9 U	20 U	18 U	17 U	19 U	18 U
Aroclor-1248	µg/kg dw	79	26	26	3.9 U	37	59 U	17 U	36	18 U
Aroclor-1254	µg/kg dw	110	48	54	6.8	66	140	30	51	18 U
Aroclor-1260	µg/kg dw	120	52	86	7.3	77	130	35	50	18 U
Aroclor-1262	µg/kg dw	18 U	18 U	18 U	3.9 U	20 U	18 U	17 U	19 U	18 U
Aroclor-1268	µg/kg dw	18 U	18 U	18 U	3.9 U	20 U	18 U	17 U	19 U	18 U
Total PCBs	µg/kg dw	310	126	166	14.1	180	270	65	137	18 U
Grain size										
Fractional % phi >-1 (>2000 microns)	% dw	4.8	2.6	1.1	na	na	0.6	2.0	na	0.1
Fractional % phi -1-0 (1000-2000 microns)	% dw	0.8	1.2	1.2	na	na	1.8	1.5	na	0.1
Fractional % phi 0-1 (500-1000 microns)	% dw	1.0	4.3	4.4	na	na	3.1	4.5	na	0.2
Fractional % phi 1-2 (250-500 microns)	% dw	2.7	15.3	15.0	na	na	12.2	11.5	na	5.1
Fractional % phi 2-3 (125-250 microns)	% dw	16.3	33.7	34.2	na	na	8.2	28.5	na	31.9
Fractional % phi 3-4 (62.5-125 microns)	% dw	19.5	19.8	21.1	na	na	4.1	24.0	na	32.8
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	15.6	7.6	12.8	na	na	4.7	11.7	na	14.4
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	15.2	4.5	2.0	na	na	10.0	5.9	na	5.6

Table A-3a, cont. T30 PDM 2009 surface sediment samples: T30-09-01 through T30-09-14

Analyte	Location ID	T30-09-01	T30-09-03		T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Depth	0 – 10 cm	0 – 10 cm		0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	FD	N	N	N	N	N	N
	Sample ID	T30-09-01	T30-09-03	T30-09-101	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13	T30-09-14
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	7.6	2.2	0.2	na	na	8.6	2.5	na	2.3
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	4.9	2.2	2.2	na	na	11.9	2.0	na	2.2
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	2.8	1.4	1.3	na	na	9.4	1.3	na	1.1
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	3.3	1.8	1.6	na	na	10.3	1.5	na	1.5
Fractional % phi 10+ (<0.98 micron)	% dw	5.6	3.3	2.9	na	na	15.2	3.1	na	2.9
Total gravel	% dw	4.8	2.6	1.1	na	na	0.6	2.0	na	0.1
Total sand	% dw	40.3	74.3	75.9	na	na	29.4	70.0	na	70.1
Total silt	% dw	43.3	16.5	17.2	na	na	35.2	22.1	na	24.4
Total clay	% dw	11.7	6.5	5.8	na	na	34.9	5.9	na	5.5
Total fines (percent silt+clay)	% dw	55.0	23.0	23.0	na	na	70.1	28.0	na	29.9
Conventionals										
Ammonia	mg-N/kg	na	na	na	na	na	na	na	na	na
Total organic carbon (TOC)	% dw	1.15 J	0.736 J	0.697 J	0.541 J	0.986 J	3.40 J	0.665 J	1.04 J	0.426 J
Total solids	% ww	61.90	68.40	69.00	69.23 J	64.80 J	55.10	75.40	70.20 J	71.20
Total solids (preserved)	% ww	na	na	na	na	na	na	na	na	na
Total sulfides	mg/kg dw	na	na	na	na	na	na	na	na	na

Table A-3a, cont. T30 PDM 2009 surface sediment samples: T30-09-01 through T30-09-14

dw - dry weight

FD - field duplicate sample

N - normal field sample

na – not analyzed

PAH – polycyclic aromatic hydrocarbon

PCB – polychlorinated biphenyl

SVOC – semivolatile organic compound

Data qualifiers:

J – estimated concentration

R – rejected

U – not detected at reporting limit shown

UJ – not detected at estimated reporting limit shown

Table A-3b. T30 PDM 2009 surface sediment samples: T30-09-20 through T30-09-31

Analyte	Location ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Depth	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	N	N	N	N	N	N
	Sample ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Metals									
Antimony	mg/kg dw	7 UJ	7 UJ	0.3 UJ	8 UJ	0.3 UJ	0.3 UJ	7 UJ	0.3 UJ
Arsenic	mg/kg dw	7 U	7 U	4.4	8 U	4.4	5.5	7 U	3.4
Cadmium	mg/kg dw	0.6	0.3	0.4 J	0.4	0.3 J	0.6 J	0.3 U	0.3 U
Chromium	mg/kg dw	24.9	20.1	21.6	23.3	19.7	25.5	13.4	19.0
Cobalt	mg/kg dw	na	na	7.1	na	6.1	7.3	na	6.5
Copper	mg/kg dw	42.3	33.8	39.1	49.3	27.1	44.9	24.7	27.7
Lead	mg/kg dw	34	18	16	29	11	25	10	3 U
Mercury	mg/kg dw	0.17 J	0.37 J	0.09 J	0.23 J	0.07 J	0.15 J	0.12 J	0.04 J
Molybdenum	mg/kg dw	na	na	1.2	na	1.1	1.4	na	1.2
Nickel	mg/kg dw	20	13	16	16	12	19	9	12
Selenium	mg/kg dw	na	na	0.8 U	na	0.7 U	0.8 U	na	0.7 U
Silver	mg/kg dw	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.5 U	0.4 U	0.4 U
Thallium	mg/kg dw	na	na	0.3 U	na	0.3 U	0.3 U	na	0.3 U
Vanadium	mg/kg dw	na	na	54.0	na	51.1	53.9	na	56.5
Zinc	mg/kg dw	88	57	62	81	46	76	39	37
PAHs									
1-Methylnaphthalene	µg/kg dw	20 U	19 U	20 U	14 J	110	10 J	16 J	20 U
2-Chloronaphthalene	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	20 U	19 U	20 U	13 J	81	21	21	20 U
Acenaphthene	µg/kg dw	17 J	22	16 J	56	390	87	180	20 U
Acenaphthylene	µg/kg dw	20 U	19 U	20 U	17 J	27	30	15 J	20 U

Table A-3b, cont. T30 PDM 2009 surface sediment samples: T30-09-20 through T30-09-31

Analyte	Location ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Depth	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	N	N	N	N	N	N
	Sample ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Anthracene	µg/kg dw	22	21	24	54	210	160	68	20 U
Benzo(a)anthracene	µg/kg dw	45	38	41	110	190	160	88	20 U
Benzo(a)pyrene	µg/kg dw	59	36	39	97	110	180	65	20 U
Benzo(b)fluoranthene	µg/kg dw	74	53	39	140	120	190	83	20 U
Benzo(g,h,i)perylene	µg/kg dw	24 J	16 J	21	34 J	43	89	24 J	20 U
Benzo(k)fluoranthene	µg/kg dw	68	41	39	110	120	190	64	20 U
Total benzofluoranthenes	µg/kg dw	142	94	78	250	240	380	147	20 U
Chrysene	µg/kg dw	59	54	55	180	220	240	130	20 U
Dibenzo(a,h)anthracene	µg/kg dw	19 J	9.9 J	20 U	27 J	22	45	9.7 J	20 U
Dibenzofuran	µg/kg dw	11 J	17 J	14 J	35	300	78	84	20 U
Fluoranthene	µg/kg dw	94	97	130	250	940	560	390	20 U
Fluorene	µg/kg dw	12 J	20	17 J	39	440	110	150	20 U
Indeno(1,2,3-cd)pyrene	µg/kg dw	22 J	14 J	20	34 J	43	89	23 J	20 U
Naphthalene	µg/kg dw	20 U	10 J	20 U	22	120	21	53	20 U
Phenanthrene	µg/kg dw	48	74	61	150	1,200	320	430	20 U
Pyrene	µg/kg dw	200	110	97	250	600	470	260	20 U
Total HPAHs	µg/kg dw	660 J	470 J	480	1,230 J	2,410	2,210	1,140 J	20 U
Total LPAHs	µg/kg dw	99 J	147 J	118 J	340 J	2,400	730	900 J	20 U
Total cPAHs	µg/kg dw	88 J	55 J	57	150 J	170	260	96 J	18 U
Total PAHs	µg/kg dw	760 J	620 J	600 J	1,570 J	4,800	2,940	2,030 J	20 U
Phthalates									
Bis(2-ethylhexyl)phthalate	µg/kg dw	50 U	36 U	210 U	87 U	250 U	310 U	51 U	120 U
Butyl benzyl phthalate	µg/kg dw	15 U	14 U	48	15 U	15 U	30	15 U	15 U
Diethyl phthalate	µg/kg dw	20 U	19 U	15 U	20 U	15 U	15 U	20 U	15 U

Table A-3b, cont. T30 PDM 2009 surface sediment samples: T30-09-20 through T30-09-31

Analyte	Location ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Depth	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	N	N	N	N	N	N
	Sample ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Dimethyl phthalate	µg/kg dw	15 U	14 U	15 U	15 U	15 U	15 U	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	44	40	20 U	34	20 U	19 U	66	20 U
Di-n-octyl phthalate	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
Other SVOCs									
1,2,4-Trichlorobenzene	µg/kg dw	5.8 U	5.8 U	6.0 U	6.1 U	6.0 U	6.0 U	6.1 U	6.2 U
1,2-Dichlorobenzene	µg/kg dw	5.8 U	5.8 U	6.0 U	6.1 U	6.0 U	6.0 U	6.1 U	6.2 U
1,3-Dichlorobenzene	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	5.8 U	5.8 U	7.2	120	6.0 U	7.8	6.1 U	6.2 U
2,4,5-Trichlorophenol	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
2,4,6-Trichlorophenol	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
2,4-Dichlorophenol	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
2,4-Dimethylphenol	µg/kg dw	5.8 UJ	5.8 UJ	6.0 U	6.1 UJ	6.0 U	6.0 U	6.1 UJ	6.2 U
2,4-Dinitrophenol	µg/kg dw	200 U	190 U	200 UJ	200 U	200 UJ	190 UJ	200 U	200 UJ
2,4-Dinitrotoluene	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
2,6-Dinitrotoluene	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
2-Chlorophenol	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
2-Methylphenol	µg/kg dw	5.8 UJ	5.8 UJ	6.0 U	6.1 UJ	6.0 U	6.0 U	6.1 UJ	6.2 U
2-Nitroaniline	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
2-Nitrophenol	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
3,3'-Dichlorobenzidine	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
3-Nitroaniline	µg/kg dw	98 U	97 U	100 UJ	98 U	98 UJ	96 UJ	97 U	98 UJ
4,6-Dinitro-o-cresol	µg/kg dw	200 U	190 U	200 UJ	200 U	200 UJ	190 UJ	200 U	200 UJ
4-Bromophenyl phenyl ether	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U

Table A-3b, cont. T30 PDM 2009 surface sediment samples: T30-09-20 through T30-09-31

Analyte	Location ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Depth	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	N	N	N	N	N	N
	Sample ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
4-Chloroaniline	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
4-Methylphenol	µg/kg dw	20 U	19 U	55	20 U	50	180	18 J	20 U
4-Nitroaniline	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
4-Nitrophenol	µg/kg dw	98 U	97 U	100 U	98 U	98 U	96 U	97 U	98 U
Aniline	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
Benzoic acid	µg/kg dw	200 U	190 U	200 UJ	200 U	200 UJ	190 UJ	200 U	200 UJ
Benzyl alcohol	µg/kg dw	R	R	20 U	R	20 U	19 U	R	20 U
bis(2-chloroethoxy) methane	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
Carbazole	µg/kg dw	na	na	20 U	na	110	69	na	20 U
Hexachlorobenzene	µg/kg dw	5.8 U	5.8 U	6.0 U	6.1 U	6.0 U	6.0 U	6.1 U	6.2 U
Hexachlorobutadiene	µg/kg dw	5.8 U	5.8 U	6.0 U	6.1 U	6.0 U	6.0 U	6.1 U	6.2 U
Hexachlorocyclopentadiene	µg/kg dw	98 U	97 U	100 UJ	98 U	98 UJ	96 UJ	97 U	98 UJ
Hexachloroethane	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
Isophorone	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	29 U	29 U	30 U	30 U	30 U	30 U	30 U	31 U
n-Nitrosodimethylamine	µg/kg dw	29 U	29 U	30 U	30 U	30 U	30 U	30 U	31 U
n-Nitrosodiphenylamine	µg/kg dw	5.8 U	5.8 U	9.0 U	6.1 U	6.0 U	6.0 U	6.1 U	6.2 U
Nitrobenzene	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
Pentachlorophenol	µg/kg dw	29 UJ	29 UJ	30 U	30 UJ	30 U	30 U	30 UJ	31 U
Phenol	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U

Table A-3b, cont. T30 PDM 2009 surface sediment samples: T30-09-20 through T30-09-31

Analyte	Location ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Depth	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	N	N	N	N	N	N
	Sample ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
PCB Aroclors									
Aroclor-1016	µg/kg dw	18 U	18 U	20 U	18 U	3.9 U	30 U	18 U	3.9 U
Aroclor-1221	µg/kg dw	18 U	18 U	20 U	18 U	3.9 U	30 U	18 U	3.9 U
Aroclor-1232	µg/kg dw	18 U	18 U	20 U	18 U	5.9 U	30 U	18 U	3.9 U
Aroclor-1242	µg/kg dw	18 U	18 U	20 U	18 U	3.9 U	30 U	18 U	3.9 U
Aroclor-1248	µg/kg dw	31	23	20 U	30	4.3	30 U	18 U	3.9 U
Aroclor-1254	µg/kg dw	94	73	51	89	17	96	37	3.9 U
Aroclor-1260	µg/kg dw	140	110	130	220	22	200	120	3.9 U
Aroclor-1262	µg/kg dw	18 U	18 U	20 U	18 U	3.9 U	30 U	18 U	3.9 U
Aroclor-1268	µg/kg dw	18 U	18 U	20 U	18 U	3.9 U	30 U	18 U	3.9 U
Total PCBs	µg/kg dw	270	210	180	340	43	300	160	3.9 U
Grain size									
Fractional % phi >-1 (>2000 microns)	% dw	0.4	0.1	na	18.6	na	na	0.3	na
Fractional % phi -1-0 (1000-2000 microns)	% dw	0.8	0.3	na	2.8	na	na	0.5	na
Fractional % phi 0-1 (500-1000 microns)	% dw	3.0	0.7	na	2.8	na	na	1.1	na
Fractional % phi 1-2 (250-500 microns)	% dw	14.9	10.7	na	11.9	na	na	13.3	na
Fractional % phi 2-3 (125-250 microns)	% dw	16.7	30.4	na	15.1	na	na	29.9	na
Fractional % phi 3-4 (62.5-125 microns)	% dw	13.7	21.7	na	11.6	na	na	22.0	na
Fractional % phi 4-5 (31.2-62.5 microns)	% dw	10.4	13.0	na	9.4	na	na	13.2	na
Fractional % phi 5-6 (15.6-31.2 microns)	% dw	12.5	6.6	na	5.9	na	na	3.8	na
Fractional % phi 6-7 (7.8-15.6 microns)	% dw	7.0	3.7	na	3.8	na	na	1.9	na

Table A-3b, cont. T30 PDM 2009 surface sediment samples: T30-09-20 through T30-09-31

Analyte	Location ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Depth	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm	0 – 10 cm
	Sample Type	N	N	N	N	N	N	N	N
	Sample ID	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
	Unit/Sample Date	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09	2/18/09
Fractional % phi 7-8 (3.9-7.8 microns)	% dw	5.6	3.6	na	4.6	na	na	3.8	na
Fractional % phi 8-9 (1.95-3.9 microns)	% dw	3.7	2.1	na	3.5	na	na	2.5	na
Fractional % phi 9-10 (0.98-1.95 microns)	% dw	4.4	2.8	na	4.0	na	na	3.2	na
Fractional % phi 10+ (<0.98 micron)	% dw	6.8	4.3	na	6.0	na	na	4.4	na
Total gravel	% dw	0.4	0.1	na	18.6	na	na	0.3	na
Total sand	% dw	49.1	63.8	na	44.2	na	na	66.8	na
Total silt	% dw	35.5	26.9	na	23.7	na	na	22.7	na
Total clay	% dw	14.9	9.2	na	13.5	na	na	10.1	na
Total fines (percent silt+clay)	% dw	50.4	36.1	na	37.2	na	na	32.8	na
Conventionals									
Ammonia	mg-N/kg	na	na	na	na	na	na	na	na
Total organic carbon (TOC)	% dw	1.60 J	1.77 J	1.16 J	1.31	0.858 J	1.52 J	0.910	0.764 J
Total solids	% ww	61.80	64.70	70.00 J	58.80	67.40 J	64.10 J	60.20	67.80 J
Total solids (preserved)	% ww	na	na	na	na	na	na	na	na
Total sulfides	mg/kg dw	na	na	na	na	na	na	na	na

Table A-3b, cont. T30 PDM 2009 surface sediment samples: T30-09-20 through T30-09-31

dw - dry weight

FD - field duplicate sample

N - normal field sample

na – not analyzed

PAH – polycyclic aromatic hydrocarbon

PCB – polychlorinated biphenyl

SVOC – semivolatile organic compound

Data qualifiers:

J – estimated concentration

R – rejected

U – not detected at reporting limit shown

UJ – not detected at estimated reporting limit shown

Table A-4. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Metals					
Antimony	mg/kg dw	6 UJ	6 UJ	6 UJ	6 UJ
Arsenic	mg/kg dw	9.1	7.9	13.3	7.7
Cadmium	mg/kg dw	0.5	0.6	0.6	0.3 U
Chromium	mg/kg dw	21.5	27.3	44.8	20.5
Cobalt	mg/kg dw	5.7	6.2	6.8	5.0
Copper	mg/kg dw	36.2	40.8	41.4	28.0
Lead	mg/kg dw	50	60	49	23
Mercury	mg/kg dw	0.06	0.08	0.10	0.08
Molybdenum	mg/kg dw	1.5	2.0	2.2	1.3
Nickel	mg/kg dw	21	24	27	20
Selenium	mg/kg dw	0.6 U	0.6 U	0.6 U	0.6 U
Silver	mg/kg dw	0.4 U	0.4 U	0.4 U	0.4 U
Thallium	mg/kg dw	0.3 U	0.3 U	0.3 U	0.2 U
Vanadium	mg/kg dw	34.3 J	43.4 J	45.5 J	30.6 J
Zinc	mg/kg dw	100	113	117	57
Organometals					
Monobutyltin as ion	µg/kg dw	3.7 U	3.5 U	3.6 U	3.6 U
Dibutyltin as ion	µg/kg dw	5.3 UJ	5.0 UJ	5.3 J	5.1 UJ
Tributyltin as ion	µg/kg dw	8.8 J	7.9 J	8.9 J	11 J
PAHs					
1-Methylnaphthalene	µg/kg dw	35	57	640	690
2-Chloronaphthalene	µg/kg dw	20 U	19 U	20 U	20 U
2-Methylnaphthalene	µg/kg dw	35	61	740	11 J
Acenaphthene	µg/kg dw	44	74	820	29

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Acenaphthylene	µg/kg dw	62	40	20 U	19 J
Anthracene	µg/kg dw	240	170 J	1,100	140
Benzo(a)anthracene	µg/kg dw	480	320	1,500	290
Benzo(a)pyrene	µg/kg dw	550	320	1,400	270
Benzo(b)fluoranthene	µg/kg dw	550	300	1,000	310
Benzo(g,h,i)perylene	µg/kg dw	170	110	440	58
Benzo(k)fluoranthene	µg/kg dw	550	300	1,000	310
Total benzofluoranthenes	µg/kg dw	1,100	600	2,000	620
Chrysene	µg/kg dw	740	450 J	1,500	440
Dibenzo(a,h)anthracene	µg/kg dw	110	60	260	45
Dibenzofuran	µg/kg dw	27	44	340	10 J
Fluoranthene	µg/kg dw	790	850 J	3,700	580
Fluorene	µg/kg dw	74	100	940	20
Indeno(1,2,3-cd)pyrene	µg/kg dw	200	120	480	71
Naphthalene	µg/kg dw	28	85 J	850	14 J
Phenanthrene	µg/kg dw	560	800 J	5,100	180
Pyrene	µg/kg dw	690	720	3,900	510
Total HPAHs	µg/kg dw	4,830	3,550 J	15,200	2,880
Total LPAHs	µg/kg dw	1,010	1,270 J	8,800	400 J
cPAHs - mammal - half DL	µg/kg dw	780	450 J	1,900	390
Total PAHs	µg/kg dw	5,840	4,820 J	24,000	3,290 J
Phthalates					
Bis(2-ethylhexyl)phthalate	µg/kg dw	410 U	280 U	330 U	330 U
Butyl benzyl phthalate	µg/kg dw	31	82	18	17
Diethyl phthalate	µg/kg dw	15 U	19 U	12 J	15 U
Dimethyl phthalate	µg/kg dw	15 U	11 J	15 U	15 U
Di-n-butyl phthalate	µg/kg dw	17 J	19 U	20 U	20 U

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Di-n-octyl phthalate	µg/kg dw	20 U	19 U	20 U	20 U
Other SVOCs					
1,2,4-Trichlorobenzene	µg/kg dw	5.9 U	5.8 U	6.0 U	6.0 U
1,2-Dichlorobenzene	µg/kg dw	5.9 U	5.8 U	6.0 U	6.0 U
1,3-Dichlorobenzene	µg/kg dw	20 U	19 U	20 U	20 U
1,4-Dichlorobenzene	µg/kg dw	12	5.8 U	6.0 U	13 J
2,4,5-Trichlorophenol	µg/kg dw	97 U	96 U	98 U	99 U
2,4,6-Trichlorophenol	µg/kg dw	97 U	96 U	98 U	99 U
2,4-Dichlorophenol	µg/kg dw	97 U	96 U	98 U	99 U
2,4-Dimethylphenol	µg/kg dw	5.9 UJ	5.8 UJ	6.0 UJ	6.0 UJ
2,4-Dinitrophenol	µg/kg dw	200 U	190 U	200 U	200 U
2,4-Dinitrotoluene	µg/kg dw	97 U	96 U	98 U	99 U
2,6-Dinitrotoluene	µg/kg dw	97 U	96 U	98 U	99 U
2-Chlorophenol	µg/kg dw	20 U	19 U	20 U	20 U
2-Methylphenol	µg/kg dw	5.9 U	5.8 U	6.0 U	6.0 U
2-Nitroaniline	µg/kg dw	97 U	96 U	98 U	99 U
2-Nitrophenol	µg/kg dw	97 U	96 U	98 U	99 U
3,3'-Dichlorobenzidine	µg/kg dw	97 U	96 U	98 U	99 U
3-Nitroaniline	µg/kg dw	97 U	96 U	98 U	99 U
4,6-Dinitro-o-cresol	µg/kg dw	200 U	190 U	200 U	200 U
4-Bromophenyl phenyl ether	µg/kg dw	20 U	19 U	20 U	20 U
4-Chloro-3-methylphenol	µg/kg dw	97 U	96 U	98 U	99 U
4-Chloroaniline	µg/kg dw	97 U	96 UJ	98 U	99 U
4-Chlorophenyl phenyl ether	µg/kg dw	20 U	19 U	20 U	20 U
4-Methylphenol	µg/kg dw	20 U	11 J	24	20 U
4-Nitroaniline	µg/kg dw	97 U	96 U	98 U	99 U
4-Nitrophenol	µg/kg dw	97 U	96 U	98 U	99 U

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Aniline	µg/kg dw	20 U	R	20 U	20 U
Benzoic acid	µg/kg dw	200 U	190 U	200 U	200 U
Benzyl alcohol	µg/kg dw	20 U	19 U	20 U	20 U
bis(2-chloroethoxy)methane	µg/kg dw	20 U	19 U	20 U	20 U
bis(2-chloroethyl)ether	µg/kg dw	20 U	19 U	20 U	20 U
bis(2-chloroisopropyl)ether	µg/kg dw	20 U	19 U	20 U	20 U
Carbazole	µg/kg dw	84	110 J	980	82
Hexachlorobenzene	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
Hexachlorobutadiene	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
Hexachlorocyclopentadiene	µg/kg dw	97 U	R	98 U	99 U
Hexachloroethane	µg/kg dw	20 U	19 U	20 U	20 U
Isophorone	µg/kg dw	20 U	19 U	20 U	20 U
n-Nitroso-di-n-propylamine	µg/kg dw	30 U	29 U	30 U	30 U
n-Nitrosodimethylamine	µg/kg dw	30 U	29 U	30 U	30 U
n-Nitrosodiphenylamine	µg/kg dw	8.3 U	9.8 U	8.3 U	6.0 U
Nitrobenzene	µg/kg dw	20 U	19 U	20 U	20 U
Pentachlorophenol	µg/kg dw	30 U	42 J	30 U	30 U
Phenol	µg/kg dw	210	110	140	98
PCB Aroclors					
Aroclor-1016	µg/kg dw	27 U	36 U	27 U	20 U
Aroclor-1221	µg/kg dw	27 U	36 U	27 U	20 U
Aroclor-1232	µg/kg dw	27 U	36 U	27 U	20 U
Aroclor-1242	µg/kg dw	96	680	27 U	20 U
Aroclor-1248	µg/kg dw	27 U	36 U	140	71
Aroclor-1254	µg/kg dw	220	550	320	150
Aroclor-1260	µg/kg dw	220	360	310	150
Aroclor-1262	µg/kg dw	27 U	36 U	27 U	20 U

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Aroclor-1268	µg/kg dw	27 U	36 U	27 U	20 U
Total PCBs	µg/kg dw	540	1,590	770	370
PCB congeners					
PCB-001	ng/kg dw	203	399	547	80.1
PCB-002	ng/kg dw	48.3	80.5	45.3	21.3
PCB-003	ng/kg dw	96.0	260	255	70.4
PCB-004	ng/kg dw	1,630 J	13,500 J	1,120 J	896 J
PCB-005	ng/kg dw	34.6 J	55.8 J	36.1 J	26.8 J
PCB-006	ng/kg dw	1,320 J	24,900 J	688 J	921 J
PCB-007	ng/kg dw	146 J	615 J	145 J	110 J
PCB-008	ng/kg dw	2,960 J	22,000 J	2,290 J	2,150 J
PCB-009	ng/kg dw	167 J	835 J	132 J	108 J
PCB-010	ng/kg dw	81.7 J	326 J	77.7 J	48.2 J
PCB-011	ng/kg dw	94.7 J	1,430 J	57.7 J	66.6 J
PCB-012	ng/kg dw	429 CJ	5,340 CJ	288 CJ	323 CJ
PCB-013	ng/kg dw	C12	C12	C12	C12
PCB-014	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-015	ng/kg dw	1,840 J	6,150 J	1,700 J	1,450 J
PCB-016	ng/kg dw	1,180 J	2,740	1,190	974
PCB-017	ng/kg dw	2,360 J	24,200 J	2,180	2,010
PCB-018	ng/kg dw	3,890 CJ	45,400 CJ	3,600 C	3,350 C
PCB-019	ng/kg dw	674 J	5,890 J	452	477
PCB-020	ng/kg dw	6,720 CJ	39,500 CJ	5,860 CJ	4,750 CJ
PCB-021	ng/kg dw	2,650 CJ	6,130 CJ	2,500 C	1,700 C
PCB-022	ng/kg dw	1,660 J	3,620	1,590	1,100
PCB-023	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-024	ng/kg dw	48.6 U	218	62.6	52.5

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB-025	ng/kg dw	877 J	16,000 J	560	697
PCB-026	ng/kg dw	2,090 CJ	30,800 CJ	1,330 C	1,510 C
PCB-027	ng/kg dw	679 J	5,660 J	392	476
PCB-028	ng/kg dw	C20	C20	C20	C20
PCB-029	ng/kg dw	C26	C26	C26	C26
PCB-030	ng/kg dw	C18	C18	C18	C18
PCB-031	ng/kg dw	6,240 J	47,400 J	5,520 J	4,320 J
PCB-032	ng/kg dw	1,650 J	13,400 J	1,560	1,290
PCB-033	ng/kg dw	C21	C21	C21	C21
PCB-034	ng/kg dw	35.8 J	422	29.6	26.9
PCB-035	ng/kg dw	113 J	481	98.0	81.3
PCB-036	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-037	ng/kg dw	1,890	5,320 J	1,860	1,420
PCB-038	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-039	ng/kg dw	1.99 U	97.5	15.1	12.8
PCB-040	ng/kg dw	2,810 C	13,100 CJ	2,110 C	1,710 C
PCB-041	ng/kg dw	262 U	743	399	228
PCB-042	ng/kg dw	1,890	6,710 J	1,520	1,170
PCB-043	ng/kg dw	175	472	162	116
PCB-044	ng/kg dw	7,760 CJ	31,100 CJ	5,400 CJ	4,240 CJ
PCB-045	ng/kg dw	1,040	6,130 J	878	783
PCB-046	ng/kg dw	449	2,210	321	291
PCB-047	ng/kg dw	C44	C44	C44	C44
PCB-048	ng/kg dw	1,210	3,600	1,040	721
PCB-049	ng/kg dw	10,000 CJ	35,400 CJ	4,500 CJ	4,490 CJ
PCB-050	ng/kg dw	3,000 C	9,810 CJ	1,130 C	1,240 C
PCB-051	ng/kg dw	1,190	3,480	348	422

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB-052	ng/kg dw	17,500 J	48,700 J	7,310 J	7,500 J
PCB-053	ng/kg dw	C50	C50	C50	C50
PCB-054	ng/kg dw	112	186	29.5	39.4
PCB-055	ng/kg dw	1.99 U	290	76.8	46.2
PCB-056	ng/kg dw	2,030	4,710 J	1,830	1,160
PCB-057	ng/kg dw	1.99 U	171	28.8	36.8
PCB-058	ng/kg dw	1.99 U	74.9	10.2 U	1.95 U
PCB-059	ng/kg dw	754 C	3,560 C	487 C	481 C
PCB-060	ng/kg dw	923	2,650	1,160	659
PCB-061	ng/kg dw	10,500 CJ	26,900 CJ	8,000 CJ	5,160 CJ
PCB-062	ng/kg dw	C59	C59	C59	C59
PCB-063	ng/kg dw	141	463	138	87.4
PCB-064	ng/kg dw	2,740	13,300 J	1,880	1,400
PCB-065	ng/kg dw	C44	C44	C44	C44
PCB-066	ng/kg dw	4,890 J	15,200 J	4,130 J	2,870
PCB-067	ng/kg dw	282	1,290	182	155
PCB-068	ng/kg dw	37.9 U	202	28.1	23.1
PCB-069	ng/kg dw	C49	C49	C49	C49
PCB-070	ng/kg dw	C61	C61	C61	C61
PCB-071	ng/kg dw	C40	C40	C40	C40
PCB-072	ng/kg dw	156	449	53.6	64.9
PCB-073	ng/kg dw	63.6	123	18.1 U	19.4
PCB-074	ng/kg dw	C61	C61	C61	C61
PCB-075	ng/kg dw	C59	C59	C59	C59
PCB-076	ng/kg dw	C61	C61	C61	C61
PCB-077	ng/kg dw	613	1,820	592	406
PCB-078	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB-079	ng/kg dw	83.8	105	43.9	30.3 U
PCB-080	ng/kg dw	72.1	79.3	36.7	39.2
PCB-081	ng/kg dw	22.2	69.8	20.2	16.3
PCB-082	ng/kg dw	1,300	1,490	776	450
PCB-083	ng/kg dw	888	1.96 U	1.98 U	1.95 U
PCB-084	ng/kg dw	4,540 J	6,880 J	2,520	1,710
PCB-085	ng/kg dw	1,610 C	1,840 C	992 C	568 C
PCB-086	ng/kg dw	11,400 CJ	10,700 CJ	5,600 CJ	4,120 CJ
PCB-087	ng/kg dw	C86	C86	C86	C86
PCB-088	ng/kg dw	1.99 U	1.96 U	1.98 U	2,240
PCB-089	ng/kg dw	109	218	86.6	59.2
PCB-090	ng/kg dw	37,800 CJ	31,500 CJ	19,800 CJ	17,300 CJ
PCB-091	ng/kg dw	9,000 J	8,380 J	3,450	1.95 U
PCB-092	ng/kg dw	5,530 J	5,010 J	2,600	2,730
PCB-093	ng/kg dw	2,780 C	1,710 C	452 C	559 C
PCB-094	ng/kg dw	49.7	1.96 U	28.8	27.8
PCB-095	ng/kg dw	27,900 J	29,000 J	17,100 J	14,200 J
PCB-096	ng/kg dw	528	663	152	153
PCB-097	ng/kg dw	C86	C86	C86	C86
PCB-098	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-099	ng/kg dw	16,600 J	15,400 J	7,020 J	5,440 J
PCB-100	ng/kg dw	C93	C93	C93	C93
PCB-101	ng/kg dw	C90	C90	C90	C90
PCB-102	ng/kg dw	1,340	2,100	471	478
PCB-103	ng/kg dw	2,860	1,770	621	805
PCB-104	ng/kg dw	68.3	31.8	8.61 U	14.4
PCB-105	ng/kg dw	5,120 J	4,490 J	2,730	1,740

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB-106	ng/kg dw	1.99 U	18.0	3.98	5.07
PCB-107	ng/kg dw	578 C	538 C	271 C	184 C
PCB-108	ng/kg dw	C86	C86	C86	C86
PCB-109	ng/kg dw	1,020	995	487	378
PCB-110	ng/kg dw	20,200 J	21,800 J	12,000 J	8,690 J
PCB-111	ng/kg dw	1.99 U	1.96 U	9.60	1.95 U
PCB-112	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-113	ng/kg dw	C90	C90	C90	C90
PCB-114	ng/kg dw	292	301	145	94.0
PCB-115	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-116	ng/kg dw	C85	C85	C85	C85
PCB-117	ng/kg dw	509	475	145	122
PCB-118	ng/kg dw	15,600 J	15,700 J	8,090 J	5,840 J
PCB-119	ng/kg dw	C86	C86	C86	C86
PCB-120	ng/kg dw	199	177	70.4	78.3
PCB-121	ng/kg dw	46.3	15.9	6.60	9.75
PCB-122	ng/kg dw	192	215	1.98 U	70.5
PCB-123	ng/kg dw	253	291	135	86.0
PCB-124	ng/kg dw	C107	C107	C107	C107
PCB-125	ng/kg dw	C86	C86	C86	C86
PCB-126	ng/kg dw	29.2	53.1	27.7	19.8 U
PCB-127	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-128	ng/kg dw	5,050 CJ	3,780 C	2,880 C	2,370 C
PCB-129	ng/kg dw	53,700 CJ	44,800 CJ	34,100 CJ	33,500 CJ
PCB-130	ng/kg dw	2,750	2,390	1,720	1,530
PCB-131	ng/kg dw	491	409	294	253
PCB-132	ng/kg dw	14,900 J	13,500 J	10,600 J	10,100 J

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB-133	ng/kg dw	974	817	493	500
PCB-134	ng/kg dw	3,240	2,660	1,810	1,780
PCB-135	ng/kg dw	27,900 CJ	22,800 CJ	15,300 CJ	16,400 CJ
PCB-136	ng/kg dw	12,000 J	9,330 J	7,730 J	6,900 J
PCB-137	ng/kg dw	1,030	793	392	258
PCB-138	ng/kg dw	C129	C129	C129	C129
PCB-139	ng/kg dw	702 C	606 C	335 C	303 C
PCB-140	ng/kg dw	C139	C139	C139	C139
PCB-141	ng/kg dw	11,800 J	9,730 J	7,760 J	7,860 J
PCB-142	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-143	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-144	ng/kg dw	3,110	2,750	2,290	2,120
PCB-145	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-146	ng/kg dw	8,600 J	7,290 J	4,490 J	4,600 J
PCB-147	ng/kg dw	62,700 CJ	51,500 CJ	34,800 CJ	33,000 CJ
PCB-148	ng/kg dw	243	177	59.1	75.2
PCB-149	ng/kg dw	C147	C147	C147	C147
PCB-150	ng/kg dw	954	538	169	207
PCB-151	ng/kg dw	C135	C135	C135	C135
PCB-152	ng/kg dw	52.3	36.8	9.96	9.81 U
PCB-153	ng/kg dw	57,800 CJ	47,600 CJ	31,000 CJ	31,300 CJ
PCB-154	ng/kg dw	5,790 J	4,060 J	1,180	1,480
PCB-155	ng/kg dw	99.4	47.5	14.7	16.4
PCB-156	ng/kg dw	3,960 C	2,900 C	2,030 C	1,940 C
PCB-157	ng/kg dw	C156	C156	C156	C156
PCB-158	ng/kg dw	5,460 J	4,490 J	3,300	3,190
PCB-159	ng/kg dw	651	499	351	369

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB-160	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-161	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-162	ng/kg dw	80.2	55.7	38.3	32.8
PCB-163	ng/kg dw	C129	C129	C129	C129
PCB-164	ng/kg dw	4,500 J	3,710	2,860	2,740
PCB-165	ng/kg dw	91.7	45.6	1.98 U	1.95 U
PCB-166	ng/kg dw	C128	C128	C128	C128
PCB-167	ng/kg dw	1,860	1,420	979	908
PCB-168	ng/kg dw	C153	C153	C153	C153
PCB-169	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-170	ng/kg dw	22,800 J	17,400 J	12,400 J	14,100 J
PCB-171	ng/kg dw	6,830 CJ	5,320 CJ	3,800 C	4,230 CJ
PCB-172	ng/kg dw	3,750	2,840 J	2,000	2,270 J
PCB-173	ng/kg dw	C171	C171	C171	C171
PCB-174	ng/kg dw	19,000 J	15,100 J	11,200 J	11,900 J
PCB-175	ng/kg dw	1,080	897 J	632	686 J
PCB-176	ng/kg dw	2,490	2,060 J	1,520	1,650 J
PCB-177	ng/kg dw	11,800 J	9,340 J	6,580 J	7,280 J
PCB-178	ng/kg dw	5,300 J	4,050 J	2,750	2,990 J
PCB-179	ng/kg dw	9,880 J	7,720 J	5,130 J	5,650 J
PCB-180	ng/kg dw	45,500 CJ	35,000 CJ	24,700 CJ	29,100 CJ
PCB-181	ng/kg dw	138	102 J	64.7	63.9 J
PCB-182	ng/kg dw	70.0	64.3 J	42.0	37.7 J
PCB-183	ng/kg dw	15,500 J	11,900 J	8,570 J	9,290 J
PCB-184	ng/kg dw	8.27 U	7.69 J	1.98 U	1.95 U
PCB-185	ng/kg dw	1,730	1,130 J	822	857 J
PCB-186	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
PCB-187	ng/kg dw	27,600 J	20,900 J	13,600 J	14,800 J
PCB-188	ng/kg dw	179	121	30.3	41.0
PCB-189	ng/kg dw	894	627 J	434	521 J
PCB-190	ng/kg dw	4,570 J	3,620 J	2,650	2,990 J
PCB-191	ng/kg dw	979	753 J	530	632 J
PCB-192	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-193	ng/kg dw	C180	C180	C180	C180
PCB-194	ng/kg dw	9,310 J	7,210 J	4,380 J	5,600 J
PCB-195	ng/kg dw	3,940	3,020	1,860	2,380
PCB-196	ng/kg dw	5,210 J	4,210 J	2,690	3,570
PCB-197	ng/kg dw	370	313	182	250
PCB-198	ng/kg dw	8,420 CJ	7,010 CJ	4,630 CJ	5,560 CJ
PCB-199	ng/kg dw	C198	C198	C198	C198
PCB-200	ng/kg dw	1,610	1,310	794	1,020
PCB-201	ng/kg dw	1,490	1,240	744	914
PCB-202	ng/kg dw	1,840	1,530	904	1,060
PCB-203	ng/kg dw	4,930 J	4,110 J	2,610	3,310
PCB-204	ng/kg dw	1.99 U	1.96 U	1.98 U	1.95 U
PCB-205	ng/kg dw	581	469	286	376
PCB-206	ng/kg dw	2,050	1,640 J	1,070	1,220
PCB-207	ng/kg dw	306	244 J	144	172
PCB-208	ng/kg dw	436	373 J	246	249
PCB-209	ng/kg dw	375	328	307	144
Total PCB Congeners	ng/kg dw	791,900 J	1,128,800 J	451,300 J	432,700 J
PCB TEQ	ng/kg dw	3.86 J	6.31 J	3.30 J	1.40 J
Pesticides					
2,4'-DDD	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
2,4'-DDE	µg/kg dw	1.7 U	20 U	9.7 U	2.7 U
2,4'-DDT	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
4,4'-DDD	µg/kg dw	3.2 U	4.2 U	2.7 U	2.7 U
4,4'-DDE	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
4,4'-DDT	µg/kg dw	1.7 U	4.2 U	29 U	2.7 U
Total DDTs	µg/kg dw	3.2 U	20 U	29 U	2.7 U
Aldrin	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
Dieldrin	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
Total aldrin/dieldrin	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
alpha-BHC	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
beta-BHC	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
gamma-BHC	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
delta-BHC	µg/kg dw	1.8 U	20 U	1.4 U	1.4 U
alpha-Chlordane	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
gamma-Chlordane	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
Total chlordane	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
alpha-Endosulfan	µg/kg dw	0.86 U	5.7 U	1.4 U	1.4 U
beta-Endosulfan	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
Endosulfan sulfate	µg/kg dw	1.7 U	4.2 U	8.2 U	2.7 U
Endrin	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
Endrin aldehyde	µg/kg dw	9.5 U	4.2 U	2.7 U	2.7 U
Heptachlor	µg/kg dw	0.86 U	3.4 U	1.4 U	1.4 U
Heptachlor epoxide	µg/kg dw	5.3 U	21 U	1.4 U	1.4 U
Methoxychlor	µg/kg dw	8.6 U	21 U	14 U	14 U
Mirex	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
cis-Nonachlor	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
Oxychlordane	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Toxaphene	µg/kg dw	340 U	840 U	540 U	540 U
trans-Nonachlor	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
Dioxin/furan					
2,3,7,8-TCDD	ng/kg dw	0.248 J	0.300 U	0.495 J	0.328 J
1,2,3,7,8-PeCDD	ng/kg dw	1.46 J	1.09 U	1.54 J	1.00 J
1,2,3,4,7,8-HxCDD	ng/kg dw	2.36 J	2.25 J	1.66 J	1.41 J
1,2,3,6,7,8-HxCDD	ng/kg dw	14.4	9.52	10.4	6.42
1,2,3,7,8,9-HxCDD	ng/kg dw	5.88	3.74	4.54	2.91
1,2,3,4,6,7,8-HpCDD	ng/kg dw	544	363	311	201
OCDD	ng/kg dw	4,670	2,860	2,770	1,820
2,3,7,8-TCDF	ng/kg dw	4.78	3.43	8.66	6.26
1,2,3,7,8-PeCDF	ng/kg dw	1.70 J	1.12 U	2.62	1.70 J
2,3,4,7,8-PeCDF	ng/kg dw	2.42 U	2.44 U	7.70	4.10
1,2,3,4,7,8-HxCDF	ng/kg dw	5.31	4.54	6.10	3.88
1,2,3,6,7,8-HxCDF	ng/kg dw	2.74	2.16 J	2.88	2.12 J
1,2,3,7,8,9-HxCDF	ng/kg dw	2.42 U	2.44 U	2.49 U	2.42 U
2,3,4,6,7,8-HxCDF	ng/kg dw	4.10	3.44	4.54	3.25
1,2,3,4,6,7,8-HpCDF	ng/kg dw	63.3	50.5	74.3	52.9
1,2,3,4,7,8,9-HpCDF	ng/kg dw	3.55	3.12	4.19 U	3.43
OCDF	ng/kg dw	197	179	326	146
Total TCDD	ng/kg dw	10.9 U	18.1 U	13.1 U	9.74 U
Total PeCDD	ng/kg dw	20.0 U	21.4 U	21.2 U	13.0 U
Total HxCDD	ng/kg dw	176	125	107	59.1
Total HpCDD	ng/kg dw	1,810	1,340	965	540
Total TCDF	ng/kg dw	41.4 U	38.1 U	167 U	35.7 U
Total PeCDF	ng/kg dw	50.1 U	43.2 U	77.5 U	37.3 U
Total HxCDF	ng/kg dw	95.7 U	80.3	104 U	67.8

Table A-4, cont. MIS intertidal surface sediment composite samples

Analyte	Location ID	EW09-ITSED-AWMIS			EW09-ITSED-PAMIS
	Depth	0 – 10 in			0 – 10 in
	Unit/ Sample ID	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Total HpCDF	ng/kg dw	224 U	190	294 U	167
Dioxin/furan TEQ	ng/kg dw	13.8 J	9.19 J	13.2 J	8.52 J
Conventionals					
Total organic carbon (TOC)	% dw	2.59	2.22	2.03	1.38
Total solids	% ww	73.40	72.10	75.40	72.50

dw - dry weight
FD - field duplicate sample
N - normal field sample
na – not analyzed
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
SVOC – semivolatile organic compound

Data qualifiers:
J – estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-5a. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB Aroclors								
Aroclor-1016	µg/kg dw	30 U	37 U	36 U	7.8 U	32 U	38 U	33 U
Aroclor-1221	µg/kg dw	30 U	37 U	36 U	7.8 U	32 U	38 U	33 U
Aroclor-1232	µg/kg dw	30 U	37 U	36 U	7.8 U	32 U	38 U	33 U
Aroclor-1242	µg/kg dw	30 U	37 U	36 U	7.8 U	32 U	38 U	33 U
Aroclor-1248	µg/kg dw	110	190 U	180 U	39 U	160 U	190 U	170 U
Aroclor-1254	µg/kg dw	150	270	330	110	330	340	270
Aroclor-1260	µg/kg dw	150	400	490	180	410	740	320
Aroclor-1262	µg/kg dw	30 U	37 U	36 U	7.8 U	32 U	38 U	33 U
Aroclor-1268	µg/kg dw	30 U	37 U	36 U	7.8 U	32 U	38 U	33 U
Total PCBs	µg/kg dw	410	670	820	290	740	1,080	590
PCB congeners								
PCB-001	ng/kg dw	122	11,600 J	2,550	353	506	803	302
PCB-002	ng/kg dw	26.3	454	308	48.3	81.5	119	78.9
PCB-003	ng/kg dw	143	5,330 J	2,120	324	530	888	320
PCB-004	ng/kg dw	307 J	4,210 J	1,210 J	195 J	368 J	409 J	505 J
PCB-005	ng/kg dw	14.4 J	154 J	60.3 J	15.1 J	28.5 J	38.8 J	26.0 J
PCB-006	ng/kg dw	230 J	1,340 J	604 J	177 J	304 J	408 J	463 J
PCB-007	ng/kg dw	59.7 J	600 J	202 J	58.6 J	94.7 J	148 J	130 J
PCB-008	ng/kg dw	1,110 J	5,850 J	2,660 J	808 J	1,290 J	1,870 J	1,880 J
PCB-009	ng/kg dw	44.3 J	385 J	136 J	44.1 J	78.7 J	100 J	94.7 J
PCB-010	ng/kg dw	1.90 U	361 J	96.6 J	1.93 U	24.9 J	30.7 J	33.9 J
PCB-011	ng/kg dw	60.2 UJ	243 J	179 J	76.4 J	127 J	147 J	145 J

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-012	ng/kg dw	172 CJ	938 CJ	519 CJ	173 CJ	258 CJ	373 CJ	402 CJ
PCB-013	ng/kg dw	C12	C12	C12	C12	C12	C12	C12
PCB-014	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-015	ng/kg dw	1,290 J	5,140 J	3,030 J	1,000 J	1,390 J	2,400 J	1,860 J
PCB-016	ng/kg dw	655	2,130	1,590	354	612	733	1,220
PCB-017	ng/kg dw	1,120	3,470	2,790	631	1,060	1,290	2,270
PCB-018	ng/kg dw	1,740 C	5,320 CJ	4,180 CJ	953 C	1,710 C	1,940 C	3,540 C
PCB-019	ng/kg dw	164	478	397	86.5	149	168	248
PCB-020	ng/kg dw	4,780 CJ	6,920 CJ	6,460 CJ	2,740 C	3,900 C	6,110 CJ	7,970 CJ
PCB-021	ng/kg dw	2,030 C	3,150 C	2,910 C	1,180 C	1,750 C	2,650 C	3,660 C
PCB-022	ng/kg dw	1,290	1,970	1,770	749	1,080	1,660	2,280
PCB-023	ng/kg dw	3.18	4.10	4.51	1.93 U	1.96 U	1.93 U	4.66
PCB-024	ng/kg dw	30.7	87.6	71.0	17.4	30.5	29.5	54.6
PCB-025	ng/kg dw	355	522	525	220	352	473	967
PCB-026	ng/kg dw	779 C	1,390 C	1,620 C	631 C	1,310 C	1,220 C	3,520 C
PCB-027	ng/kg dw	198	823	709	198	292	314	646
PCB-028	ng/kg dw	C20	C20	C20	C20	C20	C20	C20
PCB-029	ng/kg dw	C26	C26	C26	C26	C26	C26	C26
PCB-030	ng/kg dw	C18	C18	C18	C18	C18	C18	C18
PCB-031	ng/kg dw	4,070 J	5,730 J	5,340 J	2,280	3,490	4,960 J	7,730 J
PCB-032	ng/kg dw	890	2,770	2,210	520	957	1,020	1,540
PCB-033	ng/kg dw	C21	C21	C21	C21	C21	C21	C21
PCB-034	ng/kg dw	19.0	24.0	29.3	9.48 U	17.9	23.2	38.7
PCB-035	ng/kg dw	110	216	183	79.0	97.0	189	186
PCB-036	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	8.57

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-037	ng/kg dw	1,770	3,000	2,580	1,170	1,510	2,560	2,700
PCB-038	ng/kg dw	1.90 U	13.8	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-039	ng/kg dw	14.8	22.0	27.5	9.50	14.5	23.3	30.5
PCB-040	ng/kg dw	1,700 C	2,690 C	2,690 C	1,280 C	2,070 C	2,720 C	3,780 C
PCB-041	ng/kg dw	358	404	525	195	255	541	589
PCB-042	ng/kg dw	1,350	1,720	1,680	773	1,040	1,770	2,170
PCB-043	ng/kg dw	151	183	197	82.2	114	195	226
PCB-044	ng/kg dw	4,730 CJ	6,530 CJ	7,640 CJ	2,870 C	7,070 CJ	6,640 CJ	9,600 CJ
PCB-045	ng/kg dw	563	848	712	367	384	927	944
PCB-046	ng/kg dw	230	332	363	160	258	353	410
PCB-047	ng/kg dw	C44	C44	C44	C44	C44	C44	C44
PCB-048	ng/kg dw	888	1,060	1,120	484	659	1,150	1,490
PCB-049	ng/kg dw	3,380 C	6,590 CJ	9,960 CJ	3,260 C	9,780 CJ	6,590 CJ	10,600 CJ
PCB-050	ng/kg dw	698 C	1,360 C	1,710 C	810 C	1,880 C	1,530 C	3,240 C
PCB-051	ng/kg dw	258	459	1,010	245	1,460	475	608
PCB-052	ng/kg dw	5,980 J	11,100 J	16,800 J	5,620 J	16,200 J	12,100 J	22,500 J
PCB-053	ng/kg dw	C50	C50	C50	C50	C50	C50	C50
PCB-054	ng/kg dw	12.1	75.8	126	14.5	155	30.3	22.2
PCB-055	ng/kg dw	85.6	120	105	50.2	1.96 U	111	1.90 U
PCB-056	ng/kg dw	1,890	2,570	2,350	1,110	1,400	2,550	2,830
PCB-057	ng/kg dw	26.3	48.8	64.0	18.0	46.2	51.8	74.2
PCB-058	ng/kg dw	10.3	19.0	11.7	5.53 U	1.96 U	1.93 U	1.90 U
PCB-059	ng/kg dw	376 C	672 C	939 C	305 C	598 C	628 C	896 C
PCB-060	ng/kg dw	1,220	1,690	1,520	738	912	1,690	1,960
PCB-061	ng/kg dw	8,390 CJ	11,200 CJ	10,500 CJ	5,000 CJ	7,270 CJ	11,200 CJ	15,700 CJ

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-062	ng/kg dw	C59	C59	C59	C59	C59	C59	C59
PCB-063	ng/kg dw	154	198	191	89.3	136	204	259
PCB-064	ng/kg dw	1,660	2,120	2,030	948	1,270	2,160	2,950
PCB-065	ng/kg dw	C44	C44	C44	C44	C44	C44	C44
PCB-066	ng/kg dw	4,310 J	6,160 J	5,420 J	2,660	3,440	6,130 J	6,530 J
PCB-067	ng/kg dw	140	225	228	101	185	180	363
PCB-068	ng/kg dw	18.4	48.4	67.9	21.7	70.6	46.8	83.0
PCB-069	ng/kg dw	C49	C49	C49	C49	C49	C49	C49
PCB-070	ng/kg dw	C61	C61	C61	C61	C61	C61	C61
PCB-071	ng/kg dw	C40	C40	C40	C40	C40	C40	C40
PCB-072	ng/kg dw	42.5	130	228	53.3	250	122	181
PCB-073	ng/kg dw	1.90 U	71.0	92.9	50.6	117	79.0	262
PCB-074	ng/kg dw	C61	C61	C61	C61	C61	C61	C61
PCB-075	ng/kg dw	C59	C59	C59	C59	C59	C59	C59
PCB-076	ng/kg dw	C61	C61	C61	C61	C61	C61	C61
PCB-077	ng/kg dw	557	855	783	398	478	945	812
PCB-078	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-079	ng/kg dw	46.6 U	132	122	55.8	101	121	161
PCB-080	ng/kg dw	1.90 U	1.96 U	120	1.93 U	107	1.93 U	1.90 U
PCB-081	ng/kg dw	28.7	40.9	36.7	15.7	20.3	35.9	34.4
PCB-082	ng/kg dw	1,060	1,650 J	1,410	658	924	1,660	2,290
PCB-083	ng/kg dw	537	694 J	840	1.93 U	1.96 U	980	1,300
PCB-084	ng/kg dw	2,550	4,750 J	4,130 J	1,890	3,230	4,850 J	6,340 J
PCB-085	ng/kg dw	1,330 C	2,080 CJ	1,830 C	858 C	1,200 C	2,140 C	2,890 C
PCB-086	ng/kg dw	6,830 CJ	12,300 CJ	11,900 CJ	4,930 CJ	9,750 CJ	13,700 CJ	16,700 CJ

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-087	ng/kg dw	C86	C86	C86	C86	C86	C86	C86
PCB-088	ng/kg dw	1.90 U	1.96 UJ	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-089	ng/kg dw	94.0	162 J	132	65.2	93.9	164	205
PCB-090	ng/kg dw	15,100 CJ	36,400 CJ	38,300 CJ	14,700 CJ	42,900 CJ	46,000 CJ	42,800 CJ
PCB-091	ng/kg dw	1,500	4,990 J	5,890 J	2,210	6,760 J	4,610 J	4,370 J
PCB-092	ng/kg dw	2,370	6,060 J	6,830 J	2,140	6,190 J	6,640 J	6,350 J
PCB-093	ng/kg dw	188 C	1,110 CJ	1,540 C	436 C	1,980 C	574 C	663 C
PCB-094	ng/kg dw	32.3	73.5 J	103	32.8	142	72.4	119
PCB-095	ng/kg dw	9,850 J	27,200 J	27,800 J	11,300 J	28,400 J	31,000 J	30,700 J
PCB-096	ng/kg dw	82.8	315 J	311	77.8	260	147	211
PCB-097	ng/kg dw	C86	C86	C86	C86	C86	C86	C86
PCB-098	ng/kg dw	11.9	77.1 J	90.3	14.0	105	48.8	59.0
PCB-099	ng/kg dw	5,130 J	14,500 J	16,700 J	6,000 J	18,900 J	13,500 J	12,700 J
PCB-100	ng/kg dw	C93	C93	C93	C93	C93	C93	C93
PCB-101	ng/kg dw	C90	C90	C90	C90	C90	C90	C90
PCB-102	ng/kg dw	311	741 J	748	378	732	791	1,380
PCB-103	ng/kg dw	255	1,480 J	1,960	614	2,040	1,300	1,300
PCB-104	ng/kg dw	2.49	20.5 J	31.7	5.84	39.9	11.0	10.7
PCB-105	ng/kg dw	4,100 J	6,100 J	5,260 J	2,590	3,550	6,600 J	8,520 J
PCB-106	ng/kg dw	1.90 U	1.96 UJ	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-107	ng/kg dw	432 C	629 CJ	556 C	270 C	402 C	723 C	933 C
PCB-108	ng/kg dw	C86	C86	C86	C86	C86	C86	C86
PCB-109	ng/kg dw	719	1,290 J	1,300	519	1,070	1,380	1,570
PCB-110	ng/kg dw	11,000 J	22,200 J	21,400 J	9,100 J	20,200 J	26,100 J	26,500 J
PCB-111	ng/kg dw	1.90 U	39.5 J	48.6	12.1	54.4	34.6	27.2

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-112	ng/kg dw	1.90 U	1.96 UJ	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-113	ng/kg dw	C90	C90	C90	C90	C90	C90	C90
PCB-114	ng/kg dw	222	331	310	143	225	361	495
PCB-115	ng/kg dw	1.90 U	1.96 UJ	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-116	ng/kg dw	C85	C85	C85	C85	C85	C85	C85
PCB-117	ng/kg dw	262	415 J	349	167	306	482	732
PCB-118	ng/kg dw	10,100 J	16,900 J	15,000 J	7,260 J	12,200 J	19,600 J	23,100 J
PCB-119	ng/kg dw	C86	C86	C86	C86	C86	C86	C86
PCB-120	ng/kg dw	51.2	307 J	411	98.0	466	262	171
PCB-121	ng/kg dw	1.90 U	37.5 J	54.9	13.2	55.8	31.7	30.6
PCB-122	ng/kg dw	151	223 J	192	95.0	127	232	294
PCB-123	ng/kg dw	177	299	257	135	158	347	386
PCB-124	ng/kg dw	C107	C107	C107	C107	C107	C107	C107
PCB-125	ng/kg dw	C86	C86	C86	C86	C86	C86	C86
PCB-126	ng/kg dw	26.1	55.5	43.4	22.4	35.4	82.2	43.3
PCB-127	ng/kg dw	1.90 U	1.96 UJ	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-128	ng/kg dw	2,870 C	5,330 CJ	4,920 CJ	2,560 C	4,770 CJ	7,980 CJ	6,880 CJ
PCB-129	ng/kg dw	26,300 CJ	60,700 CJ	59,700 CJ	28,300 CJ	62,200 CJ	94,700 CJ	65,700 CJ
PCB-130	ng/kg dw	1,640	3,550	3,630	1,500	3,330	4,890 J	3,970 J
PCB-131	ng/kg dw	277	528	501	262	486	779	681
PCB-132	ng/kg dw	7,470 J	18,000 J	18,600 J	8,210 J	18,300 J	27,300 J	19,800 J
PCB-133	ng/kg dw	391	1,380	1,740	510	1,620	1,610	1,110
PCB-134	ng/kg dw	1,500	3,600	3,690	1,530	3,380	5,090 J	3,880 J
PCB-135	ng/kg dw	9,390 CJ	27,400 CJ	29,200 CJ	11,900 CJ	28,300 CJ	41,800 CJ	27,500 CJ
PCB-136	ng/kg dw	4,640 J	19,900 J	19,900 J	6,850 J	17,600 J	17,400 J	13,200 J

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-137	ng/kg dw	572	929	1,030	426	584	1,040	1,250
PCB-138	ng/kg dw	C129	C129	C129	C129	C129	C129	C129
PCB-139	ng/kg dw	332 C	1,100 C	1,390 C	537 C	1,330 C	1,070 C	953 C
PCB-140	ng/kg dw	C139	C139	C139	C139	C139	C139	C139
PCB-141	ng/kg dw	5,070 J	11,600 J	11,700 J	5,750 J	13,100 J	19,800 J	14,000 J
PCB-142	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-143	ng/kg dw	28.2	1.96 U	1.98 U	17.0	37.4	64.8	69.9
PCB-144	ng/kg dw	1,420	3,810	3,670	1,940	4,160 J	6,440 J	4,180 J
PCB-145	ng/kg dw	8.62	22.8	1.98 U	1.93 U	1.96 U	1.93 U	19.8
PCB-146	ng/kg dw	3,410	10,700 J	12,300 J	4,200 J	11,300 J	13,900 J	9,230 J
PCB-147	ng/kg dw	20,700 CJ	63,400 CJ	69,400 CJ	31,200 CJ	75,200 CJ	90,400 CJ	60,400 CJ
PCB-148	ng/kg dw	32.8	191	264	66.6	241	169	166
PCB-149	ng/kg dw	C147	C147	C147	C147	C147	C147	C147
PCB-150	ng/kg dw	77.9	480	566	187	521	332	320
PCB-151	ng/kg dw	C135	C135	C135	C135	C135	C135	C135
PCB-152	ng/kg dw	15.2	34.5	39.4	11.7	45.5	25.4	35.5
PCB-153	ng/kg dw	19,900 CJ	56,100 CJ	58,900 CJ	29,000 CJ	68,000 CJ	83,300 CJ	54,100 CJ
PCB-154	ng/kg dw	692	3,860	5,480 J	1,390	5,480 J	3,450	2,120
PCB-155	ng/kg dw	4.73	27.4	30.9	9.86	21.7	22.5	24.0
PCB-156	ng/kg dw	2,540 C	4,420 CJ	4,070 CJ	2,090 C	4,240 CJ	7,060 CJ	6,390 CJ
PCB-157	ng/kg dw	C156	C156	C156	C156	C156	C156	C156
PCB-158	ng/kg dw	2,530	5,320 J	5,130 J	2,870	5,890 J	8,350 J	6,650 J
PCB-159	ng/kg dw	253	660	661	407	744	1,060	654
PCB-160	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-161	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-162	ng/kg dw	41.0	74.7	73.6	38.1	50.8	108	99.1
PCB-163	ng/kg dw	C129	C129	C129	C129	C129	C129	C129
PCB-164	ng/kg dw	1,830	4,360 J	4,480 J	2,240	5,000 J	6,130 J	4,520 J
PCB-165	ng/kg dw	13.0	57.5	92.1	22.2	81.4	55.5	51.1
PCB-166	ng/kg dw	C128	C128	C128	C128	C128	C128	C128
PCB-167	ng/kg dw	923	1,750	1,650	972	1,820	2,860	2,310
PCB-168	ng/kg dw	C153	C153	C153	C153	C153	C153	C153
PCB-169	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-170	ng/kg dw	9,560 J	22,300 J	22,300 J	15,000 J	26,800 J	39,900 J	25,000 J
PCB-171	ng/kg dw	2,760 C	6,720 CJ	6,810 CJ	4,490 CJ	8,350 CJ	12,200 CJ	7,330 CJ
PCB-172	ng/kg dw	1,570	3,430	3,420	2,330	4,070 J	5,980 J	3,720
PCB-173	ng/kg dw	C171	C171	C171	C171	C171	C171	C171
PCB-174	ng/kg dw	7,370 J	19,000 J	20,100 J	12,000 J	22,900 J	32,800 J	19,400 J
PCB-175	ng/kg dw	464	1,090	1,100	721	1,300	1,950	1,230
PCB-176	ng/kg dw	1,140	3,190	3,310	1,900	3,730	4,340 J	2,720
PCB-177	ng/kg dw	4,590 J	11,800 J	12,400 J	7,070 J	13,800 J	19,900 J	11,900 J
PCB-178	ng/kg dw	1,880	4,990 J	5,090 J	2,760	5,230 J	6,510 J	4,140 J
PCB-179	ng/kg dw	3,460	9,750 J	10,200 J	5,320 J	10,500 J	13,500 J	8,340 J
PCB-180	ng/kg dw	18,000 CJ	41,100 CJ	41,700 CJ	29,000 CJ	52,700 CJ	73,600 CJ	47,200 CJ
PCB-181	ng/kg dw	65.2	130	135	86.1	177	207	168
PCB-182	ng/kg dw	45.8	221	321	75.1	302	228	107
PCB-183	ng/kg dw	6,190 J	15,200 J	15,500 J	10,800 J	20,100 J	27,600 J	16,300 J
PCB-184	ng/kg dw	4.08	17.0	21.0	8.43	23.7	19.8	15.3
PCB-185	ng/kg dw	585	1,750	1,940	1,200	1,900	3,290	1,700
PCB-186	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
PCB-187	ng/kg dw	8,790 J	22,800 J	24,600 J	14,500 J	27,200 J	36,000 J	22,600 J
PCB-188	ng/kg dw	13.0	48.3	56.4	21.0	50.1	44.4	46.1
PCB-189	ng/kg dw	353	768	759	514	917	1,400	866
PCB-190	ng/kg dw	1,860	4,260 J	4,300 J	3,070	5,310 J	7,420 J	4,910 J
PCB-191	ng/kg dw	408	913	926	689	1,230	1,640	1,050
PCB-192	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-193	ng/kg dw	C180	C180	C180	C180	C180	C180	C180
PCB-194	ng/kg dw	4,080 J	9,120 J	8,900 J	7,340 J	11,200 J	16,400 J	9,700 J
PCB-195	ng/kg dw	1,730	4,110 J	4,100 J	3,300	5,300 J	7,650 J	4,310 J
PCB-196	ng/kg dw	2,380	5,070 J	4,620 J	3,970 J	6,030 J	7,710 J	5,320 J
PCB-197	ng/kg dw	160	347	318	334	413	586	315
PCB-198	ng/kg dw	3,920 CJ	8,620 CJ	8,410 CJ	6,970 CJ	9,620 CJ	12,900 CJ	8,770 CJ
PCB-199	ng/kg dw	C198	C198	C198	C198	C198	C198	C198
PCB-200	ng/kg dw	681	1,580	1,600	1,240	1,960	2,340	1,630
PCB-201	ng/kg dw	688	1,550	1,530	1,230	1,780	2,380	1,610
PCB-202	ng/kg dw	750	1,730	1,720	1,320	1,900	2,540	1,840
PCB-203	ng/kg dw	2,370	5,100 J	4,820 J	4,080 J	5,970 J	7,920 J	5,370 J
PCB-204	ng/kg dw	1.90 U	1.96 U	1.98 U	1.93 U	1.96 U	1.93 U	1.90 U
PCB-205	ng/kg dw	230	500	483	418	630	882	545
PCB-206	ng/kg dw	1,050	2,020	2,040	1,760	2,380	2,760 J	2,810
PCB-207	ng/kg dw	148	344	323	258	359	502 J	406
PCB-208	ng/kg dw	273	706	629	445	605	972	988
PCB-209	ng/kg dw	581	1,940	1,670	928	1,310	2,450	3,240
Total PCB Congeners	ng/kg dw	340,300 J	819,200 J	820,900 J	399,800 J	837,600 J	1,082,600 J	863,300 J
PCB TEQ	ng/kg dw	3.26 J	6.59 J	5.28 J	2.73 J	4.31 J	9.50 J	5.72 J

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
Dioxin/furan								
2,3,7,8-TCDD	ng/kg dw	0.540 U	1.11	0.839 U	0.384 U	0.810	1.31	0.765 U
1,2,3,7,8-PeCDD	ng/kg dw	2.23 J	3.60	2.69 U	1.83 J	2.23 J	4.51	2.90
1,2,3,4,7,8-HxCDD	ng/kg dw	4.02	4.24	3.38	2.59	2.25 U	5.72	2.22 U
1,2,3,6,7,8-HxCDD	ng/kg dw	18.7	20.4	17.8	7.70	11.0	24.4	12.5
1,2,3,7,8,9-HxCDD	ng/kg dw	9.02	9.92	8.67	3.81 U	5.29	12.9	6.12
1,2,3,4,6,7,8-HpCDD	ng/kg dw	528	555	498	221	311	673	335
OCDD	ng/kg dw	5,210	4,960	4,850	2,090	2,740	5,620	2,930
2,3,7,8-TCDF	ng/kg dw	2.21	5.36	4.08	2.29	3.23	7.07	6.32
1,2,3,7,8-PeCDF	ng/kg dw	1.32 J	2.33 U	2.04 U	1.27 J	1.53 J	3.34	2.96
2,3,4,7,8-PeCDF	ng/kg dw	5.58	12.0	10.5	5.58	7.98	18.2	15.2
1,2,3,4,7,8-HxCDF	ng/kg dw	9.31	14.8	11.0	6.19	8.14	17.7	14.1
1,2,3,6,7,8-HxCDF	ng/kg dw	3.61	6.08	4.01 U	2.44 J	3.41	7.55	6.98
1,2,3,7,8,9-HxCDF	ng/kg dw	2.49 U	2.46 U	2.48 U	2.48 U	2.33 U	2.48 U	2.49 U
2,3,4,6,7,8-HxCDF	ng/kg dw	5.56	11.3	8.03	4.73	5.86	12.9	10.5
1,2,3,4,6,7,8-HpCDF	ng/kg dw	85.2	126	89.4	48.9	67.4	156	95.0
1,2,3,4,7,8,9-HpCDF	ng/kg dw	6.21	9.58	6.18	3.76	4.66	10.5	6.65
OCDF	ng/kg dw	263	371	305	147	232	484	305
Total TCDD	ng/kg dw	12.9 U	36.4 U	25.2 U	14.4 U	14.2 U	29.8 U	23.6 U
Total PeCDD	ng/kg dw	23.4 U	47.7 U	37.9 U	21.4 U	24.3 U	52.2 U	37.4 U
Total HxCDD	ng/kg dw	148	180	164	78.9 U	97.9 U	232	121 U
Total HpCDD	ng/kg dw	1,410	1,520	1,560	688	826	1,990	934
Total TCDF	ng/kg dw	54.9 U	91.4 U	75.3 U	42.6 U	59.8 U	123 U	119 U
Total PeCDF	ng/kg dw	57.8 U	120 U	102 U	56.3 U	84.7 U	185 U	153 U
Total HxCDF	ng/kg dw	134 U	201 U	159 U	84.2 U	113	258	184 U

Table A-5 a, cont. Subtidal surface sediment composite samples: EW-09-CS-001 through EW-09-CS-007

Analyte	Location ID	EW09-CS-001	EW09-CS-002	EW09-CS-003	EW09-CS-004	EW09-CS-005	EW09-CS-006	EW09-CS-007
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010
Total HpCDF	ng/kg dw	311	441	328	172	247	565	342
Dioxin/furan TEQ	ng/kg dw	17.4 J	24.2	18.1	10.1 J	14.1 J	30.6	19.2
Conventionals								
Total organic carbon (TOC)	% dw	2.55	2.02	1.97	1.50	1.69	2.15	1.40
Total solids	% ww	64.60	56.10	54.90	66.10	61.60	52.30	59.30

Table A-5b. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB Aroclors							
Aroclor-1016	µg/kg dw	34 U	32 U	32 U	39 U	7.9 U	7.8 U
Aroclor-1221	µg/kg dw	34 U	32 U	32 U	39 U	7.9 U	7.8 U
Aroclor-1232	µg/kg dw	34 U	32 U	32 U	39 U	7.9 U	7.8 U
Aroclor-1242	µg/kg dw	34 U	32 U	32 U	39 U	7.9 U	7.8 U
Aroclor-1248	µg/kg dw	140 U	160 U	94 U	78 U	24 U	39 U
Aroclor-1254	µg/kg dw	260	410 U	250 U	290 U	73	130
Aroclor-1260	µg/kg dw	370	910	380	640	73	270
Aroclor-1262	µg/kg dw	34 U	32 U	32 U	39 U	7.9 U	7.8 U
Aroclor-1268	µg/kg dw	34 U	32 U	32 U	39 U	7.9 U	7.8 U
Total PCBs	µg/kg dw	630	910	380	640	146	400
PCB congeners							
PCB-001	ng/kg dw	2,930	113	163	54.6	R	75.9
PCB-002	ng/kg dw	242	24.3	32.0	15.5	51.5 J	25.6
PCB-003	ng/kg dw	1,810	101	163	56.3	207	81.8
PCB-004	ng/kg dw	1,180 J	180 J	173 J	347 J	275 J	126 J
PCB-005	ng/kg dw	101 J	9.56 J	9.59 J	1.97 U	6.26 J	4.24 J
PCB-006	ng/kg dw	671 J	186 J	150 J	228 J	113 J	85.6 J
PCB-007	ng/kg dw	269 J	49.3 J	44.6 J	40.4 J	34.0 J	25.0 J
PCB-008	ng/kg dw	2,720 J	815 J	666 J	666 J	487 J	378 J
PCB-009	ng/kg dw	207 J	35.2 J	27.7 J	22.8 J	21.5 J	19.3 J
PCB-010	ng/kg dw	88.6 J	12.8 J	12.6 J	16.1 J	23.8 J	7.81 J

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-011	ng/kg dw	99.9 J	53.0 UJ	61.4 UJ	63.2 UJ	163 J	51.9 UJ
PCB-012	ng/kg dw	422 CJ	139 CJ	143 CJ	119 CJ	103 CJ	86.7 CJ
PCB-013	ng/kg dw	C12	C12	C12	C12	C12	C12
PCB-014	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-015	ng/kg dw	1,860 J	892 J	903 J	707 J	660 J	569 J
PCB-016	ng/kg dw	1,610	428	364	461	415	245
PCB-017	ng/kg dw	2,390	836	697	854	766	407
PCB-018	ng/kg dw	4,120 CJ	1,170 C	989 C	1,270 C	1,160 C	682 C
PCB-019	ng/kg dw	283	104	81.9	104	100	61.6
PCB-020	ng/kg dw	5,280 CJ	2,880 C	2,590 C	2,130 C	1,380 C	1,720 C
PCB-021	ng/kg dw	2,740 C	1,290 C	1,120 C	1,050 C	559 C	649 C
PCB-022	ng/kg dw	1,580	765	715	569	359	461
PCB-023	ng/kg dw	4.41	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-024	ng/kg dw	70.9	18.3	15.9	18.6	20.1	10.0
PCB-025	ng/kg dw	439	279	214	218	110	126
PCB-026	ng/kg dw	1,390 C	922 C	614 C	680 C	296 C	295 C
PCB-027	ng/kg dw	475	375	240	187	263	83.4
PCB-028	ng/kg dw	C20	C20	C20	C20	C20	C20
PCB-029	ng/kg dw	C26	C26	C26	C26	C26	C26
PCB-030	ng/kg dw	C18	C18	C18	C18	C18	C18
PCB-031	ng/kg dw	5,060 J	2,500	2,250	2,030	1,190	1,520
PCB-032	ng/kg dw	1,610	575	539	520	611	334
PCB-033	ng/kg dw	C21	C21	C21	C21	C21	C21
PCB-034	ng/kg dw	24.5	14.5	10.4	14.9	5.14	7.30

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-035	ng/kg dw	105	81.0	72.4	58.3	39.5	47.3
PCB-036	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-037	ng/kg dw	1,730	996	1,040	720	545	723
PCB-038	ng/kg dw	1.98 U	6.97 U	4.60	4.22	1.91 U	1.99 U
PCB-039	ng/kg dw	20.1	10.2 U	10.0	9.63	4.20	6.49
PCB-040	ng/kg dw	2,740 C	1,670 C	1,340 C	1,070 C	586 C	819 C
PCB-041	ng/kg dw	527	223	190	102	91.5	133
PCB-042	ng/kg dw	1,460	870	784	585	358	579
PCB-043	ng/kg dw	179	102	85.1	47.5	33.1	59.6
PCB-044	ng/kg dw	8,420 CJ	4,350 CJ	3,300 C	2,370 C	1,320 C	2,160 C
PCB-045	ng/kg dw	867	398	345	298	168	272
PCB-046	ng/kg dw	321	183	150	128	68.7	105
PCB-047	ng/kg dw	C44	C44	C44	C44	C44	C44
PCB-048	ng/kg dw	1,100	604	527	411	211	358
PCB-049	ng/kg dw	11,800 CJ	8,250 CJ	4,580 CJ	4,180 CJ	1,590 C	1,710 C
PCB-050	ng/kg dw	1,430 C	1,130 C	753 C	584 C	306 C	351 C
PCB-051	ng/kg dw	458	377	264	186	99.0	113
PCB-052	ng/kg dw	19,900 J	15,100 J	8,230 J	7,150 J	2,770	3,210
PCB-053	ng/kg dw	C50	C50	C50	C50	C50	C50
PCB-054	ng/kg dw	20.1	26.3	16.9	9.14	14.8	6.70
PCB-055	ng/kg dw	1.98 U	56.5	58.9	29.6	12.7	30.5
PCB-056	ng/kg dw	1,860	1,150	1,130	665	544	852
PCB-057	ng/kg dw	33.4	20.9	18.3	15.2	1.91 U	11.4
PCB-058	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-059	ng/kg dw	795 C	704 C	435 C	295 C	173 C	191 C
PCB-060	ng/kg dw	1,160	735	759	362	325	567
PCB-061	ng/kg dw	9,700 CJ	5,770 CJ	5,300 CJ	3,270 C	2,340 C	3,790 C
PCB-062	ng/kg dw	C59	C59	C59	C59	C59	C59
PCB-063	ng/kg dw	156	97.1	91.1	51.2	39.8	70.5
PCB-064	ng/kg dw	2,440	1,200	1,050	679	434	777
PCB-065	ng/kg dw	C44	C44	C44	C44	C44	C44
PCB-066	ng/kg dw	4,300 J	2,860	2,740	1,640	1,210	2,060
PCB-067	ng/kg dw	340	142	116	95.8	44.3	60.8
PCB-068	ng/kg dw	41.7	33.4	19.7	18.9	6.89	10.3
PCB-069	ng/kg dw	C49	C49	C49	C49	C49	C49
PCB-070	ng/kg dw	C61	C61	C61	C61	C61	C61
PCB-071	ng/kg dw	C40	C40	C40	C40	C40	C40
PCB-072	ng/kg dw	167	134	72.4	75.2	24.2	23.6
PCB-073	ng/kg dw	66.5	50.8	32.0	45.6	12.9	6.18
PCB-074	ng/kg dw	C61	C61	C61	C61	C61	C61
PCB-075	ng/kg dw	C59	C59	C59	C59	C59	C59
PCB-076	ng/kg dw	C61	C61	C61	C61	C61	C61
PCB-077	ng/kg dw	541	345	374	183	192	353
PCB-078	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-079	ng/kg dw	170	70.8	75.5	38.4	26.9	47.0
PCB-080	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-081	ng/kg dw	29.0	12.3	15.7	9.76	8.23	12.2
PCB-082	ng/kg dw	1,100	644	665	256	250	618

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-083	ng/kg dw	1.98 U	382	455	158	1.91 U	1.99 U
PCB-084	ng/kg dw	5,970 J	3,210	2,410	1,230	961	1,690
PCB-085	ng/kg dw	1,810 C	837 C	814 C	323 C	383 C	757 C
PCB-086	ng/kg dw	17,100 CJ	6,800 CJ	5,290 CJ	2,630 C	1,840 C	4,500 CJ
PCB-087	ng/kg dw	C86	C86	C86	C86	C86	C86
PCB-088	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-089	ng/kg dw	109	72.1	64.9	36.3	32.7	54.6
PCB-090	ng/kg dw	116,000 CJ	34,900 CJ	20,500 CJ	13,100 CJ	7,360 CJ	15,800 CJ
PCB-091	ng/kg dw	32,300 J	8,310 J	4,630 J	3,340	1,500	1,260
PCB-092	ng/kg dw	7,270 J	3,530	2,470	1,390	958	2,210
PCB-093	ng/kg dw	5,200 CJ	1,190 C	708 C	577 C	226 C	199 C
PCB-094	ng/kg dw	1.98 U	28.8	24.4	17.4	11.2	19.1
PCB-095	ng/kg dw	67,700 J	34,400 J	20,200 J	13,100 J	6,700 J	10,900 J
PCB-096	ng/kg dw	499	168	114	77.6	71.3	51.1
PCB-097	ng/kg dw	C86	C86	C86	C86	C86	C86
PCB-098	ng/kg dw	496	95.4	45.4	47.5	19.3	17.9
PCB-099	ng/kg dw	70,600 J	13,300 J	8,140 J	5,730 J	2,810	4,080 J
PCB-100	ng/kg dw	C93	C93	C93	C93	C93	C93
PCB-101	ng/kg dw	C90	C90	C90	C90	C90	C90
PCB-102	ng/kg dw	1,170	635	454	337	163	208
PCB-103	ng/kg dw	8,720 J	2,120	1,170	969	380	301
PCB-104	ng/kg dw	14.7	6.93 U	5.65	4.39	3.12 U	1.99 U
PCB-105	ng/kg dw	5,130 J	2,700	2,480	883	1,170	2,440
PCB-106	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-107	ng/kg dw	732 C	306 C	264 C	95.8 C	119 C	240 C
PCB-108	ng/kg dw	C86	C86	C86	C86	C86	C86
PCB-109	ng/kg dw	1,040	518	470	223	214	425
PCB-110	ng/kg dw	39,800 J	16,100 J	11,100 J	6,000 J	4,420 J	8,660 J
PCB-111	ng/kg dw	1.98 U	1.97 U	1.96 U	8.06	1.91 U	1.99 U
PCB-112	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-113	ng/kg dw	C90	C90	C90	C90	C90	C90
PCB-114	ng/kg dw	338	151	134	53.0	56.2	121
PCB-115	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-116	ng/kg dw	C85	C85	C85	C85	C85	C85
PCB-117	ng/kg dw	430	220	175	75.0	117	166
PCB-118	ng/kg dw	26,400 J	9,650 J	7,320 J	3,350	3,290	6,720 J
PCB-119	ng/kg dw	C86	C86	C86	C86	C86	C86
PCB-120	ng/kg dw	460	164	111	100	34.5	44.8
PCB-121	ng/kg dw	1.98 U	21.5	14.2	21.5	1.91 U	1.99 U
PCB-122	ng/kg dw	162	101	99.0	36.5	43.5	85.4
PCB-123	ng/kg dw	390	152	111	49.3	53.3	110
PCB-124	ng/kg dw	C107	C107	C107	C107	C107	C107
PCB-125	ng/kg dw	C86	C86	C86	C86	C86	C86
PCB-126	ng/kg dw	60.1	27.2	21.9	8.61	11.3	24.2
PCB-127	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-128	ng/kg dw	12,900 CJ	5,290 CJ	2,540 C	1,070 C	1,050 C	2,880 C
PCB-129	ng/kg dw	182,000 CJ	67,900 CJ	29,200 CJ	13,500 CJ	12,300 CJ	34,700 CJ
PCB-130	ng/kg dw	6,480 J	2,870	1,510	780	651	1,640

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-131	ng/kg dw	1,710	583	301	143	118	279
PCB-132	ng/kg dw	31,700 J	17,500 J	8,740 J	4,390 J	3,580	10,200 J
PCB-133	ng/kg dw	3,350	975	492	313	202	485
PCB-134	ng/kg dw	13,200 J	3,830	1,900	860	742	2,080
PCB-135	ng/kg dw	118,000 CJ	32,200 CJ	14,800 CJ	7,250 CJ	5,960 CJ	17,200 CJ
PCB-136	ng/kg dw	56,000 J	17,600 J	8,910 J	6,040 J	4,330 J	6,670 J
PCB-137	ng/kg dw	3,000	591	465	157	197	289
PCB-138	ng/kg dw	C129	C129	C129	C129	C129	C129
PCB-139	ng/kg dw	4,190 CJ	997 C	544 C	451 C	203 C	251 C
PCB-140	ng/kg dw	C139	C139	C139	C139	C139	C139
PCB-141	ng/kg dw	49,800 J	17,500 J	6,170 J	2,960	2,640	8,610 J
PCB-142	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-143	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-144	ng/kg dw	14,700 J	5,370 J	2,280	1,250	911	2,440
PCB-145	ng/kg dw	1.98 U	9.41	1.96 U	1.97 U	1.91 U	1.99 U
PCB-146	ng/kg dw	33,900 J	9,660 J	4,250 J	2,420	1,760	4,620 J
PCB-147	ng/kg dw	281,000 CJ	83,000 CJ	39,900 CJ	23,700 CJ	15,000 CJ	33,600 CJ
PCB-148	ng/kg dw	734	133	71.4	66.3	19.4	35.2
PCB-149	ng/kg dw	C147	C147	C147	C147	C147	C147
PCB-150	ng/kg dw	4,210 J	612	289	253	135	83.4
PCB-151	ng/kg dw	C135	C135	C135	C135	C135	C135
PCB-152	ng/kg dw	42.8	15.1	10.3	6.67	5.68	8.96
PCB-153	ng/kg dw	241,000 CJ	73,600 CJ	30,200 CJ	17,700 CJ	12,000 CJ	30,100 CJ
PCB-154	ng/kg dw	17,600 J	3,370	1,900	1,550	646	671

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-155	ng/kg dw	158	27.1	12.4	10.1	6.88	5.94
PCB-156	ng/kg dw	16,800 CJ	4,910 CJ	1,950 C	805 C	852 C	2,400 C
PCB-157	ng/kg dw	C156	C156	C156	C156	C156	C156
PCB-158	ng/kg dw	21,400 J	7,180 J	2,950	1,520	1,230	3,060
PCB-159	ng/kg dw	3,180	1,170	353	176	143	476
PCB-160	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-161	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-162	ng/kg dw	262	73.5	36.8	13.5	15.2	36.8
PCB-163	ng/kg dw	C129	C129	C129	C129	C129	C129
PCB-164	ng/kg dw	19,100 J	5,700 J	2,520	1,320	972	2,560
PCB-165	ng/kg dw	1.98 U	32.8	22.9	32.7	8.99	1.99 U
PCB-166	ng/kg dw	C128	C128	C128	C128	C128	C128
PCB-167	ng/kg dw	8,260 J	2,250	888	395	371	960
PCB-168	ng/kg dw	C153	C153	C153	C153	C153	C153
PCB-169	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-170	ng/kg dw	123,000 J	38,000 J	10,400 J	5,040 J	4,770 J	15,600 J
PCB-171	ng/kg dw	37,000 CJ	11,500 CJ	3,390 C	1,720 C	1,410 C	4,500 CJ
PCB-172	ng/kg dw	21,600 J	6,220 J	1,690	845	743	2,550
PCB-173	ng/kg dw	C171	C171	C171	C171	C171	C171
PCB-174	ng/kg dw	99,000 J	32,200 J	9,500 J	4,470 J	4,040 J	13,700 J
PCB-175	ng/kg dw	7,280 J	2,080	586	289	252	820
PCB-176	ng/kg dw	13,800 J	4,810 J	1,530	885	687	1,820
PCB-177	ng/kg dw	58,700 J	18,600 J	5,660 J	2,800	2,470	8,200 J
PCB-178	ng/kg dw	24,900 J	7,590 J	2,220	1,180	1,050	3,050

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-179	ng/kg dw	51,900 J	15,200 J	4,630 J	2,290	2,140	6,080 J
PCB-180	ng/kg dw	241,000 CJ	75,500 CJ	20,600 CJ	10,600 CJ	9,330 CJ	30,200 CJ
PCB-181	ng/kg dw	779	217	66.7	34.4	25.6	60.5
PCB-182	ng/kg dw	203	105	69.7	41.1	23.0	35.8
PCB-183	ng/kg dw	92,000 J	26,800 J	7,910 J	4,330 J	3,360	9,940 J
PCB-184	ng/kg dw	54.0	22.4	8.45	9.79	3.03	3.96
PCB-185	ng/kg dw	10,200 J	3,330	868	405	379	1,430
PCB-186	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-187	ng/kg dw	133,000 J	40,400 J	12,200 J	6,040 J	5,050 J	16,000 J
PCB-188	ng/kg dw	517	110	31.1	14.5	11.6	15.7
PCB-189	ng/kg dw	4,680 J	1,320	358	178	150	489
PCB-190	ng/kg dw	27,400 J	8,250 J	2,160	1,080	978	3,130
PCB-191	ng/kg dw	5,970 J	1,800	492	273	210	643
PCB-192	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-193	ng/kg dw	C180	C180	C180	C180	C180	C180
PCB-194	ng/kg dw	57,100 J	16,000 J	4,070 J	2,500	1,790	6,020 J
PCB-195	ng/kg dw	26,100 J	7,260 J	1,820	1,100	789	2,630
PCB-196	ng/kg dw	28,400 J	8,220 J	2,380	1,520	1,020	3,150
PCB-197	ng/kg dw	2,350	648	165	132	81.6	210
PCB-198	ng/kg dw	47,400 CJ	14,200 CJ	3,980 CJ	2,340 C	1,770 C	5,750 CJ
PCB-199	ng/kg dw	C198	C198	C198	C198	C198	C198
PCB-200	ng/kg dw	9,020 J	2,800	759	429	310	1,050
PCB-201	ng/kg dw	9,140 J	2,650	702	443	320	992
PCB-202	ng/kg dw	9,840 J	2,960	855	507	382	1,190

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
PCB-203	ng/kg dw	29,100 J	8,330 J	2,350	1,480	1,020	3,220
PCB-204	ng/kg dw	1.98 U	1.97 U	1.96 U	1.97 U	1.91 U	1.99 U
PCB-205	ng/kg dw	3,480	973	240	153	105	345
PCB-206	ng/kg dw	9,950 J	3,320	1,110	819	585	1,750
PCB-207	ng/kg dw	1,580	498	169	110	75.3	229
PCB-208	ng/kg dw	1,960	743	337	210	174	559
PCB-209	ng/kg dw	1,370	1,030	759	509	565	1,600
Total PCB Congeners	ng/kg dw	2,859,000 J	931,800 J	404,700 J	235,800 J	168,200 J	402,900 J
PCB TEQ	ng/kg dw	7.96 J	3.42 J	2.66 J	1.08	1.35	2.89 J
Dioxin/furan							
2,3,7,8-TCDD	ng/kg dw	0.962	0.422 J	0.805	0.239 U	0.323 U	0.689
1,2,3,7,8-PeCDD	ng/kg dw	2.45	1.46 U	1.99 J	0.748 U	0.784 U	1.92 J
1,2,3,4,7,8-HxCDD	ng/kg dw	2.47	1.86 U	2.64 U	1.04 J	1.10 J	2.11 U
1,2,3,6,7,8-HxCDD	ng/kg dw	10.8	17.9	9.39	3.01	5.32	10.2
1,2,3,7,8,9-HxCDD	ng/kg dw	5.76	4.71	5.45	1.69 J	2.54	5.56
1,2,3,4,6,7,8-HpCDD	ng/kg dw	270	638	248	85.9	131	385
OCDD	ng/kg dw	2,280	5,570	2,220	693	1,140	3,660
2,3,7,8-TCDF	ng/kg dw	4.77	3.64	14.7	1.24	2.74	3.80
1,2,3,7,8-PeCDF	ng/kg dw	1.84 J	1.63 J	3.22	0.548 U	0.775 J	1.78 J
2,3,4,7,8-PeCDF	ng/kg dw	11.0	6.67	8.48	3.02	3.55	6.60
1,2,3,4,7,8-HxCDF	ng/kg dw	9.36	10.3	8.25	2.73	3.58	7.42
1,2,3,6,7,8-HxCDF	ng/kg dw	4.40	3.20	3.21	1.22 J	1.85 J	2.98
1,2,3,7,8,9-HxCDF	ng/kg dw	2.42 U	2.49 U	2.50 U	2.46 U	2.48 U	2.47 U
2,3,4,6,7,8-HxCDF	ng/kg dw	6.99	4.53	4.98	1.49 U	2.52	4.89

Table A-5b, cont. Subtidal surface sediment composite samples: EW-09-CS-008 through EW-09-CS-013

Analyte	Location ID	EW09-CS-008	EW09-CS-009	EW09-CS-010	EW09-CS-011	EW09-CS-012	EW09-CS-013
	Depth	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in	0 – 10 in
	Unit/ Sample ID	EW09-CS-008-010	EW09-CS-009-010	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
1,2,3,4,6,7,8-HpCDF	ng/kg dw	76.0	99.4	53.2	21.9	26.7	86.3
1,2,3,4,7,8,9-HpCDF	ng/kg dw	4.79 U	8.92	4.70 U	2.4631 U	1.88 J	4.40
OCDF	ng/kg dw	243	516	154	74.0	85.7	227
Total TCDD	ng/kg dw	18.9 U	10.7 U	11.9 U	6.16 U	6.39 U	16.0 U
Total PeCDD	ng/kg dw	29.2 U	18.9 U	22.7 U	9.22 U	11.1 U	24.9 U
Total HxCDD	ng/kg dw	95.6	107 U	106 U	35.6 U	48.2 U	140 U
Total HpCDD	ng/kg dw	682	1,310	751	259	402	1,520
Total TCDF	ng/kg dw	83.0 U	45.4 U	68.3 U	29.2 U	28.7 U	54.0 U
Total PeCDF	ng/kg dw	104 U	62.1 U	67.1 U	31.5 U	33.9 U	64.5 U
Total HxCDF	ng/kg dw	137 U	127 U	92.4 U	37.6 U	47.0 U	112 U
Total HpCDF	ng/kg dw	279 U	456	188 U	76.6	91.8	282
Dioxin/furan TEQ	ng/kg dw	15.6 J	17.1 J	14.0 J	4.02 J	5.69 J	14.3 J
Conventionals							
Total organic carbon (TOC)	% dw	1.56	1.49	1.42	1.05	1.11	1.68
Total solids	% ww	64.40	64.20	64.20	70.30	70.00	61.20

HpCDD – heptachlorodibenzo-p-dioxin
HpCDF – heptachlorodibenzofuran
HxCDD – hexachlorodibenzo-p-dioxin
HxCDF – hexachlorodibenzofuran
OCDD – octachlorodibenzo-p-dioxin
OCDF – octachlorodibenzofuran
PCB – polychlorinated biphenyl
PeCDD – pentachlorodibenzo-p-dioxin
PeCDF – pentachlorodibenzofuran
TCDD – tetrachlorodibenzo-p-dioxin
TCDF – tetrachlorodibenzofuran

Table A-6a. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-001 – SS-009

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010
Metals												
Antimony	150	200	mg/kg dw	10 UJ	20 UJ	20 UJ	20 UJ	20 UJ	7 UJ	9 UJ	10 UJ	9 UJ
Arsenic	57	93	mg/kg dw	12.7	14.3	9.8	6.7	12.6	10.2	6.1	16.5	10.7
Cadmium	5.1	6.7	mg/kg dw	0.4 U	0.7 U	0.8 U	0.6 U	0.9 U	0.3 U	0.4	0.7	0.4
Chromium	260	270	mg/kg dw	28	34	27	19	26	17.3	28.1	44	36.4
Copper	390	390	mg/kg dw	59.4	70.3	55.7	55.5	56.1	51.2	45.4	117	71.6
Lead	450	530	mg/kg dw	36	28	29	12	28	18	29	75	55
Mercury	0.41	0.59	mg/kg dw	0.18 J	0.06	0.12 J	0.03	0.16 J	0.05	0.07	0.3 J	0.20 J
Nickel	140	370	mg/kg dw	20	36	24	30	18	20	21	26	21
Silver	6.1	6.1	mg/kg dw	0.6 U	1 U	1 U	1 U	1 U	0.4 U	0.6 U	0.7 U	0.5 U
Zinc	410	960	mg/kg dw	139	126	104	93	110	80	97	206	148 J
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	1.2 U	1.2 U	1.1 U	1.6 U	1.1 U	2.7 U	0.72 U	0.84 U	1.2
Acenaphthene	16	57	mg/kg OC	1.2 U	1.2 U	1.1 U	1.6 U	1.1 U	2.7 U	0.72 U	0.84 U	1.9
Acenaphthylene	66	66	mg/kg OC	1.2 U	1.2 U	1.1 U	1.6 U	2.3	2.7 U	0.45 J	1.6	1.2
Anthracene	220	1,200	mg/kg OC	1.2 U	0.77 J	3.1	1.6 U	6.5	4.2	1.8	8.9	6.2
Benzo(a)anthracene	110	270	mg/kg OC	3.3	2.2	7.4	2.2	27	13	4.1	16	12
Benzo(a)pyrene	99	210	mg/kg OC	3.3	2.6	6.9	2.4	22	13	5.2	20	14
Benzo(g,h,i)perylene	31	78	mg/kg OC	1.2 U	1.5	2.6 J	1.2 J	7.0 J	3.8	1.4	5.9 J	4.3 J
Total benzofluoranthenes	230	450	mg/kg OC	9.31	7.14	22	6.1	83.9	36	14	52.3	42.8
Chrysene	110	460	mg/kg OC	5.5	4.3	19	4.1	75	31	11	42	25
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.2 U	0.60 J	1.1 U	1.6 U	3.1	2.0 J	0.65 J	2.7	1.6 J
Dibenzofuran	15	58	mg/kg OC	1.2 U	1.2 U	1.1 U	1.6 U	1.1 U	2.7 U	0.72 U	0.84	1.7
Fluoranthene	160	1,200	mg/kg OC	6.5	4.9	31	4.1	**270**	28	8.2	35	43
Fluorene	23	79	mg/kg OC	1.2 U	1.2 U	1.1 U	1.6 U	1.1	1.4 J	0.45 J	1.9	2.7
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	1.2 J	1.6	2.7	1.2 J	8.1	4.2	1.6	6.8	4.3

Table A-6a, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-001 – SS-009

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010
Naphthalene	99	170	mg/kg OC	1.2 U	1.2 U	1.1 U	1.6 U	1.1 U	2.7 U	0.45 J	0.84 U	3.3
Phenanthrene	100	480	mg/kg OC	3.4	2.7	9.1	2.9	18	10	3.3	13	15
Pyrene	1,000	1,400	mg/kg OC	4.9	4.3	22	3.8	130	20	7.2	41	33
Total HPAHs	960	5,300	mg/kg OC	34 J	29.2 J	114 J	25.0 J	624 J	151 J	53.6 J	220 J	180 J
Total LPAHs	370	780	mg/kg OC	3.4	3.5 J	13	2.9	27	15.6 J	6.49 J	25	31
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	5.9	3.8	13	6.2	18	7.3	7.2	23	17
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.7	0.89 U	1.0	1.3 U	0.81 U	2.1 U	0.69 J	1.1	2.0
Diethyl phthalate	61	110	mg/kg OC	2.1	1.2 J	0.86 U	1.3 U	0.81 U	2.1 U	0.52 U	0.63 U	0.58 U
Dimethyl phthalate	53	53	mg/kg OC	0.89 U	0.89 U	0.86 U	1.3 U	0.81 U	4.2	0.52 U	0.63 U	1.1
Di-n-butyl phthalate	220	1,700	mg/kg OC	1.2 U	17	1.1 U	1.6 U	1.1 U	2.7 U	1.4	0.84 U	0.78 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	1.2 U	1.2 U	1.1 U	1.6 U	1.1 U	2.7 U	0.72 U	0.84 U	0.78 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.36 U	0.36 U	0.34 U	0.50 U	0.33 U	0.42 UJ	0.21 U	0.26 U	0.24 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.36 U	0.36 U	0.34 U	0.50 U	0.33 U	0.82 U	0.21 U	0.26 U	0.24 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.36 U	0.36 U	0.34 U	0.50 U	0.33 U	0.82 U	0.21 U	0.26 U	0.24 U
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	6.1 U	6.1 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	6.1 U	6.0 U	5.9 U	6.2 U	5.9 U	6.1 U	6.1 U	6.1 U
4-Methylphenol	670	670	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U
Benzoic acid	650	650	µg/kg dw	200 U	230	190 U	190 U	200 U	260	210 U	200 U	200 UJ
Benzyl alcohol	57	73	µg/kg dw	20 U	20 U	19 UJ	19 U	20 UJ	19 U	21 U	20 UJ	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.36 U	0.36 U	0.34 U	0.25 UJ	0.33 U	0.24 UJ	0.21 U	0.042 U	0.24 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.36 U	0.36 U	0.34 U	0.50 U	0.33 U	0.82 U	0.21 U	0.042 U	0.24 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	19 U	19 U	20 U	19 U	21 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.36 U	0.36 U	0.34 U	0.50 U	0.33 U	0.82 U	0.21 U	0.26 U	0.24 U
Pentachlorophenol	360	690	µg/kg dw	31 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U
Phenol	420	1,200	µg/kg dw	24	20 U	26	32	22	15 J	58	47	82 JN

Table A-6a, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-001 – SS-009

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-001-010	EW09-SS-002-010	EW09-SS-003-010	EW09-SS-004-010	EW09-SS-005-010	EW09-SS-006-010	EW09-SS-007-010	EW09-SS-008-010	EW09-SS-009-010
PCBs												
Total PCBs	12	65	mg/kg OC	8.54	1.6	1.1 U	1.5	1.0 U	3.4	12	0.84 U	**21**
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na
Aldrin	10	nc	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na
Dieldrin	10	nc	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na
gamma-BHC	10	nc	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na
Total chlordane	10	nc	µg/kg dw	na	na	na	na	na	na	na	2.0 U	na
Heptachlor	10	nc	µg/kg dw	na	na	na	na	na	na	na	0.99 U	na

[a] This is a field duplicate sample of the sample directly preceding it.
Concentration in **bold** indicates SQS/SL exceedance.
Concentration in **bold underline** indicates CSL/ML exceedance.
CSL – cleanup screening level
dw – dry weight
ML – maximum level
na - not analyzed
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-6b. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-010 – SS-018

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-010-010	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010
Metals												
Antimony	150	200	mg/kg dw	7 UJ	8 UJ	30 UJ	20 UJ	9 UJ	20 UJ	7 UJ	9 UJ	20 UJ
Arsenic	57	93	mg/kg dw	8.4	19.6	6.0	10.1	13.8	8.2	4.8	14.0	5.8
Cadmium	5.1	6.7	mg/kg dw	0.4	0.5	1 U	0.8 U	0.4	0.8 U	0.3 U	0.7	0.7 U
Chromium	260	270	mg/kg dw	31.0	30.2	8	16	29.2	23	33.6	37.2	25
Copper	390	390	mg/kg dw	54.9	73.5	21	36.0	66.8	43.9	38.6 J	73.4	35.2
Lead	450	530	mg/kg dw	54	88	10 U	20	50	32	35 J	68	88 J
Mercury	0.41	0.59	mg/kg dw	0.11	0.20 J	0.02 J	0.08 J	0.30 J	0.11 J	0.08	0.25 J	0.11
Nickel	140	370	mg/kg dw	18	18	6 U	10	20	15	26	23	20
Silver	6.1	6.1	mg/kg dw	0.4 U	0.5 U	2 U	1 U	0.5 U	1 U	0.4 U	0.6	6
Zinc	410	960	mg/kg dw	123	138	31 J	65	127	89 J	94 J	148	235 J
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	1.1 U	1.2 U	1.2 U	1.6	0.85 U	3.8	1.4 U	0.74 U	**85**
Acenaphthene	16	57	mg/kg OC	0.77 J	1.8	1.0 J	5.7	0.85 U	7.3	2.2	0.74 U	**91**
Acenaphthylene	66	66	mg/kg OC	1.3	1.4	1.2 U	0.90 U	0.85 U	2.2	6.1	0.92	11
Anthracene	220	1,200	mg/kg OC	5.5	5.5	6.4	11	5.3	9.2	20	4.4	200
Benzo(a)anthracene	110	270	mg/kg OC	11	12	17	24	7.6	14	28	10	**270**
Benzo(a)pyrene	99	210	mg/kg OC	20	23	13	23	8.9	15	30	11	**240**
Benzo(g,h,i)perylene	31	78	mg/kg OC	5.5	6.9 J	4.3	11 J	3.6 J	4.4	6.8	4.1	**55**
Total benzofluoranthenes	230	450	mg/kg OC	48	48	23	50.2	21	44.1	57	24	**329**
Chrysene	110	460	mg/kg OC	23	28	18	37	16	38	40	17	**340**
Dibenzo(a,h)anthracene	12	33	mg/kg OC	2.7	2.6	1.9	5.7	1.6 J	1.8 J	1.8	1.8	**21**
Dibenzofuran	15	58	mg/kg OC	0.71 J	1.2 U	0.81 J	4.6	0.85 U	10	1.8	0.74 U	**34**
Fluoranthene	160	1,200	mg/kg OC	23	31	45	57	18	92	56	20	**610**
Fluorene	23	79	mg/kg OC	1.3	1.6	1.2 J	6.6	1.1	9.2	4.4	1.1	**120**

Table A-6b, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-010 – SS-018

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-010-010	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	5.5	7.5	5.0	12	3.7 J	4.8	7.5	4.1	**55**
Naphthalene	99	170	mg/kg OC	0.71 J	1.2 U	1.2 U	1.6	0.85 U	6.7	1.4 U	0.77	91
Phenanthrene	100	480	mg/kg OC	11	15	12	46	5.3	**110**	21	8.1	**730**
Pyrene	1,000	1,400	mg/kg OC	27	46	27	41	11	51	56	19	610
Total HPAHs	960	5,300	mg/kg OC	166	205 J	155	260 J	91.8 J	260 J	284	111	**2,500**
Total LPAHs	370	780	mg/kg OC	20 J	25	21 J	71.6	12	140	54	15	**1,300**
Phthalates												-
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	28	23	2.1	6.2	8.5	7.0	14	15	9.1
Butyl benzyl phthalate	4.9	64	mg/kg OC	4.2	1.1	0.87 U	0.71 U	1.2	1.5	1.0 U	0.77	0.46 U
Diethyl phthalate	61	110	mg/kg OC	1.1 U	1.2 U	0.87 U	0.90 U	0.85 U	0.48 U	1.4 U	0.59 U	1.4 U
Dimethyl phthalate	53	53	mg/kg OC	2.1	0.94 U	0.87 U	0.71 U	0.67 U	0.48 U	1.0 U	0.55 U	0.46 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	**2,600**	1.2 U	1.2 U	0.90 U	0.85 U	0.63 U	3.7	0.74 U	1.8 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	1.3	1.2 U	1.2 U	0.90 U	0.85 U	0.63 U	1.4 U	0.74 U	1.8 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.33 U	0.37 U	0.34 U	0.28 U	0.27 U	0.19 U	0.41 U	0.23 U	0.18 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.33 U	0.37 U	0.34 U	0.28 U	0.27 U	0.19 U	0.41 U	0.23 U	0.18 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.55	0.37 U	0.34 U	0.28 U	0.58	0.21	0.41 U	0.52	0.18 U
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	16	5.8 U	5.9 U	6.1 U	6.1 U	6.0 U	6.1 U	15
2-Methylphenol	63	63	µg/kg dw	6.1 U	21	5.8 U	5.9 U	6.1 U	6.1 U	6.0 U	6.1 U	13
4-Methylphenol	670	670	µg/kg dw	20 U	19 U	20 U	21	19 U	20 U	20 U	20 U	76
Benzoic acid	650	650	µg/kg dw	200 U	190 U	200 UJ	190 U	190 U	200 UJ	200 U	200 U	590 U
Benzyl alcohol	57	73	µg/kg dw	20 U	19 UJ	20 U	19 UJ	19 U	20 U	20 U	20 U	30 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.33 U	0.061 U	0.34 U	0.046 U	0.27 U	0.16 U	0.41 U	0.23 U	0.18 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.33 U	0.061 U	0.34 U	0.046 U	0.27 U	0.16 U	0.41 U	0.23 U	0.18 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	19 U	20 U	19 U	19 U	20 U	20 U	20 U	59 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.33 U	0.37 U	0.47 U	0.28 U	0.27 U	0.19 U	0.41 U	0.23 U	1.4 U
Pentachlorophenol	360	690	µg/kg dw	30 U	30 U	29 U	29 U	31 U	30 U	30 U	31 U	30 U

Table A-6b, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-010 – SS-018

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-010-010	EW09-SS-011-010	EW09-SS-012-010	EW09-SS-013-010	EW09-SS-014-010	EW09-SS-015-010	EW09-SS-016-010	EW09-SS-017-010	EW09-SS-018-010
Phenol	420	1,200	µg/kg dw	320	19 U	20 U	270	19 U	20 U	20 U	68	140
PCBs												
Total PCBs	12	65	mg/kg OC	**61.7**	7.67	4.5	8.48	11	11	**57**	**24**	7.9
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	1.9 U	na	1.9 U	na	10 U	na	na	na
Aldrin	10	nc	µg/kg dw	na	0.97 U	na	0.97 U	na	270 U	na	na	na
Dieldrin	10	nc	µg/kg dw	na	1.9 U	na	1.9 U	na	10 U	na	na	na
gamma-BHC	10	nc	µg/kg dw	na	0.97 U	na	0.97 U	na	5.0 U	na	na	na
Total chlordane	10	nc	µg/kg dw	na	1.9 U	na	4.4	na	10 U	na	na	na
Heptachlor	10	nc	µg/kg dw	na	0.97 U	na	0.97 U	na	5.0 U	na	na	na

Concentration in **bold** indicates SQS/SL exceedance.
Concentration in **bold underline** indicates CSL/ML exceedance.
CSL – cleanup screening level
dw – dry weight
ML – maximum level
na - not analyzed
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-6c. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-019 – SS-027

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-019-010	EW09-SS-020-010	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010
Metals												
Antimony	150	200	mg/kg dw	10 UJ	10 UJ	7 UJ	7 J	10 UJ	9 UJ	9 UJ	8 UJ	10 UJ
Arsenic	57	93	mg/kg dw	13.9	12.9	11.4	12.1	13.2	10.3	11.6	9.1	12.1
Cadmium	5.1	6.7	mg/kg dw	0.7	0.8	0.3 U	0.3 U	1.0	0.7	0.6	0.3 U	0.7
Chromium	260	270	mg/kg dw	39	34	17.3	22.6	44	30.5	26.3	26.8	43
Copper	390	390	mg/kg dw	93.6	83.9	34.8	49.7 J	104	73.5	71.1	51.5	106
Lead	450	530	mg/kg dw	60	54	18	31 J	65	52	51	35	89
Mercury	0.41	0.59	mg/kg dw	0.3 J	**0.75 J**	0.09 J	0.04	0.4 J	0.31 J	0.32 J	0.28 J	0.4 J
Nickel	140	370	mg/kg dw	26	21	14	13	26	20	17	19	26
Silver	6.1	6.1	mg/kg dw	0.6 U	0.6 U	0.4 U	0.4 U	0.7 U	0.6 U	0.6 U	0.5 U	0.7 U
Zinc	410	960	mg/kg dw	205	155	72	136 J	196	124	122	87	214
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	0.87 U	0.78 U	1.3 U	1.4 U	0.69 U	1.1 U	0.90 U	1.0 U	0.77 U
Acenaphthene	16	57	mg/kg OC	0.91	2.3	1.3 U	2.2	0.69 U	1.1 U	0.90 U	1.0 U	0.77
Acenaphthylene	66	66	mg/kg OC	1.4	2.8	1.3 U	1.4 U	0.90	1.1 U	1.0	1.0 U	1.3
Anthracene	220	1,200	mg/kg OC	6.9	15	1.5	1.5	3.0	2.8	2.7	3.9	5.4
Benzo(a)anthracene	110	270	mg/kg OC	13	29	3.1	2.6	6.9	5.9	8.1	7.3	9.2
Benzo(a)pyrene	99	210	mg/kg OC	12	29	3.8	3.5	7.6	7.6	11	9.9	12
Benzo(g,h,i)perylene	31	78	mg/kg OC	3.6 J	13 J	1.5 J	1.4 U	2.6 J	2.8 J	3.6 J	3.9	5.4 J
Total benzofluoranthenes	230	450	mg/kg OC	30	63.2	10.1	8.75	22	22	29	22	29
Chrysene	110	460	mg/kg OC	19	54	5.0	4.3	13	12	15	14	21
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.3 J	5.4 J	1.3 U	1.4 U	1.1 J	1.1 U	1.0 J	1.5	2.4 J
Dibenzofuran	15	58	mg/kg OC	0.91	1.8	1.3 U	1.4 U	0.69 U	1.1 U	0.90 U	1.0 U	0.77 U
Fluoranthene	160	1,200	mg/kg OC	27	81	7.7	13	17	12	15	12	23
Fluorene	23	79	mg/kg OC	2.1	4.3	1.3 U	1.9	0.90	1.1 U	0.90 U	1.2	1.3

Table A-6c, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-019 – SS-027

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-019-010	EW09-SS-020-010	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	4.0 J	13 J	1.5 J	1.4 U	2.6 J	2.9 J	3.7 J	4.3	5.4 J
Naphthalene	99	170	mg/kg OC	0.87 U	0.85	1.3 U	1.4 U	0.69	1.1 U	0.90 U	1.0 U	0.77 U
Phenanthrene	100	480	mg/kg OC	10	29	3.1	9.0	6.2	4.8	5.4	6.3	10
Pyrene	1,000	1,400	mg/kg OC	19	58	6.1	7.6	12	10	14	12	19
Total HPAHs	960	5,300	mg/kg OC	129 J	340 J	39 J	40	84.1 J	74.6 J	100 J	86.9	126 J
Total LPAHs	370	780	mg/kg OC	22	54.3	4.6	15	12	7.57	9.0	12	19
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	7.8	9.3	6.3	9.7	6.9	7.6	7.7	7.9	12
Butyl benzyl phthalate	4.9	64	mg/kg OC	0.95	1.0	0.97 U	1.0 U	0.93	1.1	0.68 U	0.84	**7.7**
Diethyl phthalate	61	110	mg/kg OC	0.87 U	0.58 U	1.5	1.4 U	0.52 U	0.81 U	0.68 U	0.84 U	0.58 U
Dimethyl phthalate	53	53	mg/kg OC	0.65 U	0.58 U	0.97 U	1.0 U	0.52 U	0.81 U	0.68 U	0.79 U	0.58 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	0.87 U	0.78 U	1.3 U	1.4 U	0.69 U	1.1 U	0.90 U	1.0 U	0.77 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	0.87 U	0.78 U	1.3 U	5.8	0.69 U	1.1 U	0.90 U	1.0 U	0.77 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.26 U	0.24 U	0.39 U	0.42 U	0.21 U	0.33 U	0.27 U	0.32 U	0.23 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.26 U	0.24 U	0.39 U	0.42 U	0.21 U	0.33 U	0.27 U	0.32 U	0.23 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.87	0.58	0.62	0.42 U	0.62	1.0	0.72	0.84	0.23 U
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	6.1 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.1 U	6.0 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	6.1 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.1 U	6.0 U
4-Methylphenol	670	670	µg/kg dw	20 U	30	20 U	20 U	24	20 U	20 U	20 U	20 U
Benzoic acid	650	650	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Benzyl alcohol	57	73	µg/kg dw	20 U	20 UJ	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.26 U	0.24 U	0.062 U	0.22 UJ	0.034 U	0.33 U	0.14 UJ	0.32 U	0.23 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.26 U	0.24 U	0.062 U	0.42 U	0.034 U	0.33 U	0.27 U	0.32 U	0.23 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.26 U	0.24 U	0.39 U	0.42 U	0.23 U	0.33 U	0.27 U	0.32 U	0.23 U
Pentachlorophenol	360	690	µg/kg dw	30 U	31 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U

Table A-6c, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-019 – SS-027

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-019-010	EW09-SS-020-010	EW09-SS-021-010	EW09-SS-022-010	EW09-SS-023-010	EW09-SS-024-010	EW09-SS-025-010	EW09-SS-026-010	EW09-SS-027-010
Phenol	420	1,200	µg/kg dw	20 U	20	20 U	29	20 U	20 U	20 U	31	20 U
PCBs												
Total PCBs	12	65	mg/kg OC	**16**	1.1	5.9	4.3	0.83	3.0	3.2	**16**	6.2 J
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	na	1.9 U	na	2.0 U	na	na	na	na
Aldrin	10	nc	µg/kg dw	na	na	0.96 U	na	0.98 U	na	na	na	na
Dieldrin	10	nc	µg/kg dw	na	na	1.9 U	na	2.0 U	na	na	na	na
gamma-BHC	10	nc	µg/kg dw	na	na	0.96 U	na	0.98 U	na	na	na	na
Total chlordane	10	nc	µg/kg dw	na	na	1.9 U	na	2.0 U	na	na	na	na
Heptachlor	10	nc	µg/kg dw	na	na	0.96 U	na	0.98 U	na	na	na	na

[a] This is a field duplicate sample of the sample directly preceding it.
Concentration in **bold** indicates SQS/SL exceedance.
Concentration in **bold underline** indicates CSL/ML exceedance.
CSL – cleanup screening level
dw – dry weight
ML – maximum level
na - not analyzed
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-6d. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-028 – SS-035

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-028-010	EW09-SS-303-010[a]	EW09-SS-029-010	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010
Metals												
Antimony	150	200	mg/kg dw	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	9 UJ
Arsenic	57	93	mg/kg dw	12.1	10.7	11.5	10.4	11.4	9.6	11.2	10.4	10.1
Cadmium	5.1	6.7	mg/kg dw	0.7	0.9	1.0	0.9	0.8	0.8	2.2	1.4	0.9
Chromium	260	270	mg/kg dw	50	56	40	37	35	36	40	40	36.8
Copper	390	390	mg/kg dw	127 J	139 J	101	88.2	86.5	87.0	107	93.2	132
Lead	450	530	mg/kg dw	71 J	80 J	71	59	53	54	76	72	68
Mercury	0.41	0.59	mg/kg dw	0.40	0.36	0.4 J	**0.5 J**	0.40 J	**0.45 J**	**0.50 J**	**0.53 J**	**0.47 J**
Nickel	140	370	mg/kg dw	31	35	25	24	22	22	25	26	24
Silver	6.1	6.1	mg/kg dw	0.8	0.8	0.7 J	0.6 U	0.7 U	0.6 U	0.8 J	1.0 J	0.7 J
Zinc	410	960	mg/kg dw	182 J	206 J	163	153	145	138	157	164	156
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	0.84 U	1.2 U	0.99 U	0.99 U	0.98 U	1.2 U	1.1 U	0.89 U	1.1 U
Acenaphthene	16	57	mg/kg OC	0.84 U	1.2	0.99	0.99 U	0.98 U	1.2 U	1.1 U	0.89 U	1.1 U
Acenaphthylene	66	66	mg/kg OC	1.6	2.4	0.99 U	0.99 U	1.0	1.2 U	1.1 U	0.89 U	1.1 U
Anthracene	220	1,200	mg/kg OC	6.3	17	3.2	1.8	3.8	2.2	1.5	0.89	2.2
Benzo(a)anthracene	110	270	mg/kg OC	13	23	6.9	4.9	10	6.7	4.1	2.4	5.2
Benzo(a)pyrene	99	210	mg/kg OC	14	26	9.4	6.4	11	7.9	5.4	2.9	7.2
Benzo(g,h,i)perylene	31	78	mg/kg OC	3.0	6.4	3.3 J	2.4 J	3.5 J	3.1 J	2.3 J	1.3 J	2.8 J
Total benzofluoranthenes	230	450	mg/kg OC	36	59.0	25	17	30	22	15	7.6	19
Chrysene	110	460	mg/kg OC	24	38	11	9.9	21	12	7.0	4.3	9.9
Dibenzo(a,h)anthracene	12	33	mg/kg OC	0.97	2.4	0.99 U	0.99 U	1.7 J	1.2 J	1.1 U	0.89 U	1.1 U
Dibenzofuran	15	58	mg/kg OC	0.84 U	1.4	0.99 U	0.99 U	0.98 U	1.2 U	1.1 U	0.89 U	1.1 U
Fluoranthene	160	1,200	mg/kg OC	28	45	14	9.9	18	12	7.5	5.3	12
Fluorene	23	79	mg/kg OC	1.2	3.4	1.0	0.99 U	0.98 U	1.2 U	1.1 U	0.89 U	1.1 U

Table A-6d, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-028 – SS-035

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-028-010	EW09-SS-303-010[a]	EW09-SS-029-010	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	3.4	7.5	3.5 J	2.4 J	3.6 J	3.0 J	2.2 J	1.2 J	2.8 J
Naphthalene	99	170	mg/kg OC	0.93	1.6	0.99 U	0.99 U	0.98 U	1.2 U	1.1 U	0.89 U	1.1 U
Phenanthrene	100	480	mg/kg OC	7.6	18	8.4	4.1	7.4	4.8	3.0	2.5	4.3
Pyrene	1,000	1,400	mg/kg OC	16	33	15	9.4	15	11	9.1	5.3	14
Total HPAHs	960	5,300	mg/kg OC	138	240	87.7 J	62.6 J	114 J	79.3 J	53 J	30 J	72.9 J
Total LPAHs	370	780	mg/kg OC	18	44	14	5.91	12	7.01	4.4	3.4	6.41
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	12	23	8.4	7.9	9.8	11	7.0	4.9	6.6
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.9	2.7	1.4	0.99	1.8	1.5	0.81 U	0.67 U	0.83 U
Diethyl phthalate	61	110	mg/kg OC	0.84 U	1.2 U	0.99 U	0.74 U	0.98 U	1.2 U	0.81 U	0.67 U	0.83 U
Dimethyl phthalate	53	53	mg/kg OC	0.63 U	0.87 U	0.74 U	0.74 U	0.74 U	0.91 U	0.81 U	0.67 U	0.83 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	1.1	1.5	0.99 U	0.99 U	0.98 U	1.2 U	1.1 U	0.89 U	1.1 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	0.84 U	1.2 U	0.99 U	0.99 U	0.98 U	1.2 U	1.1 U	0.89 U	1.1 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.26 U	0.35 U	0.30 U	0.30 U	0.30 U	0.37 U	0.32 U	0.26 U	0.34 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.26 U	0.35 U	0.30 U	0.30 U	0.30 U	0.37 U	0.32 U	0.26 U	0.34 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	1.5	1.4	0.84	1.0	1.5	2.9	0.32 U	0.93	0.37
2,4-Dimethylphenol	29	29	µg/kg dw	6.2 U	6.1 U	6.0 U	6.0 U	6.1 U	6.1 U	6.0 U	5.9 U	6.1 U
2-Methylphenol	63	63	µg/kg dw	6.2 U	6.1 U	6.0 U	6.0 U	6.1 U	6.1 U	6.0 U	5.9 U	6.1 U
4-Methylphenol	670	670	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzoic acid	650	650	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Benzyl alcohol	57	73	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.26 U	0.35 U	0.30 U	0.049 U	0.30 U	0.37 U	0.053 U	0.26 U	0.34 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.26 U	0.35 U	0.30 U	0.049 U	0.30 U	0.37 U	0.053 U	0.26 U	0.34 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.26 U	0.35 U	0.30 U	0.30 U	0.30 U	0.37 U	0.32 U	0.26 U	0.34 U

Table A-6d, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-028 – SS-035

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-028-010	EW09-SS-303-010[a]	EW09-SS-029-010	EW09-SS-030-010	EW09-SS-031-010	EW09-SS-032-010	EW09-SS-033-010	EW09-SS-034-010	EW09-SS-035-010
Pentachlorophenol	360	690	µg/kg dw	31 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U
Phenol	420	1,200	µg/kg dw	26	49	20 U	350	20 U	20 U	20 U	20 U	20 U
PCBs												
Total PCBs	12	65	mg/kg OC	**18**	**28**	5.91	3.3	3.5	6.40	7.26	6.09	11
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
Aldrin	10	nc	µg/kg dw	na	na	na	0.99 U	na	na	0.98 U	na	na
Dieldrin	10	nc	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
gamma-BHC	10	nc	µg/kg dw	na	na	na	0.99 U	na	na	0.98 U	na	na
Total chlordane	10	nc	µg/kg dw	na	na	na	2.0 U	na	na	2.0 U	na	na
Heptachlor	10	nc	µg/kg dw	na	na	na	0.99 U	na	na	0.98 U	na	na

Concentration in **bold** indicates SQS/SL exceedance.
Concentration in **bold underline** indicates CSL/ML exceedance.
CSL – cleanup screening level
dw – dry weight
ML – maximum level
na - not analyzed
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-6e. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-036 – SS-040, SS-100 – SS-102

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010[a]
Metals												
Antimony	150	200	mg/kg dw	10 UJ	9 UJ	9 UJ	7 UJ	10 UJ	8 UJ	9 UJ	9 UJ	9 UJ
Arsenic	57	93	mg/kg dw	9.0	7.7	9.1	18.1	11.5	6.8	7.5	6.7	7.0
Cadmium	5.1	6.7	mg/kg dw	0.9	0.7	1.8 J	0.3	0.7	0.6 J	0.9 J	0.5	0.5
Chromium	260	270	mg/kg dw	37	33.9	40.6	20.8	41	30.2	33.8	26.9	25.3
Copper	390	390	mg/kg dw	85.2	67.5	113	42.6 J	99.6	205	89.2	67.9	64.8
Lead	450	530	mg/kg dw	60	55	76	30 J	60	73	58	35	33
Mercury	0.41	0.59	mg/kg dw	0.40 J	0.36 J	**0.46**	0.09	**0.50 J**	0.29	**0.47**	0.24 J	0.35 J
Nickel	140	370	mg/kg dw	24	21	26	15	27	20	26	19	17
Silver	6.1	6.1	mg/kg dw	0.9 J	2.3	1	0.4 U	0.7 U	0.5	0.8	0.5 U	0.5 U
Zinc	410	960	mg/kg dw	146	124	179	130 J	155	159	179	96	91
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	0.90 U	0.91	0.64 J	0.75 U	0.76	0.85 J	2.0	1.2 U	1.0 U
Acenaphthene	16	57	mg/kg OC	0.90 U	1.0	0.64 J	0.75 U	0.76	0.85 J	2.5	1.2 U	1.0 U
Acenaphthylene	66	66	mg/kg OC	0.90 U	0.82 U	0.88	0.75 U	1.1	1.0 J	1.5	1.2 U	1.0 U
Anthracene	220	1,200	mg/kg OC	1.9	4.5	3.3	2.5	4.9	4.5	9.5	2.0	1.6
Benzo(a)anthracene	110	270	mg/kg OC	3.9	9.9	13	5.2	9.2	9.7	20	5.2	3.4
Benzo(a)pyrene	99	210	mg/kg OC	4.5	12	13	5.2	12	14	23	6.5	3.9
Benzo(g,h,i)perylene	31	78	mg/kg OC	2.3 J	3.6	4.2 J	1.4 J	4.0	5.5 J	7.0 J	3.5 J	2.2 J
Total benzofluoranthenes	230	450	mg/kg OC	11 J	26	31	13	26 J	31 J	61	15	10.0
Chrysene	110	460	mg/kg OC	7.2	16	20	9.4	18	16	34	10	6.8
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.0 J	1.6	1.0	0.75 U	1.5	1.6 J	2.6 J	1.2 J	1.0 U
Dibenzofuran	15	58	mg/kg OC	0.90 U	0.82 U	0.53 J	0.75 U	0.69	0.85 J	2.2	1.2 U	1.0 U
Fluoranthene	160	1,200	mg/kg OC	7.2 J	14	30	17	13	21	37	8.8	9.4
Fluorene	23	79	mg/kg OC	0.90 U	1.5	0.67 J	0.86	1.3	1.3	3.6	1.2 U	1.0 U

Table A-6e, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-036 – SS-040, SS-100 – SS-102

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010[a]
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	2.3 J	3.7	4.2 J	1.4 J	4.3	5.2 J	7.2 J	3.1 J	2.1 J
Naphthalene	99	170	mg/kg OC	0.90 U	0.91	0.88	0.75 U	0.72	1.6	2.5	1.2 U	1.0 U
Phenanthrene	100	480	mg/kg OC	3.5	8.2	5.7	5.2	7.2	11	26	4.4	3.6
Pyrene	1,000	1,400	mg/kg OC	7.2	16	34	9.4	14	22	39	9.4	7.9
Total HPAHs	960	5,300	mg/kg OC	47.0 J	103	150 J	62.5 J	102 J	126 J	232 J	62.9 J	46 J
Total LPAHs	370	780	mg/kg OC	5.38	16	12 J	8.6	16	20 J	46	6.41	5.2
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	7.2	20	12	9.4	14	18	**73**	7.6	5.2
Butyl benzyl phthalate	4.9	64	mg/kg OC	0.68 U	1.5	4.2	0.82	1.2	**11 J**	**5.2**	0.88 U	0.79 U
Diethyl phthalate	61	110	mg/kg OC	0.68 U	0.82	1.1 J	0.56 U	0.66 U	0.85 U	1.9	0.88 U	0.79 U
Dimethyl phthalate	53	53	mg/kg OC	0.68 U	0.66	0.60 J	0.56 U	0.49 U	0.85 U	1.1 U	0.88 U	3.6
Di-n-butyl phthalate	220	1,700	mg/kg OC	0.90 U	2.8	0.71 U	0.75 U	0.66 U	1.1 U	1.2 J	1.2 U	1.0 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	0.90 U	0.82 U	0.49 J	0.75 U	0.66 U	1.1 U	1.5	1.2 U	1.0 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.28 U	0.25 U	0.22 U	0.22 U	0.20 U	0.34 U	0.44 U	0.36 U	0.32 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.28 U	0.25 U	0.22 U	0.22 U	0.20 U	0.34 U	0.44 U	0.36 U	0.32 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.99	**9.9**	**16**	0.22 U	1.9	1.4	**310**	0.65	0.32 U
2,4-Dimethylphenol	29	29	µg/kg dw	6.2 U	6.1 U	6.1 U	6.0 U	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U
2-Methylphenol	63	63	µg/kg dw	6.2 U	6.1 U	6.1 U	6.0 U	6.1 U	5.9 U	6.0 U	6.1 U	6.1 U
4-Methylphenol	670	670	µg/kg dw	20 U	20 U	20	20 U	20 U	20 U	81	20 U	20 U
Benzoic acid	650	650	µg/kg dw	200 U	200 U	200 U	200 U	200 U	200 U	190 U	200 U	200 U
Benzyl alcohol	57	73	µg/kg dw	R	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.14 UJ	0.25 U	0.035 U	0.22 U	0.20 U	0.34 U	0.44 U	0.36 U	0.32 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.28 U	0.25 U	0.035 U	0.22 U	0.20 U	0.34 U	0.44 U	0.36 U	0.32 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.28 U	0.25 U	0.22 U	0.22 U	0.20 U	0.34 U	0.44 U	0.36 U	0.32 U

Table A-6e, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-036 – SS-040, SS-100 – SS-102

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-036-010	EW09-SS-037-010	EW09-SS-038-010	EW09-SS-039-010	EW09-SS-040-010	EW09-SS-100-010	EW09-SS-101-010	EW09-SS-102-010	EW09-SS-302-010[a]
Pentachlorophenol	360	690	µg/kg dw	31 U	30 U	30 U	30 U	31 U	30 U	30 U	30 U	30 U
Phenol	420	1,200	µg/kg dw	20 U	20 U	14 J	53	20 U	20 U	18 J	25	20 U
PCBs												
Total PCBs	12	65	mg/kg OC	3.0	**30**	**57**	3.6	**14**	9.1	**23**	3.6	3.8
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	na	2.0 U	na	na	na	na	na	na
Aldrin	10	nc	µg/kg dw	na	na	0.98 U	na	na	na	na	na	na
Dieldrin	10	nc	µg/kg dw	na	na	2.0 U	na	na	na	na	na	na
gamma-BHC	10	nc	µg/kg dw	na	na	0.98 U	na	na	na	na	na	na
Total chlordane	10	nc	µg/kg dw	na	na	2.0 U	na	na	na	na	na	na
Heptachlor	10	nc	µg/kg dw	na	na	0.98 U	na	na	na	na	na	na

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **bold underline** indicates CSL/ML exceedance.

CSL – cleanup screening level

dw – dry weight

ML – maximum level

na - not analyzed

OC – organic carbon normalized

SL – screening level

SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-6f. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-103 – SS-110

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010[a]	EW09-SS-106-010	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010
Metals									-			
Antimony	150	200	mg/kg dw	10 UJ	10 UJ	10 UJ	10 UJ	6 UJ	20 UJ	6 UJ	10 UJ	10 UJ
Arsenic	57	93	mg/kg dw	9.5	15.6	12.9	12.9	4.1	9.9	3.1	10.9	9.2
Cadmium	5.1	6.7	mg/kg dw	0.7	2.3	1.7	1.4	0.2 U	**5.7**	0.3 U	1.6	1.3 J
Chromium	260	270	mg/kg dw	34	43	49	47	16.8	55	19.4	45	45
Copper	390	390	mg/kg dw	75.7	208	125	118	37.0	117	23.3	104	121
Lead	450	530	mg/kg dw	48	98	85	79	23	168	9	75	84
Mercury	0.41	0.59	mg/kg dw	**0.67 J**	**0.59**	**0.55 J**	**0.50 J**	0.08 J	**0.53 J**	0.11 J	**0.48**	**0.48**
Nickel	140	370	mg/kg dw	22	23	28	28	10	28	14	26	27
Silver	6.1	6.1	mg/kg dw	0.6 U	1.2	0.9	0.8	0.4 U	1	0.4 U	1.0	0.9
Zinc	410	960	mg/kg dw	135	354 J	246	222	85 J	**1,230 J**	42	218 J	239
PAHs									-			
2-Methylnaphthalene	38	64	mg/kg OC	0.79 U	0.39 J	1.3	1.1	1.1	1.8	2.2 U	1.1 U	0.70 J
Acenaphthene	16	57	mg/kg OC	0.95	0.45 J	1.5	1.4	3.3	2.2	2.2 U	1.1 U	0.75 J
Acenaphthylene	66	66	mg/kg OC	0.95	1.1	2.0	1.9	0.48 J	1.9	2.2 U	0.54 J	1.3
Anthracene	220	1,200	mg/kg OC	4.4	6.1	6.8	6.9	3.3	16	3.6	2.2	4.7
Benzo(a)anthracene	110	270	mg/kg OC	10	24	12	12	5.4	19	3.9	7.0	8.0
Benzo(a)pyrene	99	210	mg/kg OC	12	24	17	17	4.8	22	4.0	7.0	12
Benzo(g,h,i)perylene	31	78	mg/kg OC	3.6	8.4	8.2	8.1	1.2	6.0	2.2 U	2.9	3.6 J
Total benzofluoranthenes	230	450	mg/kg OC	29	55	45	44.0	13	67.7	10.8	16	35
Chrysene	110	460	mg/kg OC	20	32	27	24	7.3	36	9.3	10	15
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.2	4.5	2.9 U	2.5	0.36 J	1.7 J	2.2 U	1.1	1.5 J
Dibenzofuran	15	58	mg/kg OC	1.0	0.58 J	1.4	1.2	2.3	2.3	2.2 U	1.1 U	0.75 J
Fluoranthene	160	1,200	mg/kg OC	19	26	27	19	14	73	5.7	12	17
Fluorene	23	79	mg/kg OC	1.4	1.5	1.6	1.8	2.1	2.9	2.2 U	0.54 J	0.96 J

Table A-6f, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-103 – SS-110

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010[a]	EW09-SS-106-010	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	3.8	9.4	7.7	7.7	1.3	6.0	2.2 U	2.9	3.9 J
Naphthalene	99	170	mg/kg OC	1.2	0.61 J	1.4	1.3	1.1	4.3	2.2 U	0.59 J	1.2
Phenanthrene	100	480	mg/kg OC	11	10	13	10	6.6	15	6.5	3.9	7.5
Pyrene	1,000	1,400	mg/kg OC	20	28	39	34	12	82	7.0	11	18
Total HPAHs	960	5,300	mg/kg OC	118	210	183	168	59.5 J	310 J	40.8	70.3	113 J
Total LPAHs	370	780	mg/kg OC	20	20 J	27	24	17 J	42	10	7.84 J	17 J
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	19	2.7	20	18	1.8	20	28	3.7	9.6
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.8	0.49 U	3.1	1.7	0.45 U	0.86	1.6 U	0.81 U	1.1
Diethyl phthalate	61	110	mg/kg OC	0.60 U	0.49 U	0.72 U	0.58 U	0.45 U	0.69 U	2.2 U	0.81 U	0.80 U
Dimethyl phthalate	53	53	mg/kg OC	0.60 U	0.49 U	0.72 U	0.58 U	0.45 U	0.69 U	1.6 U	0.81 U	0.70 J
Di-n-butyl phthalate	220	1,700	mg/kg OC	0.79	0.65 U	0.97 U	0.77 U	0.60 U	7.8	2.2 U	1.1 U	1.1 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	0.79 U	0.65 U	0.97 U	0.77 U	0.60 U	0.86 U	2.2 U	1.1 U	1.1 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.24 U	0.20 U	0.29 U	0.24 U	0.18 U	0.27 U	0.66 U	0.33 U	0.32 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.24 U	0.20 U	0.29 U	0.24 U	0.18 U	0.27 U	0.66 U	0.33 U	0.32 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	**13**	0.20 U	1.4	0.97	0.18	0.32	0.66 U	0.33 U	0.91 J
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	6.1 U	6.1	6.1	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U
4-Methylphenol	670	670	µg/kg dw	20 U	20 U	20 U	20 U	20 U	16 J	20 U	20 U	20 U
Benzoic acid	650	650	µg/kg dw	200 U	200 U	200 U	200 U	200 UJ	200 UJ	200 U	200 U	200 U
Benzyl alcohol	57	73	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.24 U	0.20 U	0.047 U	0.038 U	0.030 U	0.27 U	0.66 U	0.33 U	0.052 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.24 U	0.20 U	0.047 U	0.038 U	0.030 U	0.27 U	0.66 U	0.33 U	0.052 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.24 U	0.20 U	0.29 U	0.24 U	0.42 U	0.27 U	0.66 U	0.33 U	0.32 U

Table A-6f, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-103 – SS-110

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-103-010	EW09-SS-104-010	EW09-SS-105-010	EW09-SS-304-010[a]	EW09-SS-106-010	EW09-SS-107-010	EW09-SS-108-010	EW09-SS-109-010	EW09-SS-110-010
Pentachlorophenol	360	690	µg/kg dw	30 U	30 U	31 U	30 U	30 U	31 U	30 U	30 U	30 U
Phenol	420	1,200	µg/kg dw	20 U	20 U	20 U	100	20 U	76 JN	20 U	20 U	24
PCBs												
Total PCBs	12	65	mg/kg OC	**30**	**<u>100</u>**	**35**	**31**	3.90	**55.2**	**12.6**	**38**	7.5
Pesticides					-							
Total DDTs	6.9	69	µg/kg dw	na	na	13 U	12 U	2.0 U	na	na	na	2.0 U
Aldrin	10	nc	µg/kg dw	na	na	2.9 U	2.8 U	0.98 U	na	na	na	0.97 U
Dieldrin	10	nc	µg/kg dw	na	na	21 U	19 U	2.0 U	na	na	na	2.0 U
gamma-BHC	10	nc	µg/kg dw	na	na	0.98 U	0.99 U	0.98 U	na	na	na	0.97 U
Total chlordane	10	nc	µg/kg dw	na	na	8.2 U	8.9 U	2.0 U	na	na	na	2.0 U
Heptachlor	10	nc	µg/kg dw	na	na	2.4 U	1.4 U	0.98 U	na	na	na	0.97 U

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **<u>bold underline</u>** indicates CSL/ML exceedance.

CSL – cleanup screening level

dw – dry weight

ML – maximum level

na - not analyzed

OC – organic carbon normalized

SL – screening level

SQS – sediment quality standards

Data Qualifiers:
- J – estimated concentration
- JN – tentatively identified at estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-6g. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-111 – SS-119

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010	EW09-SS-116-010	EW09-SS-301-010[a]	EW09-SS-118-010	EW09-SS-119-010
Metals												
Antimony	150	200	mg/kg dw	6 UJ	10 UJ	8 UJ	9 UJ	9 UJ	9 UJ	9 UJ	9 UJ	9 UJ
Arsenic	57	93	mg/kg dw	3.4	9.8	9.9	22.7	11.7	12.6	12.7	8.9	7.6
Cadmium	5.1	6.7	mg/kg dw	0.2 U	1.0	1.3	0.6 J	1.8	1.8	1.7	0.7	1.1
Chromium	260	270	mg/kg dw	15.7	41	36.6	33.8	50.5	48.4	46.5	38.4	37.7
Copper	390	390	mg/kg dw	21.4	88.1	63.7	90.3	101	101	94.3	62.4	73.1
Lead	450	530	mg/kg dw	5	61	63	58	103	94	85	48	56
Mercury	0.41	0.59	mg/kg dw	0.07	0.40 J	**0.54**	0.32	**0.48 J**	**0.72**	**0.64**	0.37 J	0.37
Nickel	140	370	mg/kg dw	14	25	28	23	28	27	27	28	21
Silver	6.1	6.1	mg/kg dw	0.4 U	0.7	0.8	0.6 U	1.1	1.6	1.3	0.5 U	0.8
Zinc	410	960	mg/kg dw	37 J	162	175 J	126	210	174 J	165 J	113	130
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	3.4 U	1.1	0.70 J	0.85 J	2.3	0.45 J	1.1 U	1.1 U	1.5 U
Acenaphthene	16	57	mg/kg OC	3.4 U	1.0	0.81 J	2.0	2.1	0.65 J	0.59 J	1.1 U	1.5 U
Acenaphthylene	66	66	mg/kg OC	3.4 U	1.3	0.54 J	1.2 J	2.4	0.51 J	1.1 U	1.1 U	1.5 U
Anthracene	220	1,200	mg/kg OC	3.4 U	10	2.1	4.3	9.4	1.9	1.9	2.4	2.1
Benzo(a)anthracene	110	270	mg/kg OC	1.7 J	11	4.2	7.7	13	3.0	3.2	4.1	5.0
Benzo(a)pyrene	99	210	mg/kg OC	3.4 U	15	4.1	13	25	4.6	4.8	3.6	7.2
Benzo(g,h,i)perylene	31	78	mg/kg OC	3.4 U	4.6	2.1	4.1 J	13	2.5	2.5	1.6 J	2.1 J
Total benzofluoranthenes	230	450	mg/kg OC	2.5 J	35	9.04	36	62	11	11	8.34	18
Chrysene	110	460	mg/kg OC	2.1 J	22	6.0	14	28	5.6	5.3	5.4	8.4
Dibenzo(a,h)anthracene	12	33	mg/kg OC	3.4 U	1.9	0.60 J	1.3 J	4.7 J	0.51 J	0.75 J	1.1 UJ	1.5 U
Dibenzofuran	15	58	mg/kg OC	3.4 U	1.1	0.76 J	1.5	2.2	0.60 J	0.64 J	1.1 U	1.5 U
Fluoranthene	160	1,200	mg/kg OC	2.1 J	19	11	15	33	4.6	4.7	10	7.6
Fluorene	23	79	mg/kg OC	3.4 U	2.3	1.1	1.3 J	3.2	0.69 J	0.70 J	1.3	1.5 U

Table A-6g, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-111 – SS-119

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010	EW09-SS-116-010	EW09-SS-301-010[a]	EW09-SS-118-010	EW09-SS-119-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	3.4 U	5.1	1.8	4.0 J	11	2.1	2.1	1.4 J	2.1 J
Naphthalene	99	170	mg/kg OC	3.4 U	1.1	1.2	1.9	2.4	1.1	1.2	1.1 U	1.5 U
Phenanthrene	100	480	mg/kg OC	3.4 U	11	4.3	7.0	18	3.3	3.0	4.1	4.0
Pyrene	1,000	1,400	mg/kg OC	3.2 J	25	12	25	75	14	17	11	9.9
Total HPAHs	960	5,300	mg/kg OC	12 J	139	51 J	120 J	263 J	47.7 J	51 J	46 J	60 J
Total LPAHs	370	780	mg/kg OC	3.4 U	27	10.1 J	18 J	38	8.06 J	7.43 J	7.87	6.1
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	3.2 J	16	3.6	16	**52**	6.9	7.0	2.7	11
Butyl benzyl phthalate	4.9	64	mg/kg OC	2.7 U	0.84	1.3	1.2 J	3.0	0.69 U	0.80 U	0.89 U	1.7
Diethyl phthalate	61	110	mg/kg OC	2.7 U	0.63 U	0.81 U	1.1 U	3.4	0.69 U	0.80 U	0.89 U	1.5 U
Dimethyl phthalate	53	53	mg/kg OC	2.7 U	0.63 U	0.81 U	1.1 U	1.2 U	0.69 U	0.80 U	0.89 U	1.2 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	3.4 U	0.84 U	1.1 U	1.4 U	1.6	0.88 U	1.1 U	1.1 U	1.5 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	3.4 U	0.84 U	1.1 U	1.4 U	1.6 U	0.88 U	1.1 U	1.1 U	1.5 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	1.1 U	0.25 U	0.46	0.43 U	0.48 U	0.28 U	0.33 U	0.43	0.47 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	1.1 U	0.25 U	0.33 U	0.43 U	0.48 U	0.28 U	0.33 U	0.36 U	0.47 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	19 U	20 U	20 U	20 U	20 U	19 U	20 U	19 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	1.1 U	1.3	0.97	0.70 J	2.0	0.28 U	0.33 U	0.43	2.4
2,4-Dimethylphenol	29	29	µg/kg dw	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.0 U	6.2 U
2-Methylphenol	63	63	µg/kg dw	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.0 U	6.2 U
4-Methylphenol	670	670	µg/kg dw	19 U	20 U	31	20 U	20 U	19 U	20 U	19 U	20 U
Benzoic acid	650	650	µg/kg dw	190 U	200 U	200 U	200 U	200 U	190 U	200 U	190 U	200 U
Benzyl alcohol	57	73	µg/kg dw	19 U	20 U	20 U	20 U	20 U	19 U	20 U	19 U	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.32 UJ	0.25 U	0.054 U	0.43 U	0.48 U	0.28 U	0.33 U	0.095 U	0.47 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	1.1 U	0.25 U	0.060 U	0.43 U	0.48 U	0.28 U	0.33 U	0.095 U	0.47 U
Hexachloroethane	1,400	14,000	µg/kg dw	19 U	20 U	20 U	20 U	20 U	19 U	20 U	19 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	1.1 U	0.25 U	0.33 U	0.43 U	0.48 U	0.28 U	0.33 U	0.36 U	0.47 U

Table A-6g, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-111 – SS-119

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-111-010	EW09-SS-112-010	EW09-SS-113-010	EW09-SS-114-010	EW09-SS-115-010	EW09-SS-116-010	EW09-SS-301-010[a]	EW09-SS-118-010	EW09-SS-119-010
Pentachlorophenol	360	690	µg/kg dw	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U
Phenol	420	1,200	µg/kg dw	19 U	20 U	20 U	20 U	20 U	19 U	14 J	44	20 U
PCBs												
Total PCBs	12	65	mg/kg OC	3.4 U	**33**	**<u>110</u>**	**15**	**<u>73</u>**	**30**	**<u>65.2</u>**	**13**	**60**
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	na	55 U	na	na	na	na	3.2 U	na
Aldrin	10	nc	µg/kg dw	na	na	1.0 U	na	na	na	na	1.6 U	na
Dieldrin	10	nc	µg/kg dw	na	na	33 UJ	na	na	na	na	3.2 U	na
gamma-BHC	10	nc	µg/kg dw	na	na	1.0 U	na	na	na	na	1.6 U	na
Total chlordane	10	nc	µg/kg dw	na	na	**14 U**	na	na	na	na	3.2 U	na
Heptachlor	10	nc	µg/kg dw	na	na	1.0 U	na	na	na	na	1.6 U	na

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **<u>bold underline</u>** indicates CSL/ML exceedance.

CSL – cleanup screening level
dw – dry weight
ML – maximum level
na - not analyzed
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-6h. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-120 – SS-128

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010
Metals												
Antimony	150	200	mg/kg dw	8 UJ	9 UJ	8 UJ	9 UJ	8 UJ	8 UJ	7 UJ	8 UJ	8 UJ
Arsenic	57	93	mg/kg dw	8.4	9.5	6.8	6.7	5.9	5.1	6.4	7.1	6.1
Cadmium	5.1	6.7	mg/kg dw	1.6	1.3	0.5	0.5	0.3 U	0.3 U	0.3 U	0.6	0.3 U
Chromium	260	270	mg/kg dw	46.3	44.4	32.9	33.1	26.1	21.4	22.7	33.1	21.6
Copper	390	390	mg/kg dw	74.1	77.5	73.2	63.3	54.2	35.7	52.3	55.9	40.1
Lead	450	530	mg/kg dw	73	72	48	41	35	22	33	42	25
Mercury	0.41	0.59	mg/kg dw	**0.42**	**0.44 J**	0.31	0.26	0.28	0.14	0.17 J	**0.43**	0.24
Nickel	140	370	mg/kg dw	26	27	21	21	17	15	18	24	15
Silver	6.1	6.1	mg/kg dw	1.2	0.9	0.6	0.5 U	0.5 U	0.5 U	0.4 U	0.5	0.5 U
Zinc	410	960	mg/kg dw	140	143	119	105	87	61	87	98	63
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	1.4 U	1.6	1.2 U	1.4 U	1.8 U	14	1.5 U	1.2 U	1.4 U
Acenaphthene	16	57	mg/kg OC	1.4 U	1.2	1.2 U	1.4 U	1.9	1.4 U	1.5 U	1.2 U	1.4 U
Acenaphthylene	66	66	mg/kg OC	1.4 U	1.3	1.2 U	1.7	1.8 U	1.4 U	1.5 U	1.2 U	1.4 U
Anthracene	220	1,200	mg/kg OC	1.4 U	4.2	1.2	5.4	6.0	3.0	2.1	1.5	5.5
Benzo(a)anthracene	110	270	mg/kg OC	2.9	6.9	3.2	10 J	10	5.5	4.8	3.2	9.6
Benzo(a)pyrene	99	210	mg/kg OC	4.7	13	4.6	17	18	11	9.0	4.9	14
Benzo(g,h,i)perylene	31	78	mg/kg OC	1.4 U	5.9	1.6 J	4.6	4.4	2.4	3.8 J	1.5 J	4.1
Total benzofluoranthenes	230	450	mg/kg OC	11.0	28	13	76.2	82	31	23 J	12	61
Chrysene	110	460	mg/kg OC	4.3	11	5.8	16	17	11	9.7	5.3	16
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.4 U	1.7 J	1.2 U	1.4	1.8 U	1.4 U	1.5 U	1.2 U	1.4 U
Dibenzofuran	15	58	mg/kg OC	1.4 U	1.2	1.2 U	1.4 U	1.8 U	1.4 U	1.5 U	1.2 U	1.4 U
Fluoranthene	160	1,200	mg/kg OC	7.7	13	5.9	20	21	16	11	6.8	17
Fluorene	23	79	mg/kg OC	1.4 U	1.7	1.2 U	1.6	2.1	1.4 U	1.5 U	1.2 U	1.8

Table A-6h, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-120 – SS-128

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	1.4 U	5.4	1.5 J	4.8	4.9	2.7	3.5 J	1.5 J	4.5
Naphthalene	99	170	mg/kg OC	1.4 U	1.4	1.2 U	1.4 U	1.8 U	3.5	1.5 U	1.2 U	1.4 U
Phenanthrene	100	480	mg/kg OC	3.9	7.8	2.4	10	12	5.5	4.0	3.0	8.9
Pyrene	1,000	1,400	mg/kg OC	10	31	9.1	20 J	24 J	15 J	16	7.4	16 J
Total HPAHs	960	5,300	mg/kg OC	41	115 J	44 J	171 J	181 J	94.6 J	80.6 J	43 J	144 J
Total LPAHs	370	780	mg/kg OC	3.9	18	3.6	19	22	12.0	6.1	4.4	16
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	9.1	25	4.0	13	23	6.0	9.0	3.6	8.9
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.0 U	0.74	1.0	1.4	1.5	1.0 U	1.6	0.93 U	1.8
Diethyl phthalate	61	110	mg/kg OC	1.4 U	0.88 U	1.2 U	1.0 U	1.4 U	1.0 U	1.1 U	1.0 U	1.2 U
Dimethyl phthalate	53	53	mg/kg OC	1.0 U	0.74 U	0.91 U	1.0 U	1.4 U	1.0 U	1.1 U	0.93 U	1.2 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	1.4 U	0.98 U	1.2 U	1.4 U	1.8 U	1.4 U	1.5 U	1.2 U	1.4 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	1.4 U	0.98 U	1.2 U	1.4 U	1.8 U	1.4 U	1.5 U	1.2 U	1.4 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.42 U	0.29 U	0.37 U	0.41 U	0.56 U	0.41 U	0.45 U	0.37 U	0.46 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.42 U	0.29 U	0.37 U	0.41 U	0.56 U	0.41 U	0.45 U	0.37 U	0.46 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	19 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.63	0.88	0.85	1.7	**8.0**	0.88	2.1	1.7	1.6
2,4-Dimethylphenol	29	29	µg/kg dw	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.0 U	6.2 U
2-Methylphenol	63	63	µg/kg dw	6.0 U	6.0 U	6.1 U	6.1 U	6.1 U	6.0 U	6.0 U	6.0 U	6.2 U
4-Methylphenol	670	670	µg/kg dw	20 U	20	20 U	20 U	19 U	20 U	20 U	20 U	19 U
Benzoic acid	650	650	µg/kg dw	200 U	200 U	200 U	200 U	190 U	200 U	200 U	200 U	190 U
Benzyl alcohol	57	73	µg/kg dw	20 U	20 U	20 U	20 UJ	19 UJ	38 J	20 U	20 U	19 UJ
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.42 U	0.29 U	0.060 U	0.12 U	0.44 U	0.41 U	0.45 U	0.37 U	0.46 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.42 U	0.29 U	0.060 U	0.12 U	0.44 U	0.41 U	0.45 U	0.37 U	0.46 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	20 U	20 U	19 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.42 U	0.29 U	0.37 U	0.41 U	0.56 U	0.41 U	0.45 U	0.37 U	0.46 U

Table A-6h, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-120 – SS-128

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-120-010	EW09-SS-121-010	EW09-SS-122-010	EW09-SS-123-010	EW09-SS-124-010	EW09-SS-125-010	EW09-SS-126-010	EW09-SS-127-010	EW09-SS-128-010
Pentachlorophenol	360	690	µg/kg dw	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U
Phenol	420	1,200	µg/kg dw	20 U	58	20 U	20 U	19 U	20 U	20 U	20 U	19 U
PCBs												
Total PCBs	12	65	mg/kg OC	**42**	**45**	**33**	**<u>75</u>**	**56**	**32**	**<u>66</u>**	**46**	**<u>81</u>**
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	na	2.0 U	3.4 U	9.7 U	na	na	na	na
Aldrin	10	nc	µg/kg dw	na	na	0.99 U	1.7 U	4.8 U	na	na	na	na
Dieldrin	10	nc	µg/kg dw	na	na	6.3 U	17 U	9.7 U	na	na	na	na
gamma-BHC	10	nc	µg/kg dw	na	na	0.99 U	1.7 U	4.8 U	na	na	na	na
Total chlordane	10	nc	µg/kg dw	na	na	2.0 U	3.4 U	9.7 U	na	na	na	na
Heptachlor	10	nc	µg/kg dw	na	na	0.99 U	1.7 U	4.8 U	na	na	na	na

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **<u>bold underline</u>** indicates CSL/ML exceedance.

CSL – cleanup screening level

dw – dry weight

ML – maximum level

na - not analyzed

OC – organic carbon normalized

SL – screening level

SQS – sediment quality standards

Data Qualifiers:
- J – estimated concentration
- JN – tentatively identified at estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-6i. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-129 – SS-201

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010	EW09-SS-200-010	EW09-SS-300-010[a]	EW09-SS-201-010
Metals												
Antimony	150	200	mg/kg dw	8 UJ	8 UJ	8 UJ	8 UJ	8 UJ	8 UJ	9 UJ	9 UJ	7 UJ
Arsenic	57	93	mg/kg dw	5.8	6.2	6.2	6.3	5.3	5.7	10.4	10.0	6.6
Cadmium	5.1	6.7	mg/kg dw	0.3 U	0.3 U	0.3 U	0.5	0.3 U	0.3 U	0.9	0.9	0.5
Chromium	260	270	mg/kg dw	25.4	24.6	26.9	26.4	26.9	26.3	38.2	37.1	29.3
Copper	390	390	mg/kg dw	48.5	66.8	49.1	76.4	93.6	50.2	79.6	77.3	53.4
Lead	450	530	mg/kg dw	32	29	29	38	31	31	75	72	45
Mercury	0.41	0.59	mg/kg dw	0.23	0.23	0.21	0.24	0.27 J	0.27	**0.47**	0.39	0.24
Nickel	140	370	mg/kg dw	15	17	19	16	17	18	24	23	19
Silver	6.1	6.1	mg/kg dw	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.8	0.8	0.5
Zinc	410	960	mg/kg dw	75	87	79	94	89	77	131	125	85
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	4.9 U	1.1 U
Acenaphthene	16	57	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	10	1.1 U
Acenaphthylene	66	66	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	53	1.1 U
Anthracene	220	1,200	mg/kg OC	2.3	1.6	3.3	1.8	4.2	4.9	3.8	63	2.9
Benzo(a)anthracene	110	270	mg/kg OC	6.1	4.4	5.2	4.8	7.3	8.7	8.1	**350**	5.1
Benzo(a)pyrene	99	210	mg/kg OC	6.8	5.3	9.9	6.2	11	13	19	**210**	11
Benzo(g,h,i)perylene	31	78	mg/kg OC	2.1 J	3.8 J	2.5	4.8 J	3.2	3.7	4.3 J	**44 J**	2.7
Total benzofluoranthenes	230	450	mg/kg OC	19	12.6	24	15	26	33	40	**915**	29
Chrysene	110	460	mg/kg OC	11	7.4	8.6	8.1	13	14	18	**1,100**	7.9
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.5 U	1.3 U	1.2 U	1.4 J	1.3 U	1.6 U	2.0 J	**15 J**	1.1 U
Dibenzofuran	15	58	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	11	1.1 U
Fluoranthene	160	1,200	mg/kg OC	22	13	9.3	7.5	13	17	24	**6,400**	9.6
Fluorene	23	79	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	19	1.1 U

Table A-6i, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-129 – SS-201

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010	EW09-SS-200-010	EW09-SS-300-010[a]	EW09-SS-201-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	2.3 J	3.3 J	2.5	4.1 J	3.2	4.1	4.4 J	**58 J**	3.1
Naphthalene	99	170	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	4.9 U	1.1 U
Phenanthrene	100	480	mg/kg OC	9.2	4.2	5.2	3.9	6.0	8.7	8.7	**440**	5.1
Pyrene	1,000	1,400	mg/kg OC	16	10	12 J	7.5	16	14 J	49	**3,500**	11 J
Total HPAHs	960	5,300	mg/kg OC	86.2 J	60 J	74.7 J	59 J	92.7	109 J	168 J	**12,500 J**	79.1 J
Total LPAHs	370	780	mg/kg OC	12	5.8	8.52	5.8	10.2	13	13	**580**	8.08
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	7.0	3.7	6.8	10	14	8.7	8.7	17	6.2
Butyl benzyl phthalate	4.9	64	mg/kg OC	2.3	1.0 U	1.2	1.6	0.99 U	1.3	0.87 U	2.0	0.85 U
Diethyl phthalate	61	110	mg/kg OC	1.2 U	1.0 U	0.93 U	0.94 U	1.4	1.2 U	1.5	2.5 U	0.85 U
Dimethyl phthalate	53	53	mg/kg OC	1.2 U	1.0 U	0.93 U	0.94 U	0.99 U	1.2 U	0.87 U	1.3 U	0.85 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	4.9 U	1.1 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	1.5 U	1.3 U	1.2 U	1.3 U	1.3 U	1.6 U	1.1 U	4.9 U	1.1 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.47 U	0.41 U	0.38 U	0.37 U	0.40 U	0.48 U	0.36 U	0.51 U	0.33 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.47 U	0.41 U	0.38 U	0.37 U	0.40 U	0.48 U	0.36 U	0.51 U	0.33 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	19 U	58 U	19 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	1.9	**3.6**	3.0	0.75	0.99	1.3	0.58	1.6	1.9
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U	6.2 U	6.0 U	5.9 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	6.1 U	6.2 U	5.9 U	6.1 U	6.0 U	6.2 U	6.0 U	5.9 U
4-Methylphenol	670	670	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	19 U	58 U	19 U
Benzoic acid	650	650	µg/kg dw	200 U	200 U	200 U	200 U	190 U	200 U	190 U	580 U	190 U
Benzyl alcohol	57	73	µg/kg dw	20 U	20 U	20 UJ	20 U	19 U	20 UJ	19 U	58 U	19 UJ
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.075 U	0.41 U	0.38 U	0.37 U	0.40 U	0.48 U	0.056 U	0.082 U	0.33 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.075 U	0.41 U	0.38 U	0.37 U	0.40 U	0.48 U	0.056 U	0.082 U	0.33 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	20 U	20 U	19 U	20 U	19 U	58 U	19 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.47 U	0.41 U	0.38 U	0.37 U	0.40 U	0.48 U	0.36 U	0.51 U	0.33 U

Table A-6i, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-129 – SS-201

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-129-010	EW09-SS-130-010	EW09-SS-131-010	EW09-SS-132-010	EW09-SS-133-010	EW09-SS-134-010	EW09-SS-200-010	EW09-SS-300-010[a]	EW09-SS-201-010
Pentachlorophenol	360	690	µg/kg dw	30 U	30 U	31 U	30 U	30 U	30 U	31 U	30 U	30 U
Phenol	420	1,200	µg/kg dw	20 U	20 U	20 U	20 U	67	20 U	19 U	58 U	19 U
PCBs												
Total PCBs	12	65	mg/kg OC	**36**	**64**	**<u>74</u>**	**53**	**26**	**<u>95</u>**	**55**	**59**	**<u>140</u>**
Pesticides												
Total DDTs	6.9	69	µg/kg dw	2.0 U	na	na	na	na	na	2.0 U	1.9 U	na
Aldrin	10	nc	µg/kg dw	0.98 U	na	na	na	na	na	0.97 U	0.97 U	na
Dieldrin	10	nc	µg/kg dw	41 U	na	na	na	na	na	9.1 U	6.7 U	na
gamma-BHC	10	nc	µg/kg dw	0.98 U	na	na	na	na	na	0.97 U	0.97 U	na
Total chlordane	10	nc	µg/kg dw	7.3 U	na	na	na	na	na	2.0 U	1.9 U	na
Heptachlor	10	nc	µg/kg dw	0.98 U	na	na	na	na	na	0.97 U	0.97 U	na

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **<u>bold underline</u>** indicates CSL/ML exceedance.

CSL – cleanup screening level

dw – dry weight

ML – maximum level

na - not analyzed

OC – organic carbon normalized

SL – screening level

SQS – sediment quality standards

Data Qualifiers:
- J – estimated concentration
- JN – tentatively identified at estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-6j. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-202 – SS-209

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010	EW09-SS-208-010	EW09-SS-305-010[a]	EW09-SS-209-010
Metals												
Antimony	150	200	mg/kg dw	8 UJ	7 UJ	8 UJ	7 UJ	9 UJ	8 UJ	9 UJ	9 UJ	8 UJ
Arsenic	57	93	mg/kg dw	5.0	3.9	6.1	4.4	20.9	5.3	5.8	6.1	5.2
Cadmium	5.1	6.7	mg/kg dw	0.3 U	0.3 U	0.3 U	0.3 U	0.4 U	0.3 U	0.4	0.3 U	0.3 U
Chromium	260	270	mg/kg dw	21.0	16.7	24.8	18.8	34.3	21.9	27.3	25.7	22.7
Copper	390	390	mg/kg dw	124	26.6	48.6	30.5	84.2	43.8	56.1	50.4	41.9
Lead	450	530	mg/kg dw	20	16	32	12	64	23	46	44	33
Mercury	0.41	0.59	mg/kg dw	0.18	0.13	0.23	0.11	0.29 J	0.17	0.21 J	0.26 J	0.25
Nickel	140	370	mg/kg dw	14	11	16	13	23	15	19	17	16
Silver	6.1	6.1	mg/kg dw	0.5 U	0.4 U	0.5 U	0.4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Zinc	410	960	mg/kg dw	83	46	84	50	162 J	69	108 J	89 J	65
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	11	1.6 U	3.3	3.2	2.7 U
Acenaphthene	16	57	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	**130**	1.6 U	**21**	16	8.3
Acenaphthylene	66	66	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	8.8 J	1.6 U	6.2	6.7	3.6
Anthracene	220	1,200	mg/kg OC	2.6	9.7	3.0	2.5	160	2.6	100	84	22
Benzo(a)anthracene	110	270	mg/kg OC	7.9	12	8.0	5.7	**200**	7.9	**170**	110	45
Benzo(a)pyrene	99	210	mg/kg OC	8.6	16	10	6.5	**160 J**	9.4	**130**	**100**	52
Benzo(g,h,i)perylene	31	78	mg/kg OC	3.3 J	4.1	4.7 J	2.3	24	4.6 J	29	20	14
Total benzofluoranthenes	230	450	mg/kg OC	19	37	22	14.5	**340**	22	**310**	**250**	110
Chrysene	110	460	mg/kg OC	12	30	13	7.7	**240**	13	**210**	**160**	66
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.6 J	2.3 U	1.6 U	2.0 U	6.8	1.6 U	11	4.7 J	5.0
Dibenzofuran	15	58	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	**68 J**	1.6 U	12	10	4.2
Fluoranthene	160	1,200	mg/kg OC	19	11	15	8.8	**610**	13	**360**	**240**	85
Fluorene	23	79	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	**95 J**	1.6 U	**32**	**24**	8.0

Table A-6j, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-202 – SS-209

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010	EW09-SS-208-010	EW09-SS-305-010[a]	EW09-SS-209-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	3.5 J	5.1	4.7 J	2.5	29	4.8 J	**35**	23	17
Naphthalene	99	170	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	16	1.6 U	9.5	6.1	3.6
Phenanthrene	100	480	mg/kg OC	8.6	7.6	7.2	3.8	**510**	6.1	**190**	**130**	52
Pyrene	1,000	1,400	mg/kg OC	17	33 J	14	7.0 J	440	13	270	220	69 J
Total HPAHs	960	5,300	mg/kg OC	92.1 J	148 J	90.6 J	55.2 J	**2,050 J**	87.4 J	**1,530**	**1,120 J**	460 J
Total LPAHs	370	780	mg/kg OC	12	17.2	10.2	6.4	**912 J**	8.74	360	270	98
Phthalates								-				
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	5.4	7.1	5.4	3.7	27	4.4	13	24	15
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.6	2.1	1.3 U	2.0	**5.5 J**	2.9	**14**	0.84 U	2.1 U
Diethyl phthalate	61	110	mg/kg OC	5.3	1.7 U	1.7	1.7 U	1.0 U	1.9	0.71 U	0.84 U	2.1 U
Dimethyl phthalate	53	53	mg/kg OC	1.1 U	1.7 U	1.3 U	1.7 U	1.0 U	1.2 U	0.71 U	0.84 U	3.1
Di-n-butyl phthalate	220	1,700	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	1.4 U	1.6 U	0.95 U	1.1 U	2.7 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	1.4 U	2.3 U	1.6 U	2.0 U	1.4 U	1.6 U	2.7 J	1.1 U	2.7 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.44 U	0.70 U	0.52 U	0.66 U	0.41 U	0.48 U	0.28 U	0.34 U	0.84 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.44 U	0.70 U	0.52 U	0.66 U	0.41 U	0.48 U	0.28 U	0.34 U	0.84 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	19 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	19 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	**4.7**	1.2	1.9	**3.2**	0.53	0.79	0.71 J	0.56 J	1.5
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	5.8 U	6.1 U	6.2 U	10	6.1 U	17	7.9	6.0 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	5.8 U	6.1 U	6.2 U	6.1 U	6.1 U	6.0 U	6.1 U	6.0 U
4-Methylphenol	670	670	µg/kg dw	19 U	19 U	19 U	19 U	20 U	20 U	15 J	16 J	19 U
Benzoic acid	650	650	µg/kg dw	190 U	190 U	190 U	190 U	200 UJ	200 U	200 UJ	200 UJ	190 U
Benzyl alcohol	57	73	µg/kg dw	19 U	19 UJ	19 U	19 UJ	20 U	20 U	20 U	20 U	19 UJ
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.44 U	0.12 U	0.082 U	0.66 U	0.33 U	0.48 U	0.046 U	0.054 U	0.84 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.44 U	0.12 U	0.082 U	0.66 U	0.33 U	0.48 U	0.046 U	0.054 U	0.84 U
Hexachloroethane	1,400	14,000	µg/kg dw	19 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	19 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.44 U	0.70 U	0.52 U	0.66 U	0.41 U	0.48 U	0.95 U	0.34 U	0.84 U

Table A-6j, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-202 – SS-209

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-202-010	EW09-SS-203-010	EW09-SS-204-010	EW09-SS-205-010	EW09-SS-206-010	EW09-SS-207-010	EW09-SS-208-010	EW09-SS-305-010[a]	EW09-SS-209-010
Pentachlorophenol	360	690	µg/kg dw	30 U	29 U	30 U	31 U	30 U	30 U	30 U	30 U	30 U
Phenol	420	1,200	µg/kg dw	19 U	19 U	19 U	19 U	74 JN	20 U	75	20 U	19 U
PCBs												
Total PCBs	12	65	mg/kg OC	**28**	**59**	**45**	**<u>160</u>**	**23**	**30**	12	**20**	**31**
Pesticides							-					
Total DDTs	6.9	69	µg/kg dw	na	2.3	1.9 U	30 U	41 UJ	na	**8.6 J**	6.2 J	na
Aldrin	10	nc	µg/kg dw	na	0.96 U	0.96 U	15 U	260 UJ	na	17 U	0.97 U	na
Dieldrin	10	nc	µg/kg dw	na	24 U	6.2 U	30 U	9.7 U	na	6.4 U	1.9 U	na
gamma-BHC	10	nc	µg/kg dw	na	0.96 U	0.96 U	15 U	4.9 U	na	1.4 U	0.97 U	na
Total chlordane	10	nc	µg/kg dw	na	1.9 U	1.9 U	**30 U**	**100 U**	na	10 U	5.9 U	na
Heptachlor	10	nc	µg/kg dw	na	0.96 U	0.96 U	15 U	4.9 U	na	0.98 U	0.97 U	na

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **<u>bold underline</u>** indicates CSL/ML exceedance.

CSL – cleanup screening level

dw – dry weight

ML – maximum level

na - not analyzed

OC – organic carbon normalized

SL – screening level

SQS – sediment quality standards

Data Qualifiers:
- J – estimated concentration
- JN – tentatively identified at estimated concentration
- R – rejected
- U – not detected at reporting limit shown
- UJ – not detected at estimated reporting limit shown

Table A-6k. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-210 – SS-218

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010	EW09-SS-217-010	EW09-SS-218-010
Metals												
Antimony	150	200	mg/kg dw	7 UJ	8 UJ	7 UJ	8 UJ	7 UJ	10 UJ	7 UJ	7 UJ	7 UJ
Arsenic	57	93	mg/kg dw	4.1	3.6	3.4	8.4	10.1	26.2	4.6	4.4	3.5
Cadmium	5.1	6.7	mg/kg dw	0.3 U	0.3 UJ	0.3 U	0.6	0.5	1.3	0.3 U	0.3 U	0.3 U
Chromium	260	270	mg/kg dw	17.2	22.7	18.3	21.7	20.6	69	19.4	17.7	14.9
Copper	390	390	mg/kg dw	27.2	64.6	27.7	63.8 J	50.8 J	272 J	29.5	24.0	21.6
Lead	450	530	mg/kg dw	14	29	15	81 J	66 J	171 J	22	15	7
Mercury	0.41	0.59	mg/kg dw	0.10	0.17	0.13	0.25	0.20	**0.70**	0.20	0.11	0.07
Nickel	140	370	mg/kg dw	12	18	14	14	14	39	15	12	11
Silver	6.1	6.1	mg/kg dw	0.4 U	0.5 U	0.4 U	0.8	0.5	1.6	0.4 U	0.4 U	0.4 U
Zinc	410	960	mg/kg dw	44	82	44	104 J	84 J	**434 J**	50	42	34
PAHs												
2-Methylnaphthalene	38	64	mg/kg OC	2.5 U	1.1 J	2.4 U	1.7	2.5	1.8 U	2.1 U	2.5 U	2.5 U
Acenaphthene	16	57	mg/kg OC	2.5 U	1.7 J	2.4 U	11	8.7	15	2.1 U	2.5 U	2.5 U
Acenaphthylene	66	66	mg/kg OC	2.5 U	2.1	2.4 U	3.4	6.1	7.7	2.1 U	2.5 U	2.5 U
Anthracene	220	1,200	mg/kg OC	5.0	6.7	5.7	24	25	42	4.6	2.5 U	2.5 U
Benzo(a)anthracene	110	270	mg/kg OC	9.4	14	11	39	39	71	9.9	3.1	2.5 U
Benzo(a)pyrene	99	210	mg/kg OC	12	22	14	53	66	83	10	3.8	2.5 U
Benzo(g,h,i)perylene	31	78	mg/kg OC	5.1	7.1 J	5.0	14	17	21	6.1 J	3.1 J	2.5 U
Total benzofluoranthenes	230	450	mg/kg OC	28	66	31	89.7	119	150	24	9.4	2.5 U
Chrysene	110	460	mg/kg OC	15	25	20	53	61	110	21	5.1	2.5 U
Dibenzo(a,h)anthracene	12	33	mg/kg OC	2.5 U	2.1 J	2.4 U	5.7	7.1	10	2.1 U	2.5 U	2.5 U
Dibenzofuran	15	58	mg/kg OC	2.5 U	1.5 J	2.4 U	4.1	5.7	4.5	2.1 U	2.5 U	2.5 U
Fluoranthene	160	1,200	mg/kg OC	20	32	37	69	72	130	14	5.1	2.5 U
Fluorene	23	79	mg/kg OC	2.5 U	1.9 J	2.4 U	8.0	7.7	10	2.1 U	2.5 U	2.5 U

Table A-6k, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-210 – SS-218

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010	EW09-SS-217-010	EW09-SS-218-010
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	5.4	6.7 J	5.5	17	18	24	6.0 J	2.5 J	2.5 U
Naphthalene	99	170	mg/kg OC	2.5 U	2.5	2.4 U	5.7	11	2.6	2.1 U	2.5 U	2.5 U
Phenanthrene	100	480	mg/kg OC	10	15	17	46	34	71	9.4	2.6	2.5 U
Pyrene	1,000	1,400	mg/kg OC	14 J	32	24 J	130	250	130	14	4.5	2.6
Total HPAHs	960	5,300	mg/kg OC	110 J	208 J	146 J	470	650	730	110 J	36.5 J	2.6
Total LPAHs	370	780	mg/kg OC	15.1	30 J	24	98.3	92.7	150	14.0	2.6	2.5 U
Phthalates												
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	9.4	**89**	7.7	5.7	12	20	5.5	3.1	15
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.9 U	2.4	1.9 U	0.86 U	1.4 U	1.3	1.6 U	1.9 U	1.9 U
Diethyl phthalate	61	110	mg/kg OC	1.9 U	1.6 U	1.9 U	1.1 U	5.2	1.3 U	1.6 U	1.9 U	1.9 U
Dimethyl phthalate	53	53	mg/kg OC	1.9 U	1.6 U	1.9 U	0.86 U	1.4 U	0.45 U	1.6 U	1.9 U	1.9 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	2.5 U	2.0 U	2.4 U	1.1 U	1.7 U	1.8 U	2.1 U	2.5 U	2.5 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	2.5 U	2.0 U	2.4 U	1.1 U	1.7 U	1.8 U	2.1 U	2.5 U	2.5 U
Other SVOCs												
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.77 U	0.64 U	0.74 U	0.34 U	0.56 U	0.18 U	0.65 U	0.75 U	0.76 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.77 U	0.64 U	0.74 U	0.34 U	0.56 U	0.18 U	0.65 U	0.75 U	0.76 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	19 U	19 U	19 U	19 U	59 U	19 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.77 U	1.1 J	1.0	0.98	2.8	0.30	0.72	0.75 U	0.76 U
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	6.0 U	6.0 U	7.7	9.7	9.6	6.0 U	6.1 U	6.1 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	6.0 U	6.0 U	6.0 U	6.1 U	6.0 U	6.0 U	6.1 U	6.1 U
4-Methylphenol	670	670	µg/kg dw	20 U	19 U	19 U	19 U	19 U	59 U	19 U	20 U	20 U
Benzoic acid	650	650	µg/kg dw	200 U	190 U	190 U	190 U	190 U	590 U	190 U	200 U	200 U
Benzyl alcohol	57	73	µg/kg dw	20 UJ	19 U	19 UJ	19 U	19 U	30 U	19 U	20 U	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.77 U	0.64 U	0.37 UJ	0.056 U	0.56 U	0.18 U	0.65 U	0.75 U	0.23 UJ
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.77 U	0.64 U	0.74 U	0.056 U	0.56 U	0.18 U	0.65 U	0.75 U	0.76 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	19 U	19 U	19 U	19 U	59 U	19 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.77 U	0.64 U	0.74 U	0.38 U	0.56 U	0.18 U	0.65 U	0.75 U	0.76 U

Table A-6k, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-210 – SS-218

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-210-010	EW09-SS-211-010	EW09-SS-212-010	EW09-SS-213-010	EW09-SS-214-010	EW09-SS-215-010	EW09-SS-216-010	EW09-SS-217-010	EW09-SS-218-010
Pentachlorophenol	360	690	µg/kg dw	72	30 U	30 U	30 U	30 U	30 U	30 U	30 U	31 U
Phenol	420	1,200	µg/kg dw	20 U	40	19 U	19 U	200	59 U	37	20 U	20 U
PCBs												
Total PCBs	12	65	mg/kg OC	**13**	**19**	11	9.8	**27**	10	11.5	9.2	2.5 U
Pesticides												
Total DDTs	6.9	69	µg/kg dw	na	na	na	6.5	na	na	na	na	na
Aldrin	10	nc	µg/kg dw	na	na	na	0.97 U	na	na	na	na	na
Dieldrin	10	nc	µg/kg dw	na	na	na	5.6 U	na	na	na	na	na
gamma-BHC	10	nc	µg/kg dw	na	na	na	0.97 U	na	na	na	na	na
Total chlordane	10	nc	µg/kg dw	na	na	na	1.9 U	na	na	na	na	na
Heptachlor	10	nc	µg/kg dw	na	na	na	0.97 U	na	na	na	na	na

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **bold underline** indicates CSL/ML exceedance.

CSL – cleanup screening level

dw – dry weight

ML – maximum level

na - not analyzed

OC – organic carbon normalized

SL – screening level

SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-6l. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-219 – SS-222; LSO-01SE-080723

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	LSO-01SE-080723
Metals								
Antimony	150	200	mg/kg dw	7 UJ	7 UJ	7 UJ	7 UJ	nr
Arsenic	57	93	mg/kg dw	3.1	2.9	3.5	3.5	nr
Cadmium	5.1	6.7	mg/kg dw	0.3 UJ	0.3 U	0.3 U	0.3 U	nr
Chromium	260	270	mg/kg dw	20.1	14.5	15.1	21.6	nr
Copper	390	390	mg/kg dw	27.3	17.6	16.9	22.3	nr
Lead	450	530	mg/kg dw	17	9	13	8	nr
Mercury	0.41	0.59	mg/kg dw	0.16	0.14	0.07 J	0.06 J	nr
Nickel	140	370	mg/kg dw	19	12	13	18	nr
Silver	6.1	6.1	mg/kg dw	0.4 U	0.4 U	0.4 U	0.4 U	nr
Zinc	410	960	mg/kg dw	54	33	52 J	233 J	nr
PAHs								
2-Methylnaphthalene	38	64	mg/kg OC	1.6 J	16	0.97 U	2.1 J	2.3 U
Acenaphthene	16	57	mg/kg OC	2.4 J	**38**	0.97 U	1.8 J	3.5
Acenaphthylene	66	66	mg/kg OC	2.0 J	2.3 U	0.97 U	2.4 U	2.3 U
Anthracene	220	1,200	mg/kg OC	16	31	1.3	3.1	7.2
Benzo(a)anthracene	110	270	mg/kg OC	15	58	2.2	4.6	15
Benzo(a)pyrene	99	210	mg/kg OC	18	71	3.1	5.0	20
Benzo(g,h,i)perylene	31	78	mg/kg OC	5.2 J	**48 J**	1.7	2.8	7.2
Total benzofluoranthenes	230	450	mg/kg OC	44	99	6.02	10	35
Chrysene	110	460	mg/kg OC	21	78	3.2	7.5	25
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.6 J	**18 J**	0.61 J	2.4 U	3.4
Dibenzofuran	15	58	mg/kg OC	1.8 J	11	0.97 U	2.1 J	1.9 J
Fluoranthene	160	1,200	mg/kg OC	33	**180**	4.0	11	45
Fluorene	23	79	mg/kg OC	3.9	**34**	0.97 U	1.9 J	3.8

Table A-6l, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-219 – SS-222; LSO-01SE-080723

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	LSO-01SE-080723
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	4.9 J	**38 J**	1.7	2.2 J	7.2
Naphthalene	99	170	mg/kg OC	4.4	26	0.82 J	12	2.3 U
Phenanthrene	100	480	mg/kg OC	21	**290**	2.7	7.5	34
Pyrene	1,000	1,400	mg/kg OC	30	210	3.9	10	43
Total HPAHs	960	5,300	mg/kg OC	172 J	800 J	26.5 J	54.0 J	202
Total LPAHs	370	780	mg/kg OC	50 J	**410**	4.8 J	26.3 J	48
Phthalates								
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	7.0	3.4	1.3	3.1	**1,900**
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.9 U	1.7 U	0.77 U	1.9 U	4.2
Diethyl phthalate	61	110	mg/kg OC	2.3	1.7 U	0.77 U	1.9 U	2.1 J
Dimethyl phthalate	53	53	mg/kg OC	1.9 U	1.7 U	0.77 U	1.9 U	0.77 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	2.5 U	2.3 U	0.97 U	2.4 U	2.3 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	2.5 U	2.3 U	0.97 U	2.4 U	2.3
Other SVOCs								
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.77 U	0.69 U	0.31 U	0.79 U	0.31 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.77 U	0.69 U	0.31 U	0.79 U	0.31 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	19 U	19 U	44 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.77 U	0.69 U	0.31 U	0.79 U	1.0
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	6.0 U	6.0 U	6.1 U	6.1 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	6.0 U	6.0 U	6.1 U	6.1 U
4-Methylphenol	670	670	µg/kg dw	16 J	20 U	19 U	19 U	59
Benzoic acid	650	650	µg/kg dw	200 U	200 U	190 UJ	190 UJ	340 J
Benzyl alcohol	57	73	µg/kg dw	20 U	20 U	19 U	19 U	30 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.23 UJ	0.11 U	0.31 U	0.23 UJ	0.31 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.77 U	0.11 U	0.31 U	0.79 U	0.31 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	19 U	19 U	44 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.77 U	0.69 U	0.31 U	0.79 U	0.31 U

Table A-6l, cont. EW surface sediment results for chemicals with criteria, Round 1 and 2: SS-219 – SS-222; LSO-01SE-080723

Analyte	SQS/SL	CSL/ML	Unit	EW09-SS-219-010	EW09-SS-220-010	EW09-SS-221-010	EW09-SS-222-010	LSO-01SE-080723
Pentachlorophenol	360	690	µg/kg dw	30 U	30 U	30 U	30 U	59
Phenol	420	1,200	µg/kg dw	15 J	20 U	42 JN	19 U	72
PCBs								
Total PCBs	12	65	mg/kg OC	2.5 U	2.3 U	2.7	3.07	**18**
Pesticides								
Total DDTs	6.9	69	µg/kg dw	na	1.9 UJ	na	na	na
Aldrin	10	nc	µg/kg dw	na	0.97 UJ	na	na	na
Dieldrin	10	nc	µg/kg dw	na	1.9 UJ	na	na	na
gamma-BHC	10	nc	µg/kg dw	na	0.97 U	na	na	na
Total chlordane	10	nc	µg/kg dw	na	1.9 U	na	na	na
Heptachlor	10	nc	µg/kg dw	na	0.97 UJ	na	na	na

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **bold underline** indicates CSL/ML exceedance.

CSL – cleanup screening level
dw – dry weight
ML – maximum level
na - not analyzed
nc – no criteria
nr – data not reported in this document
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A-7a. EW surface sediment results for chemicals with criteria: T30 PDM 2009 results, T30-09-01 through T30-09-13

Analyte	SQS/SL	CSL/ML	Unit	T30-09-01	T30-09-03	T30-09-101[a]	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13
Metals											
Antimony	150	200	mg/kg dw	7 UJ	7 UJ	7 UJ	0.3 UJ	0.3 UJ	8 UJ	6 UJ	0.3 UJ
Arsenic	57	93	mg/kg dw	7 U	7 U	7 U	2.6	5.0	8 U	6 U	3.8
Cadmium	5.1	6.7	mg/kg dw	1.7	0.6	0.8	0.3 U	0.9	1.7	0.2 U	0.5 J
Chromium	260	270	mg/kg dw	29.0	22.5	20.6	14.4	24.5	48.8	15.2	18.0
Copper	390	390	mg/kg dw	40.0	36.2	32.4	20.1	39.0	69.5	22.2	23.5
Lead	450	530	mg/kg dw	53	18	16	5	23	115	8	13
Mercury	0.41	0.59	mg/kg dw	0.35 J	0.08 J	0.11 J	0.05 J	0.11 J	**1.07 J**	0.06 J	0.07 J
Nickel	140	370	mg/kg dw	16	16	15	10	16	42	12	11
Silver	6.1	6.1	mg/kg dw	0.7	0.4 U	0.4 U	0.4 U	0.5 U	1.7	0.4 U	0.4 U
Zinc	410	960	mg/kg dw	126	67	86	32	74	246	39	47
PAHs											
2-Methylnaphthalene	38	64	mg/kg OC	2.9	1.9 J	2.4 J	3.5 U	3.4	0.59 U	2.0 J	1.8 U
Acenaphthene	16	57	mg/kg OC	13	6.9	9.0	3.5 U	**21**	0.85	6.8	1.7 J
Acenaphthylene	66	66	mg/kg OC	1.7 U	2.7 U	2.7 U	3.5 U	3.5	0.59 U	2.9 U	1.8 U
Anthracene	220	1,200	mg/kg OC	10	6.1	8.6	3.5 U	12	0.82	4.2	2.0
Benzo(a)anthracene	110	270	mg/kg OC	5.9	12	13	3.5 U	16	1.3	8.1	3.5
Benzo(a)pyrene	99	210	mg/kg OC	3.8	13	12	3.5 U	12	1.0	6.8	3.1
Benzo(g,h,i)perylene	31	78	mg/kg OC	1.9 J	5.3 J	4.6 J	3.5 U	5.2	0.41 J	2.4 J	1.5 J
Total benzofluoranthenes	230	450	mg/kg OC	9.74	33	33	3.5 U	32	2.6	15.8	6.2
Chrysene	110	460	mg/kg OC	7.8	18	17	3.5 U	27	2.0	11	4.3
Dibenzo(a,h)anthracene	12	33	mg/kg OC	0.69 J	2.0 J	2.4 J	3.5 U	2.6	0.25 J	0.90 U	1.8 U
Dibenzofuran	15	58	mg/kg OC	10	4.2	6.0	3.5 U	9.9	0.62	3.9	1.2 J
Fluoranthene	160	1,200	mg/kg OC	40	24	32	4.8	75	3.8	27	12
Fluorene	23	79	mg/kg OC	17	4.8	8.6	3.5 U	16	0.82	5.4	1.8
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	1.7 J	4.8 J	4.3 J	3.5 U	5.3	0.38 J	2.4 J	1.4 J
Naphthalene	99	170	mg/kg OC	5.2	2.0 J	1.9 J	3.5 U	4.5	0.59 U	5.4	1.1 J
Phenanthrene	100	480	mg/kg OC	56	18	29	4.1	40	2.6	24	7.2
Pyrene	1,000	1,400	mg/kg OC	27	34	34	4.8	58	3.2	35	9.6
Total HPAHs	960	5,300	mg/kg OC	98.3 J	145 J	154 J	9.6	234	15 J	110 J	41 J
Total LPAHs	370	780	mg/kg OC	102	38 J	57 J	4.1	97	5.15	47	13.8 J

Analyte	SQS/SL	CSL/ML	Unit	T30-09-01	T30-09-03	T30-09-101[a]	T30-09-04	T30-09-06	T30-09-07	T30-09-09	T30-09-13
Phthalates											
Bis(2-ethylhexyl)phthalate	47	78	mg/kg OC	17	29	20 U	35 U	37 U	1.0 U	5.3 U	130 UJ
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.3 U	2.0 U	2.2 U	2.8 U	1.5 U	0.44 U	2.3 U	1.4 U
Diethyl phthalate	61	110	mg/kg OC	1.7 U	2.7 U	2.7 U	2.8 U	1.5 U	0.59 U	2.9 U	1.4 U
Dimethyl phthalate	53	53	mg/kg OC	1.3 U	2.0 U	2.2 U	2.8 U	1.5 U	0.44 U	2.3 U	1.4 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	4.2	5.6	5.9	3.5 U	2.0 U	1.3	6.6	1.8 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	1.7 U	2.7 U	2.7 U	3.5 U	2.0 U	0.59 U	2.9 U	1.8 U
Other SVOCs											
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.53 U	0.80 U	0.86 U	1.1 U	0.61 U	0.18 U	0.90 U	0.58 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.53 U	0.80 U	0.86 U	1.1 U	0.61 U	0.18 U	0.90 U	0.58 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	1.1	0.80	0.95	1.1 U	0.67	0.18 U	0.90 U	0.58 U
2,4-Dimethylphenol	29	29	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 UJ	6.0 U
2-Methylphenol	63	63	µg/kg dw	6.1 U	5.9 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 UJ	6.0 U
4-Methylphenol	670	670	µg/kg dw	20 U	20 U	19 U	19 U	46	20 U	19 U	20
Benzoic acid	650	650	µg/kg dw	200 U	200 U	190 U	190 UJ	200 UJ	200 U	190 U	190 UJ
Benzyl alcohol	57	73	µg/kg dw	R	R	R	19 U	20 U	R	R	19 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.53 U	0.80 U	0.86 U	1.1 U	0.61 U	0.18 U	0.90 U	0.58 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.53 U	0.80 U	0.86 U	1.1 U	0.61 U	0.18 U	0.90 U	0.58 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 UJ
n-Nitrosodiphenylamine	11	11	mg/kg OC	2.4 U	0.80 U	0.86 U	1.1 U	1.2 U	1.4 U	0.90 U	1.7 U
Pentachlorophenol	360	690	µg/kg dw	30 U	29 U	30 U	30 U	30 U	30 U	30 UJ	30 U
Phenol	420	1,200	µg/kg dw	20 U	20 U	19 U	19 U	20 U	20 U	19 U	19 U
PCBs											
Total PCBs	12	65	mg/kg OC	**27**	**17.1**	**23.8**	2.61	**18.3**	7.9	9.8	**13.2**

[a] This is a field duplicate sample of the sample directly preceding it.

Concentration in **bold** indicates SQS/SL exceedance.

Concentration in **bold underline** indicates CSL/ML exceedance.

CSL – cleanup screening level

dw – dry weight

ML – maximum level

na - not analyzed

OC – organic carbon normalized

SL – screening level

SQS – sediment quality standards

Table A-7b. EW surface sediment results for chemicals with criteria: T30 PDM 2009 results, T30-09-20 through T30-09-31

Analyte	SQS/SL	CSL/ML	Unit	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
Metals											
Antimony	150	200	mg/kg dw	7 UJ	7 UJ	0.3 UJ	8 UJ	0.3 UJ	0.3 UJ	7 UJ	0.3 UJ
Arsenic	57	93	mg/kg dw	7 U	7 U	4.4	8 U	4.4	5.5	7 U	3.4
Cadmium	5.1	6.7	mg/kg dw	0.6	0.3	0.4 J	0.4	0.3 J	0.6 J	0.3 U	0.3 U
Chromium	260	270	mg/kg dw	24.9	20.1	21.6	23.3	19.7	25.5	13.4	19.0
Copper	390	390	mg/kg dw	42.3	33.8	39.1	49.3	27.1	44.9	24.7	27.7
Lead	450	530	mg/kg dw	34	18	16	29	11	25	10	3 U
Mercury	0.41	0.59	mg/kg dw	0.17 J	0.37 J	0.09 J	0.23 J	0.07 J	0.15 J	0.12 J	0.04 J
Nickel	140	370	mg/kg dw	20	13	16	16	12	19	9	12
Silver	6.1	6.1	mg/kg dw	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.5 U	0.4 U	0.4 U
Zinc	410	960	mg/kg dw	88	57	62	81	46	76	39	37
PAHs											
2-Methylnaphthalene	38	64	mg/kg OC	1.3 U	1.1 U	1.7 U	0.99 J	9.4	1.4	2.3	2.6 U
Acenaphthene	16	57	mg/kg OC	1.1 J	1.2	1.4 J	4.3	**45**	5.7	**20**	2.6 U
Acenaphthylene	66	66	mg/kg OC	1.3 U	1.1 U	1.7 U	1.3 J	3.1	2.0	1.6 J	2.6 U
Anthracene	220	1,200	mg/kg OC	1.4	1.2	2.1	4.1	24	11	7.5	2.6 U
Benzo(a)anthracene	110	270	mg/kg OC	2.8	2.1	3.5	8.4	22	11	9.7	2.6 U
Benzo(a)pyrene	99	210	mg/kg OC	3.7	2.0	3.4	7.4	13	12	7.1	2.6 U
Benzo(g,h,i)perylene	31	78	mg/kg OC	1.5 J	0.90 J	1.8	2.6 J	5.0	5.9	2.6 J	2.6 U
Total benzofluoranthenes	230	450	mg/kg OC	8.88	5.3	6.7	19	28	25	16.2	2.6 U
Chrysene	110	460	mg/kg OC	3.7	3.1	4.7	14	26	16	14	2.6 U
Dibenzo(a,h)anthracene	12	33	mg/kg OC	1.2 J	0.56 J	1.7 U	2.1 J	2.6	3.0	1.1 J	2.6 U
Dibenzofuran	15	58	mg/kg OC	0.69 J	0.96 J	1.2 J	2.7	**35**	5.1	9.2	2.6 U
Fluoranthene	160	1,200	mg/kg OC	5.9	5.5	11	19	110	37	43	2.6 U
Fluorene	23	79	mg/kg OC	0.75 J	1.1	1.5 J	3.0	**51**	7.2	16	2.6 U
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	1.4 J	0.79 J	1.7	2.6 J	5.0	5.9	2.5 J	2.6 U
Naphthalene	99	170	mg/kg OC	1.3 U	0.56 J	1.7 U	1.7	14	1.4	5.8	2.6 U
Phenanthrene	100	480	mg/kg OC	3.0	4.2	5.3	11	**140**	21	47	2.6 U
Pyrene	1,000	1,400	mg/kg OC	13	6.2	8.4	19	70	31	29	2.6 U
Total HPAHs	960	5,300	mg/kg OC	41 J	27 J	41	94.1 J	281	145	125 J	2.6 U
Total LPAHs	370	780	mg/kg OC	6.2 J	8.31 J	10.2 J	26 J	280	48	99 J	2.6 U

Analyte	SQS/SL	CSL/ML	Unit	T30-09-20	T30-09-21	T30-09-24	T30-09-26	T30-09-27	T30-09-28	T30-09-29	T30-09-31
Phthalates											
Bis(2-ethylhexyl)phthalate	47	78	mg/kg OC	3.1 U	2.0 U	18 U	6.7 U	29 U	20 U	5.6 U	16 U
Butyl benzyl phthalate	4.9	64	mg/kg OC	0.94 U	0.79 U	4.1	1.1 U	1.7 U	2.0	1.6 U	2.0 U
Diethyl phthalate	61	110	mg/kg OC	1.3 U	1.1 U	1.3 U	1.5 U	1.7 U	0.99 U	2.2 U	2.0 U
Dimethyl phthalate	53	53	mg/kg OC	0.94 U	0.79 U	1.3 U	1.1 U	1.7 U	0.99 U	1.6 U	2.0 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	2.8	2.3	1.7 U	2.6	2.3 U	1.3 U	7.3	2.6 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	1.3 U	1.1 U	1.7 U	1.5 U	2.3 U	1.3 U	2.2 U	2.6 U
Other SVOCs											
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.36 U	0.33 U	0.52 U	0.47 U	0.70 U	0.39 U	0.67 U	0.81 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.36 U	0.33 U	0.52 U	0.47 U	0.70 U	0.39 U	0.67 U	0.81 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.36 U	0.33 U	0.62	**9.2**	0.70 U	0.51	0.67 U	0.81 U
2,4-Dimethylphenol	29	29	µg/kg dw	5.8 UJ	5.8 UJ	6.0 U	6.1 UJ	6.0 U	6.0 U	6.1 UJ	6.2 U
2-Methylphenol	63	63	µg/kg dw	5.8 UJ	5.8 UJ	6.0 U	6.1 UJ	6.0 U	6.0 U	6.1 UJ	6.2 U
4-Methylphenol	670	670	µg/kg dw	20 U	19 U	55	20 U	50	180	18 J	20 U
Benzoic acid	650	650	µg/kg dw	200 U	190 U	200 UJ	200 U	200 UJ	190 UJ	200 U	200 UJ
Benzyl alcohol	57	73	µg/kg dw	R	R	20 U	R	20 U	19 U	R	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.36 U	0.33 U	0.52 U	0.47 U	0.70 U	0.39 U	0.67 U	0.81 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.36 U	0.33 U	0.52 U	0.47 U	0.70 U	0.39 U	0.67 U	0.81 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.36 U	0.33 U	0.78 U	0.47 U	0.70 U	0.39 U	0.67 U	0.81 U
Pentachlorophenol	360	690	µg/kg dw	29 UJ	29 UJ	30 U	30 UJ	30 U	30 U	30 UJ	31 U
Phenol	420	1,200	µg/kg dw	20 U	19 U	20 U	20 U	20 U	19 U	20 U	20 U
PCBs											
Total PCBs	12	65	mg/kg OC	**17**	12	**16**	**26**	5.0	**20**	**18**	0.51 U

[a] This is a field duplicate sample of the sample directly preceding it.
Concentration in **bold** indicates SQS/SL exceedance.
Concentration in **bold underline** indicates CSL/ML exceedance.
CSL – cleanup screening level
dw – dry weight
ML – maximum level
na - not analyzed
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Table A-8. EW surface sediment results for samples with TOC < 0.5% for chemicals with SMS or DMMP criteria

Analyte	SQS/SL/LAET	CSL/ML/2LAET	UnitName	EW09-SS-223-010	T30-09-14
Metals					
Antimony	150	200	mg/kg dw	7 UJ	7 UJ
Arsenic	57	93	mg/kg dw	2.3	7 U
Cadmium	5.1	6.7	mg/kg dw	0.3 U	0.3 U
Chromium	260	270	mg/kg dw	14.3	13.3
Copper	390	390	mg/kg dw	18.2 J	16.5
Lead	450	530	mg/kg dw	5 J	3 U
Mercury	0.41	0.59	mg/kg dw	0.04	0.23 J
Nickel	140	370	mg/kg dw	10	10
Silver	6.1	6.1	mg/kg dw	0.4 U	0.4 U
Zinc	410	960	mg/kg dw	29 J	28
PAHs					
2-Methylnaphthalene	670	1,400	µg/kg dw	20 U	19 U
Acenaphthene	500	730	µg/kg dw	20 U	10 J
Acenaphthylene	1,300	1,300	µg/kg dw	20 U	19 U
Anthracene	960	4,400	µg/kg dw	20 U	19 U
Benzo(a)anthracene	1,300	1,600	µg/kg dw	20 U	11 J
Benzo(a)pyrene	1,600	3,000	µg/kg dw	20 U	19 U
Benzo(g,h,i)perylene	670	720	µg/kg dw	20 U	19 UJ
Total benzofluoranthenes	3,200	3,600	µg/kg dw	20 U	19 U
Chrysene	1,400	2,800	µg/kg dw	20 U	13 J
Dibenzo(a,h)anthracene	230	540	µg/kg dw	20 U	6.2 U
Dibenzofuran	540	700	µg/kg dw	20 U	19 U
Fluoranthene	1,700	2,500	µg/kg dw	20 U	45
Fluorene	540	1,000	µg/kg dw	20 U	19 U
Indeno(1,2,3-cd)pyrene	600	690	µg/kg dw	20 U	19 UJ
Naphthalene	2,100	2,400	µg/kg dw	20 U	19 U

Table A-8, cont. EW surface sediment results for samples with TOC < 0.5% for chemicals with SMS or DMMP criteria

Analyte	SQS/SL/LAET	CSL/ML/2LAET	UnitName	EW09-SS-223-010	T30-09-14
Phenanthrene	1,500	5,400	µg/kg dw	20 U	47
Pyrene	2,600	3,300	µg/kg dw	23	39
Total HPAHs	12,000	17,000	µg/kg dw	23	108 J
Total LPAHs	5,200	13,000	µg/kg dw	20 U	57 J
Phthalates					
Bis(2-ethylhexyl)phthalate	1,300	1,900	µg/kg dw	20 U	19 U
Butyl benzyl phthalate	63	900	µg/kg dw	15 U	16 U
Diethyl phthalate	200	1,200	µg/kg dw	23	19 U
Dimethyl phthalate	71	160	µg/kg dw	15 U	16 U
Di-n-butyl phthalate	1,400	5,100	µg/kg dw	20 U	34
Di-n-octyl phthalate	6,200	nc	µg/kg dw	20 U	19 U
Other SVOCs					
1,2,4-Trichlorobenzene	31	51	µg/kg dw	5.9 U	6.2 U
1,2-Dichlorobenzene	35	50	µg/kg dw	5.9 U	6.2 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	19 U
1,4-Dichlorobenzene	110	120	µg/kg dw	5.9 U	6.2 U
2,4-Dimethylphenol	29	29	µg/kg dw	5.9 U	6.2 UJ
2-Methylphenol	63	63	µg/kg dw	5.9 U	6.2 UJ
4-Methylphenol	670	670	µg/kg dw	20 U	19 U
Benzoic acid	650	650	µg/kg dw	200 U	190 U
Benzyl alcohol	57	73	µg/kg dw	20 U	R
Hexachlorobenzene	22	70	µg/kg dw	5.9 U	6.2 U
Hexachlorobutadiene	11	120	µg/kg dw	5.9 U	6.2 UJ
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	19 U
n-Nitrosodiphenylamine	28	40	µg/kg dw	5.9 U	6.2 U
Pentachlorophenol	360	690	µg/kg dw	30 U	31 UJ
Phenol	420	1,200	µg/kg dw	20 U	19 U
PCBs					
Total PCBs	130	1,000	µg/kg dw	6.0	18 U

Table A-8, cont. EW surface sediment results for samples with TOC < 0.5% for chemicals with SMS or DMMP criteria

Concentration in **bold** indicates SQS/SL/LAET exceedance.

Concentration in **bold underline** indicates CSL/ML/2LAET exceedance.

2LAET - second lowest apparent effects threshold
CSL – cleanup screening level
dw – dry weight
LAET - lowest apparent effects threshold
ML – maximum level
na - not analyzed
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

Data Qualifiers:
J – estimated concentration
JN – tentatively identified at estimated concentration
R – rejected
U – not detected at reporting limit shown
UJ – not detected at estimated reporting limit shown

Table A- 9. EW surface sediment results for chemicals with criteria: subtidal composite sample results

Analyte	SQS	CSL	Unit	EW09-CS-001-010	EW09-CS-002-010	EW09-CS-003-010	EW09-CS-004-010	EW09-CS-005-010	EW09-CS-006-010	EW09-CS-007-010	EW09-CS-008-010	EW09-CS-009-010
PCBs												
Total PCBs	12	65	mg/kg OC	**16**	**33**	**42**	**19**	**44**	**50.2**	**42**	**40**	**61**

Analyte	SQS	CSL	Unit	EW09-CS-010-010	EW09-CS-011-010	EW09-CS-012-010	EW09-CS-013-010
Total PCBs	12	65	mg/kg OC	**27**	**61**	**13.2**	**24**

Concentration in **bold** indicates SQS exceedance.
Concentration in **bold underline** indicates CSLexceedance.
CSL – cleanup screening level
OC – organic carbon normalized
SQS – sediment quality standards

Table A-10. EW surface sediment results for chemicals with criteria: MIS intertidal results

Analyte	SQS/SL	CSL/ML	Unit	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Metals							
Antimony	150	200	mg/kg dw	6 UJ	6 UJ	6 UJ	6 UJ
Arsenic	57	93	mg/kg dw	9.1	7.9	13.3	7.7
Cadmium	5.1	6.7	mg/kg dw	0.5	0.6	0.6	0.3 U
Chromium	260	270	mg/kg dw	21.5	27.3	44.8	20.5
Copper	390	390	mg/kg dw	36.2	40.8	41.4	28.0
Lead	450	530	mg/kg dw	50	60	49	23
Mercury	0.41	0.59	mg/kg dw	0.06	0.08	0.10	0.08
Nickel	140	370	mg/kg dw	21	24	27	20
Silver	6.1	6.1	mg/kg dw	0.4 U	0.4 U	0.4 U	0.4 U
Zinc	410	960	mg/kg dw	100	113	117	57
PAHs							
2-Methylnaphthalene	38	64	mg/kg OC	1.4	2.7	36	0.80 J
Acenaphthene	16	57	mg/kg OC	1.7	3.3	**40**	2.1
Acenaphthylene	66	66	mg/kg OC	2.4	1.8	0.99 U	1.4 J
Anthracene	220	1,200	mg/kg OC	9.3	7.7 J	54	10
Benzo(a)anthracene	110	270	mg/kg OC	19	14	74	21
Benzo(a)pyrene	99	210	mg/kg OC	21	14	69	20
Benzo(g,h,i)perylene	31	78	mg/kg OC	6.6	5.0	22	4.2
Total benzofluoranthenes	230	450	mg/kg OC	42.5	27	99	45
Chrysene	110	460	mg/kg OC	29	20 J	74	32
Dibenzo(a,h)anthracene	12	33	mg/kg OC	4.2	2.7	**13**	3.3
Dibenzofuran	15	58	mg/kg OC	1.0	2.0	**17**	0.72 J
Fluoranthene	160	1,200	mg/kg OC	31	38 J	**180**	42
Fluorene	23	79	mg/kg OC	2.9	4.5	**46**	1.4
Indeno(1,2,3-cd)pyrene	34	88	mg/kg OC	7.7	5.4	24	5.1

Table A-10, cont. EW surface sediment results for chemicals with criteria: MIS intertidal results

Analyte	SQS/SL	CSL/ML	Unit	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Naphthalene	99	170	mg/kg OC	1.1	3.8 J	42	1.0 J
Phenanthrene	100	480	mg/kg OC	22	36 J	**250**	13
Pyrene	1,000	1,400	mg/kg OC	27	32	190	37
Total HPAHs	960	5,300	mg/kg OC	186	160 J	749	209
Total LPAHs	370	780	mg/kg OC	39.0	57.2 J	**430**	29 J
Phthalates							
Bis(2-ethylhexyl) phthalate	47	78	mg/kg OC	16 U	13 U	16 U	24 U
Butyl benzyl phthalate	4.9	64	mg/kg OC	1.2	3.7	0.89	1.2
Diethyl phthalate	61	110	mg/kg OC	0.58 U	0.86 U	0.59 J	1.1 U
Dimethyl phthalate	53	53	mg/kg OC	0.58 U	0.50 J	0.74 U	1.1 U
Di-n-butyl phthalate	220	1,700	mg/kg OC	0.66 J	0.86 U	0.99 U	1.4 U
Di-n-octyl phthalate	58	4,500	mg/kg OC	0.77 U	0.86 U	0.99 U	1.4 U
Other SVOCs							
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg OC	0.23 U	0.26 U	0.30 U	0.43 U
1,2-Dichlorobenzene	2.3	2.3	mg/kg OC	0.23 U	0.26 U	0.30 U	0.43 U
1,3-Dichlorobenzene	170	nc	µg/kg dw	20 U	19 U	20 U	20 U
1,4-Dichlorobenzene	3.1	9	mg/kg OC	0.46	0.26 U	0.30 U	0.94 J
2,4-Dimethylphenol	29	29	µg/kg dw	5.9 UJ	5.8 UJ	6.0 UJ	6.0 UJ
2-Methylphenol	63	63	µg/kg dw	5.9 U	5.8 U	6.0 U	6.0 U
4-Methylphenol	670	670	µg/kg dw	20 U	11 J	24	20 U
Benzoic acid	650	650	µg/kg dw	200 U	190 U	200 U	200 U
Benzyl alcohol	57	73	µg/kg dw	20 U	19 U	20 U	20 U
Hexachlorobenzene	0.38	2.3	mg/kg OC	0.033 U	0.095 U	0.069 U	0.10 U
Hexachlorobutadiene	3.9	6.2	mg/kg OC	0.033 U	0.095 U	0.069 U	0.10 U
Hexachloroethane	1,400	14,000	µg/kg dw	20 U	19 U	20 U	20 U
n-Nitrosodiphenylamine	11	11	mg/kg OC	0.32 U	0.44 U	0.41 U	0.43 U
Pentachlorophenol	360	690	µg/kg dw	30 U	42 J	30 U	30 U

Table A-10, cont. EW surface sediment results for chemicals with criteria: MIS intertidal results

Analyte	SQS/SL	CSL/ML	Unit	EW09-ITSED-AWMIS-01	EW09-ITSED-AWMIS-02	EW09-ITSED-AWMIS-03	EW09-ITSED-PAMIS-01
Phenol	420	1,200	µg/kg dw	210	110	140	98
PCBs							
Total PCBs	12	65	mg/kg OC	**21**	**<u>71.6</u>**	**38**	**27**
Pesticides					-		
Total DDTs	6.9	69	µg/kg dw	3.2 U	**20 U**	**29 U**	2.7 U
Aldrin	10	nc	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
Dieldrin	10	nc	µg/kg dw	1.7 U	4.2 U	2.7 U	2.7 U
gamma-BHC	10	nc	µg/kg dw	0.86 U	2.1 U	1.4 U	1.4 U
Heptachlor	10	nc	µg/kg dw	0.86 U	3.4 U	1.4 U	1.4 U

Concentration in **bold** indicates SQS/SL exceedance.
Concentration in **<u>bold underline</u>** indicates CSL/ML exceedance.
CSL – cleanup screening level
dw – dry weight
ML – maximum level
OC – organic carbon normalized
SL – screening level
SQS – sediment quality standards

APPENDIX B

Data Management

Appendix B Data Management

AVERAGING LABORATORY REPLICATE SAMPLES

Chemical concentrations obtained from the analysis of laboratory duplicate or replicate samples (two or more analyses on the same sample) are averaged for a closer representation of the "true" concentration as compared to the results of a single analysis. Averaging rules are dependent on whether the individual results are detected concentrations or reporting limits (RLs) for undetected analytes. If all concentrations are detects for a given parameter, the values are simply averaged arithmetically. If all concentrations are undetected for a given parameter, the minimum RL is reported. If the concentrations are a mixture of detected concentrations and RLs, any two or more detected concentrations are averaged arithmetically and RLs are ignored. If there is a single detected concentration and one or more RLs, the detected concentration is reported. The latter two rules are applied regardless of whether the RLs are higher or lower than the detected concentration.

SIGNIFICANT FIGURES AND ROUNDING

Analytical laboratories report results with various numbers of significant figures depending on the laboratory's standard operating procedures, the instrument, the chemical, and the reported chemical concentration relative to the RL. The reported (or assessed) precision of each result is explicitly stored in the project database by recording the number of significant figures. Tracking of significant figures is used when calculating analyte sums and performing other data summaries. When a calculation involves addition, such as totaling PCBs, the calculation can only be as precise as the least precise number that went into the calculation. For example:

> 210 + 19 = 229 would be reported as 230 because although 19 is reported to 2 significant digits, the trailing zero in the number 210 is not significant.

When a calculation involves multiplication or division, the final result is rounded at the end of the calculation to reflect the value used in the calculation with the fewest significant figures. For example:

> 59.9 × 1.2 = 71.88 would be reported as 72 because there are two significant figures in the number 1.2.

When rounding, if the number following the last significant figure is less than 5, the digit is left unchanged. If the number following the last significant figure is equal to or greater than 5, the digit is increased by 1.

NON-DETECT RESULTS

Analytical sensitivity is a measure of both the ability of the analytical method to detect the analyte and the concentration that can be reliably quantified. The minimum

concentration of the analyte that can be detected is reported as the method detection limit (MDL) by Analytical Resources, Inc. (ARI), or the estimated detection limit (EDL) by Analytical Perspectives (AP) for PCB congeners and dioxins/furans. The minimum concentration that can be reliably quantified is the reporting limit (RL). Laboratories use both MDLs/EDLs and RLs for reporting analyte concentrations.

The MDL is defined as the lowest concentration of an analyte or compound that a method can detect in either a sample or a blank with 99% confidence. ARI determines MDLs using standard procedures outlined in 40 CFR 136, in which seven or more replicate samples are fortified at 1 to 5 times (but not to exceed 10 times) the expected MDL concentration. The MDL is then determined by calculating the standard deviation of the replicates and multiplying by the Student's t-factor (e.g., 3.14 for seven replicates). Alternately, AP calculates a sample specific EDL, which is 2.5 times the signal-to-noise ratio of the instrument during sample analysis.

RLs are equal to or greater than the lower calibration limit defined by the lowest concentration on the calibration curve. The RLs, MDLs, and EDLs that are reported for each sample are adjusted based on the amount of sample extracted, dilution factors, and percent moisture.

All laboratories report detected concentrations above the RL without qualification and report detected concentrations between the MDL/EDL and the RL with a J-qualifier indicating the concentration is an estimated value. Non-detect values are reported at the RL, with one exception as described below.

PCB congener and dioxin/furan results that do not meet method-specified identification criteria are qualified as estimated maximum possible concentrations (EMPC) by the laboratory to indicate that there are analytical interferences that are likely to cause the reporting of false positives or elevated concentrations. These results are re-qualified as non-detect with a U-qualifier at the reported concentration.

BEST RESULT SELECTION FOR MULTIPLE RESULTS

In some instances, the laboratory generates more than one result for a chemical for a given sample. Multiple results can occur for several reasons, including: 1) the original result did not meet the laboratory's internal quality control (QC) guidelines, and a reanalysis was performed; or 2) the original result did not meet other project data quality objectives, such as a sufficiently low RL, and a reanalysis was performed. If the results are:

- Detected and not qualified, then the result from the lowest dilution is selected, unless multiple results from the same dilution are available, in which case, the result with the highest concentration is selected.
- A combination of estimated and unqualified detected results, then the unqualified result is selected. This situation most commonly occurs when the original result is outside of calibration range, thus requiring a dilution.

- All estimated, then the "best result" is selected using best professional judgment in consideration of the rationale for qualification. For example, a result qualified based on laboratory replicate results outside of QC objectives for precision would be preferred to a qualified result that is outside the calibration range.
- A combination of detected and undetected results, then the detected result is selected. If there is more than one detected result, the applicable rules for multiple results (as discussed above) are followed.
- All undetected results, then the lowest RL is selected.

CALCULATED TOTALS

Total PCBs are calculated by summing the detected values for the individual components available for each sample. For individual samples in which none of the individual components is detected, the total value is given a value equal to the highest RL of an individual component, and assigned the same qualifier (U or UJ), indicating an undetected result. Concentrations for the analyte sums are calculated as follows:

- **Total PCBs** are calculated, in accordance with the methods of the Washington State Sediment Management Standards (SMS), using only detected values for seven Aroclor mixtures.[1] For individual samples in which none of the seven Aroclor mixtures is detected, total PCBs are given a value equal to the highest RL of the seven Aroclors and assigned a U-qualifier indicating the lack of detected concentrations.
- **Total PCB congeners** are calculated using only detected values for the 209 individual congeners. For individual samples in which none of the 209 congeners are detected, total PCB congeners are given a value equal to the highest RL of the individual congener and assigned a U-qualifier indicating the lack of detected concentrations. PCB congeners that do not meet minimum method requirements for qualitative determination (i.e., estimated maximum possible concentrations) are treated as non-detected values when calculating the total PCB congener sums.

CALCULATION OF PCB CONGENER TEQS

PCB congener toxic equivalents (TEQs) are calculated using the World Health Organization (WHO) consensus toxic equivalency factor (TEF) values (Van den Berg et al. 2006) for mammals as presented in Table 1. The TEQ is calculated as the sum of each congener concentration multiplied by the corresponding TEF value. When the congener concentration is reported as non-detected, then the TEF is multiplied by zero, half the RL or the full RL, depending on the calculation method specified.

[1] Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

Table 1. PCB congener TEF values for mammals

PCB Congener Number	TEF Value (unitless)
77	0.0001
81	0.0003
105	0.00003
114	0.00003
118	0.00003
123	0.00003
126	0.1
156	0.00003
157	0.00003
167	0.00003
169	0.03
189	0.00003

CALCULATION OF DIOXIN/FURAN CONGENER TEQS

Dioxin/furan congener TEQs are calculated using the WHO consensus TEF values (Van den Berg et al. 2006) for mammals as presented in Table 2. The TEQ is calculated as the sum of each congener concentration multiplied by the corresponding TEF value. When the congener concentration is reported as undetected, then the TEF is multiplied by zero, half the RL, or the full RL, depending on the calculation method specified.

Table 2. Dioxin/furan congener TEF values for mammals

Dioxin/Furan Congener	TEF Value (unitless)
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,7,8-Pentachlorodibenzofuran	0.03
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1
2,3,4,7,8-Pentachlorodibenzofuran	0.3
2,3,7,8-Tetrachlorodibenzofuran	0.1
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1
Octachlorodibenzofuran	0.0003
Octachlorodibenzo-p-dioxin	0.0003

REFERENCES

Van den Berg M, Birnbaum LS, Denison M, De Vito M, Farland W, Feeley M, Fiedler H, Hakansson H, Hanberg A, Haws L, Rose M, Safe S, Schrenk D, Tohyama C, Tritscher A, Tuomisto J, Tysklind M, Walker N, Peterson RE. 2006. The 2005 World Health Organization reevaluation of human and mammalian toxic equivalency factors for dioxins and dioxin-like compounds. Tox Sci 93(2):223-241.

APPENDIX C

Data Validation Reports:

EcoChem, Inc.
East Waterway
Surface Sediment Sampling
Round 1 and Round 2

EcoChem, Inc.
Port of Seattle
East Waterway T-30
Post Dredge Monitoring 2009

EcoChem, Inc.
Port of Seattle
East Waterway T-30
Post Dredge Monitoring 2010

EcoChem, Inc.
Port of Seattle
East Waterway
MIS Intertidal and Subtidal
Composite Sediment Sampling

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

East Waterway Surface Sediment Sampling
Round 1 and Round 2

Prepared for:

Windward Environmental, LLC
200 West Mercer Street, Suite 401
Seattle, Washington 98119

Prepared by:

EcoChem, Inc.
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Seattle, Washington 98104

EcoChem Project: C22017

Revised September 3, 2009

Approved for Release:

Christine Ransom
Project Manager
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of the validation performed on sediment and the associated quality control sample data for East Waterway Surface Sediment Sampling, Rounds 1 and 2. A complete list of samples is provided in the **SAMPLE INDEX**.

Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. The analytical methods and EcoChem project chemists are listed in the table below.

Analysis	Method	Primary Review	Secondary Review
Semivolatile Organic Compounds (SVOC)	EPA 8270D	J. Newkirk/M. Swanson	C. Ransom
	EPA 8270D-SIM		
Polychlorinated Biphenyls (PCB)	EPA 8082	L. Panteleeff	
Pesticides	EPA 8081B		
Butyltins	Krone et al. 1989	L. Holz/L. Panteleeff/M. Kilner	P. Lambrecht C. Ransom
Metals	EPA 200.8, 6010/7471	L. Holz/M. Kilner/L. Beard	C. Ransom P. Lambrecht
Grain Size	PSEP 1986		
Total Organic Carbon	Plumb 1981		
Total Solids & Total Preserved Solids	EPA 160.3		
Ammonia	EPA 350.1M		
Sulfide	EPA 376.2		

The data were reviewed using guidance and quality control criteria documented in *Surface Sediment Sampling for Chemical Analyses and Toxicity Testing of the East Waterway* (February 13, 2009); *National Functional Guidelines for Inorganic Data Review* (USEPA 1994 & 2004); *National Functional Guidelines for Organic Data Review* (USEPA 1999); and the analytical methods.

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as **APPENDIX A**. A qualified data summary table is included as **APPENDIX B.** Data validation worksheets will be kept on file at EcoChem.

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SDG	Sample ID	Lab ID	SVOC	SIM	PCB	PEST	TBT	Metals	Conventionals
OO97	EW09-SS-220-010	09-5786-OO97A	✓	✓	✓			✓	✓
OO97	EW09-SS-218-010	09-5787-OO97B	✓	✓	✓		✓	✓	✓
OO97	EW09-SS-217-010	09-5788-OO97C	✓	✓	✓			✓	✓
OO97	EW09-SS-216-010	09-5789-OO97D	✓	✓	✓		✓	✓	✓
OO97	EW09-SS-207-010	09-5790-OO97E	✓	✓	✓		✓	✓	✓
OO97	EW09-SS-204-010	09-5791-OO97F	✓	✓	✓	✓	✓	✓	✓
OO97	EW09-SS-202-010	09-5792-OO97G	✓	✓	✓			✓	✓
OO97	EW09-SS-200-010	09-5793-OO97H	✓	✓	✓	✓	✓	✓	✓
OO97	EW09-SS-300-010	09-5794-OO97I	✓	✓	✓	✓	✓	✓	✓
OO97	EW09-SS-130-010	09-5795-OO97J	✓	✓	✓			✓	✓
OO97	EW09-SS-129-010	09-5796-OO97K	✓	✓	✓	✓	✓	✓	✓
OO97	EW09-SS-127-010	09-5797-OO97L	✓	✓	✓		✓	✓	✓
OO97	EW09-SS-122-010	09-5798-OO97M	✓	✓	✓	✓	✓	✓	✓
OO97	EW09-SS-119-010	09-5799-OO97N	✓	✓	✓		✓	✓	✓
OO97	EW09-SS-120-010	09-5800-OO97O	✓	✓	✓			✓	✓
OO97	EW09-SS-132-010	09-5801-OO97P	✓	✓	✓			✓	✓
OP22	EW09-SS-116-010	09-5937-OP22A	✓	✓	✓			✓	✓
OP22	EW09-SS-301-010	09-5938-OP22B	✓	✓	✓			✓	✓
OP22	EW09-SS-113-010	09-5939-OP22C	✓	✓	✓	✓	✓	✓	✓
OP22	EW09-SS-111-010	09-5940-OP22D	✓	✓	✓			✓	✓
OP22	EW09-SS-109-010	09-5941-OP22E	✓	✓	✓			✓	✓
OP22	EW09-SS-104-010	09-5942-OP22F	✓	✓	✓			✓	✓
OP33	EW09-SS-038-010	09-5969-OP33A	✓	✓	✓	✓		✓	
OP33	EW09-SS-100-010	09-5979-OP33B	✓	✓	✓			✓	✓
OP33	EW09-SS-101-010	09-6002-OP33C	✓	✓	✓			✓	✓
OP33	EW09-SS-110-010	09-6003-OP33D	✓	✓	✓	✓		✓	✓
OP33	EW09-SS-114-010	09-6004-OP33E	✓	✓	✓			✓	✓
OP33	EW09-SS-211-010	09-6009-OP33G	✓	✓	✓			✓	✓
OP33	EW09-SS-219-010	09-6010-OP33H	✓	✓	✓			✓	✓
OP33	EW09-SS-038-RB	09-6011-OP33I	✓	✓	✓	✓	✓	✓	
OP35	EW09-SS-027-010	09-5980-OP35A	✓	✓	✓			✓	✓
OP35	EW09-SS-102-010	09-5981-OP35B	✓	✓	✓			✓	✓
OP35	EW09-SS-302-010	09-5982-OP35C	✓	✓	✓			✓	✓
OP35	EW09-SS-036-010	09-5983-OP35D	✓	✓	✓		✓	✓	✓
OP35	EW09-SS-034-010	09-5984-OP35E	✓	✓	✓		✓	✓	✓
OP35	EW09-SS-035-010	09-5985-OP35F	✓	✓	✓			✓	✓
OP35	EW09-SS-033-010	09-5986-OP35G	✓	✓	✓	✓	✓	✓	✓
OP35	EW09-SS-032-010	09-5987-OP35H	✓	✓	✓			✓	✓
OP35	EW09-SS-031-010	09-5988-OP35I	✓	✓	✓			✓	✓
OP35	EW09-SS-030-010	09-5989-OP35J	✓	✓	✓	✓	✓	✓	✓
OP35	EW09-SS-029-010	09-5990-OP35K	✓	✓	✓		✓	✓	✓
OP35	EW09-SS-025-010	09-5991-OP35L	✓	✓	✓			✓	✓
OP35	EW09-SS-024-010	09-5992-OP35M	✓	✓	✓		✓	✓	✓
OP35	EW09-SS-023-010	09-5993-OP35N	✓	✓	✓	✓		✓	✓
OP35	EW09-SS-020-010	09-5994-OP35O	✓	✓	✓			✓	✓
OP35	EW09-SS-013-010	09-5995-OP35P	✓	✓	✓	✓	✓	✓	✓
OP35	EW09-SS-011-010	09-5996-OP35Q	✓	✓	✓	✓		✓	✓
OP35	EW09-SS-008-010	09-5997-OP35R	✓	✓	✓	✓		✓	✓
OP35	EW09-SS-005-010	09-5998-OP35S	✓	✓	✓			✓	✓
OP35	EW09-SS-003-010	09-5999-OP35T	✓	✓	✓		✓	✓	✓

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SDG	Sample ID	Lab ID	SVOC	SIM	PCB	PEST	TBT	Metals	Conventionals
OP35	EW09-SS-001-010	09-6000-OP35U	✓	✓	✓			✓	✓
OP35	EW09-SS-102-RB	09-6001-OP35V	✓	✓	✓	✓	✓	✓	
OP65	EW09-SS-014-RB	09-6148-OP65A	✓	✓	✓	✓	✓	✓	
OP65	EW09-SS-014-010	09-6149-OP65B	✓	✓	✓			✓	✓
OP65	EW09-SS-126-010	09-6150-OP65C	✓	✓	✓			✓	✓
OP65	EW09-SS-019-010	09-6151-OP65D	✓	✓	✓			✓	✓
OP65	EW09-SS-021-010	09-6152-OP65E	✓	✓	✓	✓		✓	✓
OQ77	EW09-SS-220-010	09-6653-OQ77A				✓	✓		
PD95	EW09-SS-017-010	09-14478-PD95A	✓	✓	✓			✓	✓
PD95	EW09-SS-026-010	09-14479-PD95B	✓	✓	✓			✓	✓
PD95	EW09-SS-040-010	09-14480-PD95C	✓	✓	✓			✓	✓
PD95	EW09-SS-037-010	09-14481-PD95D	✓	✓	✓			✓	✓
PD95	EW09-SS-103-010	09-14482-PD95E	✓	✓	✓			✓	✓
PD95	EW09-SS-105-010	09-14483-PD95F	✓	✓	✓	✓	✓	✓	✓
PD95	EW09-SS-112-010	09-14484-PD95G	✓	✓	✓			✓	✓
PD95	EW09-SS-304-010	09-14485-PD95H	✓	✓	✓	✓	✓	✓	✓
PD95	EW09-SS-115-010	09-14486-PD95I	✓	✓	✓		✓	✓	✓
PD95	EW09-SS-133-010	09-14487-PD95J	✓	✓	✓		✓	✓	✓
PD95	EW09-SS-108-010	09-14488-PD95K	✓	✓	✓		✓	✓	✓
PD95	EW09-SS-118-010	09-14489-PD95L	✓	✓	✓	✓	✓	✓	✓
PD95	EW09-SS-121-010	09-14490-PD95M	✓	✓	✓			✓	✓
PD97	EW09-SS-223-010	09-14497-PD97A	✓	✓	✓			✓	✓
PD97	EW09-SS-214-010	09-14499-PD97C	✓	✓	✓		✓	✓	✓
PD97	EW09-SS-213-010	09-14501-PD97E	✓	✓	✓	✓		✓	✓
PD97	EW09-SS-215-010	09-14505-PD97I	✓	✓	✓		✓	✓	✓
PD97	EW09-SS-018-010	09-14506-PD97J	✓	✓	✓			✓	✓
PD97	EW09-SS-016-010	09-14507-PD97K	✓	✓	✓			✓	✓
PD97	EW09-SS-022-010	09-14508-PD97L	✓	✓	✓		✓	✓	✓
PD97	EW09-SS-028-010	09-14509-PD97M	✓	✓	✓			✓	✓
PD97	EW09-SS-303-010	09-14510-PD97N	✓	✓	✓			✓	✓
PD97	EW09-SS-039-010	09-14511-PD97O	✓	✓	✓			✓	✓
PE07	EW09-SS-222-010	09-14569-PE07A	✓	✓	✓			✓	✓
PE07	EW09-SS-221-010	09-14570-PE07B	✓	✓	✓			✓	✓
PE07	EW09-SS-009-010	09-14571-PE07C	✓	✓	✓			✓	✓
PE07	EW09-SS-012-010	09-14572-PE07D	✓	✓	✓			✓	✓
PE07	EW09-SS-015-010	09-14573-PE07E	✓	✓	✓	✓		✓	✓
PE07	EW09-SS-107-010	09-14574-PE07F	✓	✓	✓		✓	✓	✓
PE07	EW09-SS-106-010	09-14575-PE07G	✓	✓	✓	✓	✓	✓	✓
PE07	EW09-SS-208-010	09-14576-PE07H	✓	✓	✓	✓		✓	✓
PE07	EW09-SS-305-010	09-14577-PE07I	✓	✓	✓	✓		✓	✓
PE07	EW09-SS-206-010	09-14578-PE07J	✓	✓	✓	✓		✓	✓
PE07	EW09-SS-222-RB	09-14579-PE07K	✓	✓	✓	✓	✓	✓	
PE14	EW09-SS-210-RB	09-14612-PE14A	✓	✓	✓	✓	✓	✓	
PE14	EW09-SS-210-010	09-14613-PE14B	✓	✓	✓			✓	✓
PE14	EW09-SS-205-010	09-14614-PE14C	✓	✓	✓	✓	✓	✓	✓
PE14	EW09-SS-203-010	09-14615-PE14D	✓	✓	✓	✓	✓	✓	✓
PE14	EW09-SS-212-010	09-14616-PE14E	✓	✓	✓		✓	✓	✓
PE14	EW09-SS-209-010	09-14617-PE14F	✓	✓	✓			✓	✓
PE14	EW09-SS-201-010	09-14618-PE14G	✓	✓	✓		✓	✓	✓
PE14	EW09-SS-134-010	09-14619-PE14H	✓	✓	✓			✓	✓

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SDG	Sample ID	Lab ID	SVOC	SIM	PCB	PEST	TBT	Metals	Conventionals
PE14	EW09-SS-131-010	09-14620-PE14I	✓	✓	✓			✓	✓
PE14	EW09-SS-128-010	09-14621-PE14J	✓	✓	✓			✓	✓
PE14	EW09-SS-125-010	09-14622-PE14K	✓	✓	✓			✓	✓
PE14	EW09-SS-124-010	09-14623-PE14L	✓	✓	✓	✓	✓	✓	✓
PE14	EW09-SS-123-010	09-14624-PE14M	✓	✓	✓	✓	✓	✓	✓
PE25	LSO-01SE-080723	09-14715-PE25A	✓	✓	✓				✓
PE25	EW09-SS-027-010	09-14716-PE25B					✓		
PE25	EW09-SS-038-010	09-14717-PE25C					✓		
PE25	EW09-SS-100-010	09-14718-PE25D					✓		
PE25	EW09-SS-110-010	09-14719-PE25E					✓		
PE25	EW09-SS-114-010	09-14720-PE25F					✓		
PE25	EW09-SS-211-010	09-14721-PE25G					✓		
PE25	EW09-SS-219-010	09-14722-PE25H					✓		
PE25	EW09-SS-126-010	09-14723-PE25I					✓		
PE40	EW09-SS-002-010-RB	09-14877-PE40A	✓	✓	✓	✓	✓	✓	✓
PE40	EW09-SS-002-010	09-14878-PE40B	✓	✓	✓			✓	✓
PE40	EW09-SS-004-010	09-14879-PE40C	✓	✓	✓		✓	✓	✓
PE40	EW09-SS-006-010	09-14880-PE40D	✓	✓	✓		✓	✓	✓
PE40	EW09-SS-007-010	09-14881-PE40E	✓	✓	✓			✓	✓
PE40	EW09-SS-010-010	09-14882-PE40F	✓	✓	✓		✓	✓	✓
PG13	CI09-SS-120-010	09-16270-PG13A							✓
PG13	CI09-SS-140-010	09-16271-PG13B							✓
PG13	CI09-SS-180-010	09-16272-PG13C							✓
PG50	EW09-SS-018-010	09-16484-PG50A						✓	
PH64	EW09-SS-017-010	09-17251-PH64A					✓		
PH67	LSO-01SE-080723	09-17271-PH67A	✓						
PH68	EW09-SS-002-010	09-17273-PH68B	✓						
PH68	EW09-SS-004-010	09-17274-PH68C	✓						
PH68	EW09-SS-006-010	09-17275-PH68D	✓						
PH68	EW09-SS-007-010	09-17276-PH68E	✓						
PH68	EW09-SS-010-010	09-17277-PH68F	✓						

DATA VALIDATION REPORT
East Waterway Surface Sediment, Rounds 1 & 2
Semivolatile Compounds by Method 8270D

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OO97	16 Sediment	Summary
OP22	6 Sediment	Summary
OP33	7 Sediment 1 Rinsate Blank	Summary Screening
OP35	21 Sediment 1 Rinsate Blank	Full Screening
OP65	4 Sediment 1 Rinsate Blank	Summary Screening
PD95	13 Sediment	Full
PD97	10 Sediment	Summary
PE07	10 Sediment 1 Rinsate Blank	Summary Screening
PE14	12 Sediment 1 Rinsate Blank	Summary Screening
PE25	1 Sediment	Summary
PE40	5 Sediment 1 Rinsate Blank	Summary Screening
PH67	1 Sediment	Summary
PH68	5 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

For the Round 1 sampling event (**SDGs OO97, OP22, OP33, OP35,** and **OP65**), the laboratory did not report the entire analyte list in the original data packages. The missing analytes had been analyzed for in the original analyses; the laboratory resubmitted the sample results, including the full list of target analytes on May 15, 2009.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

SDG OP33: The bis(2-ethylhexyl)phthalate value for Sample EW09-SS-038-RB was incorrect in the EDD. The result for this compound was corrected to the detected value of 0.7µg/L.

SDG OP65: The bis(2-ethylhexyl)phthalate value for EW09-SS-014-RB was incorrect in the EDD. The result for this compound was corrected to the detected value of 0.6µg/L.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	GC/MS Instrument Performance	2	Internal Standards
	Initial Calibration (ICAL)	1	Field Duplicates
2	Continuing Calibration (CCAL)	2	Target Analyte List
2	Laboratory Blanks		Reporting Limits
1	Field Blanks	2	Compound Identification
1	Surrogate Compounds	2	Reported Results
2	Laboratory Control Samples (LCS/LCSD)	1	Calculation Verification (full validation only)
1	Standard Reference Material		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received several sample coolers with temperatures outside of these control limits, ranging from 0.4°C to 8.2°C. These temperature outliers did not impact data quality and no qualifiers were assigned.

Continuing Calibration

All relative response factor (RRF) values were greater than the 0.05 minimum control limits.

With the exception of the calibrations/analytes presented in the following tables, the percent difference (%D) values were within the ±25% control limits. Outliers for %D values that were indicative of a high bias resulted in estimation (J-5B) of associated positive results. Outliers for %D values that were indicative of a low bias resulted in estimation of both associated positive results and non-detects (J/UJ-5B).

SDG OO97:

CCAL Date	Instrument ID	Analyte	Bias
3/9/09	NT4	Indeno(1,2,3-cd)pyrene	High
		Dibenz(a,h)anthracene	High
		Benzo(g,h,i)perylene	High

SDG OP33:

CCAL Date	Instrument ID	Analyte	Bias
3/11/09	NT4	Indeno(1,2,3-cd)pyrene	High
		Dibenz(a,h)anthracene	High
		Benzo(g,h,i)perylene	High

SDG OP35:

CCAL Date	Instrument ID	Analyte	Bias
3/13/09	NT4	Indeno(1,2,3-cd)pyrene	High
		Dibenz(a,h)anthracene	High
		Benzo(g,h,i)perylene	High
3/16/09	NT4	Indeno(1,2,3-cd)pyrene	High
		Dibenz(a,h)anthracene	High
		Benzo(g,h,i)perylene	High
3/18/09	NT4	Benzyl Alcohol	Low
		4-Nitrophenol	Low
		Benzo(g,h,i)perylene	High

SDG OP65:

CCAL Date	Instrument ID	Analyte	Bias
3/13/09	NT4	Indeno(1,2,3-cd)pyrene	High
		Dibenz(a,h)anthracene	High
		Benzo(g,h,i)perylene	High

SDG PD95:

CCAL Date	Instrument ID	Analyte	Bias
7/8/09	NT4	2,4-dinitrophenol	High

SDG PE07:

CCAL Date	Instrument ID	Analyte	Bias
7/4/09	NT4	Benzoic acid	Low
		Pentachlorophenol	Low

SDG PE14:

CCAL Date	Instrument ID	Analyte	Bias
7/9/09	NT4	Benzyl alcohol	Low

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank (ten times for phthalates). If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not-detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results.

The following analytes required qualification in one or more samples based on method blank contamination:

SDG OP22: diethylphthalate (3 results)

SDG OP35: diethylphthalate (1 result)

SDG OP65: bis(2-ethylhexyl)phthalate (1 result)

Field Blanks

SDG OP33: One rinsate blank was submitted, EW09-SS-038-RB. There was a positive result for bis(2-ethylhexyl)phthalate in this blank. All associated positive results were greater than the action level of 10 times the blank concentration. No qualification of data was necessary.

SDG OP35: One rinsate blank was submitted, EW09-SS-102-RB. No target analytes were detected in this blank.

SDG OP65: One rinsate blank was submitted, EW09-SS-014-RB. After qualification based on method blank contamination, there were no target analytes detected in this blank.

SDG PE07: One rinsate blank was submitted, EW09-SS-222-RB. No target analytes were detected in this blank.

SDG PE14: One rinsate blank was submitted, EW09-SS-210-RB. No target analytes were detected in this blank.

SDG PE40: One rinsate blank was submitted, EW09-SS-002-RB. No target analytes were detected in this blank.

Surrogate Compounds

The percent recovery (%R) values for the surrogates were within the laboratory control limits, with the exceptions noted below. No action was necessary if the %R value for only one surrogate per fraction (acid or base-neutral) was outside the control limits. The following outliers were noted:

SDG OP33: For Sample EW09-SS-038-RB, the %R value for d14-2-chlorophenol was greater than the upper control limit. No qualifiers were necessary; one outlier per acid or base/neutral fraction is acceptable.

SDG OP35: For Sample EW09-SS-001-010, the %R value for 2,4,6-tribromophenol was greater than the upper control limit. No qualifiers were necessary as one outlier per acid or base/neutral fraction is acceptable.

SDG PE07: The recoveries for the surrogates d5-phenol and 2,4,6-tribromophenol were greater than the upper control limits in four samples. Phenol was the only acid compound detected in these samples; positive results were estimated (J-13) to indicate a potential high bias.

SDGs PE25 & PE40: In the method blank seven of the eight surrogate %R values were outside control limits, with four %R values less than 10%. The laboratory reanalyzed all samples associated with this method blank. These re-analyses were submitted as **SDGs PH67** and **PH68**.

Laboratory Control Samples

A laboratory control sample (LCS) was analyzed at the proper frequency of one per batch. Laboratory control sample duplicates (LCSD) were also analyzed with some batches. The LCS/LCSD recovery values were within the laboratory control limits, with the exceptions noted below. No action was taken if only one of the LCS/LCSD recoveries was outside of the control limits. For LCS/LCSD recoveries greater than the upper control limit, positive results in the associated samples were estimated (J-10) to indicate a potential high bias. For recoveries less than the lower control limit, associated results were estimated (J/UJ-10) to indicate a potential low bias. If the recoveries were less than 10%, detected results were estimated (J-10) and reporting limits were rejected (R-10).

The following outliers resulted in qualification of data:

SDG PD97: For the LCS extracted on 7/1/09, the %R value for aniline was less than the lower control limit. This analyte was estimated (UJ-10) in the associated samples.

SDG PE07: For the LCS extracted on 6/26/09, the %R value for aniline was less than 10%. This analyte was rejected (R-10) in the associated samples.

SDG PE14: For the LCS extracted on 6/27/09, the %R value for benzyl alcohol was less than the lower control limit. This analyte was estimated (UJ-10) in the associated samples.

Standard Reference Material

The laboratory analyzed a reference material sample (SQ-1) with the sediment samples. Although the results for some analytes were outside of the reference range, no data were qualified as this is not a certified reference material.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the required frequency. The MS/MSD recovery values were within the laboratory control limits, with the exceptions noted below. No action was taken if only one of the MS/MSD recoveries was outside of the control limits. For MS/MSD recoveries greater than the upper control limit, positive results in the parent sample only were estimated (J-8) to indicate a potential high bias. For recoveries less than the lower control limit, positive results and reporting limits in the parent sample were estimated (J/UJ-8) to indicate a potential low bias. If the recoveries were less than 10%, detected results were estimated (J-8) and reporting limits were rejected (R-8).

The MS/MSD RPD values were less than 50%, with some exceptions. There were no positive results associated with the RPD outliers; therefore no qualification of data was necessary based on laboratory precision.

The following MS/MSD recovery outliers resulted in qualification of data:

SDG OO97: QC Sample EW09-SS-216-010:

4-chloroaniline, aniline, 3,3'-dichlorobenzidine – rejected (R-8)

SDG OP22: QC Sample EW09-SS-113-010:

4-chloroaniline, aniline – rejected (R-8)
3-nitroaniline, 3,3'-dichlorobenzidine – (UJ-8) low bias

SDG OP33: QC Sample EW09-SS-100-010:

4-chloroaniline, 3-nitroaniline, aniline, 3,3'-dichlorobenzidine – rejected (R-8)
benzo(b)fluoranthene – (J-8) high bias
4-nitroaniline, butylbenzylphthalate – (J/UJ-8) low bias

SDG OP35: QC Sample EW09-SS-036-010:

benzyl alcohol 4-chloroaniline, 3-nitroaniline, 4-nitroaniline, aniline,
3,3'-dichlorobenzidine – rejected (R-8)
fluoranthene, benzo(b)fluoranthene – (J-8) high bias

SDG OP65: QC Sample EW09-SS-126-010:

aniline, 4-chloroaniline – rejected (R-8)
3,3'-dichlorobenzidine – (UJ-8) low bias
benzo(b)fluoranthene – (J-8) high bias

SDG PD95: QC Sample EW09-SS-040-010:

aniline, 4-chloroaniline, hexachlorocyclopentadiene, and 3,3'-dichlorobenzidine – rejected (R-8)
3-nitroaniline – (UJ-8) low bias
benzo(b)fluoranthene and benzo(k)fluoranthene - (J-8) high bias

SDG PD97: QC Sample EW09-SS-039-010:

4-chloroaniline and 3,3'-dichlorobenzidine – rejected (R-8)
aniline, hexachlorocyclopentadiene, 3-nitroaniline – (UJ-8) low bias
indeno(1,2,3-c,d)pyrene and benzo(g,h,i)perylene – (J-9)

SDG PE07: QC Sample EW09-SS-206-010:

aniline, 4-chloroaniline, hexachlorocyclopentadiene – rejected (R-8)
acenaphthylene, carbazole, dibenzofuran, fluorene – (J-8) high bias
3-nitroaniline – (UJ-8) low bias; benzo(a)pyrene, fluorene – (J-9)

SDG PE14: QC Sample EW09-SS-210-010:

aniline, 3,3'-dichlorobenzidine, 4-chloroaniline – rejected (R-8)
3-nitroaniline – (UJ-8) low bias

SDG PH68: QC Sample EW09-SS-006-010:

3,3'-dichlorobenzidine – rejected (R-8)
aniline – (UJ-8) low bias

Internal Standards

SDG PD95: The recoveries for the internal standard perylene-d12 were less than the 50% lower control limit in five samples. These samples were reanalyzed at dilution (3x) with acceptable internal standard recoveries. Positive results for the associated compounds were reported from the dilutions. If an analyte was not-detected in the dilution, then the result from the initial analysis should be used. Results for compounds associated with the internal standard outlier reported from the initial analyses were estimated (J/UJ-19).

SDG PD97: The recovery for the internal standard chrysene-d12 was greater than the 200% upper control limit in Sample EW09-SS-215-010. This sample was reanalyzed at dilution (15x) with acceptable internal standard recoveries. All associated analytes were reported from the dilution; therefore no qualification was necessary for the internal standard outlier.

SDG PE07: The recovery values for the internal standards chrysene-d12, perylene-d12, and/or di-n-octylphthalate-d4 were greater than the 200% upper control limit in six samples. These samples were reanalyzed at dilution with acceptable internal standard recoveries. Positive results for the associated compounds were reported from the dilutions. If an analyte was not-detected in the dilution, then the result from the initial analysis should be used. Results for compounds associated with the internal standard outlier reported from the initial analyses were estimated (J/UJ-19).

SDG PH68: The recovery for the internal standard perylene-d12 was less than the 50% lower control limit in Sample EW09-SS-010-010 dilution analysis. No associated analytes were reported from this analysis; no qualifiers were applied.

Field Duplicates

The following acceptance criteria were applied for field duplicates: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than two times the RL.

No data were qualified based on field duplicate precision outliers. Users of the data should consider field precision when interpreting sample data. Field duplicates and any outliers are noted below:

SDG OO97: Samples EW09-SS-200-010 and EW-09-SS-300-010: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, carbazole, chrysene, dibenz(a,h)anthracene), dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene), phenanthrene, and pyrene

SDG OP22: Samples EW09-SS-116-010 and EW09-SS-301-010: all criteria met

SDG OP35: Samples EW09-SS-102-010 and EW09-SS-302-010: dimethylphthalate

SDG PD95: Samples EW09-SS-040-010 and EW09-SS-304-010: phenol

SDG PD97: Samples EW09-SS-028-010 and EW09-SS-303-010: anthracene, carbazole, and phenanthrene

SDG PE07: Samples EW09-SS-208-010 and EW09-SS-305-010: carbazole, chrysene, naphthalene, and phenanthrene

Target Analyte List

For the Round 1 sampling event (**SDGs OO97, OP22, OP33, OP35,** and **OP65**), the original data packages submitted did not include the entire requested analyte list. Summary forms and EDDs were submitted at a later date including all target analytes. The compound n-nitrosodimethylamine was included in the resubmissions and reported as "NA" in most SDGs. This analyte was also reported by 8270D-SIM. All results for the 8270D analyses were rejected (R-11).

Reporting Limits

SDG PD95: The reporting limit for 2-chlorophenol in four samples was elevated due to matrix interferences and flagged with a "Y" by the laboratory. These results were qualified as (U-22) to indicate the result is not-detected at the elevated RL.

SDG PD97: The reporting limit for n-nitrosodiphenylamine in Sample EW09-SS-018-010 was elevated due to matrix interference and was flagged with a "Y" by the laboratory. This result was qualified as (U-22) to indicate the result is not-detected at the elevated RL.

Compound Identification

SDG PE07: Positive results for phenol in four samples were flagged "M" by the laboratory. This flag indicates there was a poor spectral match. These results were qualified as tentatively identified (NJ-14).

Reported Results

Results for some compounds exceeded the linear range of the instrument in several samples. The samples were re-analyzed at dilution; both sets of data were reported. The results that exceeded the linear range were rejected (R-20). The results for all other compounds in the dilutions were rejected (R-11). The following samples were diluted for high concentrations of target analytes:

SDG OO97:

EW09-SS-220-010	fluoranthene, phenanthrene, pyrene
EW09-SS-300-010	benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, pyrene

SDG OP33:

EW09-SS-101-010:	1,4-dichlorobenzene

SDG OP35:

EW09-SS-020-010:	fluoranthene
EW09-SS-005-010:	fluoranthene and pyrene

SDG PD97:

EW09-SS-214-010:	pyrene
EW09-SS-213-010:	pyrene
EW09-SS-018-010:	anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, pyrene

SDG PE07:

EW09-SS-009-010:	fluoranthene
EW09-SS-015-010:	fluoranthene, phenanthrene
EW09-SS-107-010:	fluoranthene, pyrene
EW09-SS-208-010:	anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, pyrene

EW09-SS-305-010: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, pyrene

EW09-SS-206-010: acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, phenanthrene, pyrene

SDG PE25

LSO-01SE-080723: bis(2-ethylhexyl)phthalate

SDG PH68

EW09-SS-010-010: di-n-butyl phthalate

Further qualification was necessary to indicate the usable result when multiple results were presented:

SDG PD95: Five samples were reanalyzed at dilution (3x) due to internal standard outliers in the original analyses. Positive results for the associated compounds were reported from the dilutions; all other results for the dilutions were rejected (R-11). For compounds reported from the dilutions, results in the original analyses were rejected (R-11).

SDG PD97: Sample EW09-SS-215-010 was reanalyzed at dilution (15x) due to an internal standard outlier in the original analysis. The positive results for the associated analytes, benzo(a)anthracene, chrysene, and pyrene, were reported from the dilution. These analytes were rejected (R-11) in the initial analysis. All other analytes were rejected (R-11) in the dilution.

SDG PE25: The sample in this SDG, LSO-01SE-080723, was re-extracted and re-analyzed due to very low surrogate %R values in the associated method blank. The internal standard perylene-d12 was also greater than the upper control limit for this analysis. The re-analysis was reported in **SDG PH67**. The concentration of bis(2-ethylhexyl)phthalate was significantly higher in the original analysis than in the re-extraction. The result for this compound reported from the 15x dilution should be used. All other results for LSO-01SE-080723 reported in this SDG were rejected (R-11) in favor of the results reported in **SDG PH67**.

SDG PE40: All sediment samples from this SDG were reanalyzed due to very low surrogate %R values in the associated method blank. The reanalysis results were submitted as **SDG PH68**. All results for the sediment samples in this SDG were rejected (R-11) in favor of results from the re-analyses.

SDG PH67: Bis(2-ethylhexyl)phthalate was reported from the 15x dilution in **SDG PE25**. The result for this compound was rejected (R-11) in this SDG.

Calculation Verification

SDGs OP35 & PD95: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, standard reference material, and MS/MSD recoveries, except as previously noted. Precision was also acceptable as demonstrated by the RPD values for the field duplicate, MS/MSD, and LCS/LCSD analyses, with the exceptions noted above.

Data were estimated due to CCAL %D outliers, LCS/LCSD %R outliers, MS/MSD %R outliers, MS/MSD RPD outliers, and poor spectral match. Reporting limits were elevated based on method blank contamination and matrix interferences.

Data were rejected based on LCS/LCSD and MS/MSD %R values less that were than 10%. Data were also rejected in order to indicate the usable result when multiple results were reported.

Data that has been rejected should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway Surface Sediment, Rounds 1 & 2
Select Semivolatile Organic Compounds by Method 8270D-SIM

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OO97	16 Sediment	Summary
OP22	6 Sediment	Summary
OP33	7 Sediment 1 Rinsate Blank	Summary Screening
OP35	21 Sediment 1 Field Blank	Full Screening
OP65	4 Sediment 1 Rinsate Blank	Summary Screening
PD95	13 Sediment	Full
PD97	10 Sediment	Summary
PE07	10 Sediment 1 Rinsate Blank	Summary Screening
PE14	12 Sediment 1 Rinsate Blank	Summary Screening
PE25	1 Sediment	Summary
PE40	5 Sediment 1 Rinsate Blank	Summary Screening

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

SDG OO97: The method blank value for diethylphthalate was incorrect in the EDD. The result for this compound was corrected to the detected value of 10µg/kg. No other errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation	1	Standard Reference Material
	GC/MS Instrument Performance	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)		Internal Standards
2	Continuing Calibration (CCAL)	1	Field Duplicates
2	Laboratory Blanks		Target Analyte List
1	Field Blanks	1	Reporting Limits
	Surrogate Compounds	2	Reported Results
2	Laboratory Control Samples (LCS/LCSD)		Calculation Verification (full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received several sample coolers with temperatures outside of these control limits, ranging from 0.4°C to 8.2°C. These temperature outliers did not impact data quality and no qualifiers were assigned.

Continuing Calibration

The continuing calibration (CCAL) RRF values were greater than the 0.05 minimum control limits. With the exception of the calibrations/analytes presented in the following tables, the percent difference (%D) values were within the ±25% control limits. Outliers for %D values that were indicative of a low bias resulted in estimation of both associated positive results and non-detects (J/UJ-5B). The following outliers resulted in qualification of data:

SDG OP33:

CCAL Date	Instrument ID	Analyte	Bias
3/9/09	NT2	Diethylphthalate	Low

SDG PE14:

CCAL Date	Instrument ID	Analyte	Bias
7/2/09	NT2	Benzyl Alcohol	Low

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank (ten times for phthalates). If a contaminant is detected in an associated field sample and the concentration is less than the action

level, the result is qualified as not-detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results.

The following analytes required qualification in one or more samples based on method blank contamination:

SDG OO97: diethylphthalate (10 results)

SDG OP35: diethylphthalate (6 results)

SDG OP65: diethylphthalate (2 results)

SDG PD95: diethylphthalate (8 results)

SDG PD97: diethylphthalate (10 results)

SDG PE25: LSO-01SE-080723: diethylphthalate

SDG PE40: EW09-SS-010-010: diethylphthalate

Field Blanks

SDG OP33: One rinsate blank was submitted, EW09-SS-038-RB. No target analytes were detected in this blank.

SDG OP35: One rinsate blank was submitted, EW09-SS-102-RB. There was a positive result for diethylphthalate in this blank. After qualification for method blank contamination, this analyte was not detected in any of the associated samples; no qualification of data was necessary.

SDG OP65: One rinsate blank was submitted, EW09-SS-014-RB. There was a positive result for diethylphthalate in this blank. After qualification for method blank contamination, this analyte was not detected in any of the associated samples; no qualification of data was necessary.

SDG PE07: One rinsate blank was submitted, EW09-SS-222-RB. No target analytes were detected in this blank.

SDG PE14: One rinsate blank was submitted, EW09-SS-210-RB. No target analytes were detected in this blank.

SDG PE40: One rinsate blank was submitted, EW09-SS-002-010-RB. Diethylphthalate was detected at a level above the reporting limit. After qualification based on method blank contamination, there were no positive results for this compound in the associated samples. No qualification of data was necessary.

Surrogate Compounds

The percent recovery (%R) values for the surrogates were within the specified control limits with the exceptions noted below. If the outliers indicated a potential high bias, the associated positive results were estimated (J-13). If the outliers indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-13). No action was necessary if the %R value for only one surrogate per fraction (acid or base-neutral) was outside the control limits.

SDG PD97: The %R for terphenyl was greater than the upper control limit for Sample EW09-SS-018-010. No action was necessary for the single outlier.

SDG PE07: The %R for terphenyl was greater than the upper control limit for Sample EW09-SS-208-010. No action was necessary for the single outlier.

Laboratory Control Samples

A laboratory control sample (LCS) was analyzed at the proper frequency of one per batch. Laboratory control sample duplicates (LCSD) were also analyzed with some batches. The LCS/LCSD recovery values were within the laboratory control limits, with the exceptions noted below. No action was taken if only one of the LCS/LCSD recoveries was outside of the control limits. For LCS/LCSD recoveries greater than the upper control limit, positive results in the associated samples were estimated (J-10) to indicate a potential high bias. For recoveries less than the lower control limit, associated results were estimated (J/UJ-10) to indicate a potential low bias. If the recoveries were less than 10%, detected results were estimated (J-10) and reporting limits were rejected (R-10). The relative percent difference (RPD) values were less than the control limit of 50%. The following outliers resulted in qualification of data:

SDG OO97: The LCS %R value for benzyl alcohol was less than 10%. This analyte was not detected in the associated samples; reporting limits were rejected (R-10).

SDG OP22: The LCS %R value for benzyl alcohol was less than 10%. This analyte was not detected in the associated samples; reporting limits were rejected (R-10).

SDG OP33: The LCS %R value for benzyl alcohol was less than 10% in the LCS associated with the sediment samples. This analyte was not detected in the associated samples; reporting limits were rejected (R-10).

SDG OP35: The LCS %R values for benzyl alcohol were less than 10% in the LCS samples associated with both the equipment blank and the sediment samples. The reporting limits for this analyte were rejected (R-10) in all samples.

SDG OP65: The LCS %R value for benzyl alcohol was less than 10%. This analyte was not detected in the associated samples; reporting limits were rejected (R-10).

SDGs PD95 & PE40: The LCS %R value for benzyl alcohol was not recovered in the LCS extracted on 6/30/09 associated with the sediment samples. There were no positive results in the associated samples; reporting limits were rejected (R-10).

SDG PE07: The LCS %R value for benzyl alcohol was not recovered in the LCS extracted on 6/25/09 associated with the sediment samples. There were no positive results in the associated samples; reporting limits were rejected (R-10).

Standard Reference Material

The laboratory analyzed a reference material sample (SQ-1) with the sediment samples. Although the results for some analytes were outside of the reference range, no data were qualified as this is not a certified reference material.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the required frequency. The MS/MSD recovery values were within the laboratory control limits, with the exceptions noted below. No action was taken if only one of the MS/MSD recoveries was outside of the control limits. For MS/MSD recoveries greater than the upper control limit, positive results in the parent sample only were estimated (J-8) to indicate a potential high bias. For recoveries less than the lower control limit, positive results and reporting limits in the parent sample were estimated (J/UJ-8) to indicate a potential low bias. If the recoveries were less than 10%, detected results were estimated (J-8) and reporting limits were rejected (R-8).

The MS/MSD RPD values were within the laboratory control limits, with the exceptions noted below. For RPD outliers, positive results for the affected compounds were estimated (J-9) in the parent sample. The following outliers resulted in qualification of data:

SDG OO97: QC Sample EW09-SS-216-010: benzyl alcohol – (R-8)

SDG OP22: QC Sample EW09-SS-113-010: benzyl alcohol – (R-8)

SDG OP33: QC Sample EW09-SS-211-010: benzyl alcohol – (R-8)

SDG OP35: QC Sample EW09-SS-036-010: benzyl alcohol – (R-8)

SDG PD97: QC Sample EW09-SS-039-010: n-nitrosodimethylamine – (R-8)

SDG PE07: QC Sample EW09-SS-206-010: butylbenzylphthalate – (J-9)

SDG PE25: No MS/MSD samples were analyzed for this SDG. Laboratory precision and accuracy were evaluated using the LCS/LCSD results, other project specific MS/MSD samples, and project field duplicates.

SDG PE40: No MS/MSD samples were analyzed for this SDG. Laboratory precision and accuracy were evaluated using the LCS results, other project specific MS/MSD samples, and project field duplicates.

Field Duplicates

The following acceptance criteria were applied for field duplicates: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than two times the RL.

No data were qualified based on field duplicate precision outliers. Users of the data should consider field precision when interpreting sample data. Field duplicates and any outliers are noted below:

SDG OO97: Samples EW09-SS-200-010 and EW-09-SS-300-010: all criteria met

SDG OP22: Samples EW09-SS-116-010 and EW09-SS-301-010: all criteria met

SDG OP35: Samples EW09-SS-102-010 and EW-09-SS-302-010: all criteria met

SDG PD95: Samples EW09-SS-105-010 and EW09-SS-304-010: all criteria met

SDG PD97: Samples EW09-SS-028-010 and EW09-SS-303-010: all criteria met

SDG PE07: Samples EW09-SS-208-010 and EW09-SS-305-010: Butylbenzylphthalate

Reporting Limits

SDG OP35: The reporting limit for n-nitrosodiphenylamine was elevated due to matrix interference and was flagged with a "Y" by the laboratory in Sample EW09-SS-023-010. This result was qualified as (U-22) to indicate the result is not-detected at the elevated RL.

SDG PD97: The reporting limit for n-nitrosodiphenylamine was elevated due to matrix interference and was flagged with a "Y" by the laboratory in Samples EW09-SS-213-010, EW09-SS-208-010, and EW09-SS-018-010. These results were qualified as (U-22) to indicate the results are not-detected at the elevated RL.

SDG PE07: The reporting limit for n-nitrosodiphenylamine was elevated due to matrix interference and was flagged with a "Y" by the laboratory in Samples EW09-SS-012-010, EW09-SS-106-010, and EW09-SS-208-010. These results were qualified as (U-22) to indicate the results are not-detected at the elevated RL.

Reported Results

SDG OP33: The concentration of 1,4-dichlorobenze exceeded the linear range of the instrument in the initial analysis of Sample EW09-SS-101-010. No dilution was analyzed. The result for this analyte was estimated (J-20). There is also a reported result for this analyte form the 8270D analysis which was within the linear range.

SDG PD97: Seven samples were reanalyzed at dilution (3x) due to recovery outliers for the internal standard perylene-d12. There were no target analytes associated with this internal standard. The

results from the original analyses should be used. All results form the dilutions were rejected (R-11).

SDG PE07: Sample EW09-SS-208-010 was reanalyzed at dilution (3x) due to a low recovery of perylene-d12. There were no target analytes associated with this internal standard. The results from the original analyses should be used. All results form the dilutions were rejected (R-11).

Calculation Verification

SDGs OP35 & PD95: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, standard reference material, and MS/MSD recoveries, with the exceptions noted above. Precision was also acceptable as demonstrated by the RPD values for the field duplicate, MS/MSD, and LCS/LCSD analyses, with the exceptions previously noted.

Data were estimated due to CCAL %D, LCS/LCSD %R, and MS/MSD %R outliers and for exceeding the linear range. Reporting limits were elevated based on method blank contamination and matrix interferences.

Data were rejected due to LCS and MS/MSD recoveries that were less than 10%. Data were also rejected to indicate which results should be used from multiple reported analyses.

Data that has been rejected should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway Surface Sediment, Rounds 1 & 2
PCB Aroclors by EPA Method 8082

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OO97	16 Sediment	Summary
OP22	6 Sediment	Summary
OP33	7 Sediment 1 Rinsate Blank	Summary Screening
OP35	21 Sediment 1 Rinsate Blank	Full Screening
OP65	4 Sediment 1 Rinsate Blank	Summary Screening
PD95	13 Sediment	Full
PD97	10 Sediment	Summary
PE07	10 Sediment 1 Rinsate Blank	Summary Screening
PE14	12 Sediment 1 Rinsate Blank	Summary screening
PE25	1 Sediment	Summary
PE40	5 Sediment 1 Rinsate Blank	Summary Screening

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Receipt	1	Standard Reference Material
	Initial Calibration (ICAL)	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Continuing Calibration (CCAL)	1	Field Duplicates
	Laboratory Blanks	2	Reporting Limits
1	Field Blanks	2	Compound Identification
	Surrogate Compounds	2	Reported Results
	Laboratory Control Samples (LCS)	1	Calculation Verification (full validation only)

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received several sample coolers with temperatures outside of these control limits, ranging from 0.4°C to 8.2°C. These temperature outliers did not impact data quality and no qualifiers were assigned.

Field Blanks

Laboratory method blanks are used to evaluate all associated samples (including rinse blanks). Any remaining positive results in the rinse blank are used to evaluate the associated samples. There were no target analytes detected in the rinse blanks.

SDG OP33: Rinsate blank EW09-SS-038-RB was submitted with this SDG. There were no positive results for this blank.

SDG OP35: Rinsate blank EW09-SS-102-RB was submitted with this SDG. There were no positive results for this blank.

SDG OP65: Rinsate blank EW09-SS-014-RB was submitted with this SDG. There were no positive results for this blank.

SDG PE07: Rinsate blank EW09-SS-222-RB was submitted with this SDG. There were no positive results for this blank.

SDG PE14: Rinsate blank EW09-SS-210-RB was submitted with this SDG. There were no positive results for this blank.

SDG PE40: Rinsate blank EW09-SS-002-RB was submitted with this SDG. There were no positive results for this blank.

Standard Reference Material

The Sequim Bay reference material SQ-1 was analyzed with the samples. Recoveries were within the acceptance ranges.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed at the proper frequency. Percent recovery (%R) values were within the laboratory control limits, with some exceptions. For recoveries less than the lower control limit, positive results and reporting limits are estimated (J/UJ-8) in the parent sample to indicate a potential low bias. For recoveries greater than the upper control limit, positive results in the parent sample are estimated (J-8) to indicate a potential high bias. If only one of the MS or MSD recovery values was outside of the control limits, or if there were no positive results reported, no action was taken.

The MS/MSD relative percent difference (RPD) values were less than the upper control limit of 50%, with the exceptions noted below. Only positive results are qualified based on RPD outliers. The sample used for the MS/MSD analyses and RPD outliers are noted below:

SDG OO97: QC Sample EW09-SS-216-010: Aroclor 1260 (MS only, no action)

SDG OP33: QC Sample EW09-SS-219-010: Aroclor 1260 (MS only, no action); Aroclor 1260 RPD > 50% (analyte ND, no action)

SDG OP35: QC Sample EW09-SS-036-010: 1260 (MS only, no action)

SDG OP65: No MS/MSD analyses were performed. Precision and accuracy were evaluated using the laboratory control sample and laboratory control sample duplicate (LCS/LCSD) results, other project specific MS/MSD samples, and field duplicates.

SDG PE07: QC Sample EW09-SS-206-010: Aroclor 1016 – high bias (analyte ND, no action); Aroclor 1260 (MS only, no action)

SDG PE25: There were no MS/MSD analyses for this SDG. Precision and accuracy were evaluated using the LCS/LCSD results, other project specific MS/MSD samples, and field duplicates.

Field Duplicates

The following acceptance criteria were used to evaluate precision: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than the RL.

No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results. Field duplicates and any outliers are noted below:

SDG OO97: Samples EW09-SS-200-010 and EW-09-SS-300-010: all criteria met

SDG OP22: Samples EW09-SS-116-010 and EW-09-SS-301-010: all criteria met

SDG OP35: Samples EW09-SS-102-010 and EW-09-SS-302-010: Aroclor 1260 (75.6%)

SDG PD95: Samples EW09-SS-105-010 and EW09-SS-304-010: all criteria met

SDG PD97: Samples EW09-SS-028-010 and EW09-SS-303-010: all criteria met

SDG PE07: Samples EW09-SS-208-010 and EW09-SS-305-010: Aroclor 1260 (58.9%)

Reporting Limits

Due to matrix interferences, several sample extracts were diluted and re-analyzed. Reporting limits were elevated accordingly.

Several chromatograms indicated non-target background interferences. The reporting limits for the affected aroclors were flagged "Y" by the laboratory. These "Y" flagged results were qualified (U-22) to indicate the result was not-detected at the elevated RL. The following results were qualified:

SDG OP35: EW09-SS-001-010 and EW09-SS-034-010 – Aroclor 1232

SDG PD95: EW09-SS-040-010, EW09-SS-103-010, and EW09-SS-118-010: Aroclor 1254

SDG PD97: EW09-SS-214-010: Aroclor 1254

SDG PE14: Nine samples: Aroclor 1254

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. The elevated RPD value may indicate the presence of an interferent resulting in a high bias. When the RPD value was greater than 40% but less than 60% the reported value was estimated (J). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ). No qualifiers were assigned to samples in which no compounds were detected. The following confirmation outliers were noted:

SDG OP35: Sample EW09-SS-027-010: Aroclor 1254 (J-3)

Reported Results

SDG PE14: Samples EW09-SS-205-010 and EW09-SS-203-010 were re-extracted and re-analyzed because the results did not agree with the initial sample screening; this could indicate a possible switch of the samples during the original extraction. The results from the re-extraction agreed with the screening results. The data from the re-extraction should be used. All results from the original analyses were rejected (R-11).

Calculation Verification

SDGs OP35 & PD95: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, standard reference material, and MS/MSD recoveries, except as noted above. Precision was also acceptable as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate RPD values, except as previously noted.

Data were qualified as not–detected at elevated reporting limits due to matrix interferences. Data were estimated due to poor agreement between the two analytical columns.

Data were rejected to indicate which result should be used from multiple reported analyses. A usable result remains for all analytes and all samples; therefore completeness is unaffected.

Rejected data should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway Surface Sediment, Rounds 1 & 2
Tributyltin by Krone 1988-SIM

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OO97	10 Sediment	Summary
OP22	1 Sediment	Summary
OP33	1 Rinsate Blank	Summary
OP35	8 Sediment 1 Rinsate Blank	Full Summary
OP65	1 Rinsate Blank	Screening
OQ77	1 Sediment	Summary
PD95	6 Sediment	Full
PD97	3 Sediment	Summary
PE07	2 Sediment 1 Rinsate Blank	Summary Screening
PE14	6 Sediment 1 Rinsate Blank	Summary Screening
PE25	8 Sediment	Summary
PE40	3 Sediment 1 Rinsate Blank	Summary Screening
PH64	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation	2	Standard Reference Material
	GC/MS Instrument Performance Check	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)	2	Internal Standards
	Method Blanks		Compound Identification
1	Field Blanks	2	Reported Results
2	Surrogate Compounds		Reporting Limits
2	Laboratory Control Samples (LCS/LCSD)	1	Calculation Verification (full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received several sample coolers with temperatures outside of these control limits, ranging from 0.4°C to 8.2°C. These temperature outliers did not impact data quality and no qualifiers were assigned.

Field Blanks

SDG OP33: Rinsate blank EW09-SS-038-RB was submitted with this SDG. There were no positive results for this blank.

SDG OP35: Rinsate blank EW09-SS-102-RB was submitted with this SDG. There were no positive results for this blank.

SDG OP65: Rinsate blank EW09-SS-014-RB was submitted with this SDG. There were no positive results for this blank.

SDG PE07*:* One field blank was submitted: EW09-SS-222-RB. There were no positive results for any analytes.

SDG PE14*:* One field blank was submitted: EW09-SS-210-RB. There were no positive results for any analytes.

SDG PE40: One field blank was submitted: EW09-SS-002-RB. There were no positive results for any analytes.

Surrogate Compounds

SDG PE14: The percent recoveries (%R) for the surrogate compound tripentyltin chloride were greater than the upper control limit in samples EW09-SS-205-010 and EW09-SS-203-010. The positive results for tributyltin were as estimated (J-13) to indicate a potential high bias.

Laboratory Control Samples

A laboratory control sample (LCS) was analyzed at the proper frequency of one per batch.

Laboratory control sample duplicates (LCSD) were also analyzed with some batches. The percent recovery (%R) values were within the control limits, with the exceptions noted below. For recoveries less than the lower control limit, associated results were estimated (J/UJ-10) to indicate a potential low bias.

SDG OP65: butyl tin (23%, 9.6%) – low bias

Standard Reference Material

The standard reference material PACS-2 was analyzed at the frequency of one per batch. The %R values were within the certified limits, with the exception noted below. For recoveries greater than the upper control limit, associated positive results were estimated (J-12) to indicate a potential high bias. No action was taken for non-detects.

SDG PH64: tributyltin (150.8%) - high bias

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate samples (MS/MSD) were analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the lab control limits, with the exceptions noted below. For %R values greater than the upper control limit, the associated positive results in the parent sample only were estimated (J-8) to indicate a possible high bias. No action was taken for non-detects. For %R values less than the lower control limit, the associated results in the parent sample only were estimated (J/UJ-8) to indicate a potential low bias. The sample used for the MS/MSD analyses and outliers resulting in qualification of data are listed below:

SDG OP35: QC Sample EW09-SS-036-010: tributyltin – high bias

SDGs PD97, PE07, & PE14: QC Sample EW09-SS-107-010: dibutyl tin – low bias

SDG PE40: No MS/MSD samples were analyzed with this SDG. Precision and accuracy were evaluated using the LCS results, other project specific MS/MSD samples, and project field duplicates.

Field Duplicates

The following acceptance criteria were used to evaluate precision: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than the RL.

No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results. Field duplicates and any outliers are noted below:

SDG OO97: Samples EW09-SS-200-010 and EW-09-SS-300-010: all criteria met

SDG PD95: Samples EW09-SS-105-010 and EW09-SS-304-010: all criteria met

Internal Standards

SDG PD95: The recoveries for the internal standard p-terphenyl-d14 were outside of the control limits of 50%-200% for samples EW09-SS-304-010, EW09-SS-115-010 and EW09-SS-118-010. The samples were re-analyzed at a 2x dilution with acceptable internal standard recoveries. The results from the re-analyses should be used. All results from the original analyses were rejected (R-11).

Reported Results

Most samples were analyzed with both 1x and 2x dilution. When the results of the dilution supported the original analyses, the results from the original analyses should be used. Data that should not be used were rejected (R-11).

Several results for tributyltin exceeded the linear range of the instrument in the original analyses. The samples were re-analyzed at dilution; both sets of data were reported. The results that exceeded the linear range were rejected (R-20). The results for all other compounds in the dilutions were rejected (R-11). The following samples were diluted for high concentrations of tributyltin:

SDG PD95: EW09-SS-133-010

SDG PE14: EW09-SS-124-010

SDG PE25: EW09-SS-126-010

Reporting Limits

Several samples were analyzed at dilution due to matrix interference. Reporting limits were elevated accordingly.

Calculation Verification

SDGs OP35 & PD95: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, standard reference material, and MS/MSD recoveries, with the exceptions noted above. Precision was also acceptable as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate RPD values.

Data were estimated based on % recovery outliers in the LCS, MS/MSD, surrogate, and standard reference material samples. Data were rejected in order to report the most appropriate result from multiple dilutions and analyses; however, a useable result remains for all analytes in all samples and project completeness is unaffected.

Data that have been rejected should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway Surface Sediment, Rounds 1 & 2
Organochlorine Pesticides by EPA Method 8081B

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OO97	5 Sediment	Summary
OP22	1 Sediment	Summary
OP33	2 Sediment 1 Rinsate Blank	Full Screening
OP35	6 Sediment 1 Rinsate blank	Full Screening
OP65	1 Sediment 1 Rinsate blank	Summary Screening
OQ77	1 Sediment	Summary
PD95	3 Sediment	Full
PD97	1 Sediment	Summary
PE07	5 Sediment 1 Rinsate Blank	Summary Screening
PE14	4 Sediment 1 Rinsate Blank	Summary Screening
PE40	1 Rinsate Blank	Screening

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Receipt	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)	2	Internal Standards
2	Continuing Calibration (CCAL)	1	Field Duplicates
	Laboratory Blanks		Target Analyte List
1	Field Blanks	2	Reporting Limits
1	Surrogate Compounds	2	Compound Identification
	Laboratory Control Samples (LCS/LCSD)	2	Reported Results
1	Standard Reference Material	1	Calculation Verification (full validation only)

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received several sample coolers with temperatures outside of these control limits, ranging from 0.4°C to 8.2°C. These temperature outliers did not impact data quality and no qualifiers were assigned.

Continuing Calibration

SDGs OO97 & OP22: The percent difference (%D) values for endrin, 4,4'-DDD, and endrin ketone were greater than the control limit of 25% in the CCAL analyzed on 3/12/09, indicating a potential high bias. The analytes were not detected in the associated samples; no qualification of data was necessary. The samples were re-analyzed on 3/13/09, with similar results. Both sets of data were reported. See the **Reported Results** section for a further discussion of these samples.

SDGs OP35 & OP65: The %D value for 4,4'-DDD in the CCAL analyzed 3/19/09 was greater 25%, indicating a potential high bias. This analyte was not detected in the associated samples; therefore no qualification of data was necessary.

Field Blanks

Laboratory method blanks are used to evaluate all associated samples (including field blanks). Any remaining positive results in the rinse blank are used to evaluate the associated samples. Field blanks and any outliers are noted below.

SDG OP33: Rinsate blank EW09-SS-038-RB was submitted with this SDG. There were no positive results for this blank.

SDG OP35: Rinsate blank EW09-SS-102-RB was submitted with this SDG. There were no positive results for this blank.

SDG OP65: Rinsate blank EW09-SS-014-RB was submitted with this SDG. There were no positive results for this blank.

SDG PE07: Rinsate blank EW09-SS-222-RB was submitted with this SDG. There were no positive results for this blank.

SDG PE14: Rinsate blank EW09-SS-210-RB was submitted with this SDG. There were no positive results for this blank.

SDG PE40: Rinsate blank EW09-SS-002-RB was submitted with this SDG. There were no positive results for this blank.

Surrogate Compounds

SDG PD95: The percent recovery (%R) value of the surrogate tetrchloro-m-xylene was greater than the upper control limit in Sample EW09-SS-304-010. No qualification was required for this single outlier.

SDG PE07: The percent recovery (%R) values of the surrogate decachlorobiphenyl were greater than the upper control limits in Sample EW09-SS-015-010. No recoveries were reported for the surrogate decachlorobiphenyl in Samples EW09-SS-305-010 and EW09-SS-206-010. No qualifiers were required as the tetrchloro-m-xylene recoveries were acceptable for the above samples.

Standard Reference Material

The Sequim Bay reference material SQ-1 was analyzed with the samples. The recoveries for several analytes were outside of the reference range. Because this is not a certified reference material, no action was taken based on the analyte recoveries.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed at the proper frequency. Recoveries were within the laboratory control limits, with the exceptions noted below. For recoveries less than the lower control limit, positive results and reporting limits were estimated (J/UJ-8) in the parent sample to indicate a potential low bias. For recoveries greater than the upper control limit, positive results in the parent sample were estimated (J-8) to indicate a potential high bias. If only one of the MS or MSD recoveries was outside of the control limit, no action was taken.

The sample used for the MS/MSD analyses and outliers resulting in qualification of data are noted below:

SDG OO97: No MS/MSD analyses were performed on this SDG. Precision and accuracy were evaluated using the LCS results, other project specific MS/MSD samples, and project field duplicates.

SDG OP22: QC Sample EW09-SS-113-010: Matrix interferences in this sample resulted in elevated reporting limits and affected spike recoveries. Twelve analytes were affected by this interference; the reporting limits for these analytes were estimated (UJ-8).

SDG OP33/OP35: QC Sample EW09-SS-038-010: beta-BHC (low bias)

SDG OP65: No MS/MSD analyses were performed. Precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results other project specific MS/MSD samples, and project field duplicates.

SDG OQ77: QC Sample EW09-SS-220-010: The MS/MSD %R values for ten analytes were less than the lower control limit. The reporting limits for these analytes were qualified as estimated (UJ-8).

SDG PE07: QC Sample EW09-SS-206-010: Aldrin and 4,4'-DDT were not recovered in the MS or MSD. The reporting limits for these compounds were elevated due to matrix interferences; therefore the results in the parent sample were estimated (UJ-8) instead of being rejected.

Internal Standards

SDG PE07: The recovery for the internal standard hexabromobiphenyl was greater than the upper control limit of 200% in Samples EW09-SS-208-010 and EW09-SS-305-010. The samples were re-analyzed at a 5x dilution with acceptable internal standard recoveries. In order to achieve to lowest possible reporting limits, the results from the original analyses should be used. The positive results for 4,4'-DDD were estimated (J-19). No action was taken for non-detects. See the **Reported Results** section for a further discussion of these samples.

Field Duplicates

The following acceptance criteria were used to evaluate precision: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than the RL.

No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results. Field duplicates and any outliers are noted below:

SDG OO97: Samples EW09-SS-200-010 and EW-09-SS-300-010: all criteria met

SDG PD95: Samples EW09-SS-105-010 and EW09-SS-304-010: all criteria met

SDG PE07: Samples EW09-SS-208-010 and EW09-SS-305-010: all criteria met

Reporting Limits

The method reporting limits were sometimes greater than the limits specified in the QAPP. Several chromatograms indicated non-target background interference. The reporting limits for these analytes were flagged "Y" by the laboratory. These "Y" flagged results were qualified as not-detected (U-22). The following analytes were qualified in one or more samples:

SDG OO97: heptachlor epoxide (5 results), dieldrin (5 results), endosulfan II (1 result), gamma chlordane (1 result)

SDG OP22: Sample EW09-SS-113-010: heptachlor epoxide, dieldrin, endosulfan II, endrin aldehyde, gamma-chlordane, hexachlorobutadiene, 2,4-DDE

SDG OP33: heptachlor epoxide (2 results)

SDG OP35: heptachlor epoxide (4 results)

SDG PD95: heptachlor epoxide (2 results), aldrin (2 results), trans-nonachlor (2 results), gamma chlordane (2 results), endrin (2 results), 4,4'-DDD (1 result), 4,4'-DDE (2 results), heptaclor(2 results), alpha chlordane(1 result), dieldrin (2 results)

SDG PD97: Sample EW09-SS-213-010: dieldrin

SDG PE07: aldrin (3 results), heptachlor epoxide (1 result), mirex (3 results), trans-nonachlor (3 results), gamma chlordane (2 results), endrin ketone (2 results), gamma-BHC (1 results), dieldrin (1 result), 4,4'-DDD (1 result), 4,4'-DDT (1 result), endrin (1 result)

SDG PE14: heptachlor epoxide (2 results), dieldrin (2 results), endrin (1 result), 4,4'-DDE (1 result)

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40%, the reported result was "P" flagged by the laboratory. The elevated RPD value may indicate the presence of an interferent resulting in a high bias. When the RPD value was greater than 40% but less than 60% the reported value was estimated (J-3). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ-3).

SDG PE07: Sample EW09-SS-305-010: 4,4'-DDD (J-3)

Reported Results

SDG OO97, OP22: Samples were re-analyzed due to CCAL %D outliers associated with the original analyses. There were also CCAL %D outliers associated with the re-analyses. Both sets of data were reported. There were no positive results for either set of analyses. The results from the original analyses are acceptable without qualification. Results from the re-analyses were rejected (R-11).

SDGs OP33, OP35: The samples were originally analyzed on 3/16/09 with several %D outliers in the associated CCAL. All samples were re-analyzed on 3/19/09. Both sets of data were reported. There were no positive results for either set of analyses. Because there were fewer CCAL outliers associated with the re-analyses, these results should be used. The results for the original analyses were rejected (R-11).

SDG OP22: Sample EW09-SS-113-010 was initially analyzed at a 5x dilution and was re-analyzed at 1x. Both sets of data were reported. The results from the 5x dilution were rejected (R-11). The results from the undiluted analyses should be used.

SDG PE07: Samples EW09-SS-208-010 and EW09-SS-305-010 were re-analyzed at dilution due to internal standard outliers in the original analyses. Both sets of data were reported. In order to achieve to lowest possible reporting limits, the results from the original analyses should be used. Results from the re-analyses were rejected (R-11).

Calculation Verification

SDGs OP33, OP35, & PD95: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, standard reference material, and MS/MSD recoveries, with the exceptions previously noted. Precision was also acceptable as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate RPD values, except as noted above.

Data were qualified as not detected at elevated reporting limits due to matrix interferences. Data were estimated based on internal standard outliers, MS/MSD %R outliers, and due to poor agreement between the two analytical columns.

Data were rejected to indicate which result from multiple reported analyses should be used. A usable result remains for all analytes and all samples; completeness is unaffected.

Rejected data should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway Surface Sediment, Rounds 1 & 2
Metals Analyses by EPA 200.8, 6010B, and 7471A

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
OO97	16 Sediment	Summary
OP22	6 Sediment	Summary
OP33	7 Sediment 1 Rinsate Blank	Summary Screening
OP35	21 Sediment 1 Rinsate Blank	Full Screening
OP65	4 Sediment 1 Rinsate Blank	Summary Screening
PD95	13 Sediment	Full
PD97	10 Sediment	Summary
PE07	10 Sediment 1 Rinsate Blank	Summary Screening
PE14	12 Sediment 1 Rinsate Blank	Summary Screening
PE40	6 Sediment 1 Rinsate Blank	Summary Screening
PG50	1 Sediment (Copper only)	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements for review are listed below.

1	Holding Times and Sample Preservation	2	Matrix Spikes (MS)
	ICP-MS Tune	2	Laboratory Duplicates
	Initial Calibration (ICAL)		IC-MS Internal Standards
	Calibration Verification (ICV/CCV)	2	Interference Check Standards
2	Contract Required Detection Limit Standard	1	Field Duplicates
1	Laboratory Blanks		Reporting Limits
1	Field Blanks	2	Reported Results
	Laboratory Control Samples	1	Calculation Verification (full validation only)
1	Standard Reference Material		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received several sample coolers with temperatures outside of these control limits, ranging from 0.4°C to 8.2°C. These temperature outliers did not impact data quality and no qualifiers were assigned.

Contract Required Detection Limit Standard

Contract required detection limit (CRDL) standards were analyzed at the beginning of each analytical sequence. For recovery values greater than upper control limit of 130%, positive results less than two times (<2x) the CRDL are estimated (J-14) to indicate a potential high bias. For recoveries less than the lower control limit of 70%, positive results less than twice (<2x) the CRDL and non-detects are estimated (J/UJ-14) to indicate a potential low bias. The following outlier resulted in qualification of data:

SDG OP35: silver – high bias

Laboratory Blanks

SDG OP35: Zinc was detected in the method blank at a level greater than the method detection limit (MDL). In order to evaluate the effect on the sample data, an action level was established at five times the blank concentration. All associated results were greater than the action levels and no qualification of data was necessary.

SDG PE07: Cadmium was detected in one instrument blank at a level equal to the MDL. All associated results were greater than the action level and no qualification of data was necessary.

Field Blanks

After the field blanks have been qualified based on laboratory blank results, any remaining positive results in the field blanks are used to evaluate the field samples. Action levels are established at five times the field blank concentrations. Field blanks and outliers are noted below.

SDG OP33: One field blank was submitted: EW09-SS-038-RB. Selenium was detected in this blank at a level greater than the MDL. Selenium was not detected in any of the associated samples; no qualification of data was necessary.

SDG OP35: One field blank was submitted: EW09-SS-102-RB. There were no positive results for any analytes.

SDG OP65: One field blank was submitted: EW09-SS-014-RB. There were no positive results for any analytes.

SDG PE07*:* One field blank was submitted: EW09-SS-222-RB. Zinc was detected in the blank at a level greater than the method detection limit. All associated zinc results were greater than the action level. No qualification of data was necessary.

SDG PE14*:* One field blank was submitted: EW09-SS-210-RB. There were no positive results for any analytes.

SDG PE40: One field blank was submitted: EW09-SS-002-RB. There were no positive results for any analytes.

Matrix Spikes

A matrix spike sample (MS) was analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the control limits of 75-125%, with the exceptions noted below. For %R values greater than the upper control limit, the associated positive results were estimated (J-8) to indicate a possible high bias. No action was taken for non-detects. For %R values less than the lower control limit, the associated positive results and non-detects were qualified as estimated (J/UJ-8) to indicate a possible low bias.

For cases where the recovery was also less than 30%, the post digestion spike was also evaluated. If the post spike recovery was within 75%-125%, then associated results were estimated (J/UJ). If the post spike recovery was not acceptable or was not analyzed, then the associated non-detected results were rejected (R-8) instead of being estimated. The samples used for the MS analyses and outliers resulting in qualification of data are listed below:

SDG OO97: QC Sample EW09-SS-216-010: antimony (27.1%) – low bias, post spike acceptable

SDG OP22: QC Sample EW09-SS-113-010: antimony (17.1%) – low bias, post spike acceptable; zinc (74.3%) – low bias

SDG OP33: QC Sample EW09-SS-038-010: antimony (20.4%) – low bias, post spike acceptable

SDG OP35: QC Sample EW09-SS-036-010: antimony (21.3%) – low bias, post spike acceptable; mercury (131%) – high bias

SDG OP65: QC Sample EW09-SS-014-010: antimony (20.2%) – low bias, post spike acceptable

SDG PD95: QC Sample EW09-SS-040-010: antimony (17.3%) – low bias, post spike acceptable; mercury (130%) – high bias

SDG PD97: QC Sample EW09-SS-039-010: antimony (20.4%) – low bias, post spike acceptable

SDG PE07: QC Sample EW09-SS-206-010: antimony (16.4%) – low bias, post spike acceptable; mercury (145%), zinc (191%) –high bias

SDG PE14: QC Sample EW09-SS-210-010: antimony (23.2%) –low bias, post spike acceptable

SDG PE40: QC Sample EW09-SS-002-010: antimony (17.5%) – low bias, post spike acceptable

Laboratory Duplicates

Laboratory duplicate relative percent difference (RPD) values were analyzed at the proper frequency. The RPD values were within the control limit of 30% for sample results greater than five times the reporting limit (RL), with the exceptions noted below. For results less than five times the reporting limit, the difference was less than 2x the RL with the noted exceptions. For RPD or difference values exceeding the control limits, associated positive results and non-detects were qualified as estimated (J/UJ-9).

SDG OP33: QC Sample EW09-SS-038-010 – cadmium (difference >2x RL)

SDG OP65: QC Sample EW09-SS-014-010 – mercury (difference >2x RL)

SDG PD95: QC Sample EW09-SS-040-010 – mercury (48%)

SDG PD97: QC Sample EW09-SS-039-010 – cobalt (34.6%), copper (32.2%), lead (78.0%), molybdenum (diff >2x RL), zinc (74.6%)

SDG PE07: QC Sample EW09-SS-206-010 – mercury (diff >2x RL)

ICP Interference Check Samples

For several samples, the concentrations one or more interfering element (aluminum, calcium, iron, and magnesium) were greater than the level in the interference check samples (ICSA/ICSAB). For these samples, the ICSA results were carefully evaluated to determine if there was a potential high or low bias caused by matrix interference. The following outliers resulted in qualification of data:

SDG OP22: The ICSA result for molybdenum was less than the negative detection limit. The concentration of the interfering element calcium was greater than the ICS levels in sample EW09-SS-104-010. The result for molybdenum in this sample was estimated (UJ-17) to indicate a possible low bias.

SDG OP33: The ICSA value for molybdenum was greater than the detection limit. The concentrations of the interfering element calcium were greater than the ICS levels in several samples. The positive molybdenum result for Sample EW09-SS-219-010 was estimated (J-17) to indicate a possible high bias.

SDG OP35: The ICSA result for molybdenum was less than the negative detection limit. The concentrations of the interfering element calcium were greater than the ICS levels in samples EW09-SS-027-010, EW09-SS-020-010, EW09-SS-011-010, and EW09-SS-008-010. The results for molybdenum in these samples were estimated (UJ-17) to indicate a possible low bias.

SDG OP65: Molybdenum was detected in the ICSA at a concentration greater than the detection limit. The concentration of the interfering element calcium was greater than the ICS levels in samples EW09-SS-014-010 and EW09-SS-126-010. The results for molybdenum in these samples were estimated (J-17) to indicate a possible high bias.

Field Duplicates

The following acceptance criteria were used to evaluate precision: the RPD control limit is 30% for results greater than five times the RL. For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL.

No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results. Field duplicate samples and nay outliers are noted below

SDG OO97: Samples EW09-SS-200-010 and EW-09-SS-300-010: all criteria met

SDG OP22: Samples EW09-SS-116-010 and EW-09-SS-301-010: all criteria met

SDG OP35: Samples EW09-SS-102-010 and EW-09-SS-302-010: all criteria met

SDG PD95: Samples EW09-SS-105-010 and EW09-SS-304-010: all criteria met

SDG PD97: Samples EW09-SS-028-010 and EW09-SS-303-010: all criteria met

SDG PE07: Samples EW09-SS-208-010 and EW09-SS-305-010: all criteria met

Reported Results

SDG PD97: Sample EW09-SS-018-010 was reanalyzed for copper in **SDG PG50.** The re-analysis did not confirm the original results. The laboratory duplicate RPD value for copper was also outside of the control limits in the original analysis. The results from the re-analysis should be used. The copper result for EW09-SS-018-010 in this SDG was rejected (R-11).

Calculation Verification

SDGs OP35 & PD95: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample, standard reference material, and matrix spike recovery values, with the exceptions noted above. The laboratory and field duplicate RPD values indicated acceptable precision, with the exceptions previously noted.

Data were estimated due to CRDL standard %R, matrix spike %R, laboratory duplicate RPD, and interference check sample outliers. One copper result was rejected to indicate which result should be used from multiple reported analyses. Completeness is not affected.

Rejected data should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway Surface Sediment, Rounds 1&2
Conventional Analyses

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
OO97	16 Sediment	Summary
OP22	6 Sediment	Summary
OP33	7 Sediment	Summary
OP35	21 Sediment	Full
OP65	4 Sediment	Summary
OQ68	3 Sediment	Summary
PD95	13 Sediment	Full
PD97	10 Sediment	Summary
PE25	1 Sediment	Summary
PG13	3 Sediment	Summary
PE07	10 Sediment	Summary
PE14	12 Sediment	Summary
PE40	5 Sediment	Summary

The analytical tests that were performed are summarized below:

Parameter	Method
Ammonia	EPA 350.1M
Sulfide	EPA 376.2
Total Solids	EPA 160.3
Total Preserved Solids	EPA 160.3
Total Organic Carbon (TOC)	Plumb, 1981
Grain Size	PSEP, 1986

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all necessary deliverables for a summary validation. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed below.

2	Holding Times and Sample Preservation	2	Matrix Spikes (MS)
	Initial Calibration	2	Laboratory Replicates
	Calibration Verification	1	Field Duplicates
	Laboratory Blanks		Reporting Limits
	Laboratory Control Samples		Reported Results
1	Standard Reference Material	1	Calculation Verification (full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received several sample coolers with temperatures outside of these control limits, ranging from 0.4°C to 8.2°C. These temperature outliers did not impact data quality and no qualifiers were assigned.

SDG PE25: Sample LSO-01SE-080723 was analyzed for total solids and TOC after the extended 6 month holding time for frozen sediments. The total solids and TOC results for this sample were estimated (J-1).

Standard Reference Material

The standard reference material NIST 8704 was analyzed for TOC and SPEX 28-24AS was analyzed for ammonia. All recoveries were within the control limits.

Matrix Spike Samples

A matrix spike sample (MS) was analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the laboratory control limits, with the exceptions noted below. For %R values greater than the upper control limit, the associated sample results were qualified as estimated (J-8) to indicate a possible high bias. For %R values less than the lower control limit, the associated sample results were qualified as estimated (J/UJ-8) to indicate a possible low bias. The samples used for QC and outliers resulting in qualification of data are noted below:

SDG OO97: QC Sample EW09-SS-216-010 – sulfide (72.8%) – low bias

SDG OP35: QC Sample EW09-SS-036-010 – sulfide (40.4%) – low bias
QC Sample EW09-SS-001-010 – sulfide (51.2%) – low bias

SDG OQ68: QC Sample CI09-SS-020-010 – sulfide (67.9%) – low bias

SDG PD97: QC Sample EW09-SS-039-010: sulfide (68.3%) - low bias

SDG PE14: QC Sample EW09-SS-210-010: total organic carbon (128.8%) – high bias
QC Sample EW09-SS-128-010: sulfide (71.7%) – low bias (parent only qualified)

Laboratory Replicates

Laboratory duplicate relative percent difference (RPD) or laboratory triplicate percent relative standard deviation (%RSD) values were used to evaluate precision. The RPD and %RSD values were within the control limit (20% for sulfate, total solid, and n-ammonia; 30% for TOC, and grain size) for sample results greater than five times the reporting limit (for results less than five times the reporting limit, the difference was less than 2x the reporting limit) with the exceptions noted below.

For RPD, %RSD, or difference values exceeding the control limits, associated positive results and non-detects were qualified as estimated (J/UJ-9) for all fractions except grain size. For grains size outliers only the parent sample was qualified.

SDG OP22: QC Sample EW09-SS-113-010 – coarse silt (40.2%), medium silt (31.9%)

SDG OP35: QC Sample EW09-SS-001-010 – sulfide (difference >2x RL)

SDG PD97: QC Sample EW09-SS-039-010 – sulfide (37.4%), gravel (85.7%)

SDG PE07: QC Sample EW09-SS-206-010 – sulfide (27.7%), coarse silt (49.5%)

SDG PE14: QC Sample EW09-SS-128-010 – sulfide (21%)

Field Duplicates

The following acceptance criteria were used to evaluate precision: the RPD control limits are 20% for sulfate, total solid, and n-ammonia and 30% for TOC, and grain size. For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL.

No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results. Field duplicate samples and any outliers are noted below:

SDG OO97: Samples EW09-SS-200-010 and EW-09-SS-300-010: TOC (37.2%), sulfide (67%)

SDG OP22: Samples EW09-SS-116-010 and EW-09-SS-301-010: all criteria met

SDG OP35: Samples EW09-SS-102-010 and EW-09-SS-302-010: all criteria met

SDG PD95: Samples EW09-SS-105-010 and EW09-SS-304-010: sulfide (151%)

SDG PD97: Samples EW09-SS-028-010 and EW09-SS-303-010: TOC (31.2%)

SDG PE07: Samples EW09-SS-208-010 and EW09-SS-305-010: sulfide (32.8%)

Calculation Verification

SDGs OP35 & PD95: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample, standard reference material, and matrix spike percent recovery values, with the exceptions noted above. Precision was also acceptable as demonstrated by the laboratory replicate and field duplicate RPD or %RSD values.

Data were estimated based on holding time outliers, matrix spike recovery outliers, and laboratory replicate precision outliers.

All data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

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EcoChem Validation Guidelines for Pesticides/PCBs by GC/ECD
(Based on Organic NFG 1999 & EPA SW-846 Method 8081/8082)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL) U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	Not addressed by NFG No results > CRQL	Apply 5X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Pesticides/PCBs by GC/ECD
(Based on Organic NFG 1999 & EPA SW-846 Method 8081/8082)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) in parent sample if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Quantitated using ICAL calibration factor (CF) RPD between columns <40%	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% EcoChem PJ - See TM-08	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate (Qualifiy if required by project QAPP)	9

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration Tissues: Frozen	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r > 0.995	J(+)/UJ(-) if r < 0.995 (multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blank (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		(Refer to TM-02 for additional information)
			7

Reporting Limit Standard	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Sb, Pb, Tl)	R(-)/J(+) < 2x RL if %R <50% (< 30% Sb, Pb, Tl) J(+) < 2x RL, UJ(-) if %R 50-69% (30-49% Sb, Pb,Tl) J(+) < 2x RL if %R 130-180% (150-200% Sb, Pb, Tl) R(+) < 2x RL if %R > 180% (200% Sb, Pb, Tl)	14
Interference Check Samples (ICSA/ICSAB)	ICSAB %R 80 - 120% for all spiked elements | ICSA | < MDL for all unspiked elements except: K, Na	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R= 50 to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Matrix Spikes	One per matrix per batch 75-125% for samples less than 4x spike level	J(+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30% or J(+)/UJ(-) if Post Spike %R 75-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, spike at twice the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples >RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL (2x RL for solids) qualify all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample conc. > 50x MDL	J(+)/UJ(-) if %D >10% qualify all samples in batch	16
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

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EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

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EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	28 days from date sampled Frozen tissues: HT extended to 6 months	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + 4 standards, one at RL r > 0.995	J(+)/UJ(-) if r<0.995	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	after each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRA)	conc at RL - analyzed beginning of run %R = 70-130%	R(-),(+)<2xRL if %R <50% J(+)<2x RL, UJ(-) if %R 50-69% J(+) <2x RL if %R 130-180% R(+)<2x RL if %R>180%	14
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 5% frequency 75-125% for samples less than 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% all samples in batch	8
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5x RL: Water: Diff<RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must be less than 110% of high standard	J values over range	20

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EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler Temperature 4°C ±2°C Preservation: Method Specific	Use Professional Judgment to qualify based to qualify for coole temp outliers J(+)/UJ(-) if preservation requirements not met	1
Holding Time	Method Specific	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by > 3X	1
Initial Calibration	Method specific r>0.995	Use professional judgment J(+)/UJ(-) for r < 0.995	5A
Initial Calibration Verification (ICV)	Where applicable to method Independent source analyzed immediately after calibration %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5A
Continuing Cal Verification (CCV)	Where applicable to method Every ten samples, immed. following ICV/ICB and end of run %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5B

Initial and Continuing Cal Blanks (ICB/CCB)	Where applicable to method
	After each ICV and CCV every ten samples and end of run
	| blank| < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Method Blank	One per matrix per batch
	(not to exceed 20 samples)
	blank < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blk value, U(+) results < action level
		For (-) blk value, J(+)/UJ(-) results < action level
			7

Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Matrix Spike	One per matrix per batch; 5% frequency 75-125% for samples less than 4 x spike level	J(+) if %R > 125% or < 75% UJ(-) if %R = 30-74% R(+/-) results < IDL if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x RL Diff <RL for samples >RL and <5 x RL (may use RPD < 35%, Diff < 2X RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

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EcoChem Validation Guidelines for Conventional Chemistry Analysis
(Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5X RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff<RL Solid: Diff < 2X RL	J(+)/UJ(-) in parent samples only	9

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Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table
Windward - East Waterway Surface Sediments

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 376.2	Sulfide	19.6	mg/kg		J	8
OO97	EW09-SS-218-010	09-5787-OO97B	EPA 376.2	Sulfide	3.97	mg/kg		J	8
OO97	EW09-SS-217-010	09-5788-OO97C	EPA 376.2	Sulfide	1.60	mg/kg		J	8
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 376.2	Sulfide	1.85	mg/kg		J	8
OO97	EW09-SS-216-010LR	09-5789-OO97DLR	EPA 376.2	Sulfide	2.65	mg/kg		J	8
OO97	EW09-SS-207-010	09-5790-OO97E	EPA 376.2	Sulfide	28.0	mg/kg		J	8
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 376.2	Sulfide	28.2	mg/kg		J	8
OO97	EW09-SS-202-010	09-5792-OO97G	EPA 376.2	Sulfide	181	mg/kg		J	8
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 376.2	Sulfide	124	mg/kg		J	8
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 376.2	Sulfide	249	mg/kg		J	8
OO97	EW09-SS-130-010	09-5795-OO97J	EPA 376.2	Sulfide	127	mg/kg		J	8
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 376.2	Sulfide	23.2	mg/kg		J	8
OO97	EW09-SS-127-010	09-5797-OO97L	EPA 376.2	Sulfide	38.5	mg/kg		J	8
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 376.2	Sulfide	784	mg/kg		J	8
OO97	EW09-SS-119-010	09-5799-OO97N	EPA 376.2	Sulfide	153	mg/kg		J	8
OO97	EW09-SS-120-010	09-5800-OO97O	EPA 376.2	Sulfide	136	mg/kg		J	8
OO97	EW09-SS-132-010	09-5801-OO97P	EPA 376.2	Sulfide	96.8	mg/kg		J	8
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-218-010	09-5787-OO97B	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-217-010	09-5788-OO97C	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-216-010LR	09-5789-OO97DLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-207-010	09-5790-OO97E	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-202-010	09-5792-OO97G	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-130-010	09-5795-OO97J	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-127-010	09-5797-OO97L	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-119-010	09-5799-OO97N	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-120-010	09-5800-OO97O	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-132-010	09-5801-OO97P	EPA 6010B	Antimony		mg/kg	U	UJ	8
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 8081B	Dieldrin		ug/kg	Y	U	22
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Aldrin		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	beta-BHC		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	delta-BHC		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Dieldrin		ug/kg	Y	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Endrin		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Heptachlor		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Mirex		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	Toxaphene		ug/kg	U	R	11
OO97	EW09-SS-204-010	09-5791-OO97FRE	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 8081B	Dieldrin		ug/kg	Y	U	22
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Aldrin		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	beta-BHC		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	delta-BHC		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Dieldrin		ug/kg	Y	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Endrin		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Heptachlor		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Mirex		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	Toxaphene		ug/kg	U	R	11
OO97	EW09-SS-200-010	09-5793-OO97HRE	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11

Qualified Data Summary Table
Windward - East Waterway Surface Sediments

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8081B	Dieldrin		ug/kg	Y	U	22
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Aldrin		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	beta-BHC		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	delta-BHC		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Dieldrin		ug/kg	Y	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Endrin		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Heptachlor		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Mirex		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	Toxaphene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IRE	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 8081B	Dieldrin		ug/kg	Y	U	22
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 8081B	Endosulfan II		ug/kg	Y	U	22
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Aldrin		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	beta-BHC		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	delta-BHC		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Dieldrin		ug/kg	Y	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Endrin		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Heptachlor		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Mirex		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	Toxaphene		ug/kg	U	R	11
OO97	EW09-SS-129-010	09-5796-OO97KDL	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 8081B	Dieldrin		ug/kg	Y	U	22
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Aldrin		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	beta-BHC		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	delta-BHC		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Dieldrin		ug/kg	Y	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Endrin		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Heptachlor		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Mirex		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	Toxaphene		ug/kg	U	R	11
OO97	EW09-SS-122-010	09-5798-OO97MRE	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 8270D	Benzo(g,h,i)perylene	420	ug/kg		J	5B
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 8270D	Dibenz(a,h)anthracene	160	ug/kg		J	5B
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 8270D	Fluoranthene	1600	ug/kg	E	R	20
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 8270D	Indeno(1,2,3-cd)pyrene	330	ug/kg		J	5B
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 8270D	Phenanthrene	2300	ug/kg	E	R	20
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 8270D	Pyrene	1700	ug/kg	E	R	20
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	1-Methylnaphthalene	120	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2-Methylnaphthalene	140	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Acenaphthene	340	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Aniline		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Anthracene	270	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Benzo(a)anthracene	540	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Benzo(a)pyrene	630	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Benzo(b)fluoranthene	400	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Benzo(g,h,i)perylene	440	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Benzo(k)fluoranthene	440	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Carbazole	140	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Chrysene	710	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Dibenz(a,h)anthracene	110	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Dibenzofuran	100	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Fluorene	290	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Indeno(1,2,3-cd)pyrene	350	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Isophorone		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Naphthalene	240	ug/kg		R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
OO97	EW09-SS-220-010	09-5786-OO97ADL	EPA 8270D	Phenol		ug/kg	U	R	11
OO97	EW09-SS-217-010	09-5788-OO97C	EPA 8270D	Benzo(g,h,i)perylene	25	ug/kg		J	5B
OO97	EW09-SS-217-010	09-5788-OO97C	EPA 8270D	Indeno(1,2,3-cd)pyrene	20	ug/kg		J	5B
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 8270D	Aniline		ug/kg	U	R	8
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 8270D	Benzo(g,h,i)perylene	56	ug/kg		J	5B
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 8270D	Indeno(1,2,3-cd)pyrene	55	ug/kg		J	5B
OO97	EW09-SS-207-010	09-5790-OO97E	EPA 8270D	Benzo(g,h,i)perylene	59	ug/kg		J	5B
OO97	EW09-SS-207-010	09-5790-OO97E	EPA 8270D	Indeno(1,2,3-cd)pyrene	61	ug/kg		J	5B
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 8270D	Benzo(g,h,i)perylene	55	ug/kg		J	5B
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 8270D	Indeno(1,2,3-cd)pyrene	55	ug/kg		J	5B
OO97	EW09-SS-202-010	09-5792-OO97G	EPA 8270D	Benzo(g,h,i)perylene	46	ug/kg		J	5B
OO97	EW09-SS-202-010	09-5792-OO97G	EPA 8270D	Dibenz(a,h)anthracene	22	ug/kg		J	5B
OO97	EW09-SS-202-010	09-5792-OO97G	EPA 8270D	Indeno(1,2,3-cd)pyrene	48	ug/kg		J	5B
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 8270D	Benzo(g,h,i)perylene	74	ug/kg		J	5B
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 8270D	Dibenz(a,h)anthracene	34	ug/kg		J	5B
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 8270D	Indeno(1,2,3-cd)pyrene	75	ug/kg		J	5B
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Benzo(b)fluoranthene	6900	ug/kg	E	R	20
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Benzo(g,h,i)perylene	520	ug/kg		J	5B
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Benzo(k)fluoranthene	4900	ug/kg	E	R	20
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Chrysene	11000	ug/kg	E	R	20
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Dibenz(a,h)anthracene	180	ug/kg		J	5B
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Fluoranthene	44000	ug/kg	E	R	20
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Indeno(1,2,3-cd)pyrene	690	ug/kg		J	5B
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Phenanthrene	4800	ug/kg	E	R	20
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D	Pyrene	24000	ug/kg	E	R	20
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Acenaphthylene	500	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Aniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Anthracene	680	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Benzo(a)anthracene	3900	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Benzo(a)pyrene	2400	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Benzo(g,h,i)perylene	1200	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Carbazole	800	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Dibenz(a,h)anthracene	390	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Fluoranthene	64000	ug/kg	E	R	20

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Fluorene	300	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	1300	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Isophorone		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Phenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL	EPA 8270D	Pyrene	32000	ug/kg	E	R	20
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Acenaphthene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Aniline		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Anthracene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Benzo(a)anthracene	4100	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Benzo(a)pyrene	2400	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Benzo(b)fluoranthene	5700	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Benzo(g,h,i)perylene	1300	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Benzo(k)fluoranthene	5000	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Carbazole		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Chrysene	14000	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Fluorene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Indeno(1,2,3-cd)pyrene	1400	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Isophorone		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Naphthalene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Phenanthrene	5400	ug/kg		R	11
OO97	EW09-SS-300-010	09-5794-OO97IDL2	EPA 8270D	Phenol		ug/kg	U	R	11
OO97	EW09-SS-130-010	09-5795-OO97J	EPA 8270D	Benzo(g,h,i)perylene	57	ug/kg		J	5B
OO97	EW09-SS-130-010	09-5795-OO97J	EPA 8270D	Indeno(1,2,3-cd)pyrene	49	ug/kg		J	5B
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 8270D	Benzo(g,h,i)perylene	27	ug/kg		J	5B
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 8270D	Indeno(1,2,3-cd)pyrene	30	ug/kg		J	5B
OO97	EW09-SS-127-010	09-5797-OO97L	EPA 8270D	Benzo(g,h,i)perylene	25	ug/kg		J	5B
OO97	EW09-SS-127-010	09-5797-OO97L	EPA 8270D	Indeno(1,2,3-cd)pyrene	25	ug/kg		J	5B
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 8270D	Benzo(g,h,i)perylene	26	ug/kg		J	5B
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 8270D	Indeno(1,2,3-cd)pyrene	25	ug/kg		J	5B
OO97	EW09-SS-119-010	09-5799-OO97N	EPA 8270D	Benzo(g,h,i)perylene	27	ug/kg		J	5B
OO97	EW09-SS-119-010	09-5799-OO97N	EPA 8270D	Indeno(1,2,3-cd)pyrene	28	ug/kg		J	5B
OO97	EW09-SS-132-010	09-5801-OO97P	EPA 8270D	Benzo(g,h,i)perylene	76	ug/kg		J	5B
OO97	EW09-SS-132-010	09-5801-OO97P	EPA 8270D	Dibenz(a,h)anthracene	23	ug/kg		J	5B
OO97	EW09-SS-132-010	09-5801-OO97P	EPA 8270D	Indeno(1,2,3-cd)pyrene	66	ug/kg		J	5B
OO97	EW09-SS-220-010	09-5786-OO97A	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-218-010	09-5787-OO97B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-217-010	09-5788-OO97C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-216-010	09-5789-OO97D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	8,10
OO97	EW09-SS-207-010	09-5790-OO97E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OO97	EW09-SS-207-010	09-5790-OO97E	EPA 8270D-SIM	Diethylphthalate	20	ug/kg	B	U	7
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-204-010	09-5791-OO97F	EPA 8270D-SIM	Diethylphthalate	21	ug/kg	B	U	7
OO97	EW09-SS-202-010	09-5792-OO97G	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-202-010	09-5792-OO97G	EPA 8270D-SIM	Diethylphthalate	25	ug/kg	B	U	7
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-200-010	09-5793-OO97H	EPA 8270D-SIM	Diethylphthalate	26	ug/kg	B	U	7
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-300-010	09-5794-OO97I	EPA 8270D-SIM	Diethylphthalate	29	ug/kg	B	U	7
OO97	EW09-SS-130-010	09-5795-OO97J	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-130-010	09-5795-OO97J	EPA 8270D-SIM	Diethylphthalate	15	ug/kg	B	U	7
OO97	EW09-SS-129-010	09-5796-OO97K	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-127-010	09-5797-OO97L	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-127-010	09-5797-OO97L	EPA 8270D-SIM	Diethylphthalate	17	ug/kg	B	U	7
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-122-010	09-5798-OO97M	EPA 8270D-SIM	Diethylphthalate	22	ug/kg	B	U	7
OO97	EW09-SS-119-010	09-5799-OO97N	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-119-010	09-5799-OO97N	EPA 8270D-SIM	Diethylphthalate	23	ug/kg	B	U	7
OO97	EW09-SS-120-010	09-5800-OO97O	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OO97	EW09-SS-120-010	09-5800-OO97O	EPA 8270D-SIM	Diethylphthalate	56	ug/kg	B	U	7
OO97	EW09-SS-132-010	09-5801-OO97P	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP22	EW09-SS-116-010	09-5937-OP22A	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP22	EW09-SS-116-010	09-5937-OP22A	EPA 6010B	Zinc	174	mg/kg		J	8
OP22	EW09-SS-301-010	09-5938-OP22B	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP22	EW09-SS-301-010	09-5938-OP22B	EPA 6010B	Zinc	165	mg/kg		J	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 6010B	Zinc	173	mg/kg		J	8
OP22	EW09-SS-113-010LR	09-5939-OP22CLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP22	EW09-SS-113-010LR	09-5939-OP22CLR	EPA 6010B	Zinc	176	mg/kg		J	8
OP22	EW09-SS-111-010	09-5940-OP22D	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP22	EW09-SS-111-010	09-5940-OP22D	EPA 6010B	Zinc	37	mg/kg		J	8
OP22	EW09-SS-109-010	09-5941-OP22E	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP22	EW09-SS-109-010	09-5941-OP22E	EPA 6010B	Zinc	218	mg/kg		J	8
OP22	EW09-SS-104-010	09-5942-OP22F	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP22	EW09-SS-104-010	09-5942-OP22F	EPA 6010B	Molybdenum		mg/kg	U	UJ	17
OP22	EW09-SS-104-010	09-5942-OP22F	EPA 6010B	Zinc	354	mg/kg		J	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	4,4'-DDD		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	4,4'-DDE		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	4,4'-DDT		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Dieldrin		ug/kg	Y	UJ	8,22
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Endosulfan I		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Endosulfan II		ug/kg	Y	UJ	8,22
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Endosulfan Sulfate		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Endrin		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Endrin Aldehyde		ug/kg	Y	UJ	8,22
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Endrin Ketone		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	UJ	8,22

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Hexachlorobutadiene		ug/kg	Y	U	22
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8081B	Methoxychlor		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Aldrin		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Dieldrin		ug/kg	Y	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Endrin		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Mirex		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22CDL	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP22	EW09-SS-116-010	09-5937-OP22A	EPA 8270D	Diethylphthalate	25	ug/kg	B	U	7
OP22	EW09-SS-116-010	09-5937-OP22A	EPA 8270D	N-Nitrosodimethylamine		ug/kg	U	R	11
OP22	EW09-SS-301-010	09-5938-OP22B	EPA 8270D	N-Nitrosodimethylamine		ug/kg	U	R	11
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8270D	Aniline		ug/kg	U	R	8
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8270D	N-Nitrosodimethylamine		ug/kg	U	R	11
OP22	EW09-SS-111-010	09-5940-OP22D	EPA 8270D	Diethylphthalate	27	ug/kg	B	U	7
OP22	EW09-SS-111-010	09-5940-OP22D	EPA 8270D	N-Nitrosodimethylamine		ug/kg	U	R	11
OP22	EW09-SS-109-010	09-5941-OP22E	EPA 8270D	N-Nitrosodimethylamine		ug/kg	U	R	11
OP22	EW09-SS-104-010	09-5942-OP22F	EPA 8270D	Diethylphthalate	34	ug/kg	B	U	7
OP22	EW09-SS-104-010	09-5942-OP22F	EPA 8270D	N-Nitrosodimethylamine		ug/kg	U	R	11
OP22	EW09-SS-116-010	09-5937-OP22A	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP22	EW09-SS-301-010	09-5938-OP22B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP22	EW09-SS-113-010	09-5939-OP22C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	8,10
OP22	EW09-SS-111-010	09-5940-OP22D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP22	EW09-SS-109-010	09-5941-OP22E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP22	EW09-SS-104-010	09-5942-OP22F	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP22	EW09-SS-113-010	09-5939-OP22C	PSEP, 1986	Coarse Silt	5.5	%		J	9
OP22	EW09-SS-113-010	09-5939-OP22C	PSEP, 1986	Medium Silt	7.6	%		J	9
OP22	EW09-SS-113-010LR	09-5939-OP22CLR	PSEP, 1986	Coarse Silt	2.3	%		J	9
OP22	EW09-SS-113-010LR	09-5939-OP22CLR	PSEP, 1986	Medium Silt	10.5	%		J	9
OP22	EW09-SS-113-010LT	09-5939-OP22CLT	PSEP, 1986	Coarse Silt	4.2	%		J	9
OP22	EW09-SS-113-010LT	09-5939-OP22CLT	PSEP, 1986	Medium Silt	5.5	%		J	9
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 6010B	Cadmium	2.5	mg/kg		J	9
OP33	EW09-SS-038-010LR	09-5969-OP33ALR	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-038-010LR	09-5969-OP33ALR	EPA 6010B	Cadmium	1.1	mg/kg		J	9
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 6010B	Cadmium	0.6	mg/kg		J	9
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 6010B	Cadmium	0.9	mg/kg		J	9
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 6010B	Cadmium	1.3	mg/kg		J	9
OP33	EW09-SS-114-010	09-6004-OP33E	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-114-010	09-6004-OP33E	EPA 6010B	Cadmium	0.6	mg/kg		J	9
OP33	EW09-SS-211-010	09-6009-OP33G	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-211-010	09-6009-OP33G	EPA 6010B	Cadmium		mg/kg	U	UJ	9
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 6010B	Cadmium		mg/kg	U	UJ	9
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 6010B	Molybdenum	0.8	mg/kg		J	17
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Aldrin		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Endrin		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Mirex		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP33	EW09-SS-038-010	09-5969-OP33ARE	EPA 8081B	beta-BHC		ug/kg	U	UJ	8
OP33	EW09-SS-038-010	09-5969-OP33ARE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Aldrin		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Endrin		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Mirex		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP33	EW09-SS-110-010	09-6003-OP33DRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8270D	Benzo(g,h,i)perylene	120	ug/kg		J	5B
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8270D	Indeno(1,2,3-cd)pyrene	120	ug/kg		J	5B
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	3-Nitroaniline		ug/kg	U	R	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	4-Nitroaniline		ug/kg	U	UJ	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	Aniline		ug/kg	U	R	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	Benzo(b)fluoranthene	250	ug/kg		J	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	Benzo(g,h,i)perylene	97	ug/kg		J	5B

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	Butylbenzylphthalate	190	ug/kg		J	8
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	Dibenz(a,h)anthracene	29	ug/kg		J	5B
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	Indeno(1,2,3-cd)pyrene	92	ug/kg		J	5B
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 8270D	1,4-Dichlorobenzene	3800	ug/kg	E	R	20
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 8270D	Benzo(g,h,i)perylene	96	ug/kg		J	5B
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 8270D	Dibenz(a,h)anthracene	36	ug/kg		J	5B
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 8270D	Indeno(1,2,3-cd)pyrene	98	ug/kg		J	5B
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Aniline		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Anthracene	120	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Benzo(a)anthracene	260	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Benzo(a)pyrene	290	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Benzo(b)fluoranthene	290	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Benzo(g,h,i)perylene	170	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Benzo(k)fluoranthene	350	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	860	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Carbazole		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Chrysene	430	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Fluoranthene	600	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Fluorene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	150	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Isophorone		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Phenanthrene	330	ug/kg		R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Phenol		ug/kg	U	R	11
OP33	EW09-SS-101-010	09-6002-OP33CDL	EPA 8270D	Pyrene	460	ug/kg		R	11
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8270D	Benzo(g,h,i)perylene	68	ug/kg		J	5B
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8270D	Dibenz(a,h)anthracene	28	ug/kg		J	5B
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8270D	Indeno(1,2,3-cd)pyrene	72	ug/kg		J	5B
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-114-010	09-6004-OP33E	EPA 8270D	Benzo(g,h,i)perylene	58	ug/kg		J	5B
OP33	EW09-SS-114-010	09-6004-OP33E	EPA 8270D	Dibenz(a,h)anthracene	18	ug/kg	J	J	5B
OP33	EW09-SS-114-010	09-6004-OP33E	EPA 8270D	Indeno(1,2,3-cd)pyrene	57	ug/kg		J	5B
OP33	EW09-SS-114-010	09-6004-OP33E	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-211-010	09-6009-OP33G	EPA 8270D	Benzo(g,h,i)perylene	66	ug/kg		J	5B
OP33	EW09-SS-211-010	09-6009-OP33G	EPA 8270D	Dibenz(a,h)anthracene	20	ug/kg		J	5B
OP33	EW09-SS-211-010	09-6009-OP33G	EPA 8270D	Indeno(1,2,3-cd)pyrene	63	ug/kg		J	5B
OP33	EW09-SS-211-010	09-6009-OP33G	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 8270D	Benzo(g,h,i)perylene	41	ug/kg		J	5B
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 8270D	Dibenz(a,h)anthracene	13	ug/kg	J	J	5B
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 8270D	Indeno(1,2,3-cd)pyrene	39	ug/kg		J	5B
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP33	EW09-SS-038-RB	09-6011-OP33I	EPA 8270D	N-Nitrosodimethylamine		ug/l	NA	R	11
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP33	EW09-SS-038-010	09-5969-OP33A	EPA 8270D-SIM	Diethylphthalate	31	ug/kg		J	5B
OP33	EW09-SS-100-010	09-5979-OP33B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 8270D-SIM	1,4-Dichlorobenzene	2300	ug/kg	E	J	20

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP33	EW09-SS-101-010	09-6002-OP33C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP33	EW09-SS-110-010	09-6003-OP33D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP33	EW09-SS-114-010	09-6004-OP33E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP33	EW09-SS-211-010	09-6009-OP33G	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	8,10
OP33	EW09-SS-219-010	09-6010-OP33H	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 376.2	Sulfide	1250	mg/kg		J	8
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 376.2	Sulfide	65.1	mg/kg		J	8
OP35	EW09-SS-302-010	09-5982-OP35C	EPA 376.2	Sulfide	91.6	mg/kg		J	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 376.2	Sulfide	257	mg/kg		J	8
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 376.2	Sulfide	179	mg/kg		J	8
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 376.2	Sulfide	696	mg/kg		J	8
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 376.2	Sulfide	219	mg/kg		J	8
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 376.2	Sulfide	163	mg/kg		J	8
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 376.2	Sulfide	86.9	mg/kg		J	8
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 376.2	Sulfide	97.5	mg/kg		J	8
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 376.2	Sulfide	280	mg/kg		J	8
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 376.2	Sulfide	106	mg/kg		J	8
OP35	EW09-SS-024-010	09-5992-OP35M	EPA 376.2	Sulfide	65.6	mg/kg		J	8
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 376.2	Sulfide	250	mg/kg		J	8
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 376.2	Sulfide	1030	mg/kg		J	8
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 376.2	Sulfide	23.5	mg/kg		J	8
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 376.2	Sulfide	1840	mg/kg		J	8
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 376.2	Sulfide	1290	mg/kg		J	8
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 376.2	Sulfide	7.15	mg/kg		J	8
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 376.2	Sulfide	92.0	mg/kg		J	8
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 376.2	Sulfide	5.39	mg/kg		J	8,9
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 6010B	Molybdenum		mg/kg	U	UJ	17
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-302-010	09-5982-OP35C	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 6010B	Silver	0.9	mg/kg		J	14
OP35	EW09-SS-036-010LR	09-5983-OP35DLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 6010B	Silver	1.0	mg/kg		J	14
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 6010B	Silver	0.7	mg/kg		J	14
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 6010B	Silver	0.8	mg/kg		J	14
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 6010B	Silver	0.7	mg/kg		J	14
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-024-010	09-5992-OP35M	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 6010B	Molybdenum		mg/kg	U	UJ	17

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 6010B	Molybdenum		mg/kg	U	UJ	17
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 6010B	Molybdenum		mg/kg	U	UJ	17
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 7471A	Mercury	0.4	mg/kg		J	8
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 7471A	Mercury	0.24	mg/kg		J	8
OP35	EW09-SS-302-010	09-5982-OP35C	EPA 7471A	Mercury	0.35	mg/kg		J	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 7471A	Mercury	0.42	mg/kg		J	8
OP35	EW09-SS-036-010LR	09-5983-OP35DLR	EPA 7471A	Mercury	0.37	mg/kg		J	8
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 7471A	Mercury	0.53	mg/kg		J	8
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 7471A	Mercury	0.47	mg/kg		J	8
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 7471A	Mercury	0.50	mg/kg		J	8
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 7471A	Mercury	0.45	mg/kg		J	8
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 7471A	Mercury	0.40	mg/kg		J	8
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 7471A	Mercury	0.5	mg/kg		J	8
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 7471A	Mercury	0.4	mg/kg		J	8
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 7471A	Mercury	0.32	mg/kg		J	8
OP35	EW09-SS-024-010	09-5992-OP35M	EPA 7471A	Mercury	0.31	mg/kg		J	8
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 7471A	Mercury	0.4	mg/kg		J	8
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 7471A	Mercury	0.75	mg/kg		J	8
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 7471A	Mercury	0.08	mg/kg		J	8
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 7471A	Mercury	0.20	mg/kg		J	8
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 7471A	Mercury	0.3	mg/kg		J	8
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 7471A	Mercury	0.16	mg/kg		J	8
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 7471A	Mercury	0.12	mg/kg		J	8
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 7471A	Mercury	0.18	mg/kg		J	8
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Aldrin		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Endrin		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Endrin Ketone		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Mirex		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-033-010	09-5986-OP35GRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Aldrin		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Endrin		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Mirex		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-030-010	09-5989-OP35JRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	4,4'-DDT		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Aldrin		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Endrin		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Mirex		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Aldrin		ug/kg	Y	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Endrin		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Mirex		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8081B	trans-Nonachlor	4.4	ug/kg		R	11
OP35	EW09-SS-013-010	09-5995-OP35PRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Aldrin		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Endrin		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Mirex		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-011-010	09-5996-OP35QRE	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Aldrin		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	delta-BHC		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Endrin		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Mirex		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 8082	Aroclor 1254	32	ug/kg	P	J	3
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 8082	Aroclor 1232		ug/kg	Y	U	22
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 8082	Aroclor 1232		ug/kg	Y	U	22
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 8270D	Benzo(g,h,i)perylene	140	ug/kg		J	5B
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 8270D	Dibenz(a,h)anthracene	62	ug/kg		J	5B
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 8270D	Indeno(1,2,3-cd)pyrene	140	ug/kg		J	5B
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 8270D	Benzo(g,h,i)perylene	60	ug/kg		J	5B
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 8270D	Dibenz(a,h)anthracene	21	ug/kg		J	5B
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 8270D	Indeno(1,2,3-cd)pyrene	53	ug/kg		J	5B
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-302-010	09-5982-OP35C	EPA 8270D	Benzo(g,h,i)perylene	42	ug/kg		J	5B
OP35	EW09-SS-302-010	09-5982-OP35C	EPA 8270D	Indeno(1,2,3-cd)pyrene	40	ug/kg		J	5B
OP35	EW09-SS-302-010	09-5982-OP35C	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	3-Nitroaniline		ug/kg	U	R	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	4-Nitroaniline		ug/kg	U	R	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	Aniline		ug/kg	U	R	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	Benzo(b)fluoranthene	140	ug/kg		J	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	Benzo(g,h,i)perylene	52	ug/kg		J	5B
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	Dibenz(a,h)anthracene	23	ug/kg		J	5B
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	Fluoranthene	160	ug/kg		J	8
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	Indeno(1,2,3-cd)pyrene	51	ug/kg		J	5B
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 8270D	Benzo(g,h,i)perylene	29	ug/kg		J	5B
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 8270D	Indeno(1,2,3-cd)pyrene	28	ug/kg		J	5B
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 8270D	Benzo(g,h,i)perylene	50	ug/kg		J	5B
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 8270D	Indeno(1,2,3-cd)pyrene	51	ug/kg		J	5B

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8270D	Benzo(g,h,i)perylene	43	ug/kg		J	5B
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8270D	Indeno(1,2,3-cd)pyrene	41	ug/kg		J	5B
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 8270D	Benzo(g,h,i)perylene	51	ug/kg		J	5B
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 8270D	Dibenz(a,h)anthracene	20	ug/kg		J	5B
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 8270D	Indeno(1,2,3-cd)pyrene	49	ug/kg		J	5B
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 8270D	Benzo(g,h,i)perylene	72	ug/kg		J	5B
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 8270D	Dibenz(a,h)anthracene	34	ug/kg		J	5B
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 8270D	Indeno(1,2,3-cd)pyrene	74	ug/kg		J	5B
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8270D	Benzo(g,h,i)perylene	48	ug/kg		J	5B
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8270D	Indeno(1,2,3-cd)pyrene	48	ug/kg		J	5B
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 8270D	Benzo(g,h,i)perylene	68	ug/kg		J	5B
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 8270D	Indeno(1,2,3-cd)pyrene	72	ug/kg		J	5B
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 8270D	Benzo(g,h,i)perylene	79	ug/kg		J	5B
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 8270D	Dibenz(a,h)anthracene	22	ug/kg		J	5B
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 8270D	Indeno(1,2,3-cd)pyrene	82	ug/kg		J	5B
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-024-010	09-5992-OP35M	EPA 8270D	Benzo(g,h,i)perylene	51	ug/kg		J	5B
OP35	EW09-SS-024-010	09-5992-OP35M	EPA 8270D	Indeno(1,2,3-cd)pyrene	53	ug/kg		J	5B
OP35	EW09-SS-024-010	09-5992-OP35M	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8270D	Benzo(g,h,i)perylene	75	ug/kg		J	5B
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8270D	Dibenz(a,h)anthracene	31	ug/kg		J	5B
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8270D	Indeno(1,2,3-cd)pyrene	76	ug/kg		J	5B
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D	4-Nitrophenol		ug/kg	U	UJ	5B
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D	Benzo(g,h,i)perylene	330	ug/kg		J	5B
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D	Dibenz(a,h)anthracene	140	ug/kg		J	5B
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D	Fluoranthene	1900	ug/kg	E	R	20
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D	Indeno(1,2,3-cd)pyrene	330	ug/kg		J	5B
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Acenaphthene	65	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Acenaphthylene	75	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Aniline		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Anthracene	410	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Benzo(a)anthracene	790	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Benzo(a)pyrene	780	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Benzo(b)fluoranthene	770	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Benzo(g,h,i)perylene	210	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Benzo(k)fluoranthene	1000	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	bis(2-Ethylhexyl)phthalate	240	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Carbazole	110	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Chrysene	1400	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Fluorene	97	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Indeno(1,2,3-cd)pyrene	240	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Isophorone		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Naphthalene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Phenanthrene	760	ug/kg		R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Phenol		ug/kg	U	R	11
OP35	EW09-SS-020-010	09-5994-OP35ODL	EPA 8270D	Pyrene	1600	ug/kg		R	11
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8270D	4-Nitrophenol		ug/kg	U	UJ	5B
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8270D	Benzo(g,h,i)perylene	230	ug/kg		J	5B
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8270D	4-Nitrophenol		ug/kg	U	UJ	5B
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8270D	Benzo(g,h,i)perylene	110	ug/kg		J	5B
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8270D	4-Nitrophenol		ug/kg	U	UJ	5B
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8270D	Benzo(g,h,i)perylene	140	ug/kg		J	5B
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D	4-Nitrophenol		ug/kg	U	UJ	5B
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D	Benzo(g,h,i)perylene	130	ug/kg		J	5B
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D	Diethylphthalate	27	ug/kg	B	U	7
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D	Fluoranthene	3700	ug/kg	E	R	20
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D	Pyrene	2300	ug/kg	E	R	20
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Aniline		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Anthracene	130	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Benzo(a)anthracene	550	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Benzo(a)pyrene	420	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Benzo(b)fluoranthene	650	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Benzo(g,h,i)perylene	150	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Benzo(k)fluoranthene	1000	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	300	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Carbazole		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Chrysene	1500	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Fluorene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	150	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Isophorone		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Phenanthrene	340	ug/kg		R	11
OP35	EW09-SS-005-010	09-5998-OP35SDL	EPA 8270D	Phenol		ug/kg	U	R	11
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 8270D	4-Nitrophenol		ug/kg	U	UJ	5B
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 8270D	Benzo(g,h,i)perylene	46	ug/kg		J	5B
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 8270D	Indeno(1,2,3-cd)pyrene	20	ug/kg		J	5B
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 8270D	N-Nitrosodimethylamine		ug/kg	NA	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP35	EW09-SS-102-RB	09-6001-OP35V	EPA 8270D	N-Nitrosodimethylamine		ug/l	NA	R	11
OP35	EW09-SS-027-010	09-5980-OP35A	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-102-010	09-5981-OP35B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-302-010	09-5982-OP35C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-036-010	09-5983-OP35D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	8
OP35	EW09-SS-034-010	09-5984-OP35E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-035-010	09-5985-OP35F	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-033-010	09-5986-OP35G	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-032-010	09-5987-OP35H	EPA 8270D-SIM	Diethylphthalate	34	ug/kg	B	U	7
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-031-010	09-5988-OP35I	EPA 8270D-SIM	Diethylphthalate	43	ug/kg	B	U	7
OP35	EW09-SS-030-010	09-5989-OP35J	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-029-010	09-5990-OP35K	EPA 8270D-SIM	Diethylphthalate	21	ug/kg	B	U	7
OP35	EW09-SS-025-010	09-5991-OP35L	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-024-010	09-5992-OP35M	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-023-010	09-5993-OP35N	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
OP35	EW09-SS-020-010	09-5994-OP35O	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-013-010	09-5995-OP35P	EPA 8270D-SIM	Diethylphthalate	41	ug/kg	B	U	7
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-011-010	09-5996-OP35Q	EPA 8270D-SIM	Diethylphthalate	53	ug/kg	B	U	7
OP35	EW09-SS-008-010	09-5997-OP35R	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-005-010	09-5998-OP35S	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-003-010	09-5999-OP35T	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP35	EW09-SS-001-010	09-6000-OP35U	EPA 8270D-SIM	Diethylphthalate	17	ug/kg	B	U	7
OP35	EW09-SS-102-RB	09-6001-OP35V	EPA 8270D-SIM	Benzyl Alcohol		ug/l	U	R	10
OP35	EW09-SS-036-010	09-5983-OP35D	Krone et al. 1989	Tributyltin Ion	39	ug/kg		J	8
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 6010B	Molybdenum	1.3	mg/kg		J	17
OP65	EW09-SS-014-010LR	09-6149-OP65BLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 6010B	Molybdenum	1.5	mg/kg		J	17
OP65	EW09-SS-019-010	09-6151-OP65D	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 6010B	Antimony		mg/kg	U	UJ	8
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 7471A	Mercury	0.44	mg/kg		J	9
OP65	EW09-SS-014-010LR	09-6149-OP65BLR	EPA 7471A	Mercury	0.16	mg/kg		J	9
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 7471A	Mercury	0.17	mg/kg		J	9
OP65	EW09-SS-019-010	09-6151-OP65D	EPA 7471A	Mercury	0.3	mg/kg		J	9
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 7471A	Mercury	0.09	mg/kg		J	9
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	4,4'-DDT		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Aldrin		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	beta-BHC		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	delta-BHC		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Dieldrin		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Endrin		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Heptachlor		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Mirex		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	Toxaphene		ug/kg	U	R	11
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OP65	EW09-SS-014-RB	09-6148-OP65A	EPA 8270D	bis(2-Ethylhexyl)phthalate	0.6	ug/l	JB	U	7
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 8270D	Benzo(g,h,i)perylene	81	ug/kg		J	5B
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 8270D	Dibenz(a,h)anthracene	35	ug/kg		J	5B
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 8270D	Indeno(1,2,3-cd)pyrene	82	ug/kg		J	5B
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	8
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 8270D	Aniline		ug/kg	U	R	8
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 8270D	Benzo(b)fluoranthene	190	ug/kg		J	8
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 8270D	Benzo(g,h,i)perylene	51	ug/kg		J	5B
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 8270D	Indeno(1,2,3-cd)pyrene	47	ug/kg		J	5B
OP65	EW09-SS-019-010	09-6151-OP65D	EPA 8270D	Benzo(g,h,i)perylene	84	ug/kg		J	5B
OP65	EW09-SS-019-010	09-6151-OP65D	EPA 8270D	Dibenz(a,h)anthracene	31	ug/kg		J	5B
OP65	EW09-SS-019-010	09-6151-OP65D	EPA 8270D	Indeno(1,2,3-cd)pyrene	92	ug/kg		J	5B
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8270D	Benzo(g,h,i)perylene	23	ug/kg		J	5B
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8270D	Indeno(1,2,3-cd)pyrene	23	ug/kg		J	5B
OP65	EW09-SS-014-RB	09-6148-OP65A	EPA 8270D-SIM	Benzyl Alcohol		ug/l	U	R	10
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP65	EW09-SS-014-010	09-6149-OP65B	EPA 8270D-SIM	Diethylphthalate	56	ug/kg	B	U	7
OP65	EW09-SS-126-010	09-6150-OP65C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP65	EW09-SS-019-010	09-6151-OP65D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP65	EW09-SS-019-010	09-6151-OP65D	EPA 8270D-SIM	Diethylphthalate	29	ug/kg	B	U	7
OP65	EW09-SS-021-010	09-6152-OP65E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
OP65	EW09-SS-014-RB	09-6148-OP65A	Krone et al. 1989	Butyltin Ion		ug/l	U	UJ	10
OQ68	CI09-SS-020-010	09-6624-OQ68A	EPA 376.2	Sulfide		mg/kg	U	UJ	8
OQ68	CI09-SS-020-010LR	09-6624-OQ68ALR	EPA 376.2	Sulfide		mg/kg	U	UJ	8

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
OQ68	CI09-SS-060-010	09-6625-OQ68B	EPA 376.2	Sulfide	54.5	mg/kg		J	8
OQ68	CI09-SS-080-010	09-6626-OQ68C	EPA 376.2	Sulfide		mg/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	4,4'-DDD		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	4,4'-DDE		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	Aldrin		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	alpha Chlordane		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	beta-BHC		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	delta-BHC		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	Dieldrin		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	Heptachlor		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	Heptachlor Epoxide		ug/kg	U	UJ	8
OQ77	EW09-SS-220-010	09-6653-OQ77A	EPA 8081B	Toxaphene		ug/kg	U	UJ	8
PD95	EW09-SS-017-010	09-14478-PD95A	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-026-010	09-14479-PD95B	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-040-010LR	09-14480-PD95CLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-037-010	09-14481-PD95D	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-103-010	09-14482-PD95E	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-112-010	09-14484-PD95G	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-133-010	09-14487-PD95J	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-108-010	09-14488-PD95K	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD95	EW09-SS-017-010	09-14478-PD95A	EPA 7471A	Mercury	0.25	mg/kg		J	8,9
PD95	EW09-SS-026-010	09-14479-PD95B	EPA 7471A	Mercury	0.28	mg/kg		J	8,9
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 7471A	Mercury	0.38	mg/kg		J	8,9
PD95	EW09-SS-040-010LR	09-14480-PD95CLR	EPA 7471A	Mercury	0.62	mg/kg		J	8,9
PD95	EW09-SS-037-010	09-14481-PD95D	EPA 7471A	Mercury	0.36	mg/kg		J	8,9
PD95	EW09-SS-103-010	09-14482-PD95E	EPA 7471A	Mercury	0.67	mg/kg		J	8,9
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 7471A	Mercury	0.55	mg/kg		J	8,9
PD95	EW09-SS-112-010	09-14484-PD95G	EPA 7471A	Mercury	0.40	mg/kg		J	8,9
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 7471A	Mercury	0.50	mg/kg		J	8,9
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 7471A	Mercury	0.48	mg/kg		J	8,9
PD95	EW09-SS-133-010	09-14487-PD95J	EPA 7471A	Mercury	0.27	mg/kg		J	8,9
PD95	EW09-SS-108-010	09-14488-PD95K	EPA 7471A	Mercury	0.11	mg/kg		J	8,9
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 7471A	Mercury	0.37	mg/kg		J	8,9
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 7471A	Mercury	0.44	mg/kg		J	8,9
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	4,4'-DDD		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	4,4'-DDE		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	Aldrin		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	Dieldrin		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	Endrin		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	Heptachlor		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8081B	trans-Nonachlor		ug/kg	Y	U	22

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	4,4'-DDE		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	Aldrin		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	alpha Chlordane		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	Dieldrin		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	Endrin		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	Heptachlor		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8081B	trans-Nonachlor		ug/kg	Y	U	22
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PD95	EW09-SS-103-010	09-14482-PD95E	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	2-Chlorophenol		ug/kg	Y	U	22
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	8
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	Aniline		ug/kg	U	R	8
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	Benzo(b)fluoranthene	390	ug/kg		J	8
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	Benzo(k)fluoranthene	390	ug/kg		J	8
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	8
PD95	EW09-SS-037-010	09-14481-PD95D	EPA 8270D	2-Chlorophenol		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D	2-Chlorophenol		ug/kg	Y	U	22
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D	Benzo(a)pyrene	440	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D	Benzo(b)fluoranthene	530	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D	Benzo(g,h,i)perylene	160	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D	Benzo(k)fluoranthene	530	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D	Dibenz(a,h)anthracene	64	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D	Indeno(1,2,3-cd)pyrene	170	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Anthracene	110	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Benzo(a)anthracene	240	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	460	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Carbazole		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Chrysene	440	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Fluoranthene	480	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Phenanthrene	220	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Phenol		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	EPA 8270D	Pyrene	1100	ug/kg		R	11
PD95	EW09-SS-112-010	09-14484-PD95G	EPA 8270D	2-Chlorophenol		ug/kg	Y	U	22
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8270D	Benzo(a)pyrene	530	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8270D	Benzo(b)fluoranthene	620	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8270D	Benzo(g,h,i)perylene	210	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8270D	Benzo(k)fluoranthene	620	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8270D	Dibenz(a,h)anthracene	80	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8270D	Indeno(1,2,3-cd)pyrene	220	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Anthracene	140	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Benzo(a)anthracene	290	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	580	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Carbazole		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Chrysene	520	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Fluoranthene	430	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Phenanthrene	230	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Phenol	99	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95HDL	EPA 8270D	Pyrene	1200	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D	Benzo(a)pyrene	390	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D	Benzo(b)fluoranthene	430	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D	Benzo(g,h,i)perylene	160	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D	Benzo(k)fluoranthene	430	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D	Dibenz(a,h)anthracene	60	ug/kg		J	19
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D	Indeno(1,2,3-cd)pyrene	160	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Anthracene	86	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Benzo(a)anthracene	170	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	870	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Carbazole		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Chrysene	270	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Fluoranthene	360	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Phenanthrene	200	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Phenol		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95IDL	EPA 8270D	Pyrene	1300	ug/kg		R	11
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8270D	Benzo(a)pyrene	74	ug/kg		R	11
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8270D	Benzo(b)fluoranthene	85	ug/kg		R	11
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8270D	Benzo(g,h,i)perylene	27	ug/kg		J	19
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8270D	Benzo(k)fluoranthene	85	ug/kg		R	11
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	UJ	19
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8270D	Indeno(1,2,3-cd)pyrene	24	ug/kg		J	19
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Anthracene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Benzo(a)anthracene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Benzo(g,h,i)perylene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Carbazole		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Chrysene	77	ug/kg		R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Fluoranthene	130	ug/kg		R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Indeno(1,2,3-cd)pyrene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Phenanthrene	61	ug/kg		R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Phenol		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95LDL	EPA 8270D	Pyrene	260	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D	Benzo(a)pyrene	280	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D	Benzo(b)fluoranthene	320	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D	Benzo(g,h,i)perylene	120	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D	Benzo(k)fluoranthene	320	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D	Dibenz(a,h)anthracene	34	ug/kg		J	19
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D	Indeno(1,2,3-cd)pyrene	120	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Anthracene	71	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Benzo(a)anthracene	130	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	690	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Carbazole		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Chrysene	200	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Fluoranthene	240	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Phenanthrene	150	ug/kg		R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Phenol		ug/kg	U	R	11
PD95	EW09-SS-121-010	09-14490-PD95MDL	EPA 8270D	Pyrene	800	ug/kg		R	11
PD95	EW09-SS-017-010	09-14478-PD95A	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-017-010	09-14478-PD95A	EPA 8270D-SIM	Diethylphthalate	16	ug/kg	B	U	7
PD95	EW09-SS-026-010	09-14479-PD95B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-026-010	09-14479-PD95B	EPA 8270D-SIM	Diethylphthalate	16	ug/kg	B	U	7
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-040-010	09-14480-PD95C	EPA 8270D-SIM	Diethylphthalate	40	ug/kg	B	U	7
PD95	EW09-SS-037-010	09-14481-PD95D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-037-010	09-14481-PD95D	EPA 8270D-SIM	Diethylphthalate	27	ug/kg	B	U	7
PD95	EW09-SS-103-010	09-14482-PD95E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-105-010	09-14483-PD95F	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-112-010	09-14484-PD95G	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-304-010	09-14485-PD95H	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-115-010	09-14486-PD95I	EPA 8270D-SIM	Diethylphthalate	30	ug/kg	B	U	7
PD95	EW09-SS-133-010	09-14487-PD95J	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-133-010	09-14487-PD95J	EPA 8270D-SIM	Diethylphthalate	24	ug/kg	B	U	7
PD95	EW09-SS-108-010	09-14488-PD95K	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-108-010	09-14488-PD95K	EPA 8270D-SIM	Diethylphthalate	24	ug/kg	B	U	7
PD95	EW09-SS-118-010	09-14489-PD95L	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PD95	EW09-SS-121-010	09-14490-PD95M	EPA 8270D-SIM	Diethylphthalate	18	ug/kg	B	U	7
PD95	EW09-SS-105-010	09-14483-PD95FDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	Krone et al. 1989	Dibutyltin Ion	17	ug/kg		R	11
PD95	EW09-SS-105-010	09-14483-PD95FDL	Krone et al. 1989	Tributyltin Ion	94	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD95	EW09-SS-304-010	09-14485-PD95H	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-304-010	09-14485-PD95H	Krone et al. 1989	Dibutyltin Ion	18	ug/kg		R	11
PD95	EW09-SS-304-010	09-14485-PD95H	Krone et al. 1989	Tributyltin Ion	130	ug/kg		R	11
PD95	EW09-SS-115-010	09-14486-PD95I	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95I	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-115-010	09-14486-PD95I	Krone et al. 1989	Tributyltin Ion	53	ug/kg		R	11
PD95	EW09-SS-133-010	09-14487-PD95J	Krone et al. 1989	Tributyltin Ion	610	ug/kg	E	R	20
PD95	EW09-SS-133-010	09-14487-PD95JDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-133-010	09-14487-PD95JDL	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95L	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95L	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PD95	EW09-SS-118-010	09-14489-PD95L	Krone et al. 1989	Tributyltin Ion	14	ug/kg		R	11
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 376.2	Sulfide	25.7	mg/kg		J	8,9
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 376.2	Sulfide	133	mg/kg		J	8,9
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 376.2	Sulfide	440	mg/kg		J	8,9
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 376.2	Sulfide	1500	mg/kg		J	8,9
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 376.2	Sulfide	1790	mg/kg		J	8,9
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 376.2	Sulfide	745	mg/kg		J	8,9
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 376.2	Sulfide	204	mg/kg		J	8,9
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 376.2	Sulfide	466	mg/kg		J	8,9
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 376.2	Sulfide	552	mg/kg		J	8,9
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 376.2	Sulfide	49.2	mg/kg		J	8,9
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	EPA 376.2	Sulfide	33.7	mg/kg		J	8,9
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 6010B	Cobalt	4.3	mg/kg		J	9
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 6010B	Copper	18.2	mg/kg		J	9
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 6010B	Lead	5	mg/kg		J	9
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 6010B	Molybdenum		mg/kg	U	UJ	9
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 6010B	Zinc	29	mg/kg		J	9
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 6010B	Cobalt	5.1	mg/kg		J	9
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 6010B	Copper	50.8	mg/kg		J	9
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 6010B	Lead	66	mg/kg		J	9
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 6010B	Molybdenum	1.4	mg/kg		J	9
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 6010B	Zinc	84	mg/kg		J	9
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 6010B	Cobalt	5.8	mg/kg		J	9
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 6010B	Copper	63.8	mg/kg		J	9
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 6010B	Lead	81	mg/kg		J	9
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 6010B	Molybdenum	1.7	mg/kg		J	9
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 6010B	Zinc	104	mg/kg		J	9
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 6010B	Cobalt	12.0	mg/kg		J	9
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 6010B	Copper	272	mg/kg		J	9
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 6010B	Lead	171	mg/kg		J	9
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 6010B	Molybdenum	4	mg/kg		J	9
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 6010B	Zinc	434	mg/kg		J	9
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 6010B	Cobalt	6	mg/kg		J	9

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 6010B	Copper	1270	mg/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 6010B	Lead	88	mg/kg		J	9
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 6010B	Molybdenum	4	mg/kg		J	9
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 6010B	Zinc	235	mg/kg		J	9
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 6010B	Cobalt	6.6	mg/kg		J	9
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 6010B	Copper	38.6	mg/kg		J	9
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 6010B	Lead	35	mg/kg		J	9
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 6010B	Molybdenum	2.7	mg/kg		J	9
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 6010B	Zinc	94	mg/kg		J	9
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 6010B	Antimony	7	mg/kg		J	8
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 6010B	Cobalt	6.8	mg/kg		J	9
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 6010B	Copper	49.7	mg/kg		J	9
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 6010B	Lead	31	mg/kg		J	9
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 6010B	Molybdenum	3.1	mg/kg		J	9
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 6010B	Zinc	136	mg/kg		J	9
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 6010B	Cobalt	11.8	mg/kg		J	9
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 6010B	Copper	127	mg/kg		J	9
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 6010B	Lead	71	mg/kg		J	9
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 6010B	Molybdenum	2	mg/kg		J	9
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 6010B	Zinc	182	mg/kg		J	9
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 6010B	Cobalt	13.2	mg/kg		J	9
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 6010B	Copper	139	mg/kg		J	9
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 6010B	Lead	80	mg/kg		J	9
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 6010B	Molybdenum	2	mg/kg		J	9
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 6010B	Zinc	206	mg/kg		J	9
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 6010B	Cobalt	5.5	mg/kg		J	9
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 6010B	Copper	35.7	mg/kg		J	9
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 6010B	Lead	18	mg/kg		J	9
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 6010B	Molybdenum	0.8	mg/kg		J	9
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 6010B	Zinc	79	mg/kg		J	9
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	EPA 6010B	Cobalt	7.8	mg/kg		J	9
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	EPA 6010B	Copper	49.4	mg/kg		J	9
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	EPA 6010B	Lead	41	mg/kg		J	9
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	EPA 6010B	Molybdenum	3.0	mg/kg		J	9
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	EPA 6010B	Zinc	173	mg/kg		J	9
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 8081B	Dieldrin		ug/kg	Y	U	22
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 8270D	Pyrene	1700	ug/kg	E	R	20
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Acenaphthene	91	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Anthracene	250	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Benzo(a)anthracene	450	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Benzo(a)pyrene	800	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Benzo(b)fluoranthene	820	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Benzo(g,h,i)perylene	140	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Benzo(k)fluoranthene	820	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	130	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Carbazole	74	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Chrysene	750	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Dibenz(a,h)anthracene	68	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Dibenzofuran	60	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Diethylphthalate	60	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Fluoranthene	850	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Fluorene	85	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	160	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Naphthalene	120	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Phenanthrene	390	ug/kg		R	11
PD97	EW09-SS-214-010	09-14499-PD97CDL	EPA 8270D	Phenol	210	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 8270D	Pyrene	1600	ug/kg	E	R	20
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Acenaphthene	190	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Anthracene	360	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Benzo(a)anthracene	690	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Benzo(a)pyrene	980	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Benzo(b)fluoranthene	1100	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Benzo(g,h,i)perylene	200	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Benzo(k)fluoranthene	880	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	92	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Carbazole	100	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Chrysene	1000	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Dibenz(a,h)anthracene	75	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Dibenzofuran	68	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Fluoranthene	1200	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Fluorene	120	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	220	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Naphthalene	96	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Phenanthrene	770	ug/kg		R	11
PD97	EW09-SS-213-010	09-14501-PD97EDL	EPA 8270D	Phenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 8270D	Benzo(a)anthracene	2200	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 8270D	Chrysene	3200	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 8270D	Pyrene	3000	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Acenaphthene	480	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Anthracene	1200	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Benzo(a)pyrene	3000	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Benzo(b)fluoranthene	3600	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Benzo(g,h,i)perylene	690	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Benzo(k)fluoranthene	2600	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	640	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Carbazole	310	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Fluoranthene	4300	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Fluorene	330	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	730	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Phenanthrene	2400	ug/kg		R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D	Phenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Anthracene	4800	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Benzo(a)anthracene	6500	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Benzo(a)pyrene	6000	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Benzo(b)fluoranthene	4800	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Benzo(k)fluoranthene	4800	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Chrysene	6500	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Fluoranthene	11000	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	Y	U	22
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Phenanthrene	13000	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D	Pyrene	8700	ug/kg	E	R	20
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	1-Methylnaphthalene	3000	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2-Methylnaphthalene	3100	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Acenaphthene	3000	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Aniline		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Benzo(g,h,i)perylene	4100	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Carbazole	2300	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Dibenz(a,h)anthracene	720	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Dibenzofuran	1100	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Fluorene	4100	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	3500	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Naphthalene	3400	ug/kg		R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D	Phenol		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 8270D	Aniline		ug/kg	U	UJ	10
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	8
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D	Aniline		ug/kg	U	UJ	8,10
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D	Benzo(g,h,i)perylene	37	ug/kg		J	9
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	UJ	8
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D	Indeno(1,2,3-cd)pyrene	38	ug/kg		J	9
PD97	EW09-SS-223-010	09-14497-PD97A	EPA 8270D-SIM	Diethylphthalate	32	ug/kg	B	U	7
PD97	EW09-SS-214-010	09-14499-PD97C	EPA 8270D-SIM	Diethylphthalate	34	ug/kg	B	U	7
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 8270D-SIM	Diethylphthalate	27	ug/kg	B	U	7
PD97	EW09-SS-213-010	09-14501-PD97E	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
PD97	EW09-SS-215-010	09-14505-PD97I	EPA 8270D-SIM	Diethylphthalate	43	ug/kg	B	U	7
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-215-010	09-14505-PD97IDL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D-SIM	Diethylphthalate	46	ug/kg	B	U	7
PD97	EW09-SS-018-010	09-14506-PD97J	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	R	11
PD97	EW09-SS-018-010	09-14506-PD97JDL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97K	EPA 8270D-SIM	Diethylphthalate	100	ug/kg	B	U	7
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	Diethylphthalate	110	ug/kg	B	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-016-010	09-14507-PD97KDL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97L	EPA 8270D-SIM	Diethylphthalate	45	ug/kg	B	U	7
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-022-010	09-14508-PD97LDL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97M	EPA 8270D-SIM	Diethylphthalate	59	ug/kg	B	U	7
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	1,4-Dichlorobenzene	33	ug/kg		R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	Diethylphthalate	67	ug/kg	B	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-028-010	09-14509-PD97MDL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97N	EPA 8270D-SIM	Diethylphthalate	42	ug/kg	B	U	7
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	1,4-Dichlorobenzene	24	ug/kg		R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-303-010	09-14510-PD97NDL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D-SIM	Diethylphthalate	15	ug/kg	B	U	7
PD97	EW09-SS-039-010	09-14511-PD97O	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	8
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	Diethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97ODL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PD97	EW09-SS-039-010	09-14511-PD97O	PSEP, 1986	Gravel	1.6	%		J	9
PD97	EW09-SS-039-010LR	09-14511-PD97OLR	PSEP, 1986	Gravel	5.9	%		J	9
PD97	EW09-SS-039-010LT	09-14511-PD97OLT	PSEP, 1986	Gravel	13.4	%		J	9
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 376.2	Sulfide	4.95	mg/kg		J	9
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 376.2	Sulfide		mg/kg	U	UJ	9
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 376.2	Sulfide	656	mg/kg		J	9
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 376.2	Sulfide	260	mg/kg		J	9
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 376.2	Sulfide	156	mg/kg		J	9
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 376.2	Sulfide	232	mg/kg		J	9
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 376.2	Sulfide	752	mg/kg		J	9
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 376.2	Sulfide	1990	mg/kg		J	9
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 376.2	Sulfide	2770	mg/kg		J	9
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 376.2	Sulfide	604	mg/kg		J	9
PE07	EW09-SS-206-010LR	09-14578-PE07JLR	EPA 376.2	Sulfide	457	mg/kg		J	9
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 6010B	Zinc	233	mg/kg		J	8
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 6010B	Zinc	52	mg/kg		J	8
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 6010B	Zinc	148	mg/kg		J	8
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 6010B	Zinc	31	mg/kg		J	8
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 6010B	Zinc	89	mg/kg		J	8
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 6010B	Zinc	1230	mg/kg		J	8
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 6010B	Zinc	85	mg/kg		J	8
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 6010B	Zinc	108	mg/kg		J	8
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 6010B	Zinc	89	mg/kg		J	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 6010B	Zinc	147	mg/kg		J	8
PE07	EW09-SS-206-010LR	09-14578-PE07JLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE07	EW09-SS-206-010LR	09-14578-PE07JLR	EPA 6010B	Zinc	177	mg/kg		J	8
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 7471A	Mercury	0.06	mg/kg		J	8,9
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 7471A	Mercury	0.07	mg/kg		J	8,9
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 7471A	Mercury	0.20	mg/kg		J	8,9
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 7471A	Mercury	0.02	mg/kg		J	8,9
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 7471A	Mercury	0.11	mg/kg		J	8,9

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 7471A	Mercury	0.53	mg/kg		J	8,9
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 7471A	Mercury	0.08	mg/kg		J	8,9
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 7471A	Mercury	0.21	mg/kg		J	8,9
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 7471A	Mercury	0.26	mg/kg		J	8,9
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 7471A	Mercury	0.16	mg/kg		J	8,9
PE07	EW09-SS-206-010LR	09-14578-PE07JLR	EPA 7471A	Mercury	0.42	mg/kg		J	8,9
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8081B	Aldrin		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	4,4'-DDD	8.6	ug/kg		J	19
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	4,4'-DDE		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	Aldrin		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	Dieldrin		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	Endrin Ketone		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	gamma-BHC (Lindane)		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	Mirex		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8081B	trans-Nonachlor		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	4,4'-DDD	11	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Aldrin		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	alpha-BHC		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	beta-BHC		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	delta-BHC		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Dieldrin		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Endosulfan I		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Endosulfan II		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Endrin		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Heptachlor		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Methoxychlor		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Mirex		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	Toxaphene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8081B	4,4'-DDD	6.2	ug/kg	P	J	3,19
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8081B	Mirex		ug/kg	Y	U	22
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8081B	trans-Nonachlor		ug/kg	Y	U	22
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	4,4'-DDD	9.5	ug/kg	J	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Aldrin		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	alpha-BHC		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	beta-BHC		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	delta-BHC		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Dieldrin		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Endosulfan I		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Endosulfan II		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Endrin		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Heptachlor		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Methoxychlor		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Mirex		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	Toxaphene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8081B	4,4'-DDT		ug/kg	Y	UJ	8,22
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8081B	Aldrin		ug/kg	Y	UJ	8,22
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8081B	Endrin		ug/kg	Y	U	22
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8081B	Endrin Ketone		ug/kg	Y	U	22
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8081B	Mirex		ug/kg	Y	U	22
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8081B	trans-Nonachlor		ug/kg	Y	U	22
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 8270D	Phenol	42	ug/kg	M	NJ	14
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Benzo(a)anthracene	170	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Benzo(a)pyrene	440	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Benzo(b)fluoranthene	420	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Benzo(g,h,i)perylene	110	ug/kg		J	19
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Benzo(k)fluoranthene	420	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	bis(2-Ethylhexyl)phthalate	440	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Chrysene	170	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Dibenz(a,h)anthracene	41	ug/kg		J	19
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Fluoranthene	1600	ug/kg	E	R	20
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Indeno(1,2,3-cd)pyrene	130	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Phenol	82	ug/kg	M	NJ	13,14
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D	Pyrene	730	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Aniline		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Anthracene	140	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Benzo(g,h,i)perylene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Carbazole		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Phenanthrene	370	ug/kg		R	11
PE07	EW09-SS-009-010	09-14571-PE07CDL	EPA 8270D	Phenol		ug/kg	U	R	11
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Benzo(a)anthracene	200	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Benzo(a)pyrene	700	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Benzo(b)fluoranthene	580	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Benzo(g,h,i)perylene	130	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Benzo(k)fluoranthene	580	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	bis(2-Ethylhexyl)phthalate	230	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Chrysene	1500	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Dibenz(a,h)anthracene	58	ug/kg		J	19
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Fluoranthene	3800	ug/kg	E	R	20
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Indeno(1,2,3-cd)pyrene	170	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Phenanthrene	3400	ug/kg	E	R	20
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D	Pyrene	1500	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	1-Methylnaphthalene	110	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2-Methylnaphthalene	140	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Acenaphthene	240	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Aniline		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Anthracene	260	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Carbazole	220	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Dibenzofuran	340	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Fluorene	290	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Naphthalene	180	ug/kg		R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE07	EW09-SS-015-010	09-14573-PE07EDL	EPA 8270D	Phenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Benzo(a)anthracene	630	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Benzo(a)pyrene	1000	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Benzo(b)fluoranthene	710	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Benzo(g,h,i)perylene	100	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Benzo(k)fluoranthene	710	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	bis(2-Ethylhexyl)phthalate	440	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Chrysene	740	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Dibenz(a,h)anthracene	40	ug/kg		J	19
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Fluoranthene	2100	ug/kg	E	R	20
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Indeno(1,2,3-cd)pyrene	120	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Phenol	76	ug/kg	M	NJ	13,14
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D	Pyrene	1700	ug/kg	E	R	20
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Aniline		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Anthracene	200	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Carbazole	130	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Di-n-Butylphthalate	190	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Phenanthrene	510	ug/kg		R	11
PE07	EW09-SS-107-010	09-14574-PE07FDL	EPA 8270D	Phenol		ug/kg	U	R	11
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Aniline		ug/kg	U	R	10
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Anthracene	2200	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Benzo(a)anthracene	3100	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Benzo(a)pyrene	3100	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Benzo(b)fluoranthene	2900	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Benzo(g,h,i)perylene	380	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Benzo(k)fluoranthene	2900	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	bis(2-Ethylhexyl)phthalate	260	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Chrysene	4600	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Dibenz(a,h)anthracene	140	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Di-n-Octyl phthalate	58	ug/kg		J	19
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Fluoranthene	7600	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Indeno(1,2,3-cd)pyrene	570	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Phenanthrene	3700	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D	Pyrene	4000	ug/kg	E	R	20
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Acenaphthene	480	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Aniline		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Carbazole	540	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Dibenzofuran	260	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Fluorene	620	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D	Phenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Aniline		ug/kg	U	R	10

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Benzo(a)anthracene	2100	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Benzo(a)pyrene	2900	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Benzo(b)fluoranthene	1900	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Benzo(g,h,i)perylene	250	ug/kg		R	11
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Benzo(k)fluoranthene	1900	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	bis(2-Ethylhexyl)phthalate	430	ug/kg		R	11
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Chrysene	2600	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Dibenz(a,h)anthracene	85	ug/kg		J	19
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Fluoranthene	5100	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Indeno(1,2,3-cd)pyrene	350	ug/kg		R	11
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Phenanthrene	2000	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D	Pyrene	3200	ug/kg	E	R	20
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Acenaphthene	320	ug/kg		R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Aniline		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Anthracene	1300	ug/kg		R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Carbazole	270	ug/kg		R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Fluorene	430	ug/kg		R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07IDL	EPA 8270D	Phenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Acenaphthene	2200	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Acenaphthylene	130	ug/kg		J	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Aniline		ug/kg	U	R	8,10
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Anthracene	2400	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Benzo(a)anthracene	2400	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Benzo(a)pyrene	1700	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Benzo(b)fluoranthene	2000	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Benzo(k)fluoranthene	2000	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	bis(2-Ethylhexyl)phthalate	420	ug/kg		R	11
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Carbazole	410	ug/kg		J	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Chrysene	3500	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Dibenzofuran	1000	ug/kg		J	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Fluoranthene	9500	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Fluorene	1700	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	8
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Phenanthrene	5900	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Phenol	74	ug/kg	M	NJ	13,14
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D	Pyrene	5400	ug/kg	E	R	20
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Aniline		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Benzo(a)pyrene	2300	ug/kg		J	9
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Benzo(g,h,i)perylene	460	ug/kg		R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Carbazole	440	ug/kg		R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Dibenzofuran	840	ug/kg		R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Fluorene	1400	ug/kg		J	8,9
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	490	ug/kg		R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE07	EW09-SS-206-010	09-14578-PE07JDL	EPA 8270D	Phenol		ug/kg	U	R	11
PE07	EW09-SS-222-010	09-14569-PE07A	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-221-010	09-14570-PE07B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-009-010	09-14571-PE07C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-012-010	09-14572-PE07D	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
PE07	EW09-SS-015-010	09-14573-PE07E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-107-010	09-14574-PE07F	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-106-010	09-14575-PE07G	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-208-010	09-14576-PE07H	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	1,4-Dichlorobenzene	18	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	2,4-Dimethylphenol	18	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	Butylbenzylphthalate	150	ug/kg		R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	Diethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE07	EW09-SS-208-010	09-14576-PE07HDL	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
PE07	EW09-SS-305-010	09-14577-PE07I	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE07	EW09-SS-206-010	09-14578-PE07J	EPA 8270D-SIM	Butylbenzylphthalate	82	ug/kg		J	9
PE07	EW09-SS-222-RB	09-14579-PE07K	EPA 8270D-SIM	Benzyl Alcohol		ug/l	U	R	10
PE07	EW09-SS-107-010	09-14574-PE07F	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	UJ	8
PE07	EW09-SS-222-RB	09-14579-PE07KDL	Krone et al. 1989	Butyltin Ion		ug/l	U	R	11
PE07	EW09-SS-222-RB	09-14579-PE07KDL	Krone et al. 1989	Dibutyltin Ion		ug/l	U	R	11
PE07	EW09-SS-222-RB	09-14579-PE07KDL	Krone et al. 1989	Tributyltin Ion		ug/l	U	R	11
PE07	EW09-SS-206-010LR	09-14578-PE07JLR	PLUMB,1981	Total Organic Carbon	1.55	%		J	8
PE07	EW09-SS-206-010LT	09-14578-PE07JLT	PLUMB,1981	Total Organic Carbon	1.16	%		J	8
PE07	EW09-SS-206-010	09-14578-PE07J	PSEP, 1986	Coarse Silt	8.7	%		J	9
PE07	EW09-SS-206-010LR	09-14578-PE07JLR	PSEP, 1986	Coarse Silt	2.9	%		J	9
PE07	EW09-SS-206-010LT	09-14578-PE07JLT	PSEP, 1986	Coarse Silt	6.0	%		J	9
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 376.2	Sulfide	4.90	mg/kg		J	9
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 376.2	Sulfide	60.4	mg/kg		J	9
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 376.2	Sulfide	108	mg/kg		J	9
PE14	EW09-SS-212-010	09-14616-PE14E	EPA 376.2	Sulfide	7.88	mg/kg		J	9
PE14	EW09-SS-209-010	09-14617-PE14F	EPA 376.2	Sulfide		mg/kg	U	UJ	9
PE14	EW09-SS-201-010	09-14618-PE14G	EPA 376.2	Sulfide	50.2	mg/kg		J	9

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE14	EW09-SS-134-010	09-14619-PE14H	EPA 376.2	Sulfide	4.74	mg/kg		J	9
PE14	EW09-SS-131-010	09-14620-PE14I	EPA 376.2	Sulfide	126	mg/kg		J	9
PE14	EW09-SS-128-010	09-14621-PE14J	EPA 376.2	Sulfide	89.3	mg/kg		J	8,9
PE14	EW09-SS-128-010LR	09-14621-PE14JLR	EPA 376.2	Sulfide	72.3	mg/kg		J	8,9
PE14	EW09-SS-125-010	09-14622-PE14K	EPA 376.2	Sulfide	10.7	mg/kg		J	9
PE14	EW09-SS-124-010	09-14623-PE14L	EPA 376.2	Sulfide	341	mg/kg		J	9
PE14	EW09-SS-123-010	09-14624-PE14M	EPA 376.2	Sulfide	239	mg/kg		J	9
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-212-010	09-14616-PE14E	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-209-010	09-14617-PE14F	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-201-010	09-14618-PE14G	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-134-010	09-14619-PE14H	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-131-010	09-14620-PE14I	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-128-010	09-14621-PE14J	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-125-010	09-14622-PE14K	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-124-010	09-14623-PE14L	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-123-010	09-14624-PE14M	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8081B	4,4'-DDE		ug/kg	Y	U	22
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8081B	Dieldrin		ug/kg	Y	U	22
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8081B	Endrin		ug/kg	Y	U	22
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
PE14	EW09-SS-123-010	09-14624-PE14M	EPA 8081B	Dieldrin		ug/kg	Y	U	22
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1016		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1221		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1232		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1242		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1248		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1254		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1260		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1262		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8082	Aroclor 1268		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1016		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1221		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1232		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1242		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1248		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1254		ug/kg	Y	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1260	1100	ug/kg		R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1262		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8082	Aroclor 1268		ug/kg	U	R	11
PE14	EW09-SS-209-010	09-14617-PE14F	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-201-010	09-14618-PE14G	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-134-010	09-14619-PE14H	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-131-010	09-14620-PE14I	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-128-010	09-14621-PE14J	EPA 8082	Aroclor 1254		ug/kg	Y	U	22

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE14	EW09-SS-125-010	09-14622-PE14K	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-124-010	09-14623-PE14L	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-123-010	09-14624-PE14M	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	8
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 8270D	Aniline		ug/kg	U	R	8,10
PE14	EW09-SS-210-010	09-14613-PE14B	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-205-010	09-14614-PE14C	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-203-010	09-14615-PE14D	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-212-010	09-14616-PE14E	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-212-010	09-14616-PE14E	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-209-010	09-14617-PE14F	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-209-010	09-14617-PE14F	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-201-010	09-14618-PE14G	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-201-010	09-14618-PE14G	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-134-010	09-14619-PE14H	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-134-010	09-14619-PE14H	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-131-010	09-14620-PE14I	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-131-010	09-14620-PE14I	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-128-010	09-14621-PE14J	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-128-010	09-14621-PE14J	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-125-010	09-14622-PE14K	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-125-010	09-14622-PE14K	EPA 8270D	Benzyl Alcohol	38	ug/kg		J	5B
PE14	EW09-SS-124-010	09-14623-PE14L	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-124-010	09-14623-PE14L	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-123-010	09-14624-PE14M	EPA 8270D	Aniline		ug/kg	U	UJ	10
PE14	EW09-SS-123-010	09-14624-PE14M	EPA 8270D	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-125-010	09-14622-PE14K	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-124-010	09-14623-PE14L	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-123-010	09-14624-PE14M	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	UJ	5B
PE14	EW09-SS-210-RB	09-14612-PE14ADL	Krone et al. 1989	Butyltin Ion		ug/l	U	R	11
PE14	EW09-SS-210-RB	09-14612-PE14ADL	Krone et al. 1989	Dibutyltin Ion		ug/l	U	R	11
PE14	EW09-SS-210-RB	09-14612-PE14ADL	Krone et al. 1989	Tributyltin Ion		ug/l	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14C	Krone et al. 1989	Tributyltin Ion	7.8	ug/kg		J	13
PE14	EW09-SS-205-010	09-14614-PE14CDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14CDL	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-205-010	09-14614-PE14CDL	Krone et al. 1989	Tributyltin Ion	6.9	ug/kg		R	11
PE14	EW09-SS-203-010	09-14615-PE14D	Krone et al. 1989	Tributyltin Ion	5.5	ug/kg		J	13
PE14	EW09-SS-203-010	09-14615-PE14DDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14DDL	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-203-010	09-14615-PE14DDL	Krone et al. 1989	Tributyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-212-010	09-14616-PE14EDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-212-010	09-14616-PE14EDL	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-212-010	09-14616-PE14EDL	Krone et al. 1989	Tributyltin Ion	18	ug/kg		R	11
PE14	EW09-SS-201-010	09-14618-PE14GDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-201-010	09-14618-PE14GDL	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE14	EW09-SS-201-010	09-14618-PE14GDL	Krone et al. 1989	Tributyltin Ion	30	ug/kg		R	11
PE14	EW09-SS-124-010	09-14623-PE14L	Krone et al. 1989	Tributyltin Ion	330	ug/kg	E	R	20
PE14	EW09-SS-124-010	09-14623-PE14LDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-124-010	09-14623-PE14LDL	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PE14	EW09-SS-210-010	09-14613-PE14B	PLUMB,1981	Total Organic Carbon	0.755	%		J	8
PE14	EW09-SS-210-010LR	09-14613-PE14BLR	PLUMB,1981	Total Organic Carbon	0.849	%		J	8
PE14	EW09-SS-210-010LT	09-14613-PE14BLT	PLUMB,1981	Total Organic Carbon	0.788	%		J	8
PE14	EW09-SS-205-010	09-14614-PE14C	PLUMB,1981	Total Organic Carbon	0.942	%		J	8
PE14	EW09-SS-203-010	09-14615-PE14D	PLUMB,1981	Total Organic Carbon	0.829	%		J	8
PE14	EW09-SS-212-010	09-14616-PE14E	PLUMB,1981	Total Organic Carbon	0.807	%		J	8
PE14	EW09-SS-209-010	09-14617-PE14F	PLUMB,1981	Total Organic Carbon	0.715	%		J	8
PE14	EW09-SS-201-010	09-14618-PE14G	PLUMB,1981	Total Organic Carbon	1.77	%		J	8
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 160.3	Total Solids	65.90	%		J	1
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Aniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Anthracene	83	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Benzo(a)anthracene	300	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Benzo(a)pyrene	330	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Benzo(b)fluoranthene	360	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Benzo(g,h,i)perylene	150	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Benzo(k)fluoranthene	360	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Benzoic Acid	1100	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	bis(2-Ethylhexyl)phthalate	12000	ug/kg	ES	R	20
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Butylbenzylphthalate	100	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Carbazole	61	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Chrysene	490	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Di-n-Butylphthalate	66	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Fluoranthene	900	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Fluorene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Indeno(1,2,3-cd)pyrene	140	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Isophorone		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Phenanthrene	360	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Phenol	46	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D	Pyrene	580	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Aniline		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Anthracene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Benzo(a)anthracene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Benzo(a)pyrene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Benzo(b)fluoranthene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Benzo(g,h,i)perylene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Benzo(k)fluoranthene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Carbazole		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Chrysene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Fluoranthene	810	ug/kg		R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Fluorene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Indeno(1,2,3-cd)pyrene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Isophorone		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Phenanthrene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Phenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE25	LSO-01SE-080723	09-14715-PE25ADL	EPA 8270D	Pyrene		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	EPA 8270D-SIM	Diethylphthalate	70	ug/kg	B	U	7
PE25	EW09-SS-126-010	09-14723-PE25I	Krone et al. 1989	Tributyltin Ion	970	ug/kg	E	R	20
PE25	EW09-SS-126-010	09-14723-PE25IDL	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	11
PE25	EW09-SS-126-010	09-14723-PE25IDL	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	R	11
PE25	LSO-01SE-080723	09-14715-PE25A	PLUMB,1981	Total Organic Carbon	1.94	%		J	1
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE40	EW09-SS-002-010LR	09-14878-PE40BLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 6010B	Antimony		mg/kg	U	UJ	8
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Aniline		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Anthracene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Benzo(a)anthracene	49	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Benzo(a)pyrene	62	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Benzo(b)fluoranthene	71	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Benzo(g,h,i)perylene	34	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Benzo(k)fluoranthene	71	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	bis(2-Ethylhexyl)phthalate	63	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Carbazole		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Chrysene	97	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Di-n-Butylphthalate	20	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Fluoranthene	130	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Fluorene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Indeno(1,2,3-cd)pyrene	34	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Isophorone		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Phenanthrene	82	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Phenol		ug/kg	U	R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D	Pyrene	96	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Aniline		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Anthracene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Benzo(a)anthracene	35	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Benzo(a)pyrene	37	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Benzo(b)fluoranthene	45	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Benzo(g,h,i)perylene	20	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Benzo(k)fluoranthene	45	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	bis(2-Ethylhexyl)phthalate	83	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Carbazole		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Chrysene	78	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Fluoranthene	130	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Fluorene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Indeno(1,2,3-cd)pyrene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Isophorone		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Phenanthrene	50	ug/kg		R	11
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Phenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D	Pyrene	100	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Aniline		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Anthracene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Benzo(a)anthracene	46	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Benzo(a)pyrene	46	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Benzo(b)fluoranthene	84	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Benzo(g,h,i)perylene	22	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Benzo(k)fluoranthene	84	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	bis(2-Ethylhexyl)phthalate	32	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Carbazole		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Chrysene	170	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Dibenzofuran		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Fluoranthene	360	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Fluorene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Indeno(1,2,3-cd)pyrene	22	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Isophorone		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Phenanthrene	130	ug/kg		R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Phenol		ug/kg	U	R	11
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D	Pyrene	230	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Aniline		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Anthracene	68	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Benzo(a)anthracene	140	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Benzo(a)pyrene	160	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Benzo(b)fluoranthene	200	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Benzo(g,h,i)perylene	47	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Benzo(k)fluoranthene	200	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	bis(2-Ethylhexyl)phthalate	240	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Carbazole	26	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Chrysene	330	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Fluoranthene	300	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Fluorene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Indeno(1,2,3-cd)pyrene	47	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Isophorone		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Phenanthrene	110	ug/kg		R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Phenol		ug/kg	U	R	11
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D	Pyrene	200	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Acenaphthene	20	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Acenaphthylene	27	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Aniline		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Anthracene	120	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Benzo(a)anthracene	240	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Benzo(a)pyrene	360	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Benzo(b)fluoranthene	400	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Benzo(g,h,i)perylene	120	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Benzo(k)fluoranthene	400	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	bis(2-Ethylhexyl)phthalate	590	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Butylbenzylphthalate	44	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Carbazole	53	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Chrysene	410	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Dibenz(a,h)anthracene	33	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Fluoranthene	540	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Fluorene	20	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Indeno(1,2,3-cd)pyrene	110	ug/kg		R	11

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Isophorone		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Naphthalene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Phenanthrene	200	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Phenol	210	ug/kg		R	11
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D	Pyrene	460	ug/kg		R	11
PE40	EW09-SS-002-010	09-14878-PE40B	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE40	EW09-SS-004-010	09-14879-PE40C	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE40	EW09-SS-006-010	09-14880-PE40D	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE40	EW09-SS-007-010	09-14881-PE40E	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
PE40	EW09-SS-010-010	09-14882-PE40F	EPA 8270D-SIM	Diethylphthalate	38	ug/kg	B	U	7
PH64	EW09-SS-017-010	09-17251-PH64A	Krone et al. 1989	Tributyltin Ion	80	ug/kg		J	12
PH67	LSO-01SE-080723	09-17271-PH67A	EPA 8270D	bis(2-Ethylhexyl)phthalate	1300	ug/kg		R	11
PH68	EW09-SS-006-010	09-17275-PH68D	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
PH68	EW09-SS-006-010	09-17275-PH68D	EPA 8270D	Aniline		ug/kg	U	UJ	8
PH68	EW09-SS-010-010	09-17277-PH68F	EPA 8270D	Di-n-Butylphthalate	8900	ug/kg	ES	R	20
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	1-Methylnaphthalene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2-Methylnaphthalene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11

Qualified Data Summary Table
Windward - East Waterway Surface Sediments

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Validator Reason
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Acenaphthene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Aniline		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Anthracene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Benzo(a)anthracene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Benzo(a)pyrene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Benzo(b)fluoranthene	580	ug/kg	J	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Benzo(g,h,i)perylene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Benzo(k)fluoranthene	580	ug/kg	J	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	630	ug/kg	J	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Carbazole		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Chrysene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Dibenz(a,h)anthracene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Dibenzofuran		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Fluoranthene	550	ug/kg	J	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Fluorene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Indeno(1,2,3-cd)pyrene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Isophorone		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Naphthalene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Phenanthrene		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Phenol		ug/kg	U	R	11
PH68	EW09-SS-010-010	09-17277-PH68FDL	EPA 8270D	Pyrene	710	ug/kg	J	R	11

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

Port of Seattle
East Waterway T-30
Post Dredge Monitoring

Prepared for:

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EcoChem Project: C22010-2

Revised July 27, 2009

Approved for Release:

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PROJECT NARRATIVE

Basis for Data Validation

This report summarizes the results of full validation performed on sediment and quality control (QC) sample data collected for the East Waterway T-30 Post Dredge Monitoring project. A complete list of samples is provided in the **SAMPLE INDEX**.

Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. The analytical methods and EcoChem project chemists are listed in the table below.

Analysis	Method	Primary Review	Secondary Review
Semivolatile Organic Compounds	EPA 8270D	Jennifer Newkirk	Melissa Swanson
Semivolatile Organic Compounds	EPA 8270D-SIM		
Polychlorinated Biphenyls as Aroclors	EPA 8082	Lucy Panteleef	
Metals	EPA 6010B/7470A/7471A	Linda Holz	Chris Ransom
Total Organic Carbon	Plumb 1981		
Total Solids	EPA 160.3		
Grain Size	PSEP		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Port of Seattle, East Waterway T-30 Post Dredge Monitoring Plan (February 8, 2008)*; and *National Functional Guidelines for Inorganic Data Review* (USEPA 1994 & 2002) and *National Functional Guidelines for Organic Data Review* (USEPA 1999).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as **APPENDIX A**. A qualified data summary table is included as **APPENDIX B.** Data validation worksheets will be kept on file at EcoChem.

Sample Index
WIndward - Port of Seattle T-30 Post Dredge Monitoring

SDG	Sample ID	Lab ID	SVOC	PAH	PCB	Metals	Conventionals
ON35	T30-09-01	09-4935-ON35A	✓	✓	✓	✓	✓
ON35	T30-09-03	09-4937-ON35C	✓	✓	✓	✓	✓
ON35	T30-09-101	09-4938-ON35D	✓	✓	✓	✓	✓
ON35	T30-09-07	09-4943-ON35H	✓	✓	✓	✓	✓
ON35	T30-09-09	09-4945-ON35J	✓	✓	✓	✓	✓
ON35	T30-09-14	09-4950-ON35O	✓	✓	✓	✓	✓
ON35	T30-09-20	09-4956-ON35U	✓	✓	✓	✓	✓
ON35	T30-09-21	09-4957-ON35V	✓	✓	✓	✓	✓
ON35	T30-09-11-RB	09-5006-ON35W	✓	✓	✓	✓	
ON50	T30-09-26	09-5073-ON50E	✓	✓	✓	✓	✓
ON50	T30-09-29	09-5076-ON50H	✓	✓	✓	✓	✓

DATA VALIDATION REPORT
Port of Seattle T-30 Post Dredge Monitoring
Semivolatiles by EPA Method 8270D

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
ON35	8 Sediment & 1 Field Blank	Full
ON50	2 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

Both lab groups ON35 and ON50 were submitted in a single analytical delivery group (ADG).

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation	2	Laboratory Control Samples (LCS)
	GC/MS Tuning	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
1	Initial Calibration (ICAL)	1	Field Duplicates
2	Continuing Calibration (CCAL)	1	Reference Material
	Internal Standards		Compound Identification
2	Laboratory Blanks		Reporting Limits
1	Field Blanks		Reported Results
	Surrogate Compounds	1	Calculation Verification

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received two sample coolers with temperatures that were slightly greater than the upper control limit. These temperature outliers did not impact data quality and no qualifiers were required.

Initial Calibration

A six-point initial calibration (ICAL) was performed. The percent relative standard deviations (%RSD) were within the control limit of ±30%, with the exceptions noted below. All correlation coefficients (r) were greater than 0.995 and relative response factor (RRF) values were greater than the minimum of 0.05.

SDGs ON35 & ON50: The %RSD values for 2,4-dinitrophenol exceeded the control limit of 30% in the ICALs analyzed on 2/13/09 (instrument NT4) and 2/18/09 (instrument NT6). Linear regression analysis was not performed for this analyte. No positive results were reported; therefore no qualifiers were applied.

Continuing Calibration

All values for the relative response factor (RRF) were greater than the 0.05 minimum control limit. The values for percent difference (%D) were within the ±25% control limits, with the exceptions noted below. Results and reporting limits from samples associated with outliers indicative of a low bias were estimated (J/UJ-5B). Positive results for samples associated with outliers indicative of a high bias were estimated (J-5B). No action was taken for non-detects.

SDG ON35:

CCAL Date	Instrument ID	Analyte	Bias
2/25/09	NT4	2,2-oxybis(1-chloropropane)	Low
		Indeno(1,2,3-cd)pyrene	High
		Benzo(g,h,i)perylene	High

SDGs ON35 & ON50:

CCAL Date	Instrument ID	Analyte	Bias
3/4/09	NT6	Indeno(1,2,3-cd)pyrene	Low
		Benzo(g,h,i)perylene	Low

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank (10x for common laboratory contaminants). If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than

the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. For the analytes noted below, one or more results were qualified based on method blank contamination.

SDG ON35: Bis(2-ethylhexyl)phthalate - (5 results)

SDG ON50: Bis(2-ethylhexyl)phthalate - (2 results)

Field Blanks

SDG ON35: One field blank, T-30-09-11-RB, was submitted. There were no positive results for this blank.

Laboratory Control Sample (LCS)

Laboratory control samples (LCS) were analyzed at the proper frequency. Recoveries were within the laboratory control limits, with the exceptions noted below. For recoveries greater than the upper control limit, positive results in the associated samples were estimated (J-10) to indicate a potential high bias. No action was taken for non-detects. For recoveries less than the lower control limits, the associated sample results were estimated (J/UJ-10) to indicate a potential low bias. If the recovery was also less than 10%, associated non-detected results were rejected (R-10) due to the extreme low bias. The following outliers resulted in qualification of data:

SDG ON35: LCS 2/25/09: phenol, 4-nitrophenol - (low bias); indeno(1,2,3-c,d)pyrene – (high bias)

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Matrix spike/matrix spike duplicate samples (MS/MSD) were analyzed at the proper frequency. Recoveries were within the laboratory control limits, with the exceptions noted below. For recovery values greater than the upper control limit, positive results in the parent sample were estimated (J-8) to indicate a potential high bias. No action was taken for non-detects. For recovery values less than the lower control limit, the results in the parent sample were estimated (J/UJ-8) to indicate a potential low bias. If the recoveries were less than 10%, non-detects in the parent sample were rejected (R-8). If only one of the MS or MSD recoveries was outside of the control limits, then no data were qualified for the single outlier. Quality control samples and associated outliers are noted below:

SDG ON35: QC Sample T30-09-14: The MSD was lost due to an instrument malfunction, precision could not be assessed. The %R values for 4-chloroaniline and aniline were less than 10%. These analytes were not detected in the parent sample; reporting limits were rejected (R-8).

Field Duplicates

The following acceptance criteria were applied: the relative percent difference (RPD) control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and replicate must be less than two times the RL.

No data were qualified based on field duplicate precision outliers; however, users of the data should consider the impact of field precision outliers on the reported results.

SDG ON35: Samples T-30-09-03 & T-30-09-101 were identified as field duplicates. The RPD for fluorene was greater than the control limit.

Reference Material

SDGs ON35 & ON50: The laboratory analyzed the Sequim Bay reference material sample SQ-1 with the sediment samples. Several results were outside the reference ranges. Since this reference material is not certified, no qualifiers were assigned based on reference material results.

Calculation Verification

SDGs ON35 & ON50: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and matrix spike %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the RPD values for field duplicate, with the exception previously noted.

Data were estimated due to LCS %R and CCAL %D outliers. Data were qualified as not detected based on method blank contamination. Two data points were rejected due to MS %R values that were less than 10%.

Data that has been rejected should not be used for any purpose. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Port of Seattle T-30 Post Dredge Monitoring
Semivolatile Organic Compounds by EPA Method 8270D-SIM

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
ON35	8 Sediment & 1 Field Blank	Full
ON50	2 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

Both lab groups ON35 and ON50 were submitted in a single analytical delivery group (ADG).

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation	2	Laboratory Control Samples (LCS)
	GC/MS Tuning	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)	1	Reference Material
	Internal Standards		Compound Identification
1	Laboratory Blanks	1	Reporting Limits
1	Field Blanks	2	Reported Results
2	Surrogate Compounds	1	Calculation Verification

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received two sample coolers with temperatures that were slightly greater than the upper control limit. These temperature outliers did not impact data quality and no qualifiers were required.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank (10x for common laboratory contaminants). If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results. The following outlier was noted:

SDGs ON35 & ON50: Pentachlorophenol was detected in the method blank extracted on 3/5/09. No action was required as there were no positive results for this analyte in the associated samples.

Field Blanks

SDG ON35: One field blank, T-30-09-11-RB, was submitted. There were no positive results for this blank.

Surrogate Compounds

SDG ON35: The percent recovery (%R) values for the surrogate compound 2,4,6-tribromophenol were less than 10% in Samples T30-09-09, T30-09-14, T30-09-20, and T30-09-21. Because the %R values for the three other acid surrogates were all greater than 50%, the results for the acid compounds in these samples were estimated (UJ-13) instead of being rejected. These samples were re-extracted and re-analyzed at dilution. The results for the re-analyses were rejected (R-11) in favor of the initial results and should not be used.

SDG ON50: The %R values for 2,4,6-tribromophenol were less than 10% in Samples T30-09-26 and T30-09-29. Because the %R values for the three other acid surrogates were all greater than 50%, the results for the acid compounds in these samples were estimated (UJ-13) instead of being rejected. These samples were re-extracted and re-analyzed at dilution. The results for the re-analyses were rejected (R-11) in favor of the initial results and should not be used.

Laboratory Control Samples (LCS)

Laboratory control samples (LCS) were analyzed at the proper frequency. Recoveries were within the laboratory control limits, with the exceptions noted below. For recoveries greater than the upper control limit, positive results in the associated samples were estimated (J-10) to indicate a potential high bias. No action was taken for non-detects. For recoveries less than the lower control limits, the associated sample results were estimated (J/UJ-10) to indicate a potential low bias. If the analyte

was not recovered or recovered at less than 10%, the associated non-detected results were rejected (R-10) due to the very low bias. The following outliers resulted in qualification of data:

SDGs ON35 & ON50: LCS 3/5/09: dibenz(a,h)anthracene – (J-10) high bias; benzyl alcohol - not recovered (R-10)

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Matrix spike/matrix spike duplicate samples (MS/MSD) were analyzed at the proper frequency. Recoveries were within the laboratory control limits, with the exceptions noted below. For recovery values greater than the upper control limit, positive results in the parent sample were estimated (J-8) to indicate a potential high bias. No action was taken for non-detects. For recovery values less than the lower control limit, the results in the parent sample were estimated (J/UJ-8) to indicate a potential low bias. If the recoveries were less than 10%, non-detects in the parent sample were rejected (R-8). If only one of the MS or MSD recoveries was outside of the control limits, then no data were qualified for the single outlier.

The MS/MSD relative percent difference (RPD) values were less than the laboratory control limits, with the noted exceptions. Positive results for analytes associated with RPD outliers were estimated (J-9) in the parent sample only. No action was taken for non-detects. Quality control samples and outliers resulting in qualification of data are noted below:

SDG ON35: QC Sample T30-09-07:. benzyl alcohol - not recovered, rejected (R-8); dibenz(a,h)anthracene – (J-9) for RPD outlier

Field Duplicates

The following acceptance criteria were applied: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and replicate must be less than two times the RL.

SDG ON35: Samples T-30-09-03 & T-30-09-101 were identified as field duplicates. All field precision criteria were met.

Reference Material

SDGs ON35 & ON50: The laboratory analyzed the Sequim Bay reference material sample SQ-1 with the sediment samples. Several results were outside the reference ranges. Since this reference material is not certified, no qualifiers were assigned based on reference material results.

Reporting Limits

The QAPP calls for sediment reporting limits (MRLs) of 6.7 µg/kg for butyl benzylphthalate and 6.7 µg/kg for dimethylphthalate. The laboratory reported limits of 16 µg/kg for both analytes.

SDG ON35: N-nitrosodiphenylamine was "Y" flagged by the laboratory in Samples T30-09-01 and T30-09-07 due to chromatographic interferences. Samples were qualified (U-22) to indicate that these results are not-detected at an elevated reporting limit indicating an elevated reporting limit.

Reported Results

SDG ON35: Samples T30-09-09, T30-09-14, T30-09-20, and T30-09-21 were re-extracted and re-analyzed due to surrogate outliers in the original analyses. The results for the re-analyses were rejected (R-11) in favor of the initial results and should not be used.

SDG ON50: Samples T30-09-26 and T30-09-29 were re-extracted and re-analyzed due to surrogate outliers in the original analyses. The results for the re-analyses were rejected (R-11) in favor of the initial results and should not be used.

Calculation Verification

SDGs ON35 & ON50: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the MS/MSD and field duplicate RPD values, with the exceptions previously noted.

Data were estimated due to surrogate %R, LCS %R, MS/MSD %R, and MS/MSD RPD outliers. Data were qualified as not detected due to chromatographic interferences.

Data were rejected due to LCS and MS/MSD %R values being less than 10%. Data were also rejected in order indicate which results should be reported from multiple reported analyses.

Data that has been rejected should not be used for any purpose. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Port of Seattle T-30 Post Dredge Monitoring
PCB Aroclors by EPA Method 8082

This report documents the review of analytical data from the analyses of tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
ON35	8 Sediment & 1 Field Blank	Full
ON50	2 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

Both lab groups ON35 and ON50 were submitted in a single analytical delivery group (ADG).

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation		Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)		Target Analyte List
	Laboratory Blanks	2	Reporting Limits
1	Field Blanks		Compound Identification
	Surrogate Compounds		Reported Results
	Laboratory Control Samples (LCS)	1	Calculation Verification

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received some sample coolers with temperatures outside the advisory control limits. These temperature outliers did not impact data quality and no qualifiers were required.

Field Blanks

SDG ON35: One field blank, T30-09-11-RB, was submitted. There were no positive results for this blank.

Field Duplicates

The following acceptance criteria were applied: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and replicate must be less than two times the RL.

SDG ON35: Samples T-30-09-03 & T-30-09-101 were identified as field duplicates. All field precision criteria were met.

Reporting Limits

The method reporting limits were sometimes greater than the limits specified in the QAPP. Several chromatograms indicated non-target background interference. The reporting limits for these analytes were flagged "Y" by the laboratory. These "Y" flagged results were qualified as not-detected (U-22). The following results were qualified:

SDG ON35: Sample T30-09-07: Aroclor 1232 and Aroclor 1248

Calculation Verification

SDGs ON35 & ON50: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample, and matrix spike/matrix spike duplicate (MS/MSD) percent recoveries. Precision was also acceptable as demonstrated by the MS/MSD and field duplicate RPD values.

Data were qualified as not detected at elevated reporting limits due to matrix interferences.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Port of Seattle T-30 Post Dredge Monitoring
Metals Analyses by EPA Method 6010B, and
Mercury by EPA Methods 7470A/7471A

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
ON35	8 Sediment & 1 Field Blank	Full
ON50	2 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

Both lab groups ON35 and ON50 were submitted in a single analytical delivery group (ADG).

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements for review are listed below.

1 Holding Times and Sample Preservation
Initial Calibration (ICAL)
Calibration Verification (ICV/CCV)
2 CRDL Standards
Laboratory Blanks
1 Field Blanks
Laboratory Control Samples (LCS)
1 Standard Reference Material (SRM)
2 Matrix Spike/Matrix Spike Duplicate (MS/MSD)
2 Laboratory Duplicates
1 Field Duplicates
Interference Check Standards
ICP-MS Internal Standards
Reporting Limits
Reported Results
1 Calculation Verification

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received two sample coolers with temperatures that were slightly greater than the upper control limit. These temperature outliers did not impact data quality and no qualifiers were required.

Contract Required Detection Limit Standard

Contract required detection limit (CRDL) standards were analyzed at the beginning of each analytical sequence. For recovery values greater than upper control limit of 130%, positive results less than two times (<2x) the CRDL are estimated (J) to indicate a potential high bias. For recoveries less than the lower control limit of 70%, positive results less than twice (<2x) the CRDL and non-detects are estimated (J/UJ) to indicate a potential low bias. The following outliers resulted in qualification of data:

SDG ON35: mercury – high bias; nickel, zinc, and copper – low bias (associated with field blank only)

SDG ON50: mercury – high bias

Field Blanks

SDG ON35: One field blank was submitted, T30-09-11-RB. There were no positive results for the target analytes in this blank.

Standard Reference Material (SRM)

The laboratory analyzed the standard reference material (SRM) ERA D053540. All recoveries were within acceptance limits.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

A matrix spike sample (MS) was analyzed at the proper frequency of one set per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the control limits of 70-130%, with the exceptions noted below. For %R values greater than the upper control limit, the associated positive results were estimated (J-8) to indicate a possible high bias. No action was taken for non-detects. For %R values less than the lower control limit, the associated positive results and non-detects were qualified as estimated (J/UJ-8) to indicate a possible low bias. For cases where the recovery was also less than 30%, the post digestion spike was also evaluated. If the post spike recovery was within 70%-130%, then associated results were estimated (J/UJ). If the post spike recovery was not acceptable or was not analyzed, then the associated non-detected results were rejected (R-8) instead of being estimated. The samples used for the MS analyses and recovery outliers are listed below:

SDG ON35 & ON50: QC Sample T30-09-14 - antimony (21.5%) – low bias, post spike acceptable

Laboratory Duplicates

Laboratory duplicate relative percent difference (RPD) values were used to evaluate precision. The RPD values were within the control limit of 30% for sample results greater than five times the reporting limit (for results less than five times the reporting limit, the difference was less than twice the reporting limit) with the exception noted below.

For RPD or difference values exceeding the control limits, associated positive results and non-detects were qualified as estimated (J/UJ-9).

SDG ON35 & ON50: QC Sample T30-09-14: mercury (diff > 2X RL)

Field Replicates

The following acceptance criteria were used to evaluate precision: the RPD control limit is 30% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and replicate must be less than twice the RL.

SDG ON35: One set of field replicates, Samples T30-09-03 and T30-09-101, were submitted. All field precision criteria were met.

Calculation Verification

SDGs ON35 & ON50: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample, standard reference material and matrix spike percent recovery values, with the exceptions noted above. The laboratory duplicate and field duplicate relative percent difference values indicated acceptable precision, with the exception previously noted.

Data were estimated due to CRDL standard recovery, laboratory duplicate RPD, and matrix spike recovery outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Port of Seattle T-30 Post Dredge Monitoring
Conventional Parameter Analyses

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory quality control (QC) samples. Analytical Resources, Inc., Tukwila, Washington, analyzed the samples. See the **Sample Index** for a complete list of samples for which data were reviewed.

SDG	Number of Samples	Validation Level
ON35	8 Sediment	Full
ON50	2 Sediment	Full

The analytical tests that were performed are summarized below:

Parameter	Method
Total Solids	160.3
Total Organic Carbon	Plumb, 1981
Grain Size	PSEP

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

Both lab groups ON35 and ON50 were submitted in a single analytical delivery group (ADG).

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

1	Holding Times and Sample Preservation	2	Matrix Spikes (MS)
	Initial Calibration		Laboratory Replicates
	Calibration Verification	1	Field Replicates
	Laboratory Blanks		Reporting Limits
	Laboratory Control Samples (LCS)	1	Calculation Verification

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received two sample coolers with temperatures that were slightly greater than the upper control limit. These temperature outliers did not impact data quality and no qualifiers were required.

Matrix Spikes (MS)

A matrix spike sample (MS) was analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the laboratory control limits, with the exception noted below. For %R values greater than the upper control limit, the associated positive results were estimated (J-8) to indicate a possible high bias. No action was taken for non-detects. The following outlier was noted:

SDG ON35: QC Sample T30-09-14: total organic carbon (134%) - high bias

Field Replicates

The following acceptance criteria were used to evaluate precision: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and replicate must be less than twice the RL.

No data were qualified based on field replicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG ON35: One set of field replicates, Samples T30-09-03 and T30-09-101, were submitted. The RPD value for the coarse silt grain size fraction (51%) was greater than the control limit.

Calculation Verification

SDGs ON35 & ON50: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. The laboratory replicate percent relative standard deviation and the field duplicate RPD values indicated acceptable precision, except as noted above. Accuracy was also acceptable as demonstrated by the matrix spike and laboratory control sample recoveries, except as previously noted.

Data were estimated based on a matrix spike recovery outlier.

All data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

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EcoChem Validation Guidelines for Pesticides/PCBs by GC/ECD
(Based on Organic NFG 1999 & EPA SW-846 Method 8081/8082)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL) U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	Not addressed by NFG No results > CRQL	Apply 5X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Pesticides/PCBs by GC/ECD
(Based on Organic NFG 1999 & EPA SW-846 Method 8081/8082)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) in parent sample if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Quantitated using ICAL calibration factor (CF) RPD between columns <40%	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% EcoChem PJ - See TM-08	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate (Qualifiy if required by project QAPP)	9

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration Tissues: Frozen	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r > 0.995	J(+)/UJ(-) if r < 0.995 (multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blank (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		(Refer to TM-02 for additional information)
			7

Reporting Limit Standard	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Sb, Pb, Tl)	R(-)/J(+) < 2x RL if %R <50% (< 30% Sb, Pb, Tl) J(+) < 2x RL, UJ(-) if %R 50-69% (30-49% Sb, Pb,Tl) J(+) < 2x RL if %R 130-180% (150-200% Sb, Pb, Tl) R(+) < 2x RL if %R > 180% (200% Sb, Pb, Tl)	14
Interference Check Samples (ICSA/ICSAB)	ICSAB %R 80 - 120% for all spiked elements | ICSA | < MDL for all unspiked elements except: K, Na	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R= 50 to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spikes	One per matrix per batch 75-125% for samples less than 4x spike level	J(+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30% or J(+)/UJ(-) if Post Spike %R 75-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, spike at twice the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples >RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL (2x RL for solids) qualify all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample conc. > 50x MDL	J(+)/UJ(-) if %D >10% qualify all samples in batch	16
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	28 days from date sampled Frozen tissues: HT extended to 6 months	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + 4 standards, one at RL r > 0.995	J(+)/UJ(-) if r<0.995	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	after each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRA)	conc at RL - analyzed beginning of run %R = 70-130%	R(-),(+)<2xRL if %R <50% J(+)<2x RL, UJ(-) if %R 50-69% J(+) <2x RL if %R 130-180% R(+)<2x RL if %R>180%	14
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 5% frequency 75-125% for samples less than 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% all samples in batch	8
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5x RL: Water: Diff<RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9

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EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler Temperature 4°C ±2°C Preservation: Method Specific	Use Professional Judgment to qualify based to qualify for coole temp outliers J(+)/UJ(-) if preservation requirements not met	1
Holding Time	Method Specific	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by > 3X	1
Initial Calibration	Method specific r>0.995	Use professional judgment J(+)/UJ(-) for r < 0.995	5A
Initial Calibration Verification (ICV)	Where applicable to method Independent source analyzed immediately after calibration %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5A
Continuing Cal Verification (CCV)	Where applicable to method Every ten samples, immed. following ICV/ICB and end of run %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5B

Initial and Continuing Cal Blanks (ICB/CCB)	Where applicable to method
	After each ICV and CCV every ten samples and end of run
	| blank| < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Method Blank	One per matrix per batch
	(not to exceed 20 samples)
	blank < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blk value, U(+) results < action level
		For (-) blk value, J(+)/UJ(-) results < action level
			7

Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Matrix Spike	One per matrix per batch; 5% frequency 75-125% for samples less than 4 x spike level	J(+) if %R > 125% or < 75% UJ(-) if %R = 30-74% R(+/-) results < IDL if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x RL Diff <RL for samples >RL and <5 x RL (may use RPD < 35%, Diff < 2X RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

EcoChem Validation Guidelines for Conventional Chemistry Analysis
(Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5X RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff<RL Solid: Diff < 2X RL	J(+)/UJ(-) in parent samples only	9

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table
Windward - Port of Seattle T-30 Post Dredge Monitoring

Sample ID	Method	Analyte	Result	Units	Lab Qual	DV Qual	DV Reason
T30-09-01	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-03	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-07	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-09	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-101	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-11-RB	EPA 6010B	Copper		mg/l	U	UJ	14
T30-09-11-RB	EPA 6010B	Nickel		mg/l	U	UJ	14
T30-09-11-RB	EPA 6010B	Zinc		mg/l	U	UJ	14
T30-09-14	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-14LR	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-20	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-21	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-26	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-29	EPA 6010B	Antimony		mg/kg	U	UJ	8
T30-09-01	EPA 7471A	Mercury	0.35	mg/kg		J	9
T30-09-03	EPA 7471A	Mercury	0.08	mg/kg		J	9,14
T30-09-07	EPA 7471A	Mercury	1.07	mg/kg		J	9
T30-09-09	EPA 7471A	Mercury	0.06	mg/kg		J	9,14
T30-09-101	EPA 7471A	Mercury	0.11	mg/kg		J	9,14
T30-09-14	EPA 7471A	Mercury		mg/kg	U	UJ	9
T30-09-14LR	EPA 7471A	Mercury	0.23	mg/kg		J	9
T30-09-20	EPA 7471A	Mercury	0.17	mg/kg		J	9
T30-09-21	EPA 7471A	Mercury	0.37	mg/kg		J	9
T30-09-26	EPA 7471A	Mercury	0.23	mg/kg		J	9
T30-09-29	EPA 7471A	Mercury	0.12	mg/kg		J	9,14
T30-09-07	EPA 8082	Aroclor 1232		ug/kg	Y	U	22
T30-09-07	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
T30-09-01	EPA 8270D	Benzo(g,h,i)perylene	22	ug/kg		J	5B
T30-09-01	EPA 8270D	Indeno(1,2,3-cd)pyrene	19	ug/kg	J	J	5B
T30-09-03	EPA 8270D	Benzo(g,h,i)perylene	39	ug/kg		J	5B
T30-09-03	EPA 8270D	Indeno(1,2,3-cd)pyrene	35	ug/kg		J	5B
T30-09-07	EPA 8270D	Benzo(g,h,i)perylene	14	ug/kg	J	J	5B
T30-09-07	EPA 8270D	bis(2-Ethylhexyl)phthalate	34	ug/kg	B	U	7
T30-09-07	EPA 8270D	Indeno(1,2,3-cd)pyrene	13	ug/kg	J	J	5B
T30-09-09	EPA 8270D	Benzo(g,h,i)perylene	16	ug/kg	J	J	5B
T30-09-09	EPA 8270D	bis(2-Ethylhexyl)phthalate	35	ug/kg	B	U	7
T30-09-09	EPA 8270D	Indeno(1,2,3-cd)pyrene	16	ug/kg	J	J	5B
T30-09-101	EPA 8270D	Benzo(g,h,i)perylene	32	ug/kg		J	5B
T30-09-101	EPA 8270D	bis(2-Ethylhexyl)phthalate	140	ug/kg	B	U	7
T30-09-101	EPA 8270D	Indeno(1,2,3-cd)pyrene	30	ug/kg		J	5B
T30-09-11-RB	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/l	U	UJ	5B
T30-09-11-RB	EPA 8270D	4-Nitrophenol		ug/l	U	UJ	10
T30-09-11-RB	EPA 8270D	Phenol		ug/l	U	UJ	10
T30-09-14	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
T30-09-14	EPA 8270D	Aniline		ug/kg	U	R	8
T30-09-14	EPA 8270D	Benzo(g,h,i)perylene		ug/kg	U	UJ	5B
T30-09-14	EPA 8270D	Indeno(1,2,3-cd)pyrene		ug/kg	U	UJ	5B
T30-09-20	EPA 8270D	Benzo(g,h,i)perylene	24	ug/kg		J	5B
T30-09-20	EPA 8270D	bis(2-Ethylhexyl)phthalate	50	ug/kg	B	U	7
T30-09-20	EPA 8270D	Indeno(1,2,3-cd)pyrene	22	ug/kg		J	5B
T30-09-21	EPA 8270D	Benzo(g,h,i)perylene	16	ug/kg	J	J	5B

Qualified Data Summary Table
Windward - Port of Seattle T-30 Post Dredge Monitoring

T30-09-21	EPA 8270D	bis(2-Ethylhexyl)phthalate	36	ug/kg	B	U	7
T30-09-21	EPA 8270D	Indeno(1,2,3-cd)pyrene	14	ug/kg	J	J	5B
T30-09-26	EPA 8270D	Benzo(g,h,i)perylene	34	ug/kg		J	5B
T30-09-26	EPA 8270D	bis(2-Ethylhexyl)phthalate	87	ug/kg	B	U	7
T30-09-26	EPA 8270D	Indeno(1,2,3-cd)pyrene	34	ug/kg		J	5B
T30-09-29	EPA 8270D	Benzo(g,h,i)perylene	24	ug/kg		J	5B
T30-09-29	EPA 8270D	bis(2-Ethylhexyl)phthalate	51	ug/kg	B	U	7
T30-09-29	EPA 8270D	Indeno(1,2,3-cd)pyrene	23	ug/kg		J	5B
T30-09-01	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-01	EPA 8270D-SIM	Dibenz(a,h)anthracene	7.9	ug/kg		J	10
T30-09-01	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
T30-09-03	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-03	EPA 8270D-SIM	Dibenz(a,h)anthracene	15	ug/kg		J	10
T30-09-07	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	8,10
T30-09-07	EPA 8270D-SIM	Dibenz(a,h)anthracene	8.4	ug/kg		J	9,10
T30-09-07	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
T30-09-09	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	13
T30-09-09	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	UJ	13
T30-09-09	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-09	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	Dibenz(a,h)anthracene		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
T30-09-09	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	UJ	13
T30-09-09	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
T30-09-101	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-101	EPA 8270D-SIM	Dibenz(a,h)anthracene	17	ug/kg		J	10
T30-09-14	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	13
T30-09-14	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	UJ	13
T30-09-14	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-14	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	Dibenz(a,h)anthracene		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11

T30-09-14	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
T30-09-14	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	UJ	13
T30-09-14	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	13
T30-09-20	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	UJ	13
T30-09-20	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-20	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	Dibenz(a,h)anthracene	19	ug/kg		J	10
T30-09-20	EPA 8270D-SIM	Dibenz(a,h)anthracene	21	ug/kg		R	11
T30-09-20	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
T30-09-20	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	UJ	13
T30-09-20	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	13
T30-09-21	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	UJ	13
T30-09-21	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-21	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	Dibenz(a,h)anthracene	9.9	ug/kg		J	10
T30-09-21	EPA 8270D-SIM	Dibenz(a,h)anthracene		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
T30-09-21	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	UJ	13
T30-09-21	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	1,4-Dichlorobenzene	120	ug/kg		R	11
T30-09-26	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	13
T30-09-26	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	UJ	13
T30-09-26	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10

Qualified Data Summary Table
Windward - Port of Seattle T-30 Post Dredge Monitoring

T30-09-26	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	Dibenz(a,h)anthracene	27	ug/kg		J	10
T30-09-26	EPA 8270D-SIM	Dibenz(a,h)anthracene	31	ug/kg		R	11
T30-09-26	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
T30-09-26	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	UJ	13
T30-09-26	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	1,2,4-Trichlorobenzene		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	1,2-Dichlorobenzene		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	1,4-Dichlorobenzene		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	13
T30-09-29	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	UJ	13
T30-09-29	EPA 8270D-SIM	2-Methylphenol		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	10
T30-09-29	EPA 8270D-SIM	Benzyl Alcohol		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	Butylbenzylphthalate		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	Dibenz(a,h)anthracene	9.7	ug/kg		J	10
T30-09-29	EPA 8270D-SIM	Dibenz(a,h)anthracene		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	Dimethylphthalate		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	Hexachlorobenzene		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	Hexachlorobutadiene		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	N-Nitrosodimethylamine		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	U	R	11
T30-09-29	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	UJ	13
T30-09-29	EPA 8270D-SIM	Pentachlorophenol		ug/kg	U	R	11
T30-09-01	PLUMB,1981	Total Organic Carbon	1.15	%		J	8
T30-09-03	PLUMB,1981	Total Organic Carbon	0.736	%		J	8
T30-09-07	PLUMB,1981	Total Organic Carbon	3.40	%		J	8
T30-09-09	PLUMB,1981	Total Organic Carbon	0.665	%		J	8
T30-09-101	PLUMB,1981	Total Organic Carbon	0.697	%		J	8
T30-09-14	PLUMB,1981	Total Organic Carbon	0.415	%		J	8
T30-09-14LR	PLUMB,1981	Total Organic Carbon	0.369	%		J	8
T30-09-14LT	PLUMB,1981	Total Organic Carbon	0.495	%		J	8
T30-09-20	PLUMB,1981	Total Organic Carbon	1.60	%		J	8
T30-09-21	PLUMB,1981	Total Organic Carbon	1.77	%		J	8

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

East Waterway Terminal-30 Post Dredge Monitoring

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EcoChem Project: C22018-2

February 23, 2010

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PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation performed on sediment samples and quality control sample data for the East Waterway T-30 Post Dredge Monitoring sampling. A complete list of samples is provided in the **SAMPLE INDEX**.

Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Semivolatile Organic Compounds	EPA 8270D	Melissa Swanson	Chris Ransom
Select Semivolatile Organic Compounds	EPA 8270D-SIM		
Polychlorinated Biphenyls	EPA 8082	Lucy Panteleeff	
Metals	EPA 6010B, 7471A, 200.8	Megan Kilner	
Total Organic Carbon, Total Solids	Plumb, 1981, EPA 160.3		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the quality assurance project plan (QAPP) from the *East Waterway T-30 Post Dredge Monitoring Plan* (February 15, 2008), *National Functional Guidelines for Inorganic Data Review* (USEPA 1994 & 2004), and *National Functional Guidelines for Organic Data Review* (USEPA 1999).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as **APPENDIX A**. A Qualified Data Summary Table is included in **APPENDIX B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

Sample Index
East Waterwat T-30 Post Dredge Monitoring

SDG	Sample ID	Laboratory ID	SVOC	SVOC SIM	PCB	Metals	TOC	T. Solids
QF22	T30-09-04_T2	10-726-QF22A	✓	✓	✓	✓	✓	✓
QF22	T30-09-06_T2	10-727-QF22B	✓	✓	✓	✓	✓	✓
QF22	T30-09-13_T2	10-728-QF22C	✓	✓	✓	✓	✓	✓
QF22	T30-09-24_T2	10-729-QF22D	✓	✓	✓	✓	✓	✓
QF22	T30-09-27_T2	10-730-QF22E	✓	✓	✓	✓	✓	✓
QF22	T30-09-28_T2	10-731-QF22F	✓	✓	✓	✓	✓	✓
QF22	T30-09-31_T2	10-732-QF22G	✓	✓	✓	✓	✓	✓

DATA VALIDATION REPORT
East Waterway T-30 Post Dredge Monitoring
Semivolatile Compounds by Method 8270D

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
QF22	7 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1 Sample Preservation and Holding Times
GC/MS Instrument Performance
Initial Calibration (ICAL)
2 Continuing Calibration (CCAL)
2 Laboratory Blanks
Field Blanks
Surrogate Compounds
2 Laboratory Control Samples (LCS/LCSD)
1 Standard Reference Material
2 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Internal Standards
Target Analyte List
Reporting Limits
Compound Identification
Reported Results

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Sample Preservation and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received two sample coolers with temperatures greater than 6°C, with the highest temperature at 6.6°C. For all instances where the cooler

temperatures were greater than the upper control limit, the samples were received within six hours of collection. This did not allow sufficient time for the samples and coolers to come down to the lowest possible temperature. These temperature outliers did not impact data quality and no qualifiers were assigned.

Continuing Calibration

All relative response factor (RRF) values were greater than the 0.05 minimum control limits.

The percent difference (%D) values for benzoic acid and pentachlorophenol were outside the ±25% control limits and indicative of a low bias. These analytes were estimated (UJ-5B) in the seven associated samples. The %D value for 4-nitrophenol was also outside of the control limits and indicative of a high bias. This analyte was not detected in the associated samples; therefore no qualifiers were necessary.

Laboratory Blanks

Bis (2-ethylhexyl) phthalate and phenol were detected in the method blank at levels greater than the method detection limits. Phenol was not detected in the associated samples; therefore no qualification of data was necessary. All associated results for bis(2-ethylhexyl)phthalate were less than the action level of ten times the blank concentration and were qualified as not-detected (U-7).

Laboratory Control Samples

The laboratory control sample (LCS) percent recovery (%R) values for 2,4-dinitrophenol, 3-nitroaniline, 4,6-dinitro-2-methylphenol, and hexachlorocyclopentadiene were less than the QAPP specified lower control limit of 40%. These analytes were not detected in any sample; reporting limits were estimated (UJ-10) to indicate a potential low bias.

Standard Reference Material

The laboratory analyzed a reference material sample (SQ-1) with the sediment samples. Although the results for some analytes were outside of the reference range, no data were qualified as this is not a certified reference material.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed using Sample T30-09-13. The %R values for hexachloroethane, benzoic acid, for bis(2-ethylhexyl)phthalate , 4-chloroaniline, 3-nitroaniline, 2,4-dinitrophenol, and aniline were less than the lower control limit of 40%; these analytes were estimated (UJ-8) in the parent sample.

The %R values for hexachlorocylopentadiene were less than 10%. The result for this analyte was rejected (R-8) in the parent sample.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD recoveries, except as previously noted. Precision was also acceptable as demonstrated by the relative percent difference values for the MS/MSD analyses.

One data point was rejected based on MS/MSD %R values that were less than 10%.

Data were estimated due to CCAL %D outliers, LCS %R outliers, and MS/MSD %R outliers. Reporting limits were elevated based on method blank contamination.

Data that has been rejected should not be used for any purpose. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway T-30 Post Dredge Monitoring
Semivolatile Compounds by Method 8270D-SIM

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
QF22	7 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1 Sample Preservation and Holding Times
GC/MS Instrument Performance
Initial Calibration (ICAL)
Continuing Calibration (CCAL)
2 Laboratory Blanks
Field Blanks
Surrogate Compounds
Laboratory Control Samples (LCS/LCSD)
1 Standard Reference Material
Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Internal Standards
Target Analyte List
2 Reporting Limits
Compound Identification
Reported Results

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Sample Preservation and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received two sample coolers with temperatures greater than 6°C, with the highest temperature at 6.6°C. For all instances where the cooler

temperatures were greater than the upper control limit, the samples were received within six hours of collection. This did not allow sufficient time for the samples and coolers to come down to the lowest possible temperature. It was determined that these temperature outliers did not impact data quality and no qualifiers were assigned.

Laboratory Blanks

Diethyl phthalate was detected in the method blank at a level greater than the method detection limit. The result for this compound in Sample T30-09-13 was less than the action level of ten times the blank concentration and was qualified as not-detected (U-7).

Standard Reference Material

The laboratory analyzed a reference material sample (SQ-1) with the sediment samples. Although the results for some analytes were outside of the reference range, no data were qualified as this is not a certified reference material.

Reporting Limits

The reporting limits for n-nitrosodiphenylamine were elevated due to matrix interferences in three samples. These results were flagged with a "Y" by the laboratory. These "Y" flagged results were qualified as (U-22) to indicate the results are not-detected at the elevated RL.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample, and matrix spike/matrix spike duplicate (MS/MSD) recoveries. Precision was also acceptable as demonstrated by the relative percent difference values for the MS/MSD analyses.

Reporting limits were elevated based on method blank contamination and matrix interferences.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway T-30 Post Dredge Monitoring
PCB Aroclors by EPA Method 8082

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
QF22	7 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Preservation and Holding Times		Laboratory Control Samples (LCS)
	Initial Calibration (ICAL)	1	Standard Reference Material
	Continuing Calibration (CCAL)		Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	2	Reporting Limits
	Field Blanks		Compound Identification
	Surrogate Compounds		Reported Results

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Preservation and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received two sample coolers with temperatures greater than 6°C, with the highest temperature at 6.6°C. For all instances where the cooler temperatures were greater than the upper control limit, the samples were received within six hours of collection. This did not allow sufficient time for the samples and coolers to come down to the lowest possible temperature. It was determined that these temperature outliers did not impact data quality and no qualifiers were assigned.

Standard Reference Material

The Sequim Bay reference material SQ-1 was analyzed with the samples. Recoveries were within the reference ranges.

Reporting Limits

Due to matrix interferences, several sample extracts were re-analyzed at dilution. Reporting limits were elevated accordingly.

The chromatograms for Samples T30-09-04 and T30-09-027 indicated non-target background interferences. The reporting limits for the affected compound, Aroclor 1232, were flagged "Y" by the laboratory. These "Y" flagged results for Aroclor 1232 were qualified (U-22) to indicate the result was not-detected at the elevated RL.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample, standard reference material, and matrix spike/matrix spike duplicate (MS/MSD) recoveries. Precision was also acceptable as demonstrated by the MS/MSD relative percent difference values.

Reporting limits were elevated due to matrix interferences.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway T-30 Post Dredge Monitoring
Metals Analyses by EPA 200.8, 6010B, and 7471A

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
QF22	7 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements for review are listed below.

2	Sample Preservation and Holding Times	1	Standard Reference Material
	ICP-MS Tune	2	Matrix Spikes (MS)
	Initial Calibration (ICAL)		Laboratory Duplicates
	Calibration Verification (ICV/CCV)		IC-MS Internal Standards
2	Contract Required Detection Limit Standard		Interference Check Standards
1	Laboratory Blanks		Reporting Limits
	Laboratory Control Samples		Reported Results

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Sample Preservation and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received two sample coolers with temperatures greater than 6°C, with the highest temperature at 6.6°C. For all instances where the cooler temperatures were greater than the upper control limit, the samples were received within 6 hours of collection. This did not allow sufficient time for the samples and coolers to come down to the

lowest possible temperature. It was determined that these temperature outliers did not impact data quality and no qualifiers were assigned.

The QAPP specified extended holding times for samples that were archived at 18°C; however no extended holding time was specified for mercury. Typically the holding time for mercury for samples stored in frozen archive is 6 months. The samples were analyzed after 6 months; therefore all mercury results were estimated (J-1) to indicate a potential low bias.

Contract Required Detection Limit Standard

Contract required detection limit (CRDL) standards were analyzed at the beginning of each analytical sequence. The recovery for cadmium was greater than the upper control limit of 130%. All positive results for cadmium which were less than two times the CRDL were estimated (J-14) to indicate a potential high bias.

Laboratory Blanks

Zinc was detected in the method blank at a level greater than the method detection limit (MDL). In order to evaluate the effect on the sample data, an action level was established at five times the blank concentration. All associated results were greater than the action level and no qualification of data was necessary.

Matrix Spikes

A matrix spike sample (MS) was analyzed using Sample T30-09-04. The recovery for antimony (4.3%) was less than the lower control limit of 75%. Because the recovery was less than 30%, the result for the post digestion spike was also evaluated. The post digestion spike recovery was within the control limits of 75%-125%; therefore no rejection of data was required. All antimony results were estimated (UJ-8) to indicate a potential low bias.

Standard Reference Material

The reference material ERA D053540 was analyzed. All results were within the certified acceptance limits.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample, reference material, and matrix spike recovery values, with the exception noted above. The laboratory duplicate relative percent difference values indicated acceptable precision.

Data were estimated due to exceeded holding times, a CRDL standard %R outlier, and a matrix spike %R outlier.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway T-30 Post Dredge Monitoring
Conventional Analyses

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
QF22	7 Sediment	Summary

The analytical tests that were performed are summarized below:

Parameter	Method
Total Solids	EPA 160.3
Total Organic Carbon (TOC)	Plumb, 1981

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all necessary deliverables for a summary validation. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed below.

2	Sample Preservation and Holding Times	1	Standard Reference Material
	Initial Calibration		Matrix Spikes (MS)
	Calibration Verification		Laboratory Replicates
	Laboratory Blanks		Reporting Limits
	Laboratory Control Samples		Reported Results

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Sample Preservation and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2°C to 6°C. The laboratory received two sample coolers with temperatures greater than 6°C, with the highest temperature at 6.6°C. For all instances where the cooler temperatures were greater than the upper control limit, the samples were received within 6 hours of collection. This did not allow sufficient time for the samples and coolers to come down to the lowest possible temperature. It was determined that these temperature outliers did not impact data quality and no qualifiers were assigned.

Samples analyzed for total solids and TOC after the extended 6 month holding time for frozen sediments. The total solids and TOC results for this sample were estimated (J-1).

Standard Reference Material

The standard reference material NIST 8704 was analyzed for TOC. The recovery was within the control limits.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample, standard reference material, and matrix spike percent recovery values. Precision was also acceptable as demonstrated by the laboratory replicate percent relative standard deviation (%RSD) values.

Data were estimated based on exceeded holding times.

All data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

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EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL) U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	Not addressed by NFG No results > CRQL	Apply 5X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD
(Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) in parent sample if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Quantitated using ICAL calibration factor (CF) RPD between columns <40%	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% EcoChem PJ - See TM-08	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate (Qualifiy if required by project QAPP)	9

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration Tissues: Frozen	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r > 0.995	J(+)/UJ(-) if r < 0.995 (multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blank (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		(Refer to TM-02 for additional information)
			7

Reporting Limit Standard	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Sb, Pb, Tl)	R(-)/J(+) < 2x RL if %R <50% (< 30% Sb, Pb, Tl) J(+) < 2x RL, UJ(-) if %R 50-69% (30-49% Sb, Pb,Tl) J(+) < 2x RL if %R 130-180% (150-200% Sb, Pb, Tl) R(+) < 2x RL if %R > 180% (200% Sb, Pb, Tl)	14
Interference Check Samples (ICSA/ICSAB)	ICSAB %R 80 - 120% for all spiked elements | ICSA | < MDL for all unspiked elements except: K, Na	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R= 50 to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Matrix Spikes	One per matrix per batch 75-125% for samples less than 4x spike level	J(+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30% or J(+)/UJ(-) if Post Spike %R 75-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, spike at twice the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples >RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL (2x RL for solids) qualify all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample conc. > 50x MDL	J(+)/UJ(-) if %D >10% qualify all samples in batch	16
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

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EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

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EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	28 days from date sampled Frozen tissues: HT extended to 6 months	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + 4 standards, one at RL r > 0.995	J(+)/UJ(-) if r<0.995	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	after each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRA)	conc at RL - analyzed beginning of run %R = 70-130%	R(-),(+)<2xRL if %R <50% J(+)<2x RL, UJ(-) if %R 50-69% J(+) <2x RL if %R 130-180% R(+)<2x RL if %R>180%	14
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 5% frequency 75-125% for samples less than 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% all samples in batch	8
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5x RL: Water: Diff<RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must be less than 110% of high standard	J values over range	20

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EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler Temperature 4°C ±2°C Preservation: Method Specific	Use Professional Judgment to qualify based to qualify for coole temp outliers J(+)/UJ(-) if preservation requirements not met	1
Holding Time	Method Specific	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by > 3X	1
Initial Calibration	Method specific r>0.995	Use professional judgment J(+)/UJ(-) for r < 0.995	5A
Initial Calibration Verification (ICV)	Where applicable to method Independent source analyzed immediately after calibration %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5A
Continuing Cal Verification (CCV)	Where applicable to method Every ten samples, immed. following ICV/ICB and end of run %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5B

Initial and Continuing Cal Blanks (ICB/CCB)	Where applicable to method
	After each ICV and CCV every ten samples and end of run
	| blank| < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Method Blank	One per matrix per batch
	(not to exceed 20 samples)
	blank < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blk value, U(+) results < action level
		For (-) blk value, J(+)/UJ(-) results < action level
			7

Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Matrix Spike	One per matrix per batch; 5% frequency 75-125% for samples less than 4 x spike level	J(+) if %R > 125% or < 75% UJ(-) if %R = 30-74% R(+/-) results < IDL if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x RL Diff <RL for samples >RL and <5 x RL (may use RPD < 35%, Diff < 2X RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

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EcoChem Validation Guidelines for Conventional Chemistry Analysis
(Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5X RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff<RL Solid: Diff < 2X RL	J(+)/UJ(-) in parent samples only	9

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EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table
Windward
Terminal 30 Post Dredge Monitoring

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qual	Val Qual	Val Reason
QF22	T30-09-04_T2	10-726-QF22A	EPA 160.3	Total Solids	69.3	%		J	1
QF22	T30-09-04_T2LR	10-726-QF22ALR	EPA 160.3	Total Solids	69.2	%		J	1
QF22	T30-09-04_T2LT	10-726-QF22ALT	EPA 160.3	Total Solids	69.2	%		J	1
QF22	T30-09-06_T2	10-727-QF22B	EPA 160.3	Total Solids	64.8	%		J	1
QF22	T30-09-13_T2	10-728-QF22C	EPA 160.3	Total Solids	70.2	%		J	1
QF22	T30-09-24_T2	10-729-QF22D	EPA 160.3	Total Solids	70	%		J	1
QF22	T30-09-27_T2	10-730-QF22E	EPA 160.3	Total Solids	67.4	%		J	1
QF22	T30-09-28_T2	10-731-QF22F	EPA 160.3	Total Solids	64.1	%		J	1
QF22	T30-09-31_T2	10-732-QF22G	EPA 160.3	Total Solids	67.8	%		J	1
QF22	T30-09-04_T2	10-726-QF22A	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-04_T2LR	10-726-	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-06_T2	10-727-QF22B	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-13_T2	10-728-QF22C	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-24_T2	10-729-QF22D	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-27_T2	10-730-QF22E	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-28_T2	10-731-QF22F	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-31_T2	10-732-QF22G	EPA 200.8	Antimony		mg/kg	U	UJ	8
QF22	T30-09-13_T2	10-728-QF22C	EPA 6010B	Cadmium	0.5	mg/kg		J	14
QF22	T30-09-24_T2	10-729-QF22D	EPA 6010B	Cadmium	0.4	mg/kg		J	14
QF22	T30-09-27_T2	10-730-QF22E	EPA 6010B	Cadmium	0.3	mg/kg		J	14
QF22	T30-09-28_T2	10-731-QF22F	EPA 6010B	Cadmium	0.6	mg/kg		J	14
QF22	T30-09-04_T2	10-726-QF22A	EPA 7471A	Mercury	0.03	mg/kg		J	1
QF22	T30-09-04_T2LR	10-726-QF22ALR	EPA 7471A	Mercury	0.07	mg/kg		J	1
QF22	T30-09-06_T2	10-727-QF22B	EPA 7471A	Mercury	0.11	mg/kg		J	1
QF22	T30-09-13_T2	10-728-QF22C	EPA 7471A	Mercury	0.07	mg/kg		J	1
QF22	T30-09-24_T2	10-729-QF22D	EPA 7471A	Mercury	0.09	mg/kg		J	1
QF22	T30-09-27_T2	10-730-QF22E	EPA 7471A	Mercury	0.07	mg/kg		J	1
QF22	T30-09-28_T2	10-731-QF22F	EPA 7471A	Mercury	0.15	mg/kg		J	1
QF22	T30-09-31_T2	10-732-QF22G	EPA 7471A	Mercury	0.04	mg/kg		J	1
QF22	T30-09-04_T2	10-726-QF22A	EPA 8082	Aroclor 1232		ug/kg	Y	U	22
QF22	T30-09-27_T2	10-730-QF22E	EPA 8082	Aroclor 1232		ug/kg	Y	U	22
QF22	T30-09-04_T2	10-726-QF22A	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	UJ	10
QF22	T30-09-04_T2	10-726-QF22A	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	10
QF22	T30-09-04_T2	10-726-QF22A	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	UJ	10
QF22	T30-09-04_T2	10-726-QF22A	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
QF22	T30-09-04_T2	10-726-QF22A	EPA 8270D	bis(2-Ethylhexyl)phthalate	190	ug/kg	B	U	7
QF22	T30-09-04_T2	10-726-QF22A	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	UJ	10
QF22	T30-09-04_T2	10-726-QF22A	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	UJ	10
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	10
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	UJ	10
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D	bis(2-Ethylhexyl)phthalate	360	ug/kg	B	U	7
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	UJ	10
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	UJ	8,10
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	8,10
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	UJ	10
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	4-Chloroaniline		ug/kg	U	UJ	8
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	Aniline		ug/kg	U	UJ	8
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B,8

Qualified Data Summary Table
Windward
Terminal 30 Post Dredge Monitoring

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qual	Val Qual	Val Reason
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	bis(2-Ethylhexyl)phthalate	1400	ug/kg	B	UJ	7,8
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	8
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	Hexachloroethane		ug/kg	U	UJ	8
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	UJ	10
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	10
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	UJ	10
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D	bis(2-Ethylhexyl)phthalate	210	ug/kg	B	U	7
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	UJ	10
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
QF22	T30-09-27_T2	10-730-QF22E	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	UJ	10
QF22	T30-09-27_T2	10-730-QF22E	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	10
QF22	T30-09-27_T2	10-730-QF22E	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	UJ	10
QF22	T30-09-27_T2	10-730-QF22E	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
QF22	T30-09-27_T2	10-730-QF22E	EPA 8270D	bis(2-Ethylhexyl)phthalate	250	ug/kg	B	U	7
QF22	T30-09-27_T2	10-730-QF22E	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	UJ	10
QF22	T30-09-27_T2	10-730-QF22E	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
QF22	T30-09-28_T2	10-731-QF22F	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	UJ	10
QF22	T30-09-28_T2	10-731-QF22F	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	10
QF22	T30-09-28_T2	10-731-QF22F	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	UJ	10
QF22	T30-09-28_T2	10-731-QF22F	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
QF22	T30-09-28_T2	10-731-QF22F	EPA 8270D	bis(2-Ethylhexyl)phthalate	310	ug/kg	B	U	7
QF22	T30-09-28_T2	10-731-QF22F	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	UJ	10
QF22	T30-09-28_T2	10-731-QF22F	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
QF22	T30-09-31_T2	10-732-QF22G	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	UJ	10
QF22	T30-09-31_T2	10-732-QF22G	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	10
QF22	T30-09-31_T2	10-732-QF22G	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	UJ	10
QF22	T30-09-31_T2	10-732-QF22G	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	5B
QF22	T30-09-31_T2	10-732-QF22G	EPA 8270D	bis(2-Ethylhexyl)phthalate	120	ug/kg	B	U	7
QF22	T30-09-31_T2	10-732-QF22G	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	UJ	10
QF22	T30-09-31_T2	10-732-QF22G	EPA 8270D	Pentachlorophenol		ug/kg	U	UJ	5B
QF22	T30-09-06_T2	10-727-QF22B	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D-SIM	Diethylphthalate	15	ug/kg	B	U	7
QF22	T30-09-13_T2	10-728-QF22C	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
QF22	T30-09-24_T2	10-729-QF22D	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
QF22	T30-09-04_T2	10-726-QF22A	PLUMB,1981	Total Organic Carbon	0.551	%		J	1
QF22	T30-09-04_T2LR	10-726-QF22ALR	PLUMB,1981	Total Organic Carbon	0.534	%		J	1
QF22	T30-09-04_T2LT	10-726-QF22ALT	PLUMB,1981	Total Organic Carbon	0.538	%		J	1
QF22	T30-09-06_T2	10-727-QF22B	PLUMB,1981	Total Organic Carbon	0.986	%		J	1
QF22	T30-09-13_T2	10-728-QF22C	PLUMB,1981	Total Organic Carbon	1.04	%		J	1
QF22	T30-09-24_T2	10-729-QF22D	PLUMB,1981	Total Organic Carbon	1.16	%		J	1
QF22	T30-09-27_T2	10-730-QF22E	PLUMB,1981	Total Organic Carbon	0.858	%		J	1
QF22	T30-09-28_T2	10-731-QF22F	PLUMB,1981	Total Organic Carbon	1.52	%		J	1
QF22	T30-09-31_T2	10-732-QF22G	PLUMB,1981	Total Organic Carbon	0.764	%		J	1

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

East Waterway
MIS Intertidal and Subtidal Composite Sediment Sampling

Prepared for:

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EcoChem Project: C22018-3

April 20, 2010 (Revised)

Approved for Release:

Chris Ransom
Project Manager
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of full validation performed on sediment samples and quality control sample data for the East Waterway MIS Intertidal and Subtidal Composite Sediment sampling. A complete list of samples is provided in the **SAMPLE INDEX**.

Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington and Analytical Perspectives, Wilmington, North Carolina. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Semivolatile Organic Compounds	EPA 8270D	Melissa Swanson	Eric Strout
Polycyclic Aromatic Hydrocarbons	EPA 8270D-SIM		
Polychlorinated Biphenyls Aroclors	EPA 8082	Megan Kilner	
Polychlorinated Biphenyls Congeners	EPA 1668A	Melissa Swanson	
Pesticides	EPA 8081B	Lucy Panteleeff	
Dioxin Furans	EPA 1613	Melissa Swanson	
Organotins	Krone 1989-SIM	Megan Kilner	
Metals	EPA 200.8, 6010B, 7471A	Megan Kilner	Chris Ransom
Total Organic Carbon	Plumb, 1981		
Total Solids	EPA 160.3		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the quality assurance project plan (QAPP) for *Surface Sediment Sampling for Chemical Analyses and Toxicity Testing of the East Waterway* (February 13, 2009); the addendum to QAPP for *Intertidal MIS Sediment Sampling* (July, 2009); *National Functional Guidelines for Inorganic Data Review* (USEPA 1994 & 2004); *National Functional Guidelines for Organic Data Review* (USEPA 1999); and *USEPA National Function Guidelines for Chlorinated Dibenzo-p Dioxins (CDD) and Chlorinated Dibenzofurans (CDF) Data Review* (USEPA, 2005).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as **APPENDIX A**. A Qualified Data Summary Table is included in **APPENDIX B**. **APPENDIX C** contains project communications. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

Sample Index
East Waterway – MIS Intertidal and Subtidal Composite Sediment Sampling
Analytical Resources Inc.

SDG	Sample ID	Lab ID	SVOC	PAH	PCB	PEST	TBT	Metals	Conv
QC54	EW09-CS-001-010	09-31443-QC54A			✓				✓
QC54	EW09-CS-002-010	09-31444-QC54B			✓				✓
QC54	EW09-CS-003-010	09-31445-QC54C			✓				✓
QC54	EW09-CS-004-010	09-31446-QC54D			✓				✓
QC54	EW09-CS-005-010	09-31447-QC54E			✓				✓
QC54	EW09-CS-006-010	09-31448-QC54F			✓				✓
QC54	EW09-CS-007-010	09-31449-QC54G			✓				✓
QC54	EW09-CS-008-010	09-31450-QC54H			✓				✓
QC54	EW09-CS-009-010	09-31451-QC54I			✓				✓
QC54	EW09-CS-010-010	09-31452-QC54J			✓				✓
QC54	EW09-CS-011-010	09-31453-QC54K			✓				✓
QC54	EW09-CS-012-010	09-31454-QC54L			✓				✓
QC54	EW09-CS-013-010	09-31455-QC54M			✓				✓
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	✓	✓	✓	✓	✓	✓	✓
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	✓	✓	✓	✓	✓	✓	✓
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	✓	✓	✓	✓	✓	✓	✓
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	✓	✓	✓	✓	✓	✓	✓

Sample Index
East Waterway – MIS Intertidal and Subtidal Composite Sediment Sampling
Analytical Perspectives

SDG	Sample ID	Lab ID	PCB Congeners	Dioxin Furans
P1855	EW09-CS-001-010	P1855_7530_001	✓	✓
P1855	EW09-CS-002-010	P1855_7530_002	✓	✓
P1855	EW09-CS-003-010	P1855_7530_003	✓	✓
P1855	EW09-CS-004-010	P1855_7530_004	✓	✓
P1855	EW09-CS-005-010	P1855_7530_005	✓	✓
P1855	EW09-CS-006-010	P1855_7530_006	✓	✓
P1855	EW09-CS-007-010	P1855_7530_007	✓	✓
P1855	EW09-CS-008-010	P1855_7530_008	✓	✓
P1855	EW09-CS-009-010	P1855_7530_009	✓	✓
P1855	EW09-CS-010-010	P1855_7530_010	✓	✓
P1855	EW09-CS-011-010	P1855_7530_011	✓	✓
P1855	EW09-CS-012-010	P1855_7530_012	✓	✓
P1855	EW09-CS-013-010	P1855_7530_013	✓	✓
P1940	EW09-ITSED-AWMIS-01	P1940_7533_001	✓	✓
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	✓	✓
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	✓	✓
P1940	EW09-ITSED-PAMIS-01	P1940_7533_004	✓	✓

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
Semivolatile Compounds by EPA Method 8270D

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
QC54	4 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

The target analyte 1-methylnaphthalene was not reported on the summary forms in the original submitted data package or in the electronic data deliverable (EDD). The revised forms and EDDs were submitted by the laboratory on 4/08/2010.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the EDD results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Preservation and Holding Times
	GC/MS Instrument Performance
	Initial Calibration (ICAL)
	Continuing Calibration (CCAL)
2	Laboratory Blanks
1	Field Blanks
	Surrogate Compounds
2	Laboratory Control Samples (LCS/LCSD)
1	Reference Material
2	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Internal Standards
1	Field Duplicates
	Target Analyte List
	Reporting Limits
2	Reported Results
	Compound Identification
1	Calculation Verification (full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Laboratory Blanks

Bis(2-ethylhexyl)phthalate was detected in the method blank at a level greater than the method detection limit. The bis(2-ethylhexyl)phthalate results in all samples were less than the action level of ten times the blank concentration and were qualified as not-detected (U-7).

Field Blanks

No samples identified as field blanks were submitted.

Field Duplicates

No samples identified as field duplicates were submitted.

Laboratory Control Samples

The laboratory control sample (LCS) percent recovery (%R) value for 2,4-dimethylphenol was less than the lower control limit. This analyte was not detected in any sample; the reporting limits were estimated (UJ-10) in all samples.

Reference Material

The Sequim Bay reference material SQ-1 was analyzed with the samples. The recoveries for several analytes were outside of the reference range. As the SQ-1 values are reference values only and are not certified, no action was taken based on the recovery value outliers.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed using Sample EW09-ITSED-AWMIS-02. The percent recovery (%R) values for 4-chloroaniline were less than the lower control limit. This analyte was not detected; the reporting limit was estimated (UJ-8) in the parent sample. The %R values for anthracene, carbazole, chrysene, and fluoranthene were greater than the upper control limit; these analytes were estimated (J-8) in the parent sample.

The %R values for hexachlorocylopentadiene were very low (8.0% and 10.9%), and aniline was not recovered in the MS or MSD. These analytes were not detected in the parent sample; reporting limits were rejected (R-8).

The MSD %R values were greater than the upper control limits for the following analytes: acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzofuran, fluorene, naphthalene, phenanthrene, and pyrene. No qualifiers were applied for these single outliers.

The relative percent difference (RPD) values for carbazole, fluoranthene, naphthalene, and phenanthrene were greater than the control limit; these analytes were estimated (J-9) in the parent sample.

Reported Results

In Sample EW09-ITSED-AWMIS-03, the concentrations of fluoranthene, phenanthrene, and pyrene were greater than the calibrated linear range of the instrument. This sample was re-analyzed at dilution; both sets of data were reported. To indicate which results should be reported from each analysis, the results that exceeded the linear range in the original analysis were rejected (R-20). The results for all other compounds in the dilution were rejected (R-11).

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, LCS, and MS/MSD recoveries, except as previously noted. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD analyses, except as noted above.

Data were qualified as not detected based on method blank contamination. Data were estimated based on LCS and MS/MSD accuracy outliers and MS/MSD precision outliers.

Data were rejected based on MS/MSD %R values that were less than 10%. Data were also rejected in order to indicate the usable result when multiple results were reported.

Data that have been rejected should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
Semivolatile Compounds by EPA Method 8270D-SIM

This report documents the review of analytical data from the analysis of composite sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the Sample Index for a list of samples reviewed.

SDG	Number of Samples	Validation Level
QC54	4 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed in the following table:

	Sample Preservation and Holding Time	2	Matrix Spike/Matrix Spike Duplicate (MS/MSD)
	GC/MS Instrument Performance		Internal Standards
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)		Target Analyte List
2	Laboratory Blanks	2	Reporting Limits
1	Field Blanks		Reported Results
	Surrogate Compounds		Compound Identification
2	Laboratory Control Samples (LCS/LCSD)	1	Calculation Verification (full validation only)
1	Reference Material		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Laboratory Blanks

Diethyl phthalate was detected in the method blank at a level greater than the method detection limit. The diethyl phthalate result in Sample EW09-ITSED-AWMIS-02 was less than the action level of ten times the blank concentration and was qualified as not-detected (U-7).

Field Blanks

No samples identified as field blanks were submitted.

Field Duplicates

No samples identified as field duplicates were submitted.

Laboratory Control Samples

The laboratory control sample (LCS) percent recovery (%R) value for 2,4-dimethylphenol was less than the lower control limit. This analyte was not detected in any sample; the reporting limits were estimated (UJ-10) in the four associated samples.

Reference Material

The Sequim Bay reference material SQ-1 was analyzed with the samples. The recoveries for several analytes were outside of the reference range. As the SQ-1 values are reference values only and are not certified, no action was taken based on the recovery value outliers.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed using Sample EW09-ITSED-AWMIS-02. The benzyl alcohol %R values were greater than the upper control limit. This analyte was not detected in the parent sample, no qualifiers were applied. The %R values for pentachlorophenol were less than the lower control limit. This analyte was estimated (J-8) in the parent sample.

Reporting Limits

Several chromatograms indicated non-target background interference. The reporting limits for three n-nitrosodiphenylamine results were flagged "Y" by the laboratory to indicate that the reported value is an elevated reporting limit. These "Y" flagged results were qualified as not-detected (U-22).

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD recoveries, except as previously noted. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD analyses.

Data were qualified as not detected based on method blank contamination. Data were estimated based on LCS and MS/MSD accuracy outliers. Data were also qualified as not detected to indicate that the laboratory "Y" flags represent elevated reporting limits due to matrix interferences.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
PCB Aroclors by Method SW8082

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc., Tukwila, Washington. Please see the **Sample Index** for a complete list of samples reviewed.

SDG	Number of Samples	Validation Level
QC54	17 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed in the following table:

	Sample Preservation and Holding Times	1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)		Target Analyte List
	Laboratory Blanks	2	Reporting Limits
1	Field Blanks		Reported Results
	Surrogate Compounds	2	Compound Identification
	Laboratory Control Samples (LCS/LCSD)	1	Calculation Verification (full validation only)
1	Reference Material		

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No samples identified as field blanks were submitted.

Reference Material

The Sequim Bay reference material SQ-1 was analyzed with the samples. The recovery of the only Aroclor (Aroclor 1254) in the reference material was within the acceptance range.

Matrix Spike/Matrix Spike Duplicates

Two matrix spike/matrix spike duplicate (MS/MSD) sets were submitted. For the EW09-CS-012-010 MS/MSD set, the percent recovery (%R) values for Aroclor 1016 and Aroclor 1260 were greater than the upper control limits in the MSD analysis. No action was taken, as the recoveries in the MS and laboratory control sample/laboratory control sample duplicate (LCS) analyses were acceptable.

For the EW09-ITSED-PAMIS-01 MS/MSD set, the %R values for Aroclor 1016 were greater than the upper control limit in the MS and MSD analyses. No action was taken as Aroclor 1016 was not detected in any sample. The Aroclor 1260 %R value was greater than the upper control limit in the MSD analysis, but was acceptable in the MS and both LCS/LCSD analyses. No action was taken.

Field Duplicates

No samples identified as field duplicates were submitted.

Reporting Limits

The samples were analyzed at a 5x, 10x, or 50x dilution; reporting limits were elevated accordingly.

The chromatograms for most samples indicated non-target background interferences. The affected Aroclor results (typically Aroclor 1248 and Aroclor 1254) for these samples were "Y" flagged by the laboratory. These "Y" flagged results were qualified as not-detected (U-22) to indicate that the analyte was not-detected at an elevated reporting limit.

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recoveries, with the above noted exceptions. Precision was also acceptable as demonstrated by the LCS/LCSD and MS/MSD relative percent difference values.

Data were qualified as not detected to indicate that the laboratory "Y" flags represent elevated reporting limits due to matrix interferences.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
PCB Congeners by EPA Method 1668A

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory quality control (QC) samples. Analytical Perspectives, Wilmington, North Carolina, analyzed the samples. Refer to the Sample Index for a list of samples reviewed.

SDG	Number of Samples	Validation Level
P1855	13 Sediment	Full
P1940	4 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data packages. All sample results were verified along with ten percent of the QC results. No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Preservation and Holding Times		Ongoing Precision and Recovery (OPR)
	System Performance and Resolution Checks	1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)		Target Analyte List
2	Laboratory Blanks	2	Reported Results
1	Field Blanks	2	Compound Identification
2	Labeled Compound Recovery	1	Calculation Verification

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Sample Preservation and Holding Times

Intra-laboratory transfer documents served as the Analytical Perspectives chain-of-custody (COC) forms. Original sample COC forms and compositing instructions are on file at Windward and Analytical Resources, Inc.

Laboratory Blanks

Laboratory (method) blanks were analyzed at the appropriate frequency. Various target analytes were detected in the method blanks. To assess the impact of each blank contaminant on the reported sample results, an action level was established at five times the concentration detected in the blank. If the concentration in the associated field samples were less than the action level, the results were qualified as not detected (U-7) at the reported concentration. No action was taken if the sample results were greater than the action level or for non-detected results.

Only the following analytes were qualified as not-detected in one or more samples based on method blank contamination:

SDG P1855: PCB-11 (5 results)

Field Blanks

No samples identified as field blanks were submitted.

Labeled Compound Recovery

Labeled compounds were added to all samples. The labeled compound percent recovery (%R) values were evaluated using the laboratory control limits. If the labeled compound recovery outlier value indicates high bias, positive results for the associated compound are estimated (J-13); for outlier values indicating low bias, positive results and reporting limits for the associated compounds are estimated (J/UJ-13).

SDG P1855:

Sample EW09-CS-012-010 - Labeled PCB-1 (PCB-1L) was not recovered. PCB-1 was not detected; the reporting limit was rejected (R-13). The result for PCB-2 was estimated (J-13).

Sample EW09-CS-002-010 - PCB-104L (low bias at 34.3%, lower control limit 36%)

Sample EW09-CS-006-010 - PCB-206L (high bias at 145%, upper control limit 122%)

SDG P1940:

Sample EW09-ITSED-AWIS-01 - PCB-19L (high bias at 114%, upper control limit 108%)

Sample EW09-ITSED-PAMIS-01 - PCB-189L (high bias at 119%, upper control limit 116%)

Sample EW09-ITSED-AWIS-02 - PCB-189L, PCB-206L, and PCB-208L (high bias at 130%, 124%, and 127%, respectively, upper control limits 130%, 124%, and 127%)

Ongoing precision and recovery (OPR) sample and method blank - PCB-189L (high bias, both at 123%, upper control limit 116%)

Matrix Spike/Matrix Spike Duplicates

No matrix spike/matrix spike duplicates (MS/MSD) were analyzed. Accuracy was assessed using the labeled compound and the ongoing precision and recovery (OPR) sample recoveries. Precision is monitored by the laboratory by comparing the OPR results between extraction batches. All laboratory precision criteria were met.

Field Duplicates

No samples identified as field duplicates were submitted.

Reported Results

The concentrations for several target analytes exceeded the calibrated linear range of the instrument. The laboratory flagged these results with a "*" symbol. No further analyses or dilutions were performed. The results over the linear range were estimated (J-20).

Compound Identification

For several samples, the laboratory reported estimated maximum possible concentration (EMPC) values for one or more of the target analytes. As required by the method, an EMPC value is reported when a peak was detected but did not meet identification criteria; therefore, the result cannot be considered as positive identification for the analyte. The EMPC values were qualified as not detected (U-22) to indicate that the result is not-detected at an elevated reporting limit.

For the dichlorobiphenyls (PCB-4, PCB-5, PCB-6, PCB-7, PCB-8, PCB-9, PCB-10, PCB-11, PCB-14, and PCB-15), the laboratory flagged most of the results with "SI", indicating single ion mode. This flag indicates where the secondary ion trace has a significantly elevated noise level relative to the lock mass compound. The concentrations for these analytes were calculated using the primary ion area only and therefore should be considered estimates. These values were qualified (J-14).

Calculation Verification

Several results in each data set were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the labeled compound and OPR recoveries, with the exceptions previously noted. Precision was acceptable as indicated by the OPR recoveries from multiple extraction batches.

Data were qualified as not detected based on laboratory blank contamination. Data were also qualified as not detected to indicate that EMPC values represent elevated detection limits. Data were estimated based on labeled compound recovery outliers. Data were also estimated due to elevated noise levels in the secondary ion baseline, and concentrations greater than the calibrated linear range.

One data point was rejected because the associated labeled compound was not recovered. Data that have been rejected are not usable for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
Organochlorine Pesticides by EPA Method 8081B

This report documents the review of analytical data from sediment sample analyses and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the Sample Index for a list of samples reviewed.

SDG	Number of Samples	Validation Level
QC54	4 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed in the following table.

	Sample Preservation and Holding Times	1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Breakdown Check		Internal Standards
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)		Target Analyte List
	Laboratory Blanks	2	Reporting Limits
1	Field Blanks		Reported Results
1	Surrogate Compounds	1	Compound Identification
	Laboratory Control Samples (LCS)	1	Calculation Verification (full validation only)
1	Reference Material		

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No samples identified as field blanks were submitted.

Surrogate Compounds

The percent recovery (%R) value of the surrogate decachlorobiphenyl (DCB) was greater than the upper control limit in Samples EW09-ITSED-AWMIS-02, EW09-ITSED-AWMIS-03 and EW09-ITSED-PAMIS-01. As the tetrachloro-m-xylene (TCMX) recovery values were acceptable, no action was taken.

Field Duplicates

No samples identified as field duplicates were submitted.

Reference Material

The Sequim Bay reference material SQ-1 was analyzed with the samples. The recoveries for several analytes were outside of the reference range. As the SQ-1 values are reference values only and are not certified, no action was taken based on the recovery value outliers.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed at the proper frequency. All %R values were within the laboratory control limits, with the exceptions noted below. The relative percent difference (RPD) values were less than the 50% control limit, with the exception noted below.

Sample EW09-ITSED-AWMIS-02 was used for the MS/MSD analyses. The beta-BHC, gamma-BHC, heptachlor, endosulfan sulfate, and 4,4′-DDT recovery values all indicated a potential high bias. The endosulfan I RPD value was greater than 50%. As none of these analytes were detected in the parent sample, no qualifiers were necessary.

Reporting Limits

The samples in this SDG were analyzed at a 4X dilution. Reporting limits were elevated accordingly.

Several chromatograms indicated non-target background interference. The reporting limits for these analytes were flagged “Y” by the laboratory to indicate that the reported value is an elevated reporting limit. These “Y” flagged results were qualified as not-detected (U-22).

The following results were qualified: endrin aldehyde (1 result), delta-BHC (2 results), heptachlor (1 result), heptachlor epoxide (2 results), endosulfan I (1 result), 4,4′-DDD (1 result), endosulfan sulfate (1 result) 4,4′-DDT (1 result), 2,4′-DDE (2 results).

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40%, the reported result was "P" flagged by the laboratory. The elevated RPD value may indicate the presence of an interferent resulting in a high bias.

Three compounds in the Sequim Bay reference material SQ-1 and several compounds in the MS/MSD analyses were "P" flagged. No qualifiers are assigned to QC samples.

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample (LCS), reference material, and MS/MSD recoveries, with the exceptions noted above. Precision was also acceptable as demonstrated by the MS/MSD RPD values, with exception noted above.

Data were qualified as not detected to indicate that the laboratory "Y" flags represent elevated reporting limits due to matrix interferences.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
Dioxin/Furan Compounds by EPA 1613B

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory quality control (QC) samples. Analytical Perspectives, Wilmington, North Carolina, analyzed the samples. Refer to the Sample Index for a list of samples reviewed.

SDG	Number of Samples	Validation Level
P1855	13 Sediment	Full
P1940	4 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data packages. All sample results were verified along with ten percent of the QC results. No errors were found.

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed in the following table.

1	Holding Times and Sample Preservation	1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
1	System Performance and Resolution Checks		Ongoing Precision and Recovery (OPR)
	Initial Calibration (ICAL)	1	Field Duplicates
	Calibration Verification (CVER)		Target Analyte List
	Laboratory Blanks		Reporting Limits
1	Field Blanks	2	Compound Identification
	Labeled Compound Recovery	1	Calculation Verification

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

Intra-laboratory transfer documents served as the Analytical Perspectives chain-of-custody (COC) forms. Original sample COC forms and compositing instructions are on file at Windward and Analytical Resources, Inc.

System Performance and Resolution Checks

The method requires the analysis of an isomer-specificity test solution. The analysis of this solution (performed near the beginning of an analytical sequence) demonstrates that the GC column can successfully separate 2,3,7,8-TCDD (on the DB5 column) and 2,3,7,8-TCDF (on the DB225 or equivalent column) from closely eluting non-target isomers.

The isomer-specificity analysis was acceptable for 2,3,7,8-TCDD. However, the laboratory does not perform second column analysis. Instead, the laboratory includes the known co-eluting isomers in the ongoing precision and recovery (OPR) spike solution. This QC sample goes through the entire extraction process prior to analysis. Isomer specificity is verified using the results of the OPR analysis.

The method criteria for evaluating the isomer-specificity test is that the peak-to-valley ratio between the 2,3,7,8-isomer and the closest eluting non-target isomer must be less than or equal to 25%. The laboratory uses a 10% criterion for 2,3,7,8-TCDD, and a 40% criterion for 2,3,7,8-TCDF.

For 2,3,7,8-TCDF, the method criterion of 25% is for analyses performed using a DB225 (or equivalent) column. The laboratory uses a DB5MS column (see **Compound Identification** section for further discussion). Although the laboratory criterion for 2,3,7,8-TCDF is greater than 25%, the laboratory also requires that despite the presence of a potentially interfering peak, the 2,3,7,8-TCDF recovery and retention time must still meet the OPR control limits, proving that 2,3,7,8-TCDF was adequately resolved.

Since the 2,3,7,8-TCDF peak-to-valley ratio was less than 40% and since all other OPR control limits were met, the 2,3,7,8-TCDF peak was judged to be adequately resolved, and no further action was necessary.

Field Blanks

No samples identified as field blanks were submitted.

Field Duplicates

No samples identified as field duplicates were submitted.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Accuracy was assessed using labeled compound recoveries and ongoing precision and recovery (OPR) samples. Precision is monitored by the laboratory by comparing the OPR results between extraction batches. All laboratory precision criteria were met.

Compound Identification

The method requires the confirmation of 2,3,7,8-TCDF detects using an alternate GC column. The DB5 column that is typically used cannot fully separate 2,3,7,8-TCDF from closely eluting non-target TCDF isomers. The laboratory did not perform a second column confirmation; however the laboratory uses a DB5MS column. This modified column has been proven to adequately resolve the TCDF isomers. As discussed in the **Instrument Performance** section above, the laboratory also includes the interfering TCDF isomer as a spiked compound in the OPR solution to demonstrate acceptable resolution. Since the 2,3,7,8-TCDF resolution was acceptable, no further action was necessary.

For several samples, the laboratory reported EMPC or "estimated maximum possible concentrations" values for one or more of the target analytes. As required by the method, an EMPC value is reported when a peak was detected but did not meet identification criteria, therefore the result cannot be considered as positive identification for the analyte. To indicate that the reported result is essentially an elevated detection limit, the EMPC values were qualified as not detected (U-22) at the reported values.

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an acceptable modification of the specified analytical method. Accuracy was acceptable, as demonstrated by the labeled compound and OPR recoveries. Precision was acceptable as indicated by the OPR recoveries from multiple extraction batches.

Data were qualified as not detected to indicate that EMPC values represent an elevated detection limit.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
Organotins by Krone 1989 GCMS-SIM

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the Sample Index for a list of samples reviewed.

SDG	Number of Samples	Validation Level
QC54	4 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are summarized in the following table:

	Sample Preservation and Holding Times
	GC/MS Instrument Performance Check
1	Initial Calibration (ICAL)
1	Continuing Calibration (CCAL)
	Method Blanks
1	Field Blanks
	Surrogate Compounds
	Laboratory Control Samples (LCS)
2	Reference Material
	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
1	Field Duplicates
	Internal Standards
	Reporting Limits
	Reported Results
	Compound Identification
1	Calculation Verification (full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Initial Calibration

The relative response factor (RRF) for dibutyl tin was less than the minimum control limit. No qualifiers were assigned as the response is historically low and the response is stable, as indicated by the acceptable percent relative standard deviation (%RSD) values in the initial calibration.

Continuing Calibration

The RRF value for dibutyl tin was less than the minimum control limit. No qualifiers were assigned as response is historically low and the response is stable, as indicated by the acceptable percent difference (%D) values in the continuing calibrations.

Field Blanks

No samples identified as field blanks were submitted.

Reference Material

The certified reference material (CRM) PACS-2 was analyzed with the field samples. The criteria used to evaluate the CRM recovery is that the reported result must be within ±20% of the 95% confidence interval of the true value.

The reported results for tributyl tin and dibutyl tin were less than the lower control limits, indicating a potential low bias. The results for these analytes were estimated (J/UJ-12) in the associated field samples.

Field Duplicates

No samples identified as field duplicates were submitted.

Calculation Verification (Full validation only)

Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and matrix spike/matrix spike duplicate (MS/MSD) recovery values. Precision was also acceptable as demonstrated by the MS/MSD relative percent difference values.

Data were estimated based on low recoveries for the certified reference material analysis.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
Metals Analyses by EPA 200.8 and 6010B, Mercury by 7471A

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
QC54	4 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. All sample results and 10% of the QC results were verified. No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

	Sample Preservation and Holding Times	1	Standard Reference Materials
	Initial Calibrations (ICAL)	2	Matrix Spike (MS)
	ICP-MS Tunes	2	Laboratory Duplicates
	Initial and Continuing Calibration Verification (ICV/CCV)	1	Field Duplicates
	Contract Required Detection Limit Standards		ICP Interference Check Samples
	Laboratory Blanks		ICP-MS Internal Standards
1	Field Blanks		Reported Results
	Laboratory Control Samples	1	Calculation Verification (Full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

No samples identified as field blanks were submitted.

Standard Reference Materials

The reference material ERA D053540 was analyzed. All results were within the manufacturer's performance acceptance limits.

Matrix Spike

A matrix spike sample (MS) was analyzed using Sample EW09-ITSED-AWMIS-01. The percent recovery (%R) value for antimony (16.5%) was less than the lower control limit of 75%. The laboratory analyzed a post digestion spike and the antimony recovery was within the control limits of 75%-125%. Because the post spike recovery was acceptable, all antimony results were estimated (UJ-8) instead of being rejected.

Laboratory Duplicates

The laboratory duplicate relative percent difference (RPD) value for vanadium (31.7%) was greater than the control limit of 30%. All vanadium results were estimated (J-9).

Field Duplicates

No samples identified as field duplicates were submitted.

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample, standard reference material, and matrix spike percent recovery values, with the exception noted above. The laboratory duplicate RPD values indicated acceptable precision, with the exception noted above.

Data were estimated due to a matrix spike recovery outlier and a laboratory duplicate RPD outlier.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – MIS Intertidal and Subtidal Composite Sediments
Conventional Analyses

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
QC54	17 Sediment	Full

The analytical tests that were performed are summarized below:

Parameter	Method
Total Solids	EPA 160.3
Total Organic Carbon (TOC)	Plumb, 1981

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all necessary deliverables for data validation. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed below.

	Sample Preservation and Holding Times		Matrix Spike (MS)
	Initial Calibration		Laboratory Replicates
	Calibration Verification	1	Field Duplicates
	Laboratory Blanks		Reporting Limits
1	Field Blanks		Reported Results
	Laboratory Control Samples	1	Calculation Verification (full validation only)
1	Standard Reference Materials		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

No samples identified as field blanks were submitted.

Standard Reference Materials

The standard reference material NIST 8704 was analyzed for TOC. All recoveries were within the control limits.

Field Duplicates

No samples identified as field duplicates were submitted.

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample, standard reference material, and matrix spike percent recovery values. Precision was also acceptable as demonstrated by the laboratory replicate percent relative standard deviation (%RSD) values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS
(Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

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EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL) U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	Not addressed by NFG No results > CRQL	Apply 5X rule; U(+) < action level	6

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EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD
(Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) in parent sample if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Quantitated using ICAL calibration factor (CF) RPD between columns <40%	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% EcoChem PJ - See TM-08	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate (Qualifiy if required by project QAPP)	9

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EcoChem Validation Guidelines for PCB Congener Analysis by HRMS
(Based on EPA Reg. 10 SOP, Rev. 1, 12/1995 & EPA SW-846, Method 1668)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler/Storage Temperature	Waters/Solids <4°C Tissues <-10°C	EcoChem PJ, see TM-05	1
Holding Time	Samples: Up to one year if stored in the dark & temp as above. Extracts: Up to 1 year if stored at <-10°C and in the dark	J(+)/UJ(-) if HT > 1 year EcoChem PJ, see TM-05	1
Mass Resolution	>=10,000 resolving power at m/z 330.9792 <5 ppm deviation from each m/z listed in Table 7 of method. Analyzed prior to ICAL and at the beginning and end of each 12 hr. shift	R(+/-) if not met	14
Column Resolution 209 Congener Solution	Mix of all 209 PCBs run prior to each ICAL and each 12 hour shift RT of PCB209 must be > 55 min PCB 156 & 157 must coelute w/in 2 sec PCB34 & 23 and PCB187 & 182 must be resolved where ((x/y)*100%) < 40% x = ht. of valley and y = ht of shortest peak	J(+) if valley >40%	5A (ICAL) 5B (CCAL)
Initial Calibration	Minimum of five standards %RSD < 20% for native compounds %RSD < 35% for labeled compounds	J(+) natives if %RSD > 20%	5A
	Ion Abundance ratios within QC limits (Method 1668, Table 8) in CS1 std.	EcoChem PJ, see TM-05	
	S/N ratio > 10 for all native and labeled compounds in CS1 std.	If <10, elevate Det. Limit or R(-)	
Continuing Calibration	Every 12 hours: Concentrations must meet criteria specified in Method 1668, Table 6	J(+)/(UJ(-) natives if %D = 30% - 50% J(+)/R(-) natives if %D > 75%	5B
	Absolute RT of all Labelled Compounds and Window Defining Congeners must be +/- 15 sec of RT in ICAL RRT of all compounds must meet Table 2 of method.	EcoChem PJ, see ICAL section of TM-05	
	S/N ratio > 10	If <10, elevate Det. Limit or R(-)	
	Ion Abundance ratios must meet criteria specified in Method 1668, Table 8	EcoChem PJ, see TM-05	
Method Blank	One per matrix per batch No positive results	If sample result <5X action level, qualify U at reported value.	7

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EcoChem Validation Guidelines for PCB Congener Analysis by HRMS
(Based on EPA Reg. 10 SOP, Rev. 1, 12/1995 & EPA SW-846, Method 1668)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Rinse/Field Blank (if required)	One per matrix per batch No positive results	If sample result <5X action level, qualify U at reported value.	6
LCS / OPR	One per matrix per batch %R Values w/in limits specified in Method 1668, Table 6	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
MS/MSD (if required)	Accuracy: %R values within laboratory limits	Qualify parent sample only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
	Precision: RPD < 20%	J(+) in parent sample if RPD > 20%	9
Duplicate (if required)	RPD <25%	J(+)/UJ(-) if outside limts	9
Labeled Compounds / Internal Standards	%R must meet limits specified in Method 1668, Table 6.	J(+)/UJ(-) if %R = 10% to LCL J(+) if %R > UCL J(+)/R(-) if %R < 10%	13
Quantitation/ Identification	Ions for analyte, IS, and rec. std. must max w/in 2 sec. S/N >2.5 Ion abundance (IA ratios) must meet limits stated in Table 8 of Method 1668 Relative retention times (RRT) must be w/in limits stated in Table 2 of Method 1668	If RT criteria not met, use PJ (see TM-05) J(+) if S/N criteria not met if unlabelled ion abundance not met, change to EMPC J(+) if labelled ion abundance not met.	21
Interferences	Lock masses must not deviate +/- 20%	Change result to EMPC	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11

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EcoChem Validation Guidelines for Dioxin/Furan Analysis by HRMS
(Based on EPA Reg. 10 SOP, Rev. 2, 1996 & EPA SW-846, Methods 1613b and 8290)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler/Storage Temperature	Waters/Solids < 4°C Tissues <-10°C	EcoChem PJ, see TM-05	1
Holding Time	Extraction - Water: 30 days from collection *Note:* Under CWA, SDWA, and RCRA the HT for H2O is 7 days* Extraction - Soil: 30 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext > 30 days J(+)/UJ(-) if analysis > 40 Days EcoChem PJ, see TM-05	1
Mass Resolution	>=10,000 resolving power at m/z 304.9824 Exact mass of m/z 380.9760 w/in 5 ppm of theoretical value (380.97410 to 380.97790) . Analyzed prior to ICAL and at the start and end of each 12 hr. shift	R(+/-) if not met	14
Window Defining Mix and Column Performance Mix	Window defining mixture/Isomer specificity std run before ICAL and CCAL Valley < 25% (valley = (x/y)*100%) x = ht. of TCDD y = baseline to bottom of valley For all isomers eluting near 2378-TCDD/TCDF isomers (TCDD only for 8290)	J(+) if valley > 25%	5A (ICAL) 5B (CCAL
Initial Calibration	Minimum of five standards %RSD < 20% for native compounds %RSD <30% for labeled compounds (%RSD <35% for labeled compounds under 1613b)	J(+) natives if %RSD > 20%	5A
	Abs. RT of $^{13}C_{12}$-1234-TCDD >25 min on DB5 >15 min on DB-225	EcoChem PJ, see TM-05	
	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	EcoChem PJ, see TM-05	
	S/N ratio > 10 for all native and labeled compounds in CS1 std.	If <10, elevate Det. Limit or R(-)	

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EcoChem Validation Guidelines for Dioxin/Furan Analysis by HRMS
(Based on EPA Reg. 10 SOP, Rev. 2, 1996 & EPA SW-846, Methods 1613b and 8290)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Continuing Calibration	Analyzed at the start and end of each 12 hour shift. %D+/-20% for native compounds %D +/-30% for labeled compounds (Must meet limits in Table 6, Method 1613B) (If %Ds in the closing CCAL are w/in 25%/35% the avg RF from the two CCAL may be used to calculate samples per Method 8290, Section 8.3.2.4)	Do not qualify labeled compounds. Narrate in report for labeled compound %D outliers. For native compound %D outliers: 8290: J(+)/UJ(-) if %D = 20% - 75% J(+)/R(-) if %D > 75% 1613: J(+)/UJ(-) if %D is outside Table 6 limits J(+)/R(-) if %D is +/- 75% of Table 6 limit	5B
	Abs. RT of $^{13}C_{12}$-1234-TCDD and ^{13}C12-123789-HxCDD +/- 15 sec of ICAL.	EcoChem PJ, see ICAL section of TM-05	
	RRT of all other compounds must meet Table 2 of 1613B.	EcoChem PJ, see TM-05	
	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	EcoChem PJ, see TM-05	
	S/N ratio > 10	If <10, elevate Det. Limit or R(-)	
Method Blank	One per matrix per batch No positive results	If sample result <5X action level, qualify U at reported value.	7
Field Blanks (Not Required)	No positive results	If sample result <5X action level, qualify U at reported value.	6
LCS / OPR	Concentrations must meet limits in Table 6, Method 1613B or lab limits.	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
MS/MSD (recovery)	May not analyze MS/MSD %R should meet lab limits.	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	May not analyze MS/MSD RPD < 20%	J(+) in parent sample if RPD > CL	9

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EcoChem Validation Guidelines for Dioxin/Furan Analysis by HRMS
(Based on EPA Reg. 10 SOP, Rev. 2, 1996 & EPA SW-846, Methods 1613b and 8290)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Lab Duplicate	RPD <25% if present.	J(+)/UJ(-) if outside limts	9
Labeled Compounds / Internal Standards	*Method 8290:* %R = 40% - 135% in all samples *Method 1613B:* %R must meet limits specified in Table 7, Method 1613	J(+)/UJ(-) if %R = 10% to LCL J(+) if %R > UCL J(+)/R(-) if %R < 10%	13
Quantitation/ Identification	Ions for analyte, IS, and rec. std. must max w/in 2 sec. S/N >2.5 IA ratios meet limits in Table 9 of 1613B or Table 8 of 8290 RRTs w/in limits in Table 2 of 1613B	If RT criteria not met, use PJ (see TM-05) If S/N criteria not met, J(+). if unlabelled ion abundance not met, change to EMPC If labelled ion abundance not met, J(+).	21
EMPC (estimated maximum possible concentration)	If quantitation idenfication criteria are not met, laboratory should report an EMPC value.	If laboratory correctly reported an EMPC value, qualify with U to indicate that the value is a detection limit.	14
Interferences	PCDF interferences from PCDPE	If both detected, change PCDF result to EMPC	14
Second Column Confirmation	All 2378-TCDF hits must be confirmed on a DB-225 (or equiv) column. All QC specs in this table must be met for the confirmation analysis.	Report lower of the two values. If not performed use PJ (see TM-05).	3
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used	11

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration Tissues: Frozen	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r > 0.995	J(+)/UJ(-) if r < 0.995 (multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blank (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		(Refer to TM-02 for additional information)
			7

Reporting Limit Standard	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Sb, Pb, Tl)	R(-)/J(+) < 2x RL if %R <50% (< 30% Sb, Pb, Tl) J(+) < 2x RL, UJ(-) if %R 50-69% (30-49% Sb, Pb,Tl) J(+) < 2x RL if %R 130-180% (150-200% Sb, Pb, Tl) R(+) < 2x RL if %R > 180% (200% Sb, Pb, Tl)	14
Interference Check Samples (ICSA/ICSAB)	ICSAB %R 80 - 120% for all spiked elements | ICSA | < MDL for all unspiked elements except: K, Na	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R= 50 to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	

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EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Matrix Spikes	One per matrix per batch 75-125% for samples less than 4x spike level	J(+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30% or J(+)/UJ(-) if Post Spike %R 75-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, spike at twice the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples >RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL (2x RL for solids) qualify all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample conc. > 50x MDL	J(+)/UJ(-) if %D >10% qualify all samples in batch	16
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

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EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

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EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	28 days from date sampled Frozen tissues: HT extended to 6 months	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + 4 standards, one at RL r > 0.995	J(+)/UJ(-) if r<0.995	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	after each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRA)	conc at RL - analyzed beginning of run %R = 70-130%	R(-),(+)<2xRL if %R <50% J(+)<2x RL, UJ(-) if %R 50-69% J(+) <2x RL if %R 130-180% R(+)<2x RL if %R>180%	14
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 5% frequency 75-125% for samples less than 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% all samples in batch	8
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

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EcoChem Validation Guidelines for Mercury Analysis by CVAA
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5x RL: Water: Diff<RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must be less than 110% of high standard	J values over range	20

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EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler Temperature 4°C ±2°C Preservation: Method Specific	Use Professional Judgment to qualify based to qualify for coole temp outliers J(+)/UJ(-) if preservation requirements not met	1
Holding Time	Method Specific	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by > 3X	1
Initial Calibration	Method specific r>0.995	Use professional judgment J(+)/UJ(-) for r < 0.995	5A
Initial Calibration Verification (ICV)	Where applicable to method Independent source analyzed immediately after calibration %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5A
Continuing Cal Verification (CCV)	Where applicable to method Every ten samples, immed. following ICV/ICB and end of run %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5B

Initial and Continuing Cal Blanks (ICB/CCB)	Where applicable to method
	After each ICV and CCV every ten samples and end of run
	| blank| < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Method Blank	One per matrix per batch
	(not to exceed 20 samples)
	blank < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blk value, U(+) results < action level
		For (-) blk value, J(+)/UJ(-) results < action level
			7

Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Matrix Spike	One per matrix per batch; 5% frequency 75-125% for samples less than 4 x spike level	J(+) if %R > 125% or < 75% UJ(-) if %R = 30-74% R(+/-) results < IDL if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x RL Diff <RL for samples >RL and <5 x RL (may use RPD < 35%, Diff < 2X RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

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EcoChem Validation Guidelines for Conventional Chemistry Analysis
(Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5X RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff<RL Solid: Diff < 2X RL	J(+)/UJ(-) in parent samples only	9

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Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table
East Waterway – MIS Intertidal and Subtidal Composite Sediment Sampling

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-001-010	P1855_7530_001	EPA 1613	2378-TCDD	0.54	pg/g	EMPC	U	22
P1855	EW09-CS-001-010	P1855_7530_001	EPA 1613	Total HxCDF	134	pg/g	EMPC	U	22
P1855	EW09-CS-001-010	P1855_7530_001	EPA 1613	Total PeCDD	23.4	pg/g	EMPC	U	22
P1855	EW09-CS-001-010	P1855_7530_001	EPA 1613	Total PeCDF	57.8	pg/g	EMPC	U	22
P1855	EW09-CS-001-010	P1855_7530_001	EPA 1613	Total TCDD	12.9	pg/g	EMPC	U	22
P1855	EW09-CS-001-010	P1855_7530_001	EPA 1613	Total TCDF	54.9	pg/g	EMPC	U	22
P1855	EW09-CS-002-010	P1855_7530_002	EPA 1613	12378-PeCDF	2.33	pg/g	EMPC J	U	22
P1855	EW09-CS-002-010	P1855_7530_002	EPA 1613	Total HxCDF	201	pg/g	EMPC	U	22
P1855	EW09-CS-002-010	P1855_7530_002	EPA 1613	Total PeCDD	47.7	pg/g	EMPC	U	22
P1855	EW09-CS-002-010	P1855_7530_002	EPA 1613	Total PeCDF	120	pg/g	EMPC	U	22
P1855	EW09-CS-002-010	P1855_7530_002	EPA 1613	Total TCDD	36.4	pg/g	EMPC	U	22
P1855	EW09-CS-002-010	P1855_7530_002	EPA 1613	Total TCDF	91.4	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	123678-HxCDF	4.01	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	12378-PeCDD	2.69	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	12378-PeCDF	2.04	pg/g	EMPC J	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	2378-TCDD	0.839	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	Total HxCDF	159	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	Total PeCDD	37.9	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	Total PeCDF	102	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	Total TCDD	25.2	pg/g	EMPC	U	22
P1855	EW09-CS-003-010	P1855_7530_003	EPA 1613	Total TCDF	75.3	pg/g	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	123789-HxCDD	3.81	pg/g	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	2378-TCDD	0.384	pg/g	EMPC J	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	Total HxCDD	78.9	pg/g	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	Total HxCDF	84.2	pg/g	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	Total PeCDD	21.4	pg/g	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	Total PeCDF	56.3	pg/g	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	Total TCDD	14.4	pg/g	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7530_004	EPA 1613	Total TCDF	42.6	pg/g	EMPC	U	22
P1855	EW09-CS-005-010	P1855_7530_005	EPA 1613	123478-HxCDD	2.25	pg/g	EMPC J	U	22
P1855	EW09-CS-005-010	P1855_7530_005	EPA 1613	Total HxCDD	97.9	pg/g	EMPC	U	22
P1855	EW09-CS-005-010	P1855_7530_005	EPA 1613	Total PeCDD	24.3	pg/g	EMPC	U	22
P1855	EW09-CS-005-010	P1855_7530_005	EPA 1613	Total PeCDF	84.7	pg/g	EMPC	U	22
P1855	EW09-CS-005-010	P1855_7530_005	EPA 1613	Total TCDD	14.2	pg/g	EMPC	U	22
P1855	EW09-CS-005-010	P1855_7530_005	EPA 1613	Total TCDF	59.8	pg/g	EMPC	U	22
P1855	EW09-CS-006-010	P1855_7530_006	EPA 1613	Total PeCDD	52.2	pg/g	EMPC	U	22
P1855	EW09-CS-006-010	P1855_7530_006	EPA 1613	Total PeCDF	185	pg/g	EMPC	U	22
P1855	EW09-CS-006-010	P1855_7530_006	EPA 1613	Total TCDD	29.8	pg/g	EMPC	U	22
P1855	EW09-CS-006-010	P1855_7530_006	EPA 1613	Total TCDF	123	pg/g	EMPC	U	22
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	123478-HxCDD	2.22	pg/g	EMPC J	U	22
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	2378-TCDD	0.765	pg/g	EMPC	U	22
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	Total HxCDD	121	pg/g	EMPC	U	22
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	Total HxCDF	184	pg/g	EMPC	U	22
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	Total PeCDD	37.4	pg/g	EMPC	U	22
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	Total PeCDF	153	pg/g	EMPC	U	22

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	Total TCDD	23.6	pg/g	EMPC	U	22
P1855	EW09-CS-007-010	P1855_7530_007	EPA 1613	Total TCDF	119	pg/g	EMPC	U	22
P1855	EW09-CS-008-010	P1855_7530_008	EPA 1613	1234789-HpCDF	4.79	pg/g	EMPC	U	22
P1855	EW09-CS-008-010	P1855_7530_008	EPA 1613	Total HpCDF	279	pg/g	EMPC	U	22
P1855	EW09-CS-008-010	P1855_7530_008	EPA 1613	Total HxCDF	137	pg/g	EMPC	U	22
P1855	EW09-CS-008-010	P1855_7530_008	EPA 1613	Total PeCDD	29.2	pg/g	EMPC	U	22
P1855	EW09-CS-008-010	P1855_7530_008	EPA 1613	Total PeCDF	104	pg/g	EMPC	U	22
P1855	EW09-CS-008-010	P1855_7530_008	EPA 1613	Total TCDD	18.9	pg/g	EMPC	U	22
P1855	EW09-CS-008-010	P1855_7530_008	EPA 1613	Total TCDF	83	pg/g	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	123478-HxCDD	1.86	pg/g	EMPC J	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	12378-PeCDD	1.46	pg/g	EMPC J	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	Total HxCDD	107	pg/g	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	Total HxCDF	127	pg/g	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	Total PeCDD	18.9	pg/g	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	Total PeCDF	62.1	pg/g	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	Total TCDD	10.7	pg/g	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7530_009	EPA 1613	Total TCDF	45.4	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	1234789-HpCDF	4.7	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	123478-HxCDD	2.64	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	Total HpCDF	188	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	Total HxCDD	106	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	Total HxCDF	92.4	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	Total PeCDD	22.7	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	Total PeCDF	67.1	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	Total TCDD	11.9	pg/g	EMPC	U	22
P1855	EW09-CS-010-010	P1855_7530_010	EPA 1613	Total TCDF	68.3	pg/g	EMPC	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	12378-PeCDD	0.748	pg/g	EMPC J	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	12378-PeCDF	0.548	pg/g	EMPC J	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	234678-HxCDF	1.49	pg/g	EMPC J	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	2378-TCDD	0.239	pg/g	EMPC J	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	Total HxCDD	35.6	pg/g	EMPC	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	Total HxCDF	37.6	pg/g	EMPC	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	Total PeCDD	9.22	pg/g	EMPC	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	Total PeCDF	31.5	pg/g	EMPC	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	Total TCDD	6.16	pg/g	EMPC	U	22
P1855	EW09-CS-011-010	P1855_7530_011	EPA 1613	Total TCDF	29.2	pg/g	EMPC	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	12378-PeCDD	0.784	pg/g	EMPC J	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	2378-TCDD	0.323	pg/g	EMPC J	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	Total HxCDD	48.2	pg/g	EMPC	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	Total HxCDF	47	pg/g	EMPC	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	Total PeCDD	11.1	pg/g	EMPC	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	Total PeCDF	33.9	pg/g	EMPC	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	Total TCDD	6.39	pg/g	EMPC	U	22
P1855	EW09-CS-012-010	P1855_7530_012	EPA 1613	Total TCDF	28.7	pg/g	EMPC	U	22
P1855	EW09-CS-013-010	P1855_7530_013	EPA 1613	123478-HxCDD	2.11	pg/g	EMPC J	U	22

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-013-010	P1855_7530_013	EPA 1613	Total HxCDD	140	pg/g	EMPC	U	22
P1855	EW09-CS-013-010	P1855_7530_013	EPA 1613	Total HxCDF	112	pg/g	EMPC	U	22
P1855	EW09-CS-013-010	P1855_7530_013	EPA 1613	Total PeCDD	24.9	pg/g	EMPC	U	22
P1855	EW09-CS-013-010	P1855_7530_013	EPA 1613	Total PeCDF	64.5	pg/g	EMPC	U	22
P1855	EW09-CS-013-010	P1855_7530_013	EPA 1613	Total TCDD	16	pg/g	EMPC	U	22
P1855	EW09-CS-013-010	P1855_7530_013	EPA 1613	Total TCDF	54	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7533_001	EPA 1613	Total HpCDF	224	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7533_001	EPA 1613	Total HxCDF	95.7	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7533_001	EPA 1613	Total PeCDD	20	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7533_001	EPA 1613	Total PeCDF	50.1	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7533_001	EPA 1613	Total TCDD	10.9	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7533_001	EPA 1613	Total TCDF	41.4	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	EPA 1613	12378-PeCDD	1.09	pg/g	EMPC J	U	22
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	EPA 1613	12378-PeCDF	1.12	pg/g	EMPC J	U	22
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	EPA 1613	2378-TCDD	0.3	pg/g	EMPC J	U	22
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	EPA 1613	Total PeCDD	21.4	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	EPA 1613	Total PeCDF	43.2	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	EPA 1613	Total TCDD	18.1	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-02	P1940_7533_002	EPA 1613	Total TCDF	38.1	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	EPA 1613	1234789-HpCDF	4.19	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	EPA 1613	Total HpCDF	294	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	EPA 1613	Total HxCDF	104	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	EPA 1613	Total PeCDD	21.2	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	EPA 1613	Total PeCDF	77.5	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	EPA 1613	Total TCDD	13.1	pg/g	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7533_003	EPA 1613	Total TCDF	167	pg/g	EMPC	U	22
P1940	EW09-ITSED-PAMIS-01	P1940_7533_004	EPA 1613	Total PeCDD	13	pg/g	EMPC	U	22
P1940	EW09-ITSED-PAMIS-01	P1940_7533_004	EPA 1613	Total PeCDF	37.3	pg/g	EMPC	U	22
P1940	EW09-ITSED-PAMIS-01	P1940_7533_004	EPA 1613	Total TCDD	9.74	pg/g	EMPC	U	22
P1940	EW09-ITSED-PAMIS-01	P1940_7533_004	EPA 1613	Total TCDF	35.7	pg/g	EMPC	U	22
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-105 233'44'-PeCB	4100	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-11 33'-DiCB	60.2	ng/kg	B SI	UJ	7,14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-110 233'4'6-PeCB	11000	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-118 23'44'5-PeCB	10100	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-12 34-DiCB	172	ng/kg	C SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-129 22'33'45-HxCB	26300	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-132 22'33'46'-HxCB	7470	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-135 22'33'56'-HxCB	9390	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-136 22'33'66'-HxCB	4640	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-141 22'3455'-HxCB	5070	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-147 22'34'56-HxCB	20700	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-15 44'-DiCB	1290	ng/kg	SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-153 22'44'55'-HxCB	19900	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-170 22'33'44'5-HpCB	9560	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-174 22'33'456'-HpCB	7370	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-177 22'33'4'56-HpCB	4590	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-180 22'344'55'-HpCB	18000	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-183 22'344'5'6-HpCB	6190	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-187 22'34'55'6-HpCB	8790	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-194 22'33'44'55'-OcCB	4080	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-198 22'33'455'6-OcCB	3920	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-20 233'-TrCB	4780	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-31 24'5-TrCB	4070	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-4 22'-DiCB	307	ng/kg	SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-44 22'35'-TeCB	4730	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-5 23-DiCB	14.4	ng/kg	SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-52 22'55'-TeCB	5980	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-6 23'-DiCB	230	ng/kg	SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-61 2345-TeCB	8390	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-66 23'44'-TeCB	4310	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-7 24-DiCB	59.7	ng/kg	SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-79 33'45'-TeCB	46.6	ng/kg	EMPC	U	22
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-8 24'-DiCB	1110	ng/kg	SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-86 22'345-PeCB	6830	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-9 25-DiCB	44.3	ng/kg	SI	J	14
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-90 22'34'5-PeCB	15100	ng/kg	* C	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-95 22'35'6-PeCB	9850	ng/kg	*	J	20
P1855	EW09-CS-001-010	P1855_7531_PCB_001	EPA 1668A	PCB-99 22'44'5-PeCB	5130	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-1 2-MoCB	11600	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-10 26-DiCB	361	ng/kg	SI	J	14
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-102 22'456'-PeCB	741	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-103 22'45'6-PeCB	1480	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-104 22'466'-PeCB	20.5	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-105 233'44'-PeCB	6100	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-106 233'45-PeCB		ng/kg	U	UJ	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-107 233'4'5-PeCB	629	ng/kg	C	J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-109 233'46-PeCB	1290	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-11 33'-DiCB	243	ng/kg	SI	J	14
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-110 233'4'6-PeCB	22200	ng/kg	*	J	13,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-111 233'55'-PeCB	39.5	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-112 233'56-PeCB		ng/kg	U	UJ	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-115 2344'6-PeCB		ng/kg	U	UJ	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-117 234'56-PeCB	415	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-118 23'44'5-PeCB	16900	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-12 34-DiCB	938	ng/kg	C SI	J	14
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-120 23'455'-PeCB	307	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-121 23'45'6-PeCB	37.5	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-122 2'33'45-PeCB	223	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-127 33'455'-PeCB		ng/kg	U	UJ	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-128 22'33'44'-HxCB	5330	ng/kg	* C	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-129 22'33'45-HxCB	60700	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-132 22'33'46'-HxCB	18000	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-135 22'33'56'-HxCB	27400	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-136 22'33'66'-HxCB	19900	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-141 22'3455'-HxCB	11600	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-146 22'34'55'-HxCB	10700	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-147 22'34'56-HxCB	63400	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-15 44'-DiCB	5140	ng/kg	* SI	J	14,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-153 22'44'55'-HxCB	56100	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-156 233'44'5 HxCB	4420	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-158 233'44'6-HxCB	5320	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-164 233'4'5'6-HxCB	4360	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-170 22'33'44'5-HpCB	22300	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-171 22'33'44'6-HpCB	6720	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-174 22'33'456'-HpCB	19000	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-177 22'33'4'56-HpCB	11800	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-178 22'33'55'6-HpCB	4990	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-179 22'33'566'-HpCB	9750	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-18 22'5-TrCB	5320	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-180 22'344'55'-HpCB	41100	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-183 22'344'5'6-HpCB	15200	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-187 22'34'55'6-HpCB	22800	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-190 233'44'56-HpCB	4260	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-194 22'33'44'55'-OcCB	9120	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-195 22'33'44'56-OcCB	4110	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-196 22'33'44'56'-OcCB	5070	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-198 22'33'455'6-OcCB	8620	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-20 233'-TrCB	6920	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-203 22'344'55'6-OcCB	5100	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-3 4-MoCB	5330	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-31 24'5-TrCB	5730	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-4 22'-DiCB	4210	ng/kg	* SI	J	14,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-44 22'35'-TeCB	6530	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-49 22'45'TeCB	6590	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-5 23-DiCB	154	ng/kg	SI	J	14
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-52 22'55'-TeCB	11100	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-6 23'-DiCB	1340	ng/kg	SI	J	14
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-61 2345-TeCB	11200	ng/kg	* C	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-66 23'44'-TeCB	6160	ng/kg	*	J	20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-7 24-DiCB	600	ng/kg	SI	J	14
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-8 24'-DiCB	5850	ng/kg	* SI	J	14,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-82 22'33'4-PeCB	1650	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-83 22'33'5-PeCB	694	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-84 22'33'6-PeCB	4750	ng/kg	*	J	13,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-85 22'344'-PeCB	2080	ng/kg	C	J	13

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-86 22'345-PeCB	12300	ng/kg	* C	J	13,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-88 22'346-PeCB		ng/kg	U	UJ	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-89 22'346'-PeCB	162	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-9 25-DiCB	385	ng/kg	SI	J	14
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-90 22'34'5-PeCB	36400	ng/kg	* C	J	13,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-91 22'34'6-PeCB	4990	ng/kg	*	J	13,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-92 22'355'-PeCB	6060	ng/kg	*	J	13,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-93 22'356-PeCB	1110	ng/kg	C	J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-94 22'356'-PeCB	73.5	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-95 22'35'6-PeCB	27200	ng/kg	*	J	13,20
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-96 22'366'-PeCB	315	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-98 22'3'46-PeCB	77.1	ng/kg		J	13
P1855	EW09-CS-002-010	P1855_7531_PCB_002	EPA 1668A	PCB-99 22'44'5-PeCB	14500	ng/kg	*	J	13,20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-10 26-DiCB	96.6	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-105 233'44'-PeCB	5260	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-11 33'-DiCB	179	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-110 233'4'6-PeCB	21400	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-118 23'44'5-PeCB	15000	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-12 34-DiCB	519	ng/kg	C SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-128 22'33'44'-HxCB	4920	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-129 22'33'45-HxCB	59700	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-132 22'33'46'-HxCB	18600	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-135 22'33'56'-HxCB	29200	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-136 22'33'66'-HxCB	19900	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-141 22'3455'-HxCB	11700	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-146 22'34'55'-HxCB	12300	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-147 22'34'56-HxCB	69400	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-15 44'-DiCB	3030	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-153 22'44'55'-HxCB	58900	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-154 22'44'5'6-HxCB	5480	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-156 233'44'5 HxCB	4070	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-158 233'44'6-HxCB	5130	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-164 233'4'5'6-HxCB	4480	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-170 22'33'44'5-HpCB	22300	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-171 22'33'44'6-HpCB	6810	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-174 22'33'456'-HpCB	20100	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-177 22'33'4'56-HpCB	12400	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-178 22'33'55'6-HpCB	5090	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-179 22'33'566'-HpCB	10200	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-18 22'5-TrCB	4180	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-180 22'344'55'-HpCB	41700	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-183 22'344'5'6-HpCB	15500	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-187 22'34'55'6-HpCB	24600	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-190 233'44'56-HpCB	4300	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-194 22'33'44'55'-OcCB	8900	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-195 22'33'44'56-OcCB	4100	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-196 22'33'44'56'-OcCB	4620	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-198 22'33'455'6-OcCB	8410	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-20 233'-TrCB	6460	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-203 22'344'55'6-OcCB	4820	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-31 24'5-TrCB	5340	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-4 22'-DiCB	1210	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-44 22'35'-TeCB	7640	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-49 22'45'TeCB	9960	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-5 23-DiCB	60.3	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-52 22'55'-TeCB	16800	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-6 23'-DiCB	604	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-61 2345-TeCB	10500	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-66 23'44'-TeCB	5420	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-7 24-DiCB	202	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-8 24'-DiCB	2660	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-84 22'33'6-PeCB	4130	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-86 22'345-PeCB	11900	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-9 25-DiCB	136	ng/kg	SI	J	14
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-90 22'34'5-PeCB	38300	ng/kg	* C	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-91 22'34'6-PeCB	5890	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-92 22'355'-PeCB	6830	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-95 22'35'6-PeCB	27800	ng/kg	*	J	20
P1855	EW09-CS-003-010	P1855_7531_PCB_003	EPA 1668A	PCB-99 22'44'5-PeCB	16700	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-11 33'-DiCB	76.4	ng/kg	B SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-110 233'4'6-PeCB	9100	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-118 23'44'5-PeCB	7260	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-12 34-DiCB	173	ng/kg	C SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-129 22'33'45-HxCB	28300	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-132 22'33'46'-HxCB	8210	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-135 22'33'56'-HxCB	11900	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-136 22'33'66'-HxCB	6850	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-141 22'3455'-HxCB	5750	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-146 22'34'55'-HxCB	4200	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-147 22'34'56-HxCB	31200	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-15 44'-DiCB	1000	ng/kg	SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-153 22'44'55'-HxCB	29000	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-170 22'33'44'5-HpCB	15000	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-171 22'33'44'6-HpCB	4490	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-174 22'33'456'-HpCB	12000	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-177 22'33'4'56-HpCB	7070	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-179 22'33'566'-HpCB	5320	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-180 22'344'55'-HpCB	29000	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-183 22'344'5'6-HpCB	10800	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-187 22'34'55'6-HpCB	14500	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-194 22'33'44'55'-OcCB	7340	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-196 22'33'44'56'-OcCB	3970	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-198 22'33'455'6-OcCB	6970	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-203 22'344'55'6-OcCB	4080	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-34 2'35-TrCB	9.48	ng/kg	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-4 22'-DiCB	195	ng/kg	SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-5 23-DiCB	15.1	ng/kg	SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-52 22'55'-TeCB	5620	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-58 233'5'-TeCB	5.53	ng/kg	EMPC	U	22
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-6 23'-DiCB	177	ng/kg	SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-61 2345-TeCB	5000	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-7 24-DiCB	58.6	ng/kg	SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-8 24'-DiCB	808	ng/kg	SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-86 22'345-PeCB	4930	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-9 25-DiCB	44.1	ng/kg	SI	J	14
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-90 22'34'5-PeCB	14700	ng/kg	* C	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-95 22'35'6-PeCB	11300	ng/kg	*	J	20
P1855	EW09-CS-004-010	P1855_7531_PCB_004	EPA 1668A	PCB-99 22'44'5-PeCB	6000	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-10 26-DiCB	24.9	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-11 33'-DiCB	127	ng/kg	B SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-110 233'4'6-PeCB	20200	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-118 23'44'5-PeCB	12200	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-12 34-DiCB	258	ng/kg	C SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-128 22'33'44'-HxCB	4770	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-129 22'33'45-HxCB	62200	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-132 22'33'46'-HxCB	18300	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-135 22'33'56'-HxCB	28300	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-136 22'33'66'-HxCB	17600	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-141 22'3455'-HxCB	13100	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-144 22'345'6-HxCB	4160	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-146 22'34'55'-HxCB	11300	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-147 22'34'56-HxCB	75200	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-15 44'-DiCB	1390	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-153 22'44'55'-HxCB	68000	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-154 22'44'5'6-HxCB	5480	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-156 233'44'5 HxCB	4240	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-158 233'44'6-HxCB	5890	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-164 233'4'5'6-HxCB	5000	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-170 22'33'44'5-HpCB	26800	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-171 22'33'44'6-HpCB	8350	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-172 22'33'455'-HpCB	4070	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-174 22'33'456'-HpCB	22900	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-177 22'33'4'56-HpCB	13800	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-178 22'33'55'6-HpCB	5230	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-179 22'33'566'-HpCB	10500	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-180 22'344'55'-HpCB	52700	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-183 22'344'5'6-HpCB	20100	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-187 22'34'55'6-HpCB	27200	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-190 233'44'56-HpCB	5310	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-194 22'33'44'55'-OcCB	11200	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-195 22'33'44'56-OcCB	5300	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-196 22'33'44'56'-OcCB	6030	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-198 22'33'455'6-OcCB	9620	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-203 22'344'55'6-OcCB	5970	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-4 22'-DiCB	368	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-44 22'35'-TeCB	7070	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-49 22'45'TeCB	9780	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-5 23-DiCB	28.5	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-52 22'55'-TeCB	16200	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-6 23'-DiCB	304	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-61 2345-TeCB	7270	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-7 24-DiCB	94.7	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-8 24'-DiCB	1290	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-86 22'345-PeCB	9750	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-9 25-DiCB	78.7	ng/kg	SI	J	14
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-90 22'34'5-PeCB	42900	ng/kg	* C	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-91 22'34'6-PeCB	6760	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-92 22'355'-PeCB	6190	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-95 22'35'6-PeCB	28400	ng/kg	*	J	20
P1855	EW09-CS-005-010	P1855_7531_PCB_005	EPA 1668A	PCB-99 22'44'5-PeCB	18900	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-10 26-DiCB	30.7	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-105 233'44'-PeCB	6600	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-11 33'-DiCB	147	ng/kg	B SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-110 233'4'6-PeCB	26100	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-118 23'44'5-PeCB	19600	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-12 34-DiCB	373	ng/kg	C SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-128 22'33'44'-HxCB	7980	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-129 22'33'45-HxCB	94700	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-130 22'33'45'-HxCB	4890	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-132 22'33'46'-HxCB	27300	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-134 22'33'56-HxCB	5090	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-135 22'33'56'-HxCB	41800	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-136 22'33'66'-HxCB	17400	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-141 22'3455'-HxCB	19800	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-144 22'345'6-HxCB	6440	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-146 22'34'55'-HxCB	13900	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-147 22'34'56-HxCB	90400	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-15 44'-DiCB	2400	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-153 22'44'55'-HxCB	83300	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-156 233'44'5 HxCB	7060	ng/kg	* C	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-158 233'44'6-HxCB	8350	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-164 233'4'5'6-HxCB	6130	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-170 22'33'44'5-HpCB	39900	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-171 22'33'44'6-HpCB	12200	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-172 22'33'455'-HpCB	5980	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-174 22'33'456'-HpCB	32800	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-176 22'33'466'-HpCB	4340	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-177 22'33'4'56-HpCB	19900	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-178 22'33'55'6-HpCB	6510	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-179 22'33'566'-HpCB	13500	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-180 22'344'55'-HpCB	73600	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-183 22'344'5'6-HpCB	27600	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-187 22'34'55'6-HpCB	36000	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-190 233'44'56-HpCB	7420	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-194 22'33'44'55'-OcCB	16400	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-195 22'33'44'56-OcCB	7650	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-196 22'33'44'56'-OcCB	7710	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-198 22'33'455'6-OcCB	12900	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-20 233'-TrCB	6110	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-203 22'344'55'6-OcCB	7920	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-206 22'33'44'55'6-NoCB	2760	ng/kg		J	13
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-207 22'33'44'566'-NoCB	502	ng/kg		J	13
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-31 24'5-TrCB	4960	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-4 22'-DiCB	409	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-44 22'35'-TeCB	6640	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-49 22'45'TeCB	6590	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-5 23-DiCB	38.8	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-52 22'55'-TeCB	12100	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-6 23'-DiCB	408	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-61 2345-TeCB	11200	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-66 23'44'-TeCB	6130	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-7 24-DiCB	148	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-8 24'-DiCB	1870	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-84 22'33'6-PeCB	4850	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-86 22'345-PeCB	13700	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-9 25-DiCB	100	ng/kg	SI	J	14
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-90 22'34'5-PeCB	46000	ng/kg	* C	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-91 22'34'6-PeCB	4610	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-92 22'355'-PeCB	6640	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-95 22'35'6-PeCB	31000	ng/kg	*	J	20
P1855	EW09-CS-006-010	P1855_7531_PCB_006	EPA 1668A	PCB-99 22'44'5-PeCB	13500	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-10 26-DiCB	33.9	ng/kg	SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-105 233'44'-PeCB	8520	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-11 33'-DiCB	145	ng/kg	B SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-110 233'4'6-PeCB	26500	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-118 23'44'5-PeCB	23100	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-12 34-DiCB	402	ng/kg	C SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-128 22'33'44'-HxCB	6880	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-129 22'33'45-HxCB	65700	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-130 22'33'45'-HxCB	3970	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-132 22'33'46'-HxCB	19800	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-134 22'33'56-HxCB	3880	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-135 22'33'56'-HxCB	27500	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-136 22'33'66'-HxCB	13200	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-141 22'3455'-HxCB	14000	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-144 22'345'6-HxCB	4180	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-146 22'34'55'-HxCB	9230	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-147 22'34'56-HxCB	60400	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-15 44'-DiCB	1860	ng/kg	SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-153 22'44'55'-HxCB	54100	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-156 233'44'5 HxCB	6390	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-158 233'44'6-HxCB	6650	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-164 233'4'5'6-HxCB	4520	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-170 22'33'44'5-HpCB	25000	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-171 22'33'44'6-HpCB	7330	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-174 22'33'456'-HpCB	19400	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-177 22'33'4'56-HpCB	11900	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-178 22'33'55'6-HpCB	4140	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-179 22'33'566'-HpCB	8340	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-180 22'344'55'-HpCB	47200	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-183 22'344'5'6-HpCB	16300	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-187 22'34'55'6-HpCB	22600	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-190 233'44'56-HpCB	4910	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-194 22'33'44'55'-OcCB	9700	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-195 22'33'44'56-OcCB	4310	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-196 22'33'44'56'-OcCB	5320	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-198 22'33'455'6-OcCB	8770	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-20 233'-TrCB	7970	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-203 22'344'55'6-OcCB	5370	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-31 24'5-TrCB	7730	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-4 22'-DiCB	505	ng/kg	SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-44 22'35'-TeCB	9600	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-49 22'45'TeCB	10600	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-5 23-DiCB	26	ng/kg	SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-52 22'55'-TeCB	22500	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-6 23'-DiCB	463	ng/kg	SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-61 2345-TeCB	15700	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-66 23'44'-TeCB	6530	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-7 24-DiCB	130	ng/kg	SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-8 24'-DiCB	1880	ng/kg	SI	J	14

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-84 22'33'6-PeCB	6340	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-86 22'345-PeCB	16700	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-9 25-DiCB	94.7	ng/kg	SI	J	14
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-90 22'34'5-PeCB	42800	ng/kg	* C	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-91 22'34'6-PeCB	4370	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-92 22'355'-PeCB	6350	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-95 22'35'6-PeCB	30700	ng/kg	*	J	20
P1855	EW09-CS-007-010	P1855_7531_PCB_007	EPA 1668A	PCB-99 22'44'5-PeCB	12700	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-10 26-DiCB	88.6	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-103 22'45'6-PeCB	8720	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-105 233'44'-PeCB	5130	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-11 33'-DiCB	99.9	ng/kg	B SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-110 233'4'6-PeCB	39800	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-118 23'44'5-PeCB	26400	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-12 34-DiCB	422	ng/kg	C SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-128 22'33'44'-HxCB	12900	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-129 22'33'45-HxCB	182000	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-130 22'33'45'-HxCB	6480	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-132 22'33'46'-HxCB	31700	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-134 22'33'56-HxCB	13200	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-135 22'33'56'-HxCB	118000	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-136 22'33'66'-HxCB	56000	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-139 22'344'6-HxCB	4190	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-141 22'3455'-HxCB	49800	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-144 22'345'6-HxCB	14700	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-146 22'34'55'-HxCB	33900	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-147 22'34'56-HxCB	281000	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-15 44'-DiCB	1860	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-150 22'34'66'-HxCB	4210	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-153 22'44'55'-HxCB	241000	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-154 22'44'5'6-HxCB	17600	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-156 233'44'5 HxCB	16800	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-158 233'44'6-HxCB	21400	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-164 233'4'5'6-HxCB	19100	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-167 23'44'55'-HxCB	8260	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-170 22'33'44'5-HpCB	123000	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-171 22'33'44'6-HpCB	37000	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-172 22'33'455'-HpCB	21600	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-174 22'33'456'-HpCB	99000	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-175 22'33'45'6-HpCB	7280	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-176 22'33'466'-HpCB	13800	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-177 22'33'4'56-HpCB	58700	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-178 22'33'55'6-HpCB	24900	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-179 22'33'566'-HpCB	51900	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-18 22'5-TrCB	4120	ng/kg	* C	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-180 22'344'55'-HpCB	241000	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-183 22'344'5'6-HpCB	92000	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-185 22'3455'6-HpCB	10200	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-187 22'34'55'6-HpCB	133000	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-189 233'44'55'-HpCB	4680	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-190 233'44'56-HpCB	27400	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-191 233'44'5'6-HpCB	5970	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-194 22'33'44'55'-OcCB	57100	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-195 22'33'44'56-OcCB	26100	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-196 22'33'44'56'-OcCB	28400	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-198 22'33'455'6-OcCB	47400	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-20 233'-TrCB	5280	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-200 22'33'4566'-OcCB	9020	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-201 22'33'45'66'-OcCB	9140	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-202 22'33'55'66'-OcCB	9840	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-203 22'344'55'6-OcCB	29100	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-206 22'33'44'55'6-NoCB	9950	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-31 24'5-TrCB	5060	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-4 22'-DiCB	1180	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-44 22'35'-TeCB	8420	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-49 22'45'TeCB	11800	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-5 23-DiCB	101	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-52 22'55'-TeCB	19900	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-6 23'-DiCB	671	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-61 2345-TeCB	9700	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-66 23'44'-TeCB	4300	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-7 24-DiCB	269	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-8 24'-DiCB	2720	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-84 22'33'6-PeCB	5970	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-86 22'345-PeCB	17100	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-9 25-DiCB	207	ng/kg	SI	J	14
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-90 22'34'5-PeCB	116000	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-91 22'34'6-PeCB	32300	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-92 22'355'-PeCB	7270	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-93 22'356-PeCB	5200	ng/kg	* C	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-95 22'35'6-PeCB	67700	ng/kg	*	J	20
P1855	EW09-CS-008-010	P1855_7531_PCB_008	EPA 1668A	PCB-99 22'44'5-PeCB	70600	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-10 26-DiCB	12.8	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-104 22'466'-PeCB	6.93	ng/kg	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-11 33'-DiCB	53	ng/kg	B SI	UJ	7,14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-110 233'4'6-PeCB	16100	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-118 23'44'5-PeCB	9650	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-12 34-DiCB	139	ng/kg	C SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-128 22'33'44'-HxCB	5290	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-129 22'33'45-HxCB	67900	ng/kg	* C	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-132 22'33'46'-HxCB	17500	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-135 22'33'56'-HxCB	32200	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-136 22'33'66'-HxCB	17600	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-141 22'3455'-HxCB	17500	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-144 22'345'6-HxCB	5370	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-146 22'34'55'-HxCB	9660	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-147 22'34'56-HxCB	83000	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-15 44'-DiCB	892	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-153 22'44'55'-HxCB	73600	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-156 233'44'5 HxCB	4910	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-158 233'44'6-HxCB	7180	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-164 233'4'5'6-HxCB	5700	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-170 22'33'44'5-HpCB	38000	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-171 22'33'44'6-HpCB	11500	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-172 22'33'455'-HpCB	6220	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-174 22'33'456'-HpCB	32200	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-176 22'33'466'-HpCB	4810	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-177 22'33'4'56-HpCB	18600	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-178 22'33'55'6-HpCB	7590	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-179 22'33'566'-HpCB	15200	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-180 22'344'55'-HpCB	75500	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-183 22'344'5'6-HpCB	26800	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-187 22'34'55'6-HpCB	40400	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-190 233'44'56-HpCB	8250	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-194 22'33'44'55'-OcCB	16000	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-195 22'33'44'56-OcCB	7260	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-196 22'33'44'56'-OcCB	8220	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-198 22'33'455'6-OcCB	14200	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-203 22'344'55'6-OcCB	8330	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-38 345-TrCB	6.97	ng/kg	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-39 34'5-TrCB	10.2	ng/kg	EMPC	U	22
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-4 22'-DiCB	180	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-44 22'35'-TeCB	4350	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-49 22'45'TeCB	8250	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-5 23-DiCB	9.56	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-52 22'55'-TeCB	15100	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-6 23'-DiCB	186	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-61 2345-TeCB	5770	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-7 24-DiCB	49.3	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-8 24'-DiCB	815	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-86 22'345-PeCB	6800	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-9 25-DiCB	35.2	ng/kg	SI	J	14
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-90 22'34'5-PeCB	34900	ng/kg	* C	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-91 22'34'6-PeCB	8310	ng/kg	*	J	20
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-95 22'35'6-PeCB	34400	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-009-010	P1855_7531_PCB_009	EPA 1668A	PCB-99 22'44'5-PeCB	13300	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-10 26-DiCB	12.6	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-11 33'-DiCB	61.4	ng/kg	B SI	UJ	7,14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-110 233'4'6-PeCB	11100	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-118 23'44'5-PeCB	7320	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-12 34-DiCB	143	ng/kg	C SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-129 22'33'45-HxCB	29200	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-132 22'33'46'-HxCB	8740	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-135 22'33'56'-HxCB	14800	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-136 22'33'66'-HxCB	8910	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-141 22'3455'-HxCB	6170	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-146 22'34'55'-HxCB	4250	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-147 22'34'56-HxCB	39900	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-15 44'-DiCB	903	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-153 22'44'55'-HxCB	30200	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-170 22'33'44'5-HpCB	10400	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-174 22'33'456'-HpCB	9500	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-177 22'33'4'56-HpCB	5660	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-179 22'33'566'-HpCB	4630	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-180 22'344'55'-HpCB	20600	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-183 22'344'5'6-HpCB	7910	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-187 22'34'55'6-HpCB	12200	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-194 22'33'44'55'-OcCB	4070	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-198 22'33'455'6-OcCB	3980	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-4 22'-DiCB	173	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-49 22'45'TeCB	4580	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-5 23-DiCB	9.59	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-52 22'55'-TeCB	8230	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-6 23'-DiCB	150	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-61 2345-TeCB	5300	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-7 24-DiCB	44.6	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-8 24'-DiCB	666	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-86 22'345-PeCB	5290	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-9 25-DiCB	27.7	ng/kg	SI	J	14
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-90 22'34'5-PeCB	20500	ng/kg	* C	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-91 22'34'6-PeCB	4630	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-95 22'35'6-PeCB	20200	ng/kg	*	J	20
P1855	EW09-CS-010-010	P1855_7531_PCB_010	EPA 1668A	PCB-99 22'44'5-PeCB	8140	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-10 26-DiCB	16.1	ng/kg	SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-11 33'-DiCB	63.2	ng/kg	B SI	UJ	7,14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-110 233'4'6-PeCB	6000	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-12 34-DiCB	119	ng/kg	C SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-129 22'33'45-HxCB	13500	ng/kg	* C	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-132 22'33'46'-HxCB	4390	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-135 22'33'56'-HxCB	7250	ng/kg	* C	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-136 22'33'66'-HxCB	6040	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-147 22'34'56-HxCB	23700	ng/kg	* C	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-15 44'-DiCB	707	ng/kg	SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-153 22'44'55'-HxCB	17700	ng/kg	* C	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-170 22'33'44'5-HpCB	5040	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-174 22'33'456'-HpCB	4470	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-180 22'344'55'-HpCB	10600	ng/kg	* C	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-183 22'344'5'6-HpCB	4330	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-187 22'34'55'6-HpCB	6040	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-4 22'-DiCB	347	ng/kg	SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-49 22'45'TeCB	4180	ng/kg	* C	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-52 22'55'-TeCB	7150	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-6 23'-DiCB	228	ng/kg	SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-7 24-DiCB	40.4	ng/kg	SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-8 24'-DiCB	666	ng/kg	SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-9 25-DiCB	22.8	ng/kg	SI	J	14
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-90 22'34'5-PeCB	13100	ng/kg	* C	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-95 22'35'6-PeCB	13100	ng/kg	*	J	20
P1855	EW09-CS-011-010	P1855_7531_PCB_011	EPA 1668A	PCB-99 22'44'5-PeCB	5730	ng/kg	*	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-1 2-MoCB		ng/kg	U	R	13
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-10 26-DiCB	23.8	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-104 22'466'-PeCB	3.12	ng/kg	EMPC	U	22
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-11 33'-DiCB	163	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-110 233'4'6-PeCB	4420	ng/kg	*	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-12 34-DiCB	103	ng/kg	C SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-129 22'33'45-HxCB	12300	ng/kg	* C	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-135 22'33'56'-HxCB	5960	ng/kg	* C	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-136 22'33'66'-HxCB	4330	ng/kg	*	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-147 22'34'56-HxCB	15000	ng/kg	* C	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-15 44'-DiCB	660	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-153 22'44'55'-HxCB	12000	ng/kg	* C	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-170 22'33'44'5-HpCB	4770	ng/kg	*	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-174 22'33'456'-HpCB	4040	ng/kg	*	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-180 22'344'55'-HpCB	9330	ng/kg	* C	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-187 22'34'55'6-HpCB	5050	ng/kg	*	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-2 3-MoCB	51.5	ng/kg		J	13
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-4 22'-DiCB	275	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-5 23-DiCB	6.26	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-6 23'-DiCB	113	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-7 24-DiCB	34	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-8 24'-DiCB	487	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-9 25-DiCB	21.5	ng/kg	SI	J	14
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-90 22'34'5-PeCB	7360	ng/kg	* C	J	20
P1855	EW09-CS-012-010	P1855_7531_PCB_012	EPA 1668A	PCB-95 22'35'6-PeCB	6700	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-10 26-DiCB	7.81	ng/kg	SI	J	14

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-11 33'-DiCB	51.9	ng/kg	B SI	UJ	7,14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-110 233'4'6-PeCB	8660	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-118 23'44'5-PeCB	6720	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-12 34-DiCB	86.7	ng/kg	C SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-129 22'33'45-HxCB	34700	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-132 22'33'46'-HxCB	10200	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-135 22'33'56'-HxCB	17200	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-136 22'33'66'-HxCB	6670	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-141 22'3455'-HxCB	8610	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-146 22'34'55'-HxCB	4620	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-147 22'34'56-HxCB	33600	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-15 44'-DiCB	569	ng/kg	SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-153 22'44'55'-HxCB	30100	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-170 22'33'44'5-HpCB	15600	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-171 22'33'44'6-HpCB	4500	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-174 22'33'456'-HpCB	13700	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-177 22'33'4'56-HpCB	8200	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-179 22'33'566'-HpCB	6080	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-180 22'344'55'-HpCB	30200	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-183 22'344'5'6-HpCB	9940	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-187 22'34'55'6-HpCB	16000	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-194 22'33'44'55'-OcCB	6020	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-198 22'33'455'6-OcCB	5750	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-4 22'-DiCB	126	ng/kg	SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-5 23-DiCB	4.24	ng/kg	SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-6 23'-DiCB	85.6	ng/kg	SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-7 24-DiCB	25	ng/kg	SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-8 24'-DiCB	378	ng/kg	SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-86 22'345-PeCB	4500	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-9 25-DiCB	19.3	ng/kg	SI	J	14
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-90 22'34'5-PeCB	15800	ng/kg	* C	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-95 22'35'6-PeCB	10900	ng/kg	*	J	20
P1855	EW09-CS-013-010	P1855_7531_PCB_013	EPA 1668A	PCB-99 22'44'5-PeCB	4080	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-10 26-DiCB	81.7	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-105 233'44'-PeCB	5120	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-11 33'-DiCB	94.7	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-110 233'4'6-PeCB	20200	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-118 23'44'5-PeCB	15600	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-12 34-DiCB	429	ng/kg	C SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-128 22'33'44'-HxCB	5050	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-129 22'33'45-HxCB	53700	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-132 22'33'46'-HxCB	14900	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-135 22'33'56'-HxCB	27900	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-136 22'33'66'-HxCB	12000	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-141 22'3455'-HxCB	11800	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-146 22'34'55'-HxCB	8600	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-147 22'34'56-HxCB	62700	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-15 44'-DiCB	1840	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-153 22'44'55'-HxCB	57800	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-154 22'44'5'6-HxCB	5790	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-158 233'44'6-HxCB	5460	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-16 22'3-TrCB	1180	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-164 233'4'5'6-HxCB	4500	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-17 22'4-TrCB	2360	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-170 22'33'44'5-HpCB	22800	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-171 22'33'44'6-HpCB	6830	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-174 22'33'456'-HpCB	19000	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-177 22'33'4'56-HpCB	11800	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-178 22'33'55'6-HpCB	5300	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-179 22'33'566'-HpCB	9880	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-18 22'5-TrCB	3890	ng/kg	C	J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-180 22'344'55'-HpCB	45500	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-183 22'344'5'6-HpCB	15500	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-184 22'344'66'-HpCB	8.27	ng/kg	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-187 22'34'55'6-HpCB	27600	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-19 22'6-TrCB	674	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-190 233'44'56-HpCB	4570	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-194 22'33'44'55'-OcCB	9310	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-196 22'33'44'56'-OcCB	5210	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-198 22'33'455'6-OcCB	8420	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-20 233'-TrCB	6720	ng/kg	* C	J	13,20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-203 22'344'55'6-OcCB	4930	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-21 234-TrCB	2650	ng/kg	C	J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-22 234'-TrCB	1660	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-24 236-TrCB	48.6	ng/kg	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-25 23'4-TrCB	877	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-26 23'5-TrCB	2090	ng/kg	C	J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-27 23'6-TrCB	679	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-31 24'5-TrCB	6240	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-32 24'6-TrCB	1650	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-34 2'35-TrCB	35.8	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-35 33'4-TrCB	113	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-4 22'-DiCB	1630	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-41 22'34-TeCB	262	ng/kg	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-44 22'35'-TeCB	7760	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-49 22'45'TeCB	10000	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-5 23-DiCB	34.6	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-52 22'55'-TeCB	17500	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-6 23'-DiCB	1320	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-61 2345-TeCB	10500	ng/kg	* C	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-66 23'44'-TeCB	4890	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-68 23'45'-TeCB	37.9	ng/kg	EMPC	U	22
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-7 24-DiCB	146	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-8 24'-DiCB	2960	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-84 22'33'6-PeCB	4540	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-86 22'345-PeCB	11400	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-9 25-DiCB	167	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-90 22'34'5-PeCB	37800	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-91 22'34'6-PeCB	9000	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-92 22'355'-PeCB	5530	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-95 22'35'6-PeCB	27900	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-01	P1940_7534_PCB_001	EPA 1668A	PCB-99 22'44'5-PeCB	16600	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-10 26-DiCB	326	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-105 233'44'-PeCB	4490	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-11 33'-DiCB	1430	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-110 233'4'6-PeCB	21800	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-118 23'44'5-PeCB	15700	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-12 34-DiCB	5340	ng/kg	* C SI	J	14,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-129 22'33'45-HxCB	44800	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-132 22'33'46'-HxCB	13500	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-135 22'33'56'-HxCB	22800	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-136 22'33'66'-HxCB	9330	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-141 22'3455'-HxCB	9730	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-146 22'34'55'-HxCB	7290	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-147 22'34'56-HxCB	51500	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-15 44'-DiCB	6150	ng/kg	* SI	J	14,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-153 22'44'55'-HxCB	47600	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-154 22'44'5'6-HxCB	4060	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-158 233'44'6-HxCB	4490	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-17 22'4-TrCB	24200	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-170 22'33'44'5-HpCB	17400	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-171 22'33'44'6-HpCB	5320	ng/kg	* C	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-172 22'33'455'-HpCB	2840	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-174 22'33'456'-HpCB	15100	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-175 22'33'45'6-HpCB	897	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-176 22'33'466'-HpCB	2060	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-177 22'33'4'56-HpCB	9340	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-178 22'33'55'6-HpCB	4050	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-179 22'33'566'-HpCB	7720	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-18 22'5-TrCB	45400	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-180 22'344'55'-HpCB	35000	ng/kg	* C	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-181 22'344'56-HpCB	102	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-182 22'344'56'-HpCB	64.3	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-183 22'344'5'6-HpCB	11900	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-184 22'344'66'-HpCB	7.69	ng/kg		J	13

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-185 22'3455'6-HpCB	1130	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-187 22'34'55'6-HpCB	20900	ng/kg	*	J	13,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-189 233'44'55'-HpCB	627	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-19 22'6-TrCB	5890	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-190 233'44'56-HpCB	3620	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-191 233'44'5'6-HpCB	753	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-194 22'33'44'55'-OcCB	7210	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-196 22'33'44'56'-OcCB	4210	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-198 22'33'455'6-OcCB	7010	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-20 233'-TrCB	39500	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-203 22'344'55'6-OcCB	4110	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-206 22'33'44'55'6-NoCB	1640	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-207 22'33'44'566'-NoCB	244	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-208 22'33'455'66'-NoCB	373	ng/kg		J	13
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-21 234-TrCB	6130	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-25 23'4-TrCB	16000	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-26 23'5-TrCB	30800	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-27 23'6-TrCB	5660	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-31 24'5-TrCB	47400	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-32 24'6-TrCB	13400	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-37 344'-TrCB	5320	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-4 22'-DiCB	13500	ng/kg	* SI	J	14,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-40 22'33'-TeCB	13100	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-42 22'34'-TeCB	6710	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-44 22'35'-TeCB	31100	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-45 22'36-TeCB	6130	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-49 22'45'TeCB	35400	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-5 23-DiCB	55.8	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-50 22'46-TeCB	9810	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-52 22'55'-TeCB	48700	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-56 233'4'-TeCB	4710	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-6 23'-DiCB	24900	ng/kg	* SI	J	14,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-61 2345-TeCB	26900	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-64 234'6-TeCB	13300	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-66 23'44'-TeCB	15200	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-7 24-DiCB	615	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-8 24'-DiCB	22000	ng/kg	* SI	J	14,20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-84 22'33'6-PeCB	6880	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-86 22'345-PeCB	10700	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-9 25-DiCB	835	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-90 22'34'5-PeCB	31500	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-91 22'34'6-PeCB	8380	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-92 22'355'-PeCB	5010	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-95 22'35'6-PeCB	29000	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-02	P1940_7534_PCB_002	EPA 1668A	PCB-99 22'44'5-PeCB	15400	ng/kg	*	J	20

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-10 26-DiCB	77.7	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-104 22'466'-PeCB	8.61	ng/kg	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-11 33'-DiCB	57.7	ng/kg	B SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-110 233'4'6-PeCB	12000	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-118 23'44'5-PeCB	8090	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-12 34-DiCB	288	ng/kg	C SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-129 22'33'45-HxCB	34100	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-132 22'33'46'-HxCB	10600	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-135 22'33'56'-HxCB	15300	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-136 22'33'66'-HxCB	7730	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-141 22'3455'-HxCB	7760	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-146 22'34'55'-HxCB	4490	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-147 22'34'56-HxCB	34800	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-15 44'-DiCB	1700	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-153 22'44'55'-HxCB	31000	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-170 22'33'44'5-HpCB	12400	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-174 22'33'456'-HpCB	11200	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-177 22'33'4'56-HpCB	6580	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-179 22'33'566'-HpCB	5130	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-180 22'344'55'-HpCB	24700	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-183 22'344'5'6-HpCB	8570	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-187 22'34'55'6-HpCB	13600	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-194 22'33'44'55'-OcCB	4380	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-198 22'33'455'6-OcCB	4630	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-20 233'-TrCB	5860	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-31 24'5-TrCB	5520	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-4 22'-DiCB	1120	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-44 22'35'-TeCB	5400	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-49 22'45'TeCB	4500	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-5 23-DiCB	36.1	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-52 22'55'-TeCB	7310	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-58 233'5'-TeCB	10.2	ng/kg	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-6 23'-DiCB	688	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-61 2345-TeCB	8000	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-66 23'44'-TeCB	4130	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-7 24-DiCB	145	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-73 23'5'6TeCB	18.1	ng/kg	EMPC	U	22
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-8 24'-DiCB	2290	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-86 22'345-PeCB	5600	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-9 25-DiCB	132	ng/kg	SI	J	14
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-90 22'34'5-PeCB	19800	ng/kg	* C	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-95 22'35'6-PeCB	17100	ng/kg	*	J	20
P1940	EW09-ITSED-AWMIS-03	P1940_7534_PCB_003	EPA 1668A	PCB-99 22'44'5-PeCB	7020	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-10 26-DiCB	48.2	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-11 33'-DiCB	66.6	ng/kg	B SI	J	14

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-110 233'4'6-PeCB	8690	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-118 23'44'5-PeCB	5840	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-12 34-DiCB	323	ng/kg	C SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-126 33'44'5-PeCB	19.8	ng/kg	EMPC	U	22
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-129 22'33'45-HxCB	33500	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-132 22'33'46'-HxCB	10100	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-135 22'33'56'-HxCB	16400	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-136 22'33'66'-HxCB	6900	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-141 22'3455'-HxCB	7860	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-146 22'34'55'-HxCB	4600	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-147 22'34'56-HxCB	33000	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-15 44'-DiCB	1450	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-152 22'3566'-HxCB	9.81	ng/kg	EMPC	U	22
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-153 22'44'55'-HxCB	31300	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-170 22'33'44'5-HpCB	14100	ng/kg	*	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-171 22'33'44'6-HpCB	4230	ng/kg	* C	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-172 22'33'455'-HpCB	2270	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-174 22'33'456'-HpCB	11900	ng/kg	*	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-175 22'33'45'6-HpCB	686	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-176 22'33'466'-HpCB	1650	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-177 22'33'4'56-HpCB	7280	ng/kg	*	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-178 22'33'55'6-HpCB	2990	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-179 22'33'566'-HpCB	5650	ng/kg	*	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-180 22'344'55'-HpCB	29100	ng/kg	* C	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-181 22'344'56-HpCB	63.9	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-182 22'344'56'-HpCB	37.7	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-183 22'344'5'6-HpCB	9290	ng/kg	*	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-185 22'3455'6-HpCB	857	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-187 22'34'55'6-HpCB	14800	ng/kg	*	J	13,20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-189 233'44'55'-HpCB	521	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-190 233'44'56-HpCB	2990	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-191 233'44'5'6-HpCB	632	ng/kg		J	13
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-194 22'33'44'55'-OcCB	5600	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-198 22'33'455'6-OcCB	5560	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-20 233'-TrCB	4750	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-31 24'5-TrCB	4320	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-4 22'-DiCB	896	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-44 22'35'-TeCB	4240	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-49 22'45'TeCB	4490	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-5 23-DiCB	26.8	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-52 22'55'-TeCB	7500	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-6 23'-DiCB	921	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-61 2345-TeCB	5160	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-7 24-DiCB	110	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-79 33'45'-TeCB	30.3	ng/kg	EMPC	U	22

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-8 24'-DiCB	2150	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-86 22'345-PeCB	4120	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-9 25-DiCB	108	ng/kg	SI	J	14
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-90 22'34'5-PeCB	17300	ng/kg	* C	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-95 22'35'6-PeCB	14200	ng/kg	*	J	20
P1940	EW09-ITSED-PAMIS-01	P1940_7534_PCB_004	EPA 1668A	PCB-99 22'44'5-PeCB	5440	ng/kg	*	J	20
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 6010B	Antimony		mg/kg	U	UJ	8
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 6010B	Vanadium	39.8	mg/kg		J	9
QC54	EW09-ITSED-AWMIS-01LR	09-31456-QC54NLR	EPA 6010B	Antimony		mg/kg	U	UJ	8
QC54	EW09-ITSED-AWMIS-01LR	09-31456-QC54NLR	EPA 6010B	Vanadium	28.9	mg/kg		J	9
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 6010B	Antimony		mg/kg	U	UJ	8
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 6010B	Vanadium	43.4	mg/kg		J	9
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 6010B	Antimony		mg/kg	U	UJ	8
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 6010B	Vanadium	45.5	mg/kg		J	9
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	EPA 6010B	Antimony		mg/kg	U	UJ	8
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	EPA 6010B	Vanadium	30.6	mg/kg		J	9
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8081B	4,4'-DDD		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8081B	delta-BHC		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8081B	Endrin Aldehyde		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8081B	delta-BHC		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8081B	Endosulfan I		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8081B	Heptachlor		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8081B	Endosulfan Sulfate		ug/kg	Y	U	22
QC54	EW09-CS-002-010	09-31444-QC54B	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-003-010	09-31445-QC54C	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-004-010	09-31446-QC54D	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-005-010	09-31447-QC54E	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-006-010	09-31448-QC54F	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-007-010	09-31449-QC54G	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-008-010	09-31450-QC54H	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-009-010	09-31451-QC54I	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-009-010	09-31451-QC54I	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
QC54	EW09-CS-010-010	09-31452-QC54J	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-010-010	09-31452-QC54J	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
QC54	EW09-CS-011-010	09-31453-QC54K	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-011-010	09-31453-QC54K	EPA 8082	Aroclor 1254		ug/kg	Y	U	22
QC54	EW09-CS-012-010	09-31454-QC54L	EPA 8082	Aroclor 1248		ug/kg	Y	U	22
QC54	EW09-CS-013-010	09-31455-QC54M	EPA 8082	Aroclor 1248		ug/kg	Y	U	22

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8270D	bis(2-Ethylhexyl)phthalate	410	ug/kg	B	U	7
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	4-Chloroaniline		ug/kg	U	UJ	8
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Aniline		ug/kg	U	R	8
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Anthracene	170	ug/kg		J	8
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	bis(2-Ethylhexyl)phthalate	280	ug/kg	B	U	7
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Carbazole	110	ug/kg		J	8,9
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Chrysene	450	ug/kg		J	8
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Fluoranthene	850	ug/kg		J	8,9
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	8
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Naphthalene	85	ug/kg		J	9
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D	Phenanthrene	800	ug/kg		J	9
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8270D	bis(2-Ethylhexyl)phthalate	330	ug/kg	B	U	7
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8270D	Fluoranthene	3000	ug/kg	ES	R	20
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8270D	Phenanthrene	3400	ug/kg	ES	R	20
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8270D	Pyrene	2300	ug/kg	ES	R	20
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	1,2,4-Trichlorobenzene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	1,2-Dichlorobenzene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	1,3-Dichlorobenzene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	1,4-Dichlorobenzene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	1-Methylnaphthalene	690	ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,2'-Oxybis(1-Chloropropane)		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,4,5-Trichlorophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,4,6-Trichlorophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,4-Dichlorophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,4-Dinitrophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,4-Dinitrotoluene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2,6-Dinitrotoluene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2-Chloronaphthalene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2-Chlorophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2-Methylnaphthalene	760	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2-Methylphenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2-Nitroaniline		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	2-Nitrophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	3-Nitroaniline		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4,6-Dinitro-2-Methylphenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4-Bromophenyl-phenylether		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4-Chloro-3-methylphenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4-Chloroaniline		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4-Chlorophenyl-phenylether		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4-Methylphenol		ug/kg	U	R	11

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4-Nitroaniline		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	4-Nitrophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Acenaphthene	820	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Acenaphthylene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Aniline		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Anthracene	1200	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Benzo(a)anthracene	1700	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Benzo(a)pyrene	1500	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Benzo(b)fluoranthene	1200	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Benzo(g,h,i)perylene	840	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Benzo(k)fluoranthene	1200	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Benzoic Acid		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Benzyl Alcohol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	bis(2-Chloroethoxy) Methane		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Bis-(2-Chloroethyl) Ether		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	bis(2-Ethylhexyl)phthalate	290	ug/kg	B	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Butylbenzylphthalate		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Carbazole	660	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Chrysene	1900	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Dibenz(a,h)anthracene	380	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Dibenzofuran	320	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Diethylphthalate		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Dimethylphthalate		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Di-n-Butylphthalate		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Di-n-Octyl phthalate		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Fluorene	980	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Hexachlorobenzene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Hexachlorobutadiene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Hexachlorocyclopentadiene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Hexachloroethane		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Indeno(1,2,3-cd)pyrene	770	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Isophorone		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Naphthalene	950	ug/kg		R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Nitrobenzene		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	N-Nitroso-Di-N-Propylamine		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	N-Nitrosodiphenylamine		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Pentachlorophenol		ug/kg	U	R	11
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54PDL	EPA 8270D	Phenol	160	ug/kg		R	11
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	EPA 8270D	bis(2-Ethylhexyl)phthalate	330	ug/kg	B	U	7
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D-SIM	Diethylphthalate	23	ug/kg	B	U	7
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22

Qualified Data Summary Table
East Waterway – MIS Intertidal and Subtidal Composite Sediment Sampling

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Quals	Val Quals	Val Reason
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	EPA 8270D-SIM	Pentachlorophenol	42	ug/kg		J	8
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	EPA 8270D-SIM	N-Nitrosodiphenylamine		ug/kg	Y	U	22
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	EPA 8270D-SIM	2,4-Dimethylphenol		ug/kg	U	UJ	10
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	UJ	12
QC54	EW09-ITSED-AWMIS-01	09-31456-QC54N	Krone et al. 1989	Tributyltin Ion	8.8	ug/kg		J	12
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	UJ	12
QC54	EW09-ITSED-AWMIS-02	09-31457-QC54O	Krone et al. 1989	Tributyltin Ion	7.9	ug/kg		J	12
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	Krone et al. 1989	Dibutyltin Ion	5.3	ug/kg		J	12
QC54	EW09-ITSED-AWMIS-03	09-31458-QC54P	Krone et al. 1989	Tributyltin Ion	8.9	ug/kg		J	12
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	UJ	12
QC54	EW09-ITSED-PAMIS-01	09-31459-QC54Q	Krone et al. 1989	Tributyltin Ion	11	ug/kg		J	12

EcoChem, INC.
Environmental Data Quality

APPENDIX C
COMMUNICATION RECORDS

Melissa Swanson

From: Chris Ransom
Sent: Tuesday, March 09, 2010 12:00 PM
To: Melissa Swanson
Subject: FW: Windward EW Sediment SDGs P1855 and P1940
Attachments: MM1_ical_122509_RTQC.pdf

ok - I think this has what you need.....

From: Heather Steele [mailto:hsteele@ultratrace.com]
Sent: Tuesday, March 09, 2010 11:34 AM
To: Chris Ransom
Subject: RE: Windward EW Sediment SDGs P1855 and P1940

Chris:

I have attached the ICAL including our "RTQC" sheets for each run which give the peak area information for the compounds. Please let me know if you need anything else.

Heather

Heather Steele PhD
Project Manager
Analytical Perspectives
2714 Exchange Dr.
Wilmington, NC. 28405
(910)-794-1613 Ext: 110

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From: Chris Ransom [mailto:cransom@ecochem.net]
Sent: Tuesday, March 09, 2010 11:38 AM
To: Heather Steele
Subject: RE: Windward EW Sediment SDGs P1855 and P1940

Hi Heather,

Thanks for the quick reply, but this is the same information that we have on the CD - we are looking for the quant reports, which show the areas for the analytes. Is this available?

Thanks for your help

Chris

From: Heather Steele [mailto:hsteele@ultratrace.com]
Sent: Monday, March 08, 2010 11:34 AM
To: Chris Ransom

Cc: 'Kimberly Mace'
Subject: RE: Windward EW Sediment SDGs P1855 and P1940

Hi Chris:

Kim is out of the office until Wednesday, so I am covering for her. I have attached the D/F ICAL for MM1. I apologize for any inconvenience this may have caused you. Please let me know if you need anything else.

Heather

Heather Steele PhD
Project Manager
Analytical Perspectives
2714 Exchange Dr.
Wilmington, NC. 28405
(910)-794-1613 Ext: 110

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From: Chris Ransom [mailto:cransom@ecochem.net]
Sent: Monday, March 08, 2010 1:39 PM
To: Kimberly Mace
Subject: Windward EW Sediment SDGs P1855 and P1940

Hi Kimberly,

Could you please send a pdf of the quant reports for the dioxin ICAL of 12/25/09 on MM1? They weren't included in the hardcopy or on the CD.

Thanks

Chris
Christine Ransom
EcoChem, Inc.
Senior Project Chemist

710 Second Ave, Suite 660, Seattle, WA 98104
DIRECT: 206.233.9332 ext. 109 • FAX: 206.233.0114
EMAIL: cransom@ecochem.net

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and implement data management solutions that accomplish your program needs.

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APPENDIX D

Laboratory Reports

D-1. CHEMISTRY REPORTS

Round 1 Metals

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-001-010
SAMPLE

Lab Sample ID: OP35U
LIMS ID: 09-6000
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 52.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**12.7**	
3050B	03/09/09	6010B	03/13/09	7440-43-9	Cadmium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**28**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**8.9**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**59.4**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**36**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.18**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**20**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**70.5**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**139**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-003-010
SAMPLE

Lab Sample ID: OP35T
LIMS ID: 09-5999
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 56.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	20	20	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.3	**9.8**	
3050B	03/09/09	6010B	03/19/09	7440-43-9	Cadmium	0.8	0.8	U
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	2	**27**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	1	**9**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.8	**55.7**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	8	**29**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.12**	
3050B	03/09/09	6010B	03/19/09	7439-98-7	Molybdenum	2	2	U
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	4	**24**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/09/09	6010B	03/19/09	7440-22-4	Silver	1	1	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	1	**65**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	4	**104**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-005-010
SAMPLE

Lab Sample ID: OP35S
LIMS ID: 09-5998
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 52.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	20	20	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**12.6**	
3050B	03/09/09	6010B	03/19/09	7440-43-9	Cadmium	0.9	0.9	U
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	2	**26**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	1	**8**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.9	**56.1**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	9	**28**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.16**	
3050B	03/09/09	6010B	03/19/09	7439-98-7	Molybdenum	2	2	U
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	5	**18**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/19/09	7440-22-4	Silver	1	1	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	1	**63**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	5	**110**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-008-010
SAMPLE

Lab Sample ID: OP35R
LIMS ID: 09-5997
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 42.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.5	**16.5**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.5	**0.7**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**44**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.7	**10.1**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.5	**117**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	5	**75**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.1	**0.3**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.7	0.7	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.5	0.5	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.7	**89.7**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**206**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-011-010
SAMPLE

Lab Sample ID: OP35Q
LIMS ID: 09-5996
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 60.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	8	8	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.3	**19.6**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	0.8	**30.2**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.5	**6.9**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.3	**73.5**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	3	**88**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.20**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**18**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.5	**57.5**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**138**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-013-010
SAMPLE

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 59.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	20	20	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.3	**10.1**	
3050B	03/09/09	6010B	03/19/09	7440-43-9	Cadmium	0.8	0.8	U
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	2	**16**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	1	**5**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.8	**36.0**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	8	**20**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.08**	
3050B	03/09/09	6010B	03/19/09	7439-98-7	Molybdenum	2	2	U
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	4	**10**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/09/09	6010B	03/19/09	7440-22-4	Silver	1	1	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	1	**44**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	4	**65**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-014-010
SAMPLE

Lab Sample ID: OP65B
LIMS ID: 09-6149
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Percent Total Solids: 53.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/11/09	6010B	03/19/09	7440-36-0	Antimony	9	9	U
3050B	03/11/09	200.8	03/13/09	**7440-38-2**	**Arsenic**	0.3	**14.0**	
3050B	03/11/09	6010B	03/19/09	**7440-43-9**	**Cadmium**	0.4	**0.4**	
3050B	03/11/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.9	**29.1**	
3050B	03/11/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.5	**7.6**	
3050B	03/11/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.4	**65.4**	
3050B	03/11/09	6010B	03/19/09	**7439-92-1**	**Lead**	4	**42**	
CLP	03/11/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.44**	
3050B	03/11/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.9	**1.3**	
3050B	03/11/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**20**	
3050B	03/11/09	200.8	03/13/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/11/09	6010B	03/19/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/11/09	200.8	03/13/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/11/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.5	**60.8**	
3050B	03/11/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**121**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-014-010
DUPLICATE

Lab Sample ID: OP65B
LIMS ID: 09-6149
Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	9 U	9 U	0.0%	+/- 9	L
Arsenic	200.8	14.0	13.5	3.6%	+/- 20%	
Cadmium	6010B	0.4	0.4	0.0%	+/- 0.4	L
Chromium	6010B	29.1	29.3	0.7%	+/- 20%	
Cobalt	6010B	7.6	7.8	2.6%	+/- 20%	
Copper	6010B	65.4	68.1	4.0%	+/- 20%	
Lead	6010B	42	50	17.4%	+/- 20%	
Mercury	7471A	0.44	0.16	93.3%	+/- 0.08	L*
Molybdenum	6010B	1.3	1.9	37.5%	+/- 0.9	L
Nickel	6010B	20	21	4.9%	+/- 20%	
Selenium	200.8	0.9 U	0.9 U	0.0%	+/- 0.9	L
Silver	6010B	0.5 U	0.5 U	0.0%	+/- 0.5	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	60.8	60.6	0.3%	+/- 20%	
Zinc	6010B	121	132	8.7%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-019-010
SAMPLE

Lab Sample ID: OP65D
LIMS ID: 09-6151
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Percent Total Solids: 43.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/11/09	6010B	03/19/09	7440-36-0	Antimony	10	10	U
3050B	03/11/09	200.8	03/13/09	**7440-38-2**	**Arsenic**	0.4	**13.9**	
3050B	03/11/09	6010B	03/19/09	**7440-43-9**	**Cadmium**	0.4	**0.7**	
3050B	03/11/09	6010B	03/19/09	**7440-47-3**	**Chromium**	1	**39**	
3050B	03/11/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.6	**9.1**	
3050B	03/11/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.4	**93.6**	
3050B	03/11/09	6010B	03/19/09	**7439-92-1**	**Lead**	4	**60**	
CLP	03/11/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.1	**0.3**	
3050B	03/11/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	1	**3**	
3050B	03/11/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/11/09	200.8	03/13/09	7782-49-2	Selenium	1	1	U
3050B	03/11/09	6010B	03/19/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/11/09	200.8	03/13/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/11/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.6	**70.4**	
3050B	03/11/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**205**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-020-010
SAMPLE

Lab Sample ID: OP35O
LIMS ID: 09-5994
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 47.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**12.9**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.8**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**34**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**8.1**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**83.9**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**54**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.75**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**67.7**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**155**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-021-010
SAMPLE

Lab Sample ID: OP65E
LIMS ID: 09-6152
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Percent Total Solids: 68.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/11/09	6010B	03/19/09	7440-36-0	Antimony	7	7	U
3050B	03/11/09	200.8	03/13/09	**7440-38-2**	**Arsenic**	0.3	**11.4**	
3050B	03/11/09	6010B	03/19/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/11/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.7	**17.3**	
3050B	03/11/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.4	**5.8**	
3050B	03/11/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.3	**34.8**	
3050B	03/11/09	6010B	03/19/09	**7439-92-1**	**Lead**	3	**18**	
CLP	03/11/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.09**	
3050B	03/11/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.7	**1.5**	
3050B	03/11/09	6010B	03/19/09	**7440-02-0**	**Nickel**	1	**14**	
3050B	03/11/09	200.8	03/13/09	7782-49-2	Selenium	0.7	0.7	U
3050B	03/11/09	6010B	03/19/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/11/09	200.8	03/13/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/11/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.4	**44.6**	
3050B	03/11/09	6010B	03/19/09	**7440-66-6**	**Zinc**	1	**72**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-023-010
SAMPLE

Lab Sample ID: OP35N
LIMS ID: 09-5993
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 41.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.5	**13.2**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.5	**1.0**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**44**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.7	**9.8**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.5	**104**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	5	**65**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.1	**0.4**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.7	0.7	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.5	0.5	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.7	**78.6**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**196**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-024-010
SAMPLE

Lab Sample ID: OP35M
LIMS ID: 09-5992
Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 51.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**10.3**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.7**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	0.9	**30.5**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**7.5**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**73.5**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**52**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.31**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**20**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**61.1**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**124**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-025-010
SAMPLE

Lab Sample ID: OP35L
LIMS ID: 09-5991
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 53.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**11.6**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.6**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	0.9	**26.3**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**6.6**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**71.1**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**51**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.32**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**17**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**51.6**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**122**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-027-010
SAMPLE

Lab Sample ID: OP35A
LIMS ID: 09-5980
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/02/09
Date Received: 03/04/09

Percent Total Solids: 41.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.5	**12.1**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.7**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**43**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.7	**9.6**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**106**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**89**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.1	**0.4**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.7	0.7	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.5	0.5	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.7	**72.3**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**214**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-029-010
SAMPLE

Lab Sample ID: OP35K
LIMS ID: 09-5990
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 47.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**11.5**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**1.0**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**40**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**9.0**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**101**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**71**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.1	**0.4**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**25**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-22-4**	**Silver**	0.6	**0.7**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**71.1**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**163**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-030-010
SAMPLE

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 44.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**10.4**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.9**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**37**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**8.7**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**88.2**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**59**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.1	**0.5**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**24**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**68.1**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**153**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-031-010
SAMPLE

Lab Sample ID: OP35I
LIMS ID: 09-5988
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 42.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**11.4**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.5	**0.8**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**35**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.7	**8.7**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.5	**86.5**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	5	**53**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.40**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**22**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.7	0.7	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.7	**69.0**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**145**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-032-010
SAMPLE

Lab Sample ID: OP35H
LIMS ID: 09-5987
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 47.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**9.6**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.8**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**36**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**8.5**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**87.0**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**54**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.45**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**22**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**66.9**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**138**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-033-010
SAMPLE

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 50.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**11.2**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**2.2**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**40**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**8.7**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**107**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**76**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.50**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**25**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	**7440-22-4**	**Silver**	0.6	**0.8**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**68.8**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**157**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-034-010
SAMPLE

Lab Sample ID: OP35E
LIMS ID: 09-5984
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 46.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**10.4**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**1.4**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**40**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**8.8**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**93.2**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**72**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.53**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-22-4**	**Silver**	0.6	**1.0**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**69.1**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**164**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-035-010
SAMPLE

Lab Sample ID: OP35F
LIMS ID: 09-5985
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 50.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**10.1**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.9**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	0.9	**36.8**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.5	**8.8**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**132**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**68**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.47**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**24**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	**7440-22-4**	**Silver**	0.5	**0.7**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.5	**68.6**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**156**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-036-010
SAMPLE

Lab Sample ID: OP35D
LIMS ID: 09-5983
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 47.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**9.1**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.9**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	1	**37**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.6	**8.5**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**85.0**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**60**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.42**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**23**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/13/09	**7440-22-4**	**Silver**	0.6	**0.9**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.6	**65.7**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**144**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-036-010
DUPLICATE

Lab Sample ID: OP35D
LIMS ID: 09-5983
Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	10 U	10 U	0.0%	+/- 10	L
Arsenic	200.8	9.1	8.8	3.4%	+/- 20%	
Cadmium	6010B	0.9	0.9	0.0%	+/- 0.4	L
Chromium	6010B	37	36	2.7%	+/- 20%	
Cobalt	6010B	8.5	8.4	1.2%	+/- 20%	
Copper	6010B	85.0	85.3	0.4%	+/- 20%	
Lead	6010B	60	67	11.0%	+/- 20%	
Mercury	7471A	0.42	0.37	12.7%	+/- 0.08	L
Molybdenum	6010B	1 U	1 U	0.0%	+/- 1	L
Nickel	6010B	23	24	4.3%	+/- 20%	
Selenium	200.8	1 U	1 U	0.0%	+/- 1	L
Silver	6010B	0.9	0.6 U	40.0%	+/- 0.6	L
Thallium	200.8	0.4 U	0.4 U	0.0%	+/- 0.4	L
Vanadium	6010B	65.7	65.2	0.8%	+/- 20%	
Zinc	6010B	144	147	2.1%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-038-010
SAMPLE

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 53.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**9.1**	
3050B	03/09/09	6010B	03/19/09	**7440-43-9**	**Cadmium**	0.4	**2.5**	
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.9	**43.8**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.5	**8.2**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.4	**107**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	4	**83**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.42**	
3050B	03/09/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.9	**4.1**	
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**28**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/19/09	**7440-22-4**	**Silver**	0.5	**0.9**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.5	**62.5**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**177**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-038-010
DUPLICATE

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	9 U	9 U	0.0%	+/- 9	L
Arsenic	200.8	9.1	9.2	1.1%	+/- 20%	
Cadmium	6010B	2.5	1.1	77.8%	+/- 0.4	L*
Chromium	6010B	43.8	37.3	16.0%	+/- 20%	
Cobalt	6010B	8.2	7.7	6.3%	+/- 20%	
Copper	6010B	107	119	10.6%	+/- 20%	
Lead	6010B	83	68	19.9%	+/- 20%	
Mercury	7471A	0.42	0.50	17.4%	+/- 0.09	L
Molybdenum	6010B	4.1	3.6	13.0%	+/- 0.9	L
Nickel	6010B	28	24	15.4%	+/- 20%	
Selenium	200.8	0.9 U	0.9 U	0.0%	+/- 0.9	L
Silver	6010B	0.9	1.1	20.0%	+/- 0.5	L
Thallium	200.8	0.4 U	0.4 U	0.0%	+/- 0.4	L
Vanadium	6010B	62.5	60.3	3.6%	+/- 20%	
Zinc	6010B	177	181	2.2%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-100-010
SAMPLE

Lab Sample ID: OP33B
LIMS ID: 09-5979
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 55.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	8	8	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.3	**6.8**	
3050B	03/09/09	6010B	03/19/09	**7440-43-9**	**Cadmium**	0.3	**0.6**	
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.8	**30.2**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.5	**6.9**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.3	**205**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	3	**73**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.29**	
3050B	03/09/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.8	**2.3**	
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**20**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/09/09	6010B	03/19/09	**7440-22-4**	**Silver**	0.5	**0.5**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.5	**57.4**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**159**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-101-010
SAMPLE

Lab Sample ID: OP33C
LIMS ID: 09-6002
Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 52.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**7.5**	
3050B	03/09/09	6010B	03/19/09	**7440-43-9**	**Cadmium**	0.4	**0.9**	
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.9	**33.8**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.5	**5.9**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.4	**89.2**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	4	**58**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.47**	
3050B	03/09/09	6010B	03/19/09	7439-98-7	Molybdenum	0.9	0.9	U
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/19/09	**7440-22-4**	**Silver**	0.5	**0.8**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.5	**46.7**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**179**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-102-010
SAMPLE

Lab Sample ID: OP35B
LIMS ID: 09-5981
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 53.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**6.7**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.5**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	0.9	**26.9**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.5	**7.0**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**67.9**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**35**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.24**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**19**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.5	**55.9**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**96**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-104-010
SAMPLE

Lab Sample ID: OP22F
LIMS ID: 09-5942
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Percent Total Solids: 49.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	10	10	U
3050B	03/05/09	200.8	03/11/09	**7440-38-2**	**Arsenic**	0.4	**15.6**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.4	**2.3**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	1	**43**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.6	**7.9**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.4	**208**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	4	**98**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.59**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	1	1	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**23**	
3050B	03/05/09	200.8	03/11/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.6	**1.2**	
3050B	03/05/09	200.8	03/11/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.6	**64.7**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**354**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-109-010
SAMPLE

Lab Sample ID: OP22E
LIMS ID: 09-5941
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Percent Total Solids: 47.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	10	10	U
3050B	03/05/09	200.8	03/11/09	**7440-38-2**	**Arsenic**	0.4	**10.9**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.4	**1.6**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	1	**45**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.6	**9.0**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.4	**104**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	4	**75**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.48**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	1	**1**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/05/09	200.8	03/11/09	7782-49-2	Selenium	1	1	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.6	**1.0**	
3050B	03/05/09	200.8	03/11/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.6	**69.9**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**218**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-110-010
SAMPLE

Lab Sample ID: OP33D
LIMS ID: 09-6003
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 47.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	10	10	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**9.2**	
3050B	03/09/09	6010B	03/19/09	**7440-43-9**	**Cadmium**	0.4	**1.3**	
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	1	**45**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.6	**8.7**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.4	**121**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	4	**84**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.48**	
3050B	03/09/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	1	**3**	
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**27**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	1	1	U
3050B	03/09/09	6010B	03/19/09	**7440-22-4**	**Silver**	0.6	**0.9**	
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.6	**70.0**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**239**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-111-010
SAMPLE

Lab Sample ID: OP22D
LIMS ID: 09-5940
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Percent Total Solids: 80.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	6	6	U
3050B	03/05/09	200.8	03/11/09	**7440-38-2**	**Arsenic**	0.2	**3.4**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.6	**15.7**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.4	**4.8**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.2	**21.4**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	2	**5**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.05	**0.07**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.6	0.6	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	1	**14**	
3050B	03/05/09	200.8	03/11/09	7782-49-2	Selenium	0.6	0.6	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/05/09	200.8	03/11/09	7440-28-0	Thallium	0.2	0.2	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.4	**47.8**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	1	**37**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-113-010
SAMPLE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized
Reported: 03/16/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Percent Total Solids: 59.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/11/09	**7440-38-2**	**Arsenic**	0.3	**10.0**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.3	**1.3**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**36.7**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**8.7**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**65.5**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**62**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.52**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.8	**1.4**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**28**	
3050B	03/05/09	200.8	03/11/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**0.8**	
3050B	03/05/09	200.8	03/11/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**63.7**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**173**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-113-010
DUPLICATE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized
Reported: 03/16/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	8 U	8 U	0.0%	+/- 8	L
Arsenic	200.8	10.0	9.7	3.0%	+/- 20%	
Cadmium	6010B	1.3	1.3	0.0%	+/- 0.3	L
Chromium	6010B	36.7	36.5	0.5%	+/- 20%	
Cobalt	6010B	8.7	9.1	4.5%	+/- 20%	
Copper	6010B	65.5	61.8	5.8%	+/- 20%	
Lead	6010B	62	63	1.6%	+/- 20%	
Mercury	7471A	0.52	0.57	9.2%	+/- 20%	
Molybdenum	6010B	1.4	1.2	15.4%	+/- 0.8	L
Nickel	6010B	28	28	0.0%	+/- 20%	
Selenium	200.8	0.8 U	0.8 U	0.0%	+/- 0.8	L
Silver	6010B	0.8	0.8	0.0%	+/- 0.5	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	63.7	65.9	3.4%	+/- 20%	
Zinc	6010B	173	176	1.7%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-114-010
SAMPLE

Lab Sample ID: OP33E
LIMS ID: 09-6004
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 52.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**22.7**	
3050B	03/09/09	6010B	03/19/09	**7440-43-9**	**Cadmium**	0.4	**0.6**	
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.9	**33.8**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.6	**7.7**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.4	**90.3**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	4	**58**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.32**	
3050B	03/09/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.9	**2.7**	
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**23**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/19/09	7440-22-4	Silver	0.6	0.6	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.6	**60.6**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**126**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-116-010
SAMPLE

Lab Sample ID: OP22A
LIMS ID: 09-5937
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Percent Total Solids: 53.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	9	9	U
3050B	03/05/09	200.8	03/11/09	**7440-38-2**	**Arsenic**	0.4	**12.6**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.4	**1.8**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.9	**48.4**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**9.4**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.4	**101**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	4	**94**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.72**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.9	**1.9**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**27**	
3050B	03/05/09	200.8	03/11/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**1.6**	
3050B	03/05/09	200.8	03/11/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**69.8**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**174**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-119-010
SAMPLE

Lab Sample ID: 0097N
LIMS ID: 09-5799
Matrix: Sediment
Data Release Authorized
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 52.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	9	9	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.4	**7.6**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.4	**1.1**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.9	**37.7**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**8.6**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.4	**73.1**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	4	**56**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.37**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.9	**0.9**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**0.8**	
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**64.7**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**130**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-120-010
SAMPLE

Lab Sample ID: 0097O
LIMS ID: 09-5800
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 59.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**8.4**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.3	**1.6**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**46.3**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**8.5**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**74.1**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**73**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.42**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.8	**1.4**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**26**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**1.2**	
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**65.0**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**140**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-122-010
SAMPLE

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 57.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**6.8**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**32.9**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**8.5**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**73.2**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**48**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.31**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.8	**1.0**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**0.6**	
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**64.4**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**119**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-126-010
SAMPLE

Lab Sample ID: OP65C
LIMS ID: 09-6150
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Percent Total Solids: 66.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/11/09	6010B	03/19/09	7440-36-0	Antimony	7	7	U
3050B	03/11/09	200.8	03/13/09	**7440-38-2**	**Arsenic**	0.3	**6.4**	
3050B	03/11/09	6010B	03/19/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/11/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.7	**22.7**	
3050B	03/11/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.4	**6.1**	
3050B	03/11/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.3	**52.3**	
3050B	03/11/09	6010B	03/19/09	**7439-92-1**	**Lead**	3	**33**	
CLP	03/11/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.17**	
3050B	03/11/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.7	**1.5**	
3050B	03/11/09	6010B	03/19/09	**7440-02-0**	**Nickel**	1	**18**	
3050B	03/11/09	200.8	03/13/09	7782-49-2	Selenium	0.7	0.7	U
3050B	03/11/09	6010B	03/19/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/11/09	200.8	03/13/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/11/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.4	**47.4**	
3050B	03/11/09	6010B	03/19/09	**7440-66-6**	**Zinc**	1	**87**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-127-010
SAMPLE

Lab Sample ID: 0097L
LIMS ID: 09-5797
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 58.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**7.1**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.3	**0.6**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**33.1**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**8.1**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**55.9**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**42**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.43**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**24**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**0.5**	
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**60.6**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**98**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-129-010
SAMPLE

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 59.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**5.8**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**25.4**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**6.2**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**48.5**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**32**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.23**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**15**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**50.8**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**75**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-130-010
SAMPLE

Lab Sample ID: 0097J
LIMS ID: 09-5795
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 57.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**6.2**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**24.6**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**6.8**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**66.8**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**29**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.23**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**17**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**54.6**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**87**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-132-010
SAMPLE

Lab Sample ID: 0097P
LIMS ID: 09-5801
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 58.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**6.3**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**26.4**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**6.4**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**76.4**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**38**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.24**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**16**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**0.5**	
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**51.4**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**94**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-200-010
SAMPLE

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 54.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	9	9	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.4	**10.4**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.3	**0.9**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.9	**38.2**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**8.7**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**79.6**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**75**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.47**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.9	**2.2**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**24**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**0.8**	
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**65.3**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**131**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-202-010
SAMPLE

Lab Sample ID: 0097G
LIMS ID: 09-5792
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 60.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**5.0**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**21.0**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**6.0**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**124**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**20**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.18**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**14**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**50.2**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**83**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-204-010
SAMPLE

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 59.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**6.1**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**24.8**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**6.4**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**48.6**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**32**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.23**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**16**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**53.0**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**84**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-207-010
SAMPLE

Lab Sample ID: 0097E
LIMS ID: 09-5790
Matrix: Sediment
Data Release Authorized
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 62.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	8	8	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**5.3**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.8	**21.9**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**6.1**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**43.8**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**23**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.17**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**15**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**50.4**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**69**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-211-010
SAMPLE

Lab Sample ID: OP33G
LIMS ID: 09-6009
Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 61.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	8	8	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.3	**3.6**	
3050B	03/09/09	6010B	03/19/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.8	**22.7**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.5	**6.0**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.3	**64.6**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	3	**29**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.07	**0.17**	
3050B	03/09/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.8	**1.6**	
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	2	**18**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/09/09	6010B	03/19/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.5	**50.5**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	2	**82**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-216-010
SAMPLE

Lab Sample ID: 0097D
LIMS ID: 09-5789
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 68.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	7	7	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**4.7**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.7	**19.4**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.4	**5.3**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**29.2**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**22**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.23**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	1	**15**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.4	**45.4**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	1	**53**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-216-010
DUPLICATE

Lab Sample ID: 0097D
LIMS ID: 09-5789
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	7 U	7 U	0.0%	+/- 7	L
Arsenic	200.8	4.7	4.5	4.3%	+/- 20%	
Cadmium	6010B	0.3 U	0.3 U	0.0%	+/- 0.3	L
Chromium	6010B	19.4	19.3	0.5%	+/- 20%	
Cobalt	6010B	5.3	5.4	1.9%	+/- 20%	
Copper	6010B	29.2	29.7	1.7%	+/- 20%	
Lead	6010B	22	22	0.0%	+/- 20%	
Mercury	7471A	0.23	0.16	35.9%	+/- 0.06	L*
Molybdenum	6010B	0.7 U	0.7 U	0.0%	+/- 0.7	L
Nickel	6010B	15	15	0.0%	+/- 20%	
Selenium	200.8	0.7 U	0.7 U	0.0%	+/- 0.7	L
Silver	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	45.4	45.2	0.4%	+/- 20%	
Zinc	6010B	53	50	5.8%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-217-010
SAMPLE

Lab Sample ID: 0097C
LIMS ID: 09-5788
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 69.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	7	7	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**4.4**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.7	**17.7**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.4	**4.9**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**24.0**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**15**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.11**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	1	**12**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.4	**43.8**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	1	**42**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-218-010
SAMPLE

Lab Sample ID: 0097B
LIMS ID: 09-5787
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 68.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	7	7	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**3.5**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.7	**14.9**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.4	**4.9**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**21.6**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**7**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.07**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	1	**11**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.4	**45.8**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	1	**34**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-219-010
SAMPLE

Lab Sample ID: OP33H
LIMS ID: 09-6010
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 66.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/19/09	7440-36-0	Antimony	7	7	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.3	**3.1**	
3050B	03/09/09	6010B	03/19/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/09/09	6010B	03/19/09	**7440-47-3**	**Chromium**	0.7	**20.1**	
3050B	03/09/09	6010B	03/19/09	**7440-48-4**	**Cobalt**	0.4	**5.0**	
3050B	03/09/09	6010B	03/19/09	**7440-50-8**	**Copper**	0.3	**27.3**	
3050B	03/09/09	6010B	03/19/09	**7439-92-1**	**Lead**	3	**17**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.06	**0.16**	
3050B	03/09/09	6010B	03/19/09	**7439-98-7**	**Molybdenum**	0.7	**0.8**	
3050B	03/09/09	6010B	03/19/09	**7440-02-0**	**Nickel**	1	**19**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.7	0.7	U
3050B	03/09/09	6010B	03/19/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/09/09	6010B	03/19/09	**7440-62-2**	**Vanadium**	0.4	**42.1**	
3050B	03/09/09	6010B	03/19/09	**7440-66-6**	**Zinc**	1	**54**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-220-010
SAMPLE

Lab Sample ID: 0097A
LIMS ID: 09-5786
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 69.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	7	7	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**2.9**	
3050B	03/05/09	6010B	03/12/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.7	**14.5**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.4	**4.7**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.3	**17.6**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	3	**9**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.05	**0.14**	
3050B	03/05/09	6010B	03/12/09	7439-98-7	Molybdenum	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	1	**12**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.7	0.7	U
3050B	03/05/09	6010B	03/12/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.4	**42.8**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	1	**33**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-300-010
SAMPLE

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Percent Total Solids: 55.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	9	9	U
3050B	03/05/09	200.8	03/09/09	**7440-38-2**	**Arsenic**	0.3	**10.0**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.4	**0.9**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.9	**37.1**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**8.1**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.4	**77.3**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	4	**72**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.09	**0.39**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.9	**1.9**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**23**	
3050B	03/05/09	200.8	03/09/09	7782-49-2	Selenium	0.8	0.8	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**0.8**	
3050B	03/05/09	200.8	03/09/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**62.6**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**125**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-301-010
SAMPLE

Lab Sample ID: OP22B
LIMS ID: 09-5938
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Percent Total Solids: 53.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/05/09	6010B	03/12/09	7440-36-0	Antimony	9	9	U
3050B	03/05/09	200.8	03/11/09	**7440-38-2**	**Arsenic**	0.3	**12.7**	
3050B	03/05/09	6010B	03/12/09	**7440-43-9**	**Cadmium**	0.4	**1.7**	
3050B	03/05/09	6010B	03/12/09	**7440-47-3**	**Chromium**	0.9	**46.5**	
3050B	03/05/09	6010B	03/12/09	**7440-48-4**	**Cobalt**	0.5	**9.6**	
3050B	03/05/09	6010B	03/12/09	**7440-50-8**	**Copper**	0.4	**94.3**	
3050B	03/05/09	6010B	03/12/09	**7439-92-1**	**Lead**	4	**85**	
CLP	03/05/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.64**	
3050B	03/05/09	6010B	03/12/09	**7439-98-7**	**Molybdenum**	0.9	**1.8**	
3050B	03/05/09	6010B	03/12/09	**7440-02-0**	**Nickel**	2	**27**	
3050B	03/05/09	200.8	03/11/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/05/09	6010B	03/12/09	**7440-22-4**	**Silver**	0.5	**1.3**	
3050B	03/05/09	200.8	03/11/09	7440-28-0	Thallium	0.3	0.3	U
3050B	03/05/09	6010B	03/12/09	**7440-62-2**	**Vanadium**	0.5	**70.6**	
3050B	03/05/09	6010B	03/12/09	**7440-66-6**	**Zinc**	2	**165**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-302-010
SAMPLE

Lab Sample ID: OP35C
LIMS ID: 09-5982
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Percent Total Solids: 53.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/09/09	6010B	03/13/09	7440-36-0	Antimony	9	9	U
3050B	03/09/09	200.8	03/12/09	**7440-38-2**	**Arsenic**	0.4	**7.0**	
3050B	03/09/09	6010B	03/13/09	**7440-43-9**	**Cadmium**	0.4	**0.5**	
3050B	03/09/09	6010B	03/13/09	**7440-47-3**	**Chromium**	0.9	**25.3**	
3050B	03/09/09	6010B	03/13/09	**7440-48-4**	**Cobalt**	0.5	**6.6**	
3050B	03/09/09	6010B	03/13/09	**7440-50-8**	**Copper**	0.4	**64.8**	
3050B	03/09/09	6010B	03/13/09	**7439-92-1**	**Lead**	4	**33**	
CLP	03/09/09	7471A	03/13/09	**7439-97-6**	**Mercury**	0.08	**0.35**	
3050B	03/09/09	6010B	03/13/09	7439-98-7	Molybdenum	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	**7440-02-0**	**Nickel**	2	**17**	
3050B	03/09/09	200.8	03/12/09	7782-49-2	Selenium	0.9	0.9	U
3050B	03/09/09	6010B	03/13/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/09/09	200.8	03/12/09	7440-28-0	Thallium	0.4	0.4	U
3050B	03/09/09	6010B	03/13/09	**7440-62-2**	**Vanadium**	0.5	**52.2**	
3050B	03/09/09	6010B	03/13/09	**7440-66-6**	**Zinc**	2	**91**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-014-RB
SAMPLE

Lab Sample ID: OP65A
LIMS ID: 09-6148
Matrix: Water
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	03/09/09	6010B	03/19/09	7440-36-0	Antimony	0.05	0.05	U
200.8	03/09/09	200.8	03/13/09	7440-38-2	Arsenic	0.0002	0.0002	U
3010A	03/09/09	6010B	03/19/09	7440-43-9	Cadmium	0.002	0.002	U
3010A	03/09/09	6010B	03/19/09	7440-47-3	Chromium	0.005	0.005	U
3010A	03/09/09	6010B	03/19/09	7440-48-4	Cobalt	0.003	0.003	U
3010A	03/09/09	6010B	03/19/09	7440-50-8	Copper	0.002	0.002	U
3010A	03/09/09	6010B	03/19/09	7439-92-1	Lead	0.02	0.02	U
7470A	03/09/09	7470A	03/12/09	7439-97-6	Mercury	0.0001	0.0001	U
3010A	03/09/09	6010B	03/19/09	7439-98-7	Molybdenum	0.005	0.005	U
3010A	03/09/09	6010B	03/19/09	7440-02-0	Nickel	0.01	0.01	U
200.8	03/09/09	200.8	03/13/09	7782-49-2	Selenium	0.0005	0.0005	U
3010A	03/09/09	6010B	03/19/09	7440-22-4	Silver	0.003	0.003	U
200.8	03/09/09	200.8	03/13/09	7440-28-0	Thallium	0.0002	0.0002	U
3010A	03/09/09	6010B	03/19/09	7440-62-2	Vanadium	0.003	0.003	U
3010A	03/09/09	6010B	03/19/09	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-038-RB
SAMPLE

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	03/06/09	6010B	03/19/09	7440-36-0	Antimony	0.05	0.05	U
200.8	03/06/09	200.8	03/12/09	7440-38-2	Arsenic	0.0002	0.0002	U
3010A	03/06/09	6010B	03/19/09	7440-43-9	Cadmium	0.002	0.002	U
3010A	03/06/09	6010B	03/19/09	7440-47-3	Chromium	0.005	0.005	U
3010A	03/06/09	6010B	03/19/09	7440-48-4	Cobalt	0.003	0.003	U
3010A	03/06/09	6010B	03/19/09	7440-50-8	Copper	0.002	0.002	U
3010A	03/06/09	6010B	03/19/09	7439-92-1	Lead	0.02	0.02	U
7470A	03/06/09	7470A	03/06/09	7439-97-6	Mercury	0.0001	0.0001	U
3010A	03/06/09	6010B	03/19/09	7439-98-7	Molybdenum	0.005	0.005	U
3010A	03/06/09	6010B	03/19/09	7440-02-0	Nickel	0.01	0.01	U
200.8	03/06/09	200.8	03/12/09	**7782-49-2**	**Selenium**	0.0005	**0.0007**	
3010A	03/06/09	6010B	03/19/09	7440-22-4	Silver	0.003	0.003	U
200.8	03/06/09	200.8	03/12/09	7440-28-0	Thallium	0.0002	0.0002	U
3010A	03/06/09	6010B	03/19/09	7440-62-2	Vanadium	0.003	0.003	U
3010A	03/06/09	6010B	03/19/09	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-038-RB
DUPLICATE

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	0.05 U	0.05 U	0.0%	+/- 0.05	L
Arsenic	200.8	0.0002 U	0.0002 U	0.0%	+/- 0.0002	L
Cadmium	6010B	0.002 U	0.002 U	0.0%	+/- 0.002	L
Chromium	6010B	0.005 U	0.005 U	0.0%	+/- 0.005	L
Cobalt	6010B	0.003 U	0.003 U	0.0%	+/- 0.003	L
Copper	6010B	0.002 U	0.002 U	0.0%	+/- 0.002	L
Lead	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Molybdenum	6010B	0.005 U	0.005 U	0.0%	+/- 0.005	L
Nickel	6010B	0.01 U	0.01 U	0.0%	+/- 0.01	L
Selenium	200.8	0.0007	0.0006	15.4%	+/- 0.0005	L
Silver	6010B	0.003 U	0.003 U	0.0%	+/- 0.003	L
Thallium	200.8	0.0002 U	0.0002 U	0.0%	+/- 0.0002	L
Vanadium	6010B	0.003 U	0.003 U	0.0%	+/- 0.003	L
Zinc	6010B	0.01 U	0.01 U	0.0%	+/- 0.01	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-102-RB
SAMPLE

Lab Sample ID: OP35V
LIMS ID: 09-6001
Matrix: Water
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	03/06/09	6010B	03/13/09	7440-36-0	Antimony	0.05	0.05	U
200.8	03/06/09	200.8	03/12/09	7440-38-2	Arsenic	0.0002	0.0002	U
3010A	03/06/09	6010B	03/13/09	7440-43-9	Cadmium	0.002	0.002	U
3010A	03/06/09	6010B	03/13/09	7440-47-3	Chromium	0.005	0.005	U
3010A	03/06/09	6010B	03/13/09	7440-48-4	Cobalt	0.003	0.003	U
3010A	03/06/09	6010B	03/13/09	7440-50-8	Copper	0.002	0.002	U
3010A	03/06/09	6010B	03/13/09	7439-92-1	Lead	0.02	0.02	U
7470A	03/06/09	7470A	03/06/09	7439-97-6	Mercury	0.0001	0.0001	U
3010A	03/06/09	6010B	03/13/09	7439-98-7	Molybdenum	0.005	0.005	U
3010A	03/06/09	6010B	03/13/09	7440-02-0	Nickel	0.01	0.01	U
200.8	03/06/09	200.8	03/12/09	7782-49-2	Selenium	0.0005	0.0005	U
3010A	03/06/09	6010B	03/13/09	7440-22-4	Silver	0.003	0.003	U
200.8	03/06/09	200.8	03/12/09	7440-28-0	Thallium	0.0002	0.0002	U
3010A	03/06/09	6010B	03/13/09	7440-62-2	Vanadium	0.003	0.003	U
3010A	03/06/09	6010B	03/13/09	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

Round 2 Metals

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-002-010
SAMPLE

Lab Sample ID: PE40B
LIMS ID: 09-14878
Matrix: Sediment
Data Release Authorized
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Percent Total Solids: 68.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/29/09	6010B	07/01/09	7440-36-0	Antimony	20	20	U
3050B	06/29/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**14.7**	
3050B	06/29/09	6010B	07/01/09	7440-43-9	Cadmium	0.7	0.7	U
3050B	06/29/09	6010B	07/01/09	**7440-47-3**	**Chromium**	2	**36**	
3050B	06/29/09	6010B	07/01/09	**7440-48-4**	**Cobalt**	1	**14**	
3050B	06/29/09	6010B	07/01/09	**7440-50-8**	**Copper**	0.7	**74.5**	
3050B	06/29/09	6010B	07/01/09	**7439-92-1**	**Lead**	7	**27**	
CLP	06/29/09	7471A	07/02/09	**7439-97-6**	**Mercury**	0.03	**0.06**	
3050B	06/29/09	6010B	07/01/09	7439-98-7	Molybdenum	2	2	U
3050B	06/29/09	6010B	07/01/09	**7440-02-0**	**Nickel**	4	**37**	
3050B	06/29/09	200.8	06/30/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/29/09	6010B	07/01/09	7440-22-4	Silver	1	1	U
3050B	06/29/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/29/09	6010B	07/01/09	**7440-62-2**	**Vanadium**	1	**66**	
3050B	06/29/09	6010B	07/01/09	**7440-66-6**	**Zinc**	4	**122**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-002-010
DUPLICATE

Lab Sample ID: PE40B
LIMS ID: 09-14878
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	20 U	20 U	0.0%	+/- 20	L
Arsenic	200.8	14.7	13.9	5.6%	+/- 20%	
Cadmium	6010B	0.7 U	0.7 U	0.0%	+/- 0.7	L
Chromium	6010B	36	32	11.8%	+/- 20%	
Cobalt	6010B	14	13	7.4%	+/- 20%	
Copper	6010B	74.5	66.1	11.9%	+/- 20%	
Lead	6010B	27	28	3.6%	+/- 7	L
Mercury	7471A	0.06	0.06	0.0%	+/- 0.03	L
Molybdenum	6010B	2 U	2 U	0.0%	+/- 2	L
Nickel	6010B	37	34	8.5%	+/- 20%	
Selenium	200.8	0.7 U	0.7 U	0.0%	+/- 0.7	L
Silver	6010B	1 U	1 U	0.0%	+/- 1	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	66	67	1.5%	+/- 20%	
Zinc	6010B	122	129	5.6%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-004-010
SAMPLE

Lab Sample ID: PE40C
LIMS ID: 09-14879
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Percent Total Solids: 75.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/29/09	6010B	07/01/09	7440-36-0	Antimony	20	20	U
3050B	06/29/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.2	**6.7**	
3050B	06/29/09	6010B	07/01/09	7440-43-9	Cadmium	0.6	0.6	U
3050B	06/29/09	6010B	07/01/09	**7440-47-3**	**Chromium**	2	**19**	
3050B	06/29/09	6010B	07/01/09	**7440-48-4**	**Cobalt**	1	**16**	
3050B	06/29/09	6010B	07/01/09	**7440-50-8**	**Copper**	0.6	**55.5**	
3050B	06/29/09	6010B	07/01/09	**7439-92-1**	**Lead**	6	**12**	
CLP	06/29/09	7471A	07/02/09	**7439-97-6**	**Mercury**	0.02	**0.03**	
3050B	06/29/09	6010B	07/01/09	7439-98-7	Molybdenum	2	2	U
3050B	06/29/09	6010B	07/01/09	**7440-02-0**	**Nickel**	3	**30**	
3050B	06/29/09	200.8	06/30/09	7782-49-2	Selenium	0.6	0.6	U
3050B	06/29/09	6010B	07/01/09	7440-22-4	Silver	1	1	U
3050B	06/29/09	200.8	06/30/09	7440-28-0	Thallium	0.2	0.2	U
3050B	06/29/09	6010B	07/01/09	**7440-62-2**	**Vanadium**	1	**62**	
3050B	06/29/09	6010B	07/01/09	**7440-66-6**	**Zinc**	3	**93**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PE40D
LIMS ID: 09-14880
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Percent Total Solids: 74.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/29/09	6010B	06/30/09	7440-36-0	Antimony	7	7	U
3050B	06/29/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.2	**10.2**	
3050B	06/29/09	6010B	06/30/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/29/09	6010B	06/30/09	**7440-47-3**	**Chromium**	0.7	**17.3**	
3050B	06/29/09	6010B	06/30/09	**7440-48-4**	**Cobalt**	0.4	**9.6**	
3050B	06/29/09	6010B	06/30/09	**7440-50-8**	**Copper**	0.3	**51.2**	
3050B	06/29/09	6010B	06/30/09	**7439-92-1**	**Lead**	3	**18**	
CLP	06/29/09	7471A	07/02/09	**7439-97-6**	**Mercury**	0.03	**0.05**	
3050B	06/29/09	6010B	06/30/09	7439-98-7	Molybdenum	0.7	0.7	U
3050B	06/29/09	6010B	06/30/09	**7440-02-0**	**Nickel**	1	**20**	
3050B	06/29/09	200.8	06/30/09	7782-49-2	Selenium	0.6	0.6	U
3050B	06/29/09	6010B	06/30/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/29/09	200.8	06/30/09	7440-28-0	Thallium	0.2	0.2	U
3050B	06/29/09	6010B	06/30/09	**7440-62-2**	**Vanadium**	0.4	**43.5**	
3050B	06/29/09	6010B	06/30/09	**7440-66-6**	**Zinc**	1	**80**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-007-010
SAMPLE

Lab Sample ID: PE40E
LIMS ID: 09-14881
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Percent Total Solids: 52.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/29/09	6010B	06/30/09	7440-36-0	Antimony	9	9	U
3050B	06/29/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.4	**6.1**	
3050B	06/29/09	6010B	06/30/09	**7440-43-9**	**Cadmium**	0.4	**0.4**	
3050B	06/29/09	6010B	06/30/09	**7440-47-3**	**Chromium**	0.9	**28.1**	
3050B	06/29/09	6010B	06/30/09	**7440-48-4**	**Cobalt**	0.6	**6.3**	
3050B	06/29/09	6010B	06/30/09	**7440-50-8**	**Copper**	0.4	**45.4**	
3050B	06/29/09	6010B	06/30/09	**7439-92-1**	**Lead**	4	**29**	
CLP	06/29/09	7471A	07/02/09	**7439-97-6**	**Mercury**	0.04	**0.07**	
3050B	06/29/09	6010B	06/30/09	**7439-98-7**	**Molybdenum**	0.9	**2.2**	
3050B	06/29/09	6010B	06/30/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	06/29/09	200.8	06/30/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/29/09	6010B	06/30/09	7440-22-4	Silver	0.6	0.6	U
3050B	06/29/09	200.8	06/30/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/29/09	6010B	06/30/09	**7440-62-2**	**Vanadium**	0.6	**52.3**	
3050B	06/29/09	6010B	06/30/09	**7440-66-6**	**Zinc**	2	**97**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-009-010
SAMPLE

Lab Sample ID: PE07C
LIMS ID: 09-14571
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 57.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	9	9	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**10.7**	
3050B	06/24/09	6010B	06/29/09	**7440-43-9**	**Cadmium**	0.3	**0.4**	
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.9	**36.4**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**8.3**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**71.6**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**55**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.04	**0.20**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.9	**2.5**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**60.3**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**148**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PE40F
LIMS ID: 09-14882
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Percent Total Solids: 67.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/29/09	6010B	06/30/09	7440-36-0	Antimony	7	7	U
3050B	06/29/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**8.4**	
3050B	06/29/09	6010B	06/30/09	**7440-43-9**	**Cadmium**	0.3	**0.4**	
3050B	06/29/09	6010B	06/30/09	**7440-47-3**	**Chromium**	0.7	**31.0**	
3050B	06/29/09	6010B	06/30/09	**7440-48-4**	**Cobalt**	0.4	**5.6**	
3050B	06/29/09	6010B	06/30/09	**7440-50-8**	**Copper**	0.3	**54.9**	
3050B	06/29/09	6010B	06/30/09	**7439-92-1**	**Lead**	3	**54**	
CLP	06/29/09	7471A	07/02/09	**7439-97-6**	**Mercury**	0.03	**0.11**	
3050B	06/29/09	6010B	06/30/09	**7439-98-7**	**Molybdenum**	0.7	**2.4**	
3050B	06/29/09	6010B	06/30/09	**7440-02-0**	**Nickel**	1	**18**	
3050B	06/29/09	200.8	06/30/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/29/09	6010B	06/30/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/29/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/29/09	6010B	06/30/09	**7440-62-2**	**Vanadium**	0.4	**43.7**	
3050B	06/29/09	6010B	06/30/09	**7440-66-6**	**Zinc**	1	**123**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-012-010
SAMPLE

Lab Sample ID: PE07D
LIMS ID: 09-14572
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 75.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	30	30	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**6.0**	
3050B	06/24/09	6010B	06/29/09	7440-43-9	Cadmium	1	1	U
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	3	**8**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	2	**4**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	1	**21**	
3050B	06/24/09	6010B	06/29/09	7439-92-1	Lead	10	10	U
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.02	**0.02**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	3	**3**	
3050B	06/24/09	6010B	06/29/09	7440-02-0	Nickel	6	6	U
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.6	0.6	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	2	2	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	2	**24**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	6	**31**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-015-010
SAMPLE

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 60.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	20	20	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**8.2**	
3050B	06/24/09	6010B	06/29/09	7440-43-9	Cadmium	0.8	0.8	U
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	2	**23**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	1	**5**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.8	**43.9**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	8	**32**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.11**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	2	**3**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	4	**15**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	1	1	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	1	**41**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	4	**89**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-016-010
SAMPLE

Lab Sample ID: PD97K
LIMS ID: 09-14507
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 66.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/07/09	7440-36-0	Antimony	7	7	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**4.8**	
3050B	06/26/09	6010B	07/07/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/26/09	6010B	07/07/09	**7440-47-3**	**Chromium**	0.7	**33.6**	
3050B	06/26/09	6010B	07/07/09	**7440-48-4**	**Cobalt**	0.4	**6.6**	
3050B	06/26/09	6010B	07/07/09	**7440-50-8**	**Copper**	0.3	**38.6**	
3050B	06/26/09	6010B	07/07/09	**7439-92-1**	**Lead**	3	**35**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.08**	
3050B	06/26/09	6010B	07/07/09	**7439-98-7**	**Molybdenum**	0.7	**2.7**	
3050B	06/26/09	6010B	07/07/09	**7440-02-0**	**Nickel**	1	**26**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/26/09	6010B	07/07/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/26/09	6010B	07/07/09	**7440-62-2**	**Vanadium**	0.4	**46.6**	
3050B	06/26/09	6010B	07/07/09	**7440-66-6**	**Zinc**	1	**94**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-017-010
SAMPLE

Lab Sample ID: PD95A
LIMS ID: 09-14478
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 53.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	9	9	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**14.0**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**0.7**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.9	**37.2**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.5	**9.4**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**73.4**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**68**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.25**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	0.9	**1.8**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**23**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/23/09	6010B	06/25/09	**7440-22-4**	**Silver**	0.5	**0.6**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.5	**64.1**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**148**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-018-010
SAMPLE

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 67.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/07/09	7440-36-0	Antimony	20	20	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**5.8**	
3050B	06/26/09	6010B	07/07/09	7440-43-9	Cadmium	0.7	0.7	U
3050B	06/26/09	6010B	07/07/09	**7440-47-3**	**Chromium**	2	**25**	
3050B	06/26/09	6010B	07/07/09	**7440-48-4**	**Cobalt**	1	**6**	
3050B	06/26/09	6010B	07/07/09	**7440-50-8**	**Copper**	0.7	**1,270**	
3050B	06/26/09	6010B	07/07/09	**7439-92-1**	**Lead**	7	**88**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.11**	
3050B	06/26/09	6010B	07/07/09	**7439-98-7**	**Molybdenum**	2	**4**	
3050B	06/26/09	6010B	07/07/09	**7440-02-0**	**Nickel**	4	**20**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/26/09	6010B	07/07/09	**7440-22-4**	**Silver**	1	**6**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/26/09	6010B	07/07/09	**7440-62-2**	**Vanadium**	1	**38**	
3050B	06/26/09	6010B	07/07/09	**7440-66-6**	**Zinc**	4	**235**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-018-010
SAMPLE

Lab Sample ID: PG50A
LIMS ID: 09-16484
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PG50-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 69.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/14/09	6010B	07/16/09	**7440-50-8**	**Copper**	0.3	**32.2**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-018-010
DUPLICATE

Lab Sample ID: PG50A
LIMS ID: 09-16484
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PG50-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Copper	6010B	32.2	38.2	17.0%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-022-010
SAMPLE

Lab Sample ID: PD97L
LIMS ID: 09-14508
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 69.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/07/09	**7440-36-0**	**Antimony**	7	**7**	
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**12.1**	
3050B	06/26/09	6010B	07/07/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/26/09	6010B	07/07/09	**7440-47-3**	**Chromium**	0.7	**22.6**	
3050B	06/26/09	6010B	07/07/09	**7440-48-4**	**Cobalt**	0.4	**6.8**	
3050B	06/26/09	6010B	07/07/09	**7440-50-8**	**Copper**	0.3	**49.7**	
3050B	06/26/09	6010B	07/07/09	**7439-92-1**	**Lead**	3	**31**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.04**	
3050B	06/26/09	6010B	07/07/09	**7439-98-7**	**Molybdenum**	0.7	**3.1**	
3050B	06/26/09	6010B	07/07/09	**7440-02-0**	**Nickel**	1	**13**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/26/09	6010B	07/07/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/26/09	6010B	07/07/09	**7440-62-2**	**Vanadium**	0.4	**48.0**	
3050B	06/26/09	6010B	07/07/09	**7440-66-6**	**Zinc**	1	**136**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-026-010
SAMPLE

Lab Sample ID: PD95B
LIMS ID: 09-14479
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 59.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	8	8	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**9.1**	
3050B	06/23/09	6010B	06/25/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.8	**26.8**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.5	**7.3**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.3	**51.5**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	3	**35**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.28**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	0.8	**1.4**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**19**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/23/09	6010B	06/25/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.5	**53.9**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**87**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-028-010
SAMPLE

Lab Sample ID: PD97M
LIMS ID: 09-14509
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 42.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/07/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**12.1**	
3050B	06/26/09	6010B	07/07/09	**7440-43-9**	**Cadmium**	0.5	**0.7**	
3050B	06/26/09	6010B	07/07/09	**7440-47-3**	**Chromium**	1	**50**	
3050B	06/26/09	6010B	07/07/09	**7440-48-4**	**Cobalt**	0.7	**11.8**	
3050B	06/26/09	6010B	07/07/09	**7440-50-8**	**Copper**	0.5	**127**	
3050B	06/26/09	6010B	07/07/09	**7439-92-1**	**Lead**	5	**71**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.40**	
3050B	06/26/09	6010B	07/07/09	**7439-98-7**	**Molybdenum**	1	**2**	
3050B	06/26/09	6010B	07/07/09	**7440-02-0**	**Nickel**	2	**31**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/26/09	6010B	07/07/09	**7440-22-4**	**Silver**	0.7	**0.8**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/26/09	6010B	07/07/09	**7440-62-2**	**Vanadium**	0.7	**85.1**	
3050B	06/26/09	6010B	07/07/09	**7440-66-6**	**Zinc**	2	**182**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-037-010
SAMPLE

Lab Sample ID: PD95D
LIMS ID: 09-14481
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 51.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	9	9	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**7.7**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**0.7**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.9	**33.9**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.6	**7.6**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**67.5**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**55**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.36**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	0.9	**2.0**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/23/09	6010B	06/25/09	**7440-22-4**	**Silver**	0.6	**2.3**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.6	**54.7**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**124**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-039-010
SAMPLE

Lab Sample ID: PD97O
LIMS ID: 09-14511
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 64.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/01/09	7440-36-0	Antimony	7	7	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**17.6**	
3050B	06/26/09	6010B	07/01/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/26/09	6010B	07/01/09	**7440-47-3**	**Chromium**	0.7	**20.0**	
3050B	06/26/09	6010B	07/01/09	**7440-48-4**	**Cobalt**	0.4	**5.5**	
3050B	06/26/09	6010B	07/01/09	**7440-50-8**	**Copper**	0.3	**35.7**	
3050B	06/26/09	6010B	07/01/09	**7439-92-1**	**Lead**	3	**18**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.08**	
3050B	06/26/09	6010B	07/01/09	**7439-98-7**	**Molybdenum**	0.7	**0.8**	
3050B	06/26/09	6010B	07/01/09	**7440-02-0**	**Nickel**	1	**15**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/26/09	6010B	07/01/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/26/09	6010B	07/01/09	**7440-62-2**	**Vanadium**	0.4	**45.0**	
3050B	06/26/09	6010B	07/01/09	**7440-66-6**	**Zinc**	1	**79**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-039-010
DUPLICATE

Lab Sample ID: PD97O
LIMS ID: 09-14511
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	7 U	7 U	0.0%	+/- 7	L
Arsenic	200.8	17.6	18.5	5.0%	+/- 20%	
Cadmium	6010B	0.3 U	0.3	0.0%	+/- 0.3	L
Chromium	6010B	20.0	21.6	7.7%	+/- 20%	
Cobalt	6010B	5.5	7.8	34.6%	+/- 20%	*
Copper	6010B	35.7	49.4	32.2%	+/- 20%	*
Lead	6010B	18	41	78.0%	+/- 20%	*
Mercury	7471A	0.08	0.09	11.8%	+/- 0.03	L
Molybdenum	6010B	0.8	3.0	116%	+/- 0.7	L*
Nickel	6010B	15	15	0.0%	+/- 20%	
Selenium	200.8	0.7 U	0.7 U	0.0%	+/- 0.7	L
Silver	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	45.0	48.2	6.9%	+/- 20%	
Zinc	6010B	79	173	74.6%	+/- 20%	*

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-040-010
SAMPLE

Lab Sample ID: PD95C
LIMS ID: 09-14480
Matrix: Sediment
Data Release Authorized
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 41.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.5	**11.9**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.5	**0.7**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	1	**43**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.7	**10.8**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.5	**105**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	5	**63**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.38**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	1	**2**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**28**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/23/09	6010B	06/25/09	7440-22-4	Silver	0.7	0.7	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.5	0.5	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.7	**75.8**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**164**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-040-010
DUPLICATE

Lab Sample ID: PD95C
LIMS ID: 09-14480
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	10 U	10 U	0.0%	+/- 10	L
Arsenic	200.8	11.9	11.2	6.1%	+/- 20%	
Cadmium	6010B	0.7	0.7	0.0%	+/- 0.5	L
Chromium	6010B	43	39	9.8%	+/- 20%	
Cobalt	6010B	10.8	9.8	9.7%	+/- 20%	
Copper	6010B	105	94.1	10.9%	+/- 20%	
Lead	6010B	63	56	11.8%	+/- 20%	
Mercury	7471A	0.38	0.62	48.0%	+/- 20%	*
Molybdenum	6010B	2	2	0.0%	+/- 1	L
Nickel	6010B	28	25	11.3%	+/- 20%	
Selenium	200.8	1 U	1 U	0.0%	+/- 1	L
Silver	6010B	0.7 U	0.7 U	0.0%	+/- 0.7	L
Thallium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Vanadium	6010B	75.8	68.6	10.0%	+/- 20%	
Zinc	6010B	164	146	11.6%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-103-010
SAMPLE

Lab Sample ID: PD95E
LIMS ID: 09-14482
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 48.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**9.5**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**0.7**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	1	**34**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.6	**8.2**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**75.7**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**48**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.05	**0.67**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	1	**2**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**22**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/23/09	6010B	06/25/09	7440-22-4	Silver	0.6	0.6	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.6	**59.6**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**135**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-105-010
SAMPLE

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 44.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**12.9**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**1.7**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	1	**49**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.6	**9.8**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**125**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**85**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.05	**0.55**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	1	**3**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**28**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/23/09	6010B	06/25/09	**7440-22-4**	**Silver**	0.6	**0.9**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.6	**71.3**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**246**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-106-010
SAMPLE

Lab Sample ID: PE07G
LIMS ID: 09-14575
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 75.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	6	6	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**4.1**	
3050B	06/24/09	6010B	06/29/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.6	**16.8**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**4.8**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.2	**37.0**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	2	**23**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.02	**0.08**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.6	**1.6**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**10**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.6	0.6	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**38.8**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**85**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-107-010
SAMPLE

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 68.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	20	20	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**9.9**	
3050B	06/24/09	6010B	06/29/09	**7440-43-9**	**Cadmium**	0.7	**5.7**	
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	2	**55**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	1	**8**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.7	**117**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	7	**168**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.53**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	2	**5**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	3	**28**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/24/09	6010B	06/29/09	**7440-22-4**	**Silver**	1	**1**	
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	1	**55**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	3	**1,230**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-108-010
SAMPLE

Lab Sample ID: PD95K
LIMS ID: 09-14488
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 72.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	6	6	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**3.1**	
3050B	06/23/09	6010B	06/25/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.6	**19.4**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.4	**5.3**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.3	**23.3**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	3	**9**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.11**	
3050B	06/23/09	6010B	06/25/09	7439-98-7	Molybdenum	0.6	0.6	U
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	1	**14**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.6	0.6	U
3050B	06/23/09	6010B	06/25/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.4	**42.8**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	1	**42**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-112-010
SAMPLE

Lab Sample ID: PD95G
LIMS ID: 09-14484
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 47.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**9.8**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**1.0**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	1	**41**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.6	**8.8**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**88.1**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**61**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.40**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	1	**3**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**25**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/23/09	6010B	06/25/09	**7440-22-4**	**Silver**	0.6	**0.7**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.6	**65.5**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**162**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-115-010
SAMPLE

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 49.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	9	9	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**11.7**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**1.8**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.9	**50.5**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.6	**9.4**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**101**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**103**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.48**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	0.9	**3.1**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**28**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/23/09	6010B	06/25/09	**7440-22-4**	**Silver**	0.6	**1.1**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.6	**66.8**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**210**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-118-010
SAMPLE

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 55.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	9	9	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**8.9**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.3	**0.7**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.9	**38.4**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.5	**9.6**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.3	**62.4**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	3	**48**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.37**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	0.9	**2.1**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**28**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/23/09	6010B	06/25/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.5	**67.3**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**113**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-121-010
SAMPLE

Lab Sample ID: PD95M
LIMS ID: 09-14490
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 52.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	9	9	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**9.5**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**1.3**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.9	**44.4**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.5	**9.1**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**77.5**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**72**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.44**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	0.9	**3.6**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**27**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/23/09	6010B	06/25/09	**7440-22-4**	**Silver**	0.5	**0.9**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.5	**64.0**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**143**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-123-010
SAMPLE

Lab Sample ID: PE14M
LIMS ID: 09-14624
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 55.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	9	9	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.4	**6.7**	
3050B	06/25/09	6010B	06/29/09	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.9	**33.1**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**8.0**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**63.3**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**41**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.04	**0.26**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.9	**2.0**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**59.9**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**105**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-124-010
SAMPLE

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 60.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	8	8	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**5.9**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.8	**26.1**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**6.4**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**54.2**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**35**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.28**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.8	**1.8**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**17**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**50.1**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**87**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-125-010
SAMPLE

Lab Sample ID: PE14K
LIMS ID: 09-14622
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 61.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	8	8	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**5.1**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.8	**21.4**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**5.8**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**35.7**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**22**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.14**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.8	**1.1**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**15**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**46.6**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**61**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-128-010
SAMPLE

Lab Sample ID: PE14J
LIMS ID: 09-14621
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 55.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	8	8	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**6.1**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.8	**21.6**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**6.1**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**40.1**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**25**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.24**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.8	**1.2**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**15**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**45.8**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**63**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-131-010
SAMPLE

Lab Sample ID: PE14I
LIMS ID: 09-14620
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 57.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	8	8	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**6.2**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.8	**26.9**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**7.6**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**49.1**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**29**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.21**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.8	**1.7**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**19**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**56.0**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**79**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-133-010
SAMPLE

Lab Sample ID: PD95J
LIMS ID: 09-14487
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 56.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	8	8	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**5.3**	
3050B	06/23/09	6010B	06/25/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	0.8	**26.9**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.5	**6.5**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.3	**93.6**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	3	**31**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.27**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	0.8	**1.3**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**17**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/23/09	6010B	06/25/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.5	**50.9**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**89**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-134-010
SAMPLE

Lab Sample ID: PE14H
LIMS ID: 09-14619
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 56.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	8	8	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**5.7**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.8	**26.3**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**7.0**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**50.2**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**31**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.04	**0.27**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.8	**1.4**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**18**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**54.1**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**77**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-201-010
SAMPLE

Lab Sample ID: PE14G
LIMS ID: 09-14618
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 67.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	7	7	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**6.6**	
3050B	06/25/09	6010B	06/29/09	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.7	**29.3**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**6.7**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**53.4**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**45**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.24**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.7	**2.5**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**19**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/25/09	6010B	06/29/09	**7440-22-4**	**Silver**	0.4	**0.5**	
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**47.6**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**85**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-203-010
SAMPLE

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 65.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	7	7	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**3.9**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.7	**16.7**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**5.0**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**26.6**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**16**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.13**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.7	**1.6**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**11**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**44.6**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**46**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-205-010
SAMPLE

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 61.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	7	7	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**4.4**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.7	**18.8**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**5.7**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**30.5**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**12**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.11**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.7	**1.2**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**13**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**45.0**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**50**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-206-010
SAMPLE

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 54.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	06/30/09	7440-36-0	Antimony	9	9	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.4	**21.1**	
3050B	06/26/09	6010B	06/30/09	7440-43-9	Cadmium	0.4	0.4	U
3050B	06/26/09	6010B	06/30/09	**7440-47-3**	**Chromium**	0.9	**29.5**	
3050B	06/26/09	6010B	06/30/09	**7440-48-4**	**Cobalt**	0.5	**6.9**	
3050B	06/26/09	6010B	06/30/09	**7440-50-8**	**Copper**	0.4	**76.5**	
3050B	06/26/09	6010B	06/30/09	**7439-92-1**	**Lead**	4	**64**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.16**	
3050B	06/26/09	6010B	06/30/09	**7439-98-7**	**Molybdenum**	0.9	**3.1**	
3050B	06/26/09	6010B	06/30/09	**7440-02-0**	**Nickel**	2	**21**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/26/09	6010B	06/30/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/26/09	6010B	06/30/09	**7440-62-2**	**Vanadium**	0.5	**45.6**	
3050B	06/26/09	6010B	06/30/09	**7440-66-6**	**Zinc**	2	**147**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-206-010
DUPLICATE

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Data Release Authorized
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	9 U	9 U	0.0%	+/- 9	L
Arsenic	200.8	21.1	20.6	2.4%	+/- 20%	
Cadmium	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Chromium	6010B	29.5	39.0	27.7%	+/- 20%	*
Cobalt	6010B	6.9	7.9	13.5%	+/- 20%	
Copper	6010B	76.5	91.8	18.2%	+/- 20%	
Lead	6010B	64	63	1.6%	+/- 20%	
Mercury	7471A	0.16	0.42	89.7%	+/- 0.03	L*
Molybdenum	6010B	3.1	4.1	27.8%	+/- 0.9	L*
Nickel	6010B	21	24	13.3%	+/- 20%	
Selenium	200.8	0.9 U	0.9 U	0.0%	+/- 0.9	L
Silver	6010B	0.5 U	0.5 U	0.0%	+/- 0.5	L
Thallium	200.8	0.4 U	0.4 U	0.0%	+/- 0.4	L
Vanadium	6010B	45.6	47.6	4.3%	+/- 20%	
Zinc	6010B	147	177	18.5%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-208-010
SAMPLE

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 54.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	9	9	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.4	**5.8**	
3050B	06/24/09	6010B	06/29/09	**7440-43-9**	**Cadmium**	0.3	**0.4**	
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.9	**27.3**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**6.4**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**56.1**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**46**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.04	**0.21**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.9	**4.4**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**19**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**53.4**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**108**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-209-010
SAMPLE

Lab Sample ID: PE14F
LIMS ID: 09-14617
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 61.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	8	8	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**5.2**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.8	**22.7**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**5.8**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**41.9**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**33**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.25**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.8	**1.2**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**16**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**46.0**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**65**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-210-010
SAMPLE

Lab Sample ID: PE14B
LIMS ID: 09-14613
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 67.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	7	7	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**4.1**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.7	**17.0**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**5.1**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**27.2**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**14**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.10**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.7	**0.9**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**12**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**41.3**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**44**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-210-010
DUPLICATE

Lab Sample ID: PE14B
LIMS ID: 09-14613
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	7 U	7 U	0.0%	+/- 7	L
Arsenic	200.8	4.1	4.1	0.0%	+/- 20%	
Cadmium	6010B	0.3 U	0.3 U	0.0%	+/- 0.3	L
Chromium	6010B	17.0	17.3	1.7%	+/- 20%	
Cobalt	6010B	5.1	5.1	0.0%	+/- 20%	
Copper	6010B	27.2	27.2	0.0%	+/- 20%	
Lead	6010B	14	13	7.4%	+/- 3	L
Mercury	7471A	0.10	0.10	0.0%	+/- 0.03	L
Molybdenum	6010B	0.9	0.8	11.8%	+/- 0.7	L
Nickel	6010B	12	12	0.0%	+/- 20%	
Selenium	200.8	0.7 U	0.7 U	0.0%	+/- 0.7	L
Silver	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	41.3	40.2	2.7%	+/- 20%	
Zinc	6010B	44	43	2.3%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-212-010
SAMPLE

Lab Sample ID: PE14E
LIMS ID: 09-14616
Matrix: Sediment
Data Release Authorized
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 66.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/25/09	6010B	06/29/09	7440-36-0	Antimony	7	7	U
3050B	06/25/09	200.8	06/29/09	**7440-38-2**	**Arsenic**	0.3	**3.4**	
3050B	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.7	**18.3**	
3050B	06/25/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**5.0**	
3050B	06/25/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**27.7**	
3050B	06/25/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**15**	
CLP	06/25/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.13**	
3050B	06/25/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.7	**0.9**	
3050B	06/25/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**14**	
3050B	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/25/09	6010B	06/29/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/25/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**40.4**	
3050B	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**44**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-213-010
SAMPLE

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 57.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/01/09	7440-36-0	Antimony	8	8	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**8.4**	
3050B	06/26/09	6010B	07/01/09	**7440-43-9**	**Cadmium**	0.3	**0.6**	
3050B	06/26/09	6010B	07/01/09	**7440-47-3**	**Chromium**	0.8	**21.7**	
3050B	06/26/09	6010B	07/01/09	**7440-48-4**	**Cobalt**	0.5	**5.8**	
3050B	06/26/09	6010B	07/01/09	**7440-50-8**	**Copper**	0.3	**63.8**	
3050B	06/26/09	6010B	07/01/09	**7439-92-1**	**Lead**	3	**81**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.25**	
3050B	06/26/09	6010B	07/01/09	**7439-98-7**	**Molybdenum**	0.8	**1.7**	
3050B	06/26/09	6010B	07/01/09	**7440-02-0**	**Nickel**	2	**14**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/26/09	6010B	07/01/09	**7440-22-4**	**Silver**	0.5	**0.8**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/26/09	6010B	07/01/09	**7440-62-2**	**Vanadium**	0.5	**50.0**	
3050B	06/26/09	6010B	07/01/09	**7440-66-6**	**Zinc**	2	**104**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-214-010
SAMPLE

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 62.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/01/09	7440-36-0	Antimony	7	7	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**10.1**	
3050B	06/26/09	6010B	07/01/09	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	06/26/09	6010B	07/01/09	**7440-47-3**	**Chromium**	0.7	**20.6**	
3050B	06/26/09	6010B	07/01/09	**7440-48-4**	**Cobalt**	0.4	**5.1**	
3050B	06/26/09	6010B	07/01/09	**7440-50-8**	**Copper**	0.3	**50.8**	
3050B	06/26/09	6010B	07/01/09	**7439-92-1**	**Lead**	3	**66**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.20**	
3050B	06/26/09	6010B	07/01/09	**7439-98-7**	**Molybdenum**	0.7	**1.4**	
3050B	06/26/09	6010B	07/01/09	**7440-02-0**	**Nickel**	1	**14**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.8	0.8	U
3050B	06/26/09	6010B	07/01/09	**7440-22-4**	**Silver**	0.4	**0.5**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/26/09	6010B	07/01/09	**7440-62-2**	**Vanadium**	0.4	**45.4**	
3050B	06/26/09	6010B	07/01/09	**7440-66-6**	**Zinc**	1	**84**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-215-010
SAMPLE

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 41.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/07/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**26.2**	
3050B	06/26/09	6010B	07/07/09	**7440-43-9**	**Cadmium**	0.5	**1.3**	
3050B	06/26/09	6010B	07/07/09	**7440-47-3**	**Chromium**	1	**69**	
3050B	06/26/09	6010B	07/07/09	**7440-48-4**	**Cobalt**	0.7	**12.0**	
3050B	06/26/09	6010B	07/07/09	**7440-50-8**	**Copper**	0.5	**272**	
3050B	06/26/09	6010B	07/07/09	**7439-92-1**	**Lead**	5	**171**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.05	**0.70**	
3050B	06/26/09	6010B	07/07/09	**7439-98-7**	**Molybdenum**	1	**4**	
3050B	06/26/09	6010B	07/07/09	**7440-02-0**	**Nickel**	2	**39**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/26/09	6010B	07/07/09	**7440-22-4**	**Silver**	0.7	**1.6**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/26/09	6010B	07/07/09	**7440-62-2**	**Vanadium**	0.7	**91.5**	
3050B	06/26/09	6010B	07/07/09	**7440-66-6**	**Zinc**	2	**434**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-221-010
SAMPLE

Lab Sample ID: PE07B
LIMS ID: 09-14570
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 69.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	7	7	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**3.5**	
3050B	06/24/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.7	**15.1**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**4.7**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**16.9**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**13**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.07**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.7	**0.7**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**13**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**37.4**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**52**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-222-010
SAMPLE

Lab Sample ID: PE07A
LIMS ID: 09-14569
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 71.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	7	7	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.3	**3.5**	
3050B	06/24/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.7	**21.6**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.4	**5.4**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**22.3**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**8**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.03	**0.06**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.7	**1.4**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	1	**18**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.4	**37.7**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	1	**233**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-223-010
SAMPLE

Lab Sample ID: PD97A
LIMS ID: 09-14497
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 66.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/01/09	7440-36-0	Antimony	7	7	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.3	**2.3**	
3050B	06/26/09	6010B	07/01/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/26/09	6010B	07/01/09	**7440-47-3**	**Chromium**	0.7	**14.3**	
3050B	06/26/09	6010B	07/01/09	**7440-48-4**	**Cobalt**	0.4	**4.3**	
3050B	06/26/09	6010B	07/01/09	**7440-50-8**	**Copper**	0.3	**18.2**	
3050B	06/26/09	6010B	07/01/09	**7439-92-1**	**Lead**	3	**5**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.03	**0.04**	
3050B	06/26/09	6010B	07/01/09	7439-98-7	Molybdenum	0.7	0.7	U
3050B	06/26/09	6010B	07/01/09	**7440-02-0**	**Nickel**	1	**10**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	0.7	0.7	U
3050B	06/26/09	6010B	07/01/09	7440-22-4	Silver	0.4	0.4	U
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.3	0.3	U
3050B	06/26/09	6010B	07/01/09	**7440-62-2**	**Vanadium**	0.4	**40.2**	
3050B	06/26/09	6010B	07/01/09	**7440-66-6**	**Zinc**	1	**29**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-303-010
SAMPLE

Lab Sample ID: PD97N
LIMS ID: 09-14510
Matrix: Sediment
Data Release Authorized
Reported: 07/08/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 40.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/26/09	6010B	07/07/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.5	**10.7**	
3050B	06/26/09	6010B	07/07/09	**7440-43-9**	**Cadmium**	0.5	**0.9**	
3050B	06/26/09	6010B	07/07/09	**7440-47-3**	**Chromium**	1	**56**	
3050B	06/26/09	6010B	07/07/09	**7440-48-4**	**Cobalt**	0.7	**13.2**	
3050B	06/26/09	6010B	07/07/09	**7440-50-8**	**Copper**	0.5	**139**	
3050B	06/26/09	6010B	07/07/09	**7439-92-1**	**Lead**	5	**80**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.04	**0.36**	
3050B	06/26/09	6010B	07/07/09	**7439-98-7**	**Molybdenum**	1	**2**	
3050B	06/26/09	6010B	07/07/09	**7440-02-0**	**Nickel**	2	**35**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/26/09	6010B	07/07/09	**7440-22-4**	**Silver**	0.7	**0.8**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.5	0.5	U
3050B	06/26/09	6010B	07/07/09	**7440-62-2**	**Vanadium**	0.7	**94.1**	
3050B	06/26/09	6010B	07/07/09	**7440-66-6**	**Zinc**	2	**206**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-304-010
SAMPLE

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Percent Total Solids: 44.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/23/09	6010B	06/25/09	7440-36-0	Antimony	10	10	U
3050B	06/23/09	200.8	06/25/09	**7440-38-2**	**Arsenic**	0.4	**12.9**	
3050B	06/23/09	6010B	06/25/09	**7440-43-9**	**Cadmium**	0.4	**1.4**	
3050B	06/23/09	6010B	06/25/09	**7440-47-3**	**Chromium**	1	**47**	
3050B	06/23/09	6010B	06/25/09	**7440-48-4**	**Cobalt**	0.7	**9.7**	
3050B	06/23/09	6010B	06/25/09	**7440-50-8**	**Copper**	0.4	**118**	
3050B	06/23/09	6010B	06/25/09	**7439-92-1**	**Lead**	4	**79**	
CLP	06/23/09	7471A	06/24/09	**7439-97-6**	**Mercury**	0.05	**0.50**	
3050B	06/23/09	6010B	06/25/09	**7439-98-7**	**Molybdenum**	1	**3**	
3050B	06/23/09	6010B	06/25/09	**7440-02-0**	**Nickel**	2	**28**	
3050B	06/23/09	200.8	06/25/09	7782-49-2	Selenium	1	1	U
3050B	06/23/09	6010B	06/25/09	**7440-22-4**	**Silver**	0.7	**0.8**	
3050B	06/23/09	200.8	06/25/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/23/09	6010B	06/25/09	**7440-62-2**	**Vanadium**	0.7	**69.8**	
3050B	06/23/09	6010B	06/25/09	**7440-66-6**	**Zinc**	2	**222**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-305-010
SAMPLE

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Percent Total Solids: 53.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	06/24/09	6010B	06/29/09	7440-36-0	Antimony	9	9	U
3050B	06/24/09	200.8	06/30/09	**7440-38-2**	**Arsenic**	0.4	**6.1**	
3050B	06/24/09	6010B	06/29/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	06/24/09	6010B	06/29/09	**7440-47-3**	**Chromium**	0.9	**25.7**	
3050B	06/24/09	6010B	06/29/09	**7440-48-4**	**Cobalt**	0.5	**6.2**	
3050B	06/24/09	6010B	06/29/09	**7440-50-8**	**Copper**	0.3	**50.4**	
3050B	06/24/09	6010B	06/29/09	**7439-92-1**	**Lead**	3	**44**	
CLP	06/24/09	7471A	06/26/09	**7439-97-6**	**Mercury**	0.04	**0.26**	
3050B	06/24/09	6010B	06/29/09	**7439-98-7**	**Molybdenum**	0.9	**3.5**	
3050B	06/24/09	6010B	06/29/09	**7440-02-0**	**Nickel**	2	**17**	
3050B	06/24/09	200.8	06/30/09	7782-49-2	Selenium	0.9	0.9	U
3050B	06/24/09	6010B	06/29/09	7440-22-4	Silver	0.5	0.5	U
3050B	06/24/09	200.8	06/30/09	7440-28-0	Thallium	0.4	0.4	U
3050B	06/24/09	6010B	06/29/09	**7440-62-2**	**Vanadium**	0.5	**50.2**	
3050B	06/24/09	6010B	06/29/09	**7440-66-6**	**Zinc**	2	**89**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-002-010-RB
SAMPLE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
3010A	06/29/09	6010B	06/30/09	7440-36-0	Antimony	50	50	U
200.8	06/29/09	200.8	06/30/09	7440-38-2	Arsenic	0.2	0.2	U
3010A	06/29/09	6010B	06/30/09	7440-43-9	Cadmium	2	2	U
3010A	06/29/09	6010B	06/30/09	7440-47-3	Chromium	5	5	U
3010A	06/29/09	6010B	06/30/09	7440-48-4	Cobalt	3	3	U
3010A	06/29/09	6010B	06/30/09	7440-50-8	Copper	2	2	U
3010A	06/29/09	6010B	06/30/09	7439-92-1	Lead	20	20	U
7470A	06/29/09	7470A	06/30/09	7439-97-6	Mercury	0.1	0.1	U
3010A	06/29/09	6010B	06/30/09	7439-98-7	Molybdenum	5	5	U
3010A	06/29/09	6010B	06/30/09	7440-02-0	Nickel	10	10	U
200.8	06/29/09	200.8	06/30/09	7782-49-2	Selenium	0.5	0.5	U
3010A	06/29/09	6010B	06/30/09	7440-22-4	Silver	3	3	U
200.8	06/29/09	200.8	06/30/09	7440-28-0	Thallium	0.2	0.2	U
3010A	06/29/09	6010B	06/30/09	7440-62-2	Vanadium	3	3	U
3010A	06/29/09	6010B	06/30/09	7440-66-6	Zinc	10	10	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-002-010-RB
DUPLICATE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	50 U	50 U	0.0%	+/- 50	L
Arsenic	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	6010B	2 U	2 U	0.0%	+/- 2	L
Chromium	6010B	5 U	5 U	0.0%	+/- 5	L
Cobalt	6010B	3 U	3 U	0.0%	+/- 3	L
Copper	6010B	2 U	2 U	0.0%	+/- 2	L
Lead	6010B	20 U	20 U	0.0%	+/- 20	L
Mercury	7470A	0.1 U	0.1 U	0.0%	+/- 0.1	L
Molybdenum	6010B	5 U	5 U	0.0%	+/- 5	L
Nickel	6010B	10 U	10 U	0.0%	+/- 10	L
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	6010B	3 U	3 U	0.0%	+/- 3	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Vanadium	6010B	3 U	3 U	0.0%	+/- 3	L
Zinc	6010B	10 U	10 U	0.0%	+/- 10	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-222-RB
SAMPLE

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
3010A	06/25/09	6010B	06/29/09	7440-36-0	Antimony	50	50	U
200.8	06/25/09	200.8	06/30/09	7440-38-2	Arsenic	0.2	0.2	U
3010A	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	2	2	U
3010A	06/25/09	6010B	06/29/09	7440-47-3	Chromium	5	5	U
3010A	06/25/09	6010B	06/29/09	7440-48-4	Cobalt	3	3	U
3010A	06/25/09	6010B	06/29/09	7440-50-8	Copper	2	2	U
3010A	06/25/09	6010B	06/29/09	7439-92-1	Lead	20	20	U
7470A	06/25/09	7470A	06/26/09	7439-97-6	Mercury	0.1	0.1	U
3010A	06/25/09	6010B	06/29/09	7439-98-7	Molybdenum	5	5	U
3010A	06/25/09	6010B	06/29/09	7440-02-0	Nickel	10	10	U
200.8	06/25/09	200.8	06/30/09	7782-49-2	Selenium	0.5	0.5	U
3010A	06/25/09	6010B	06/29/09	7440-22-4	Silver	3	3	U
200.8	06/25/09	200.8	06/30/09	7440-28-0	Thallium	0.2	0.2	U
3010A	06/25/09	6010B	06/29/09	7440-62-2	Vanadium	3	3	U
3010A	06/25/09	6010B	06/29/09	**7440-66-6**	**Zinc**	10	**10**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-222-RB DUPLICATE

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	50 U	50 U	0.0%	+/- 50	L
Arsenic	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	6010B	2 U	2 U	0.0%	+/- 2	L
Chromium	6010B	5 U	5 U	0.0%	+/- 5	L
Cobalt	6010B	3 U	3 U	0.0%	+/- 3	L
Copper	6010B	2 U	2 U	0.0%	+/- 2	L
Lead	6010B	20 U	20 U	0.0%	+/- 20	L
Mercury	7470A	0.1 U	0.1 U	0.0%	+/- 0.1	L
Molybdenum	6010B	5 U	5 U	0.0%	+/- 5	L
Nickel	6010B	10 U	10 U	0.0%	+/- 10	L
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	6010B	3 U	3 U	0.0%	+/- 3	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Vanadium	6010B	3 U	3 U	0.0%	+/- 3	L
Zinc	6010B	10	10	0.0%	+/- 10	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-210-RB
SAMPLE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
3010A	06/25/09	6010B	06/29/09	7440-36-0	Antimony	50	50	U
200.8	06/25/09	200.8	06/29/09	7440-38-2	Arsenic	0.2	0.2	U
3010A	06/25/09	6010B	06/29/09	7440-43-9	Cadmium	2	2	U
3010A	06/25/09	6010B	06/29/09	7440-47-3	Chromium	5	5	U
3010A	06/25/09	6010B	06/29/09	7440-48-4	Cobalt	3	3	U
3010A	06/25/09	6010B	06/29/09	7440-50-8	Copper	2	2	U
3010A	06/25/09	6010B	06/29/09	7439-92-1	Lead	20	20	U
7470A	06/25/09	7470A	06/26/09	7439-97-6	Mercury	0.1	0.1	U
3010A	06/25/09	6010B	06/29/09	7439-98-7	Molybdenum	5	5	U
3010A	06/25/09	6010B	06/29/09	7440-02-0	Nickel	10	10	U
200.8	06/25/09	200.8	06/29/09	7782-49-2	Selenium	0.5	0.5	U
3010A	06/25/09	6010B	06/29/09	7440-22-4	Silver	3	3	U
200.8	06/25/09	200.8	06/29/09	7440-28-0	Thallium	0.2	0.2	U
3010A	06/25/09	6010B	06/29/09	7440-62-2	Vanadium	3	3	U
3010A	06/25/09	6010B	06/29/09	7440-66-6	Zinc	10	10	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-SS-210-RB DUPLICATE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	50 U	50 U	0.0%	+/- 50	L
Arsenic	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	6010B	2 U	2 U	0.0%	+/- 2	L
Chromium	6010B	5 U	5 U	0.0%	+/- 5	L
Cobalt	6010B	3 U	3 U	0.0%	+/- 3	L
Copper	6010B	2 U	2 U	0.0%	+/- 2	L
Lead	6010B	20 U	20 U	0.0%	+/- 20	L
Mercury	7470A	0.1 U	0.1 U	0.0%	+/- 0.1	L
Molybdenum	6010B	5 U	5 U	0.0%	+/- 5	L
Nickel	6010B	10 U	10 U	0.0%	+/- 10	L
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	6010B	3 U	3 U	0.0%	+/- 3	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Vanadium	6010B	3 U	3 U	0.0%	+/- 3	L
Zinc	6010B	10 U	10 U	0.0%	+/- 10	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

T30 Metals

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-01
SAMPLE

Lab Sample ID: ON35A
LIMS ID: 09-4935
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 63.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-43-9	Cadmium	0.3	1.7	
3050B	03/06/09	6010B	03/11/09	7440-47-3	Chromium	0.7	29.0	
3050B	03/06/09	6010B	03/11/09	7440-50-8	Copper	0.3	40.0	
3050B	03/06/09	6010B	03/11/09	7439-92-1	Lead	3	53	
CLP	03/03/09	7471A	03/04/09	7439-97-6	Mercury	0.06	0.35	
3050B	03/06/09	6010B	03/11/09	7440-02-0	Nickel	1	16	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.7	
3050B	03/06/09	6010B	03/11/09	7440-66-6	Zinc	1	126	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-03
SAMPLE

Lab Sample ID: ON35C
LIMS ID: 09-4937
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 69.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	7	7	U
3050B	03/06/09	6010B	03/11/09	**7440-43-9**	**Cadmium**	0.3	**0.6**	
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.7	**22.5**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**36.2**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	3	**18**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.06	**0.08**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	1	**16**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	1	**67**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-101
SAMPLE

Lab Sample ID: ON35D
LIMS ID: 09-4938
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 71.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	7	7	U
3050B	03/06/09	6010B	03/11/09	**7440-43-9**	**Cadmium**	0.3	**0.8**	
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.7	**20.6**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**32.4**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	3	**16**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.07	**0.11**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	1	**15**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	1	**86**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-04
SAMPLE

Lab Sample ID: QF22A
LIMS ID: 10-726
Matrix: Sediment
Data Release Authorized:
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 70.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/14/10	200.8	01/25/10	7440-36-0	Antimony	0.3	0.3	U
3050B	01/14/10	200.8	01/25/10	**7440-38-2**	**Arsenic**	0.3	**2.5**	
3050B	01/14/10	6010B	01/22/10	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	**7440-47-3**	**Chromium**	0.7	**15.1**	
3050B	01/14/10	6010B	01/22/10	**7440-48-4**	**Cobalt**	0.4	**5.2**	
3050B	01/14/10	6010B	01/22/10	**7440-50-8**	**Copper**	0.3	**20.8**	
3050B	01/14/10	6010B	01/22/10	**7439-92-1**	**Lead**	3	**5**	
CLP	01/14/10	7471A	01/18/10	**7439-97-6**	**Mercury**	0.03	**0.03**	
3050B	01/14/10	6010B	01/22/10	**7439-98-7**	**Molybdenum**	0.7	**0.9**	
3050B	01/14/10	6010B	01/22/10	**7440-02-0**	**Nickel**	1	**10**	
3050B	01/14/10	200.8	01/25/10	7782-49-2	Selenium	0.7	0.7	U
3050B	01/14/10	6010B	01/22/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/14/10	200.8	01/25/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	**7440-62-2**	**Vanadium**	0.4	**46.9**	
3050B	01/14/10	6010B	01/22/10	**7440-66-6**	**Zinc**	1	**32**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-04
DUPLICATE

Lab Sample ID: QF22A
LIMS ID: 10-726
Matrix: Sediment
Data Release Authorized
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Arsenic	200.8	2.5	2.6	3.9%	+/- 20%	
Cadmium	6010B	0.3 U	0.3 U	0.0%	+/- 0.3	L
Chromium	6010B	15.1	13.7	9.7%	+/- 20%	
Cobalt	6010B	5.2	4.7	10.1%	+/- 20%	
Copper	6010B	20.8	19.3	7.5%	+/- 20%	
Lead	6010B	5	4	22.2%	+/- 3	L
Mercury	7471A	0.03	0.07	80.0%	+/- 0.03	L*
Molybdenum	6010B	0.9	0.9	0.0%	+/- 0.7	L
Nickel	6010B	10	9	10.5%	+/- 20%	
Selenium	200.8	0.7 U	0.7 U	0.0%	+/- 0.7	L
Silver	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	46.9	43.4	7.8%	+/- 20%	
Zinc	6010B	32	31	3.2%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-06
SAMPLE

Lab Sample ID: QF22B
LIMS ID: 10-727
Matrix: Sediment
Data Release Authorized
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 63.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/14/10	200.8	01/25/10	7440-36-0	Antimony	0.3	0.3	U
3050B	01/14/10	200.8	01/25/10	**7440-38-2**	**Arsenic**	0.3	**5.0**	
3050B	01/14/10	6010B	01/22/10	**7440-43-9**	**Cadmium**	0.3	**0.9**	
3050B	01/14/10	6010B	01/22/10	**7440-47-3**	**Chromium**	0.8	**24.5**	
3050B	01/14/10	6010B	01/22/10	**7440-48-4**	**Cobalt**	0.5	**6.4**	
3050B	01/14/10	6010B	01/22/10	**7440-50-8**	**Copper**	0.3	**39.0**	
3050B	01/14/10	6010B	01/22/10	**7439-92-1**	**Lead**	3	**23**	
CLP	01/14/10	7471A	01/18/10	**7439-97-6**	**Mercury**	0.04	**0.11**	
3050B	01/14/10	6010B	01/22/10	**7439-98-7**	**Molybdenum**	0.8	**1.5**	
3050B	01/14/10	6010B	01/22/10	**7440-02-0**	**Nickel**	2	**16**	
3050B	01/14/10	200.8	01/25/10	7782-49-2	Selenium	0.8	0.8	U
3050B	01/14/10	6010B	01/22/10	7440-22-4	Silver	0.5	0.5	U
3050B	01/14/10	200.8	01/25/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	**7440-62-2**	**Vanadium**	0.5	**51.5**	
3050B	01/14/10	6010B	01/22/10	**7440-66-6**	**Zinc**	2	**74**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-07
SAMPLE

Lab Sample ID: ON35H
LIMS ID: 09-4943
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 54.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	8	8	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	8	8	U
3050B	03/06/09	6010B	03/11/09	**7440-43-9**	**Cadmium**	0.3	**1.7**	
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.8	**48.8**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**69.5**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	3	**115**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.07	**1.07**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	2	**42**	
3050B	03/06/09	6010B	03/11/09	**7440-22-4**	**Silver**	0.5	**1.7**	
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	2	**246**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-09
SAMPLE

Lab Sample ID: ON35J
LIMS ID: 09-4945
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 76.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	6	6	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	6	6	U
3050B	03/06/09	6010B	03/11/09	7440-43-9	Cadmium	0.2	0.2	U
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.6	**15.2**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.2	**22.2**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	2	**8**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.05	**0.06**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	1	**12**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	1	**39**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-13
SAMPLE

Lab Sample ID: QF22C
LIMS ID: 10-728
Matrix: Sediment
Data Release Authorized
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 67.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/14/10	200.8	01/25/10	7440-36-0	Antimony	0.3	0.3	U
3050B	01/14/10	200.8	01/25/10	7440-38-2	Arsenic	0.3	3.8	
3050B	01/14/10	6010B	01/22/10	7440-43-9	Cadmium	0.3	0.5	
3050B	01/14/10	6010B	01/22/10	7440-47-3	Chromium	0.7	18.0	
3050B	01/14/10	6010B	01/22/10	7440-48-4	Cobalt	0.4	5.1	
3050B	01/14/10	6010B	01/22/10	7440-50-8	Copper	0.3	23.5	
3050B	01/14/10	6010B	01/22/10	7439-92-1	Lead	3	13	
CLP	01/14/10	7471A	01/18/10	7439-97-6	Mercury	0.03	0.07	
3050B	01/14/10	6010B	01/22/10	7439-98-7	Molybdenum	0.7	1.2	
3050B	01/14/10	6010B	01/22/10	7440-02-0	Nickel	1	11	
3050B	01/14/10	200.8	01/25/10	7782-49-2	Selenium	0.7	0.7	U
3050B	01/14/10	6010B	01/22/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/14/10	200.8	01/25/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	7440-62-2	Vanadium	0.4	47.4	
3050B	01/14/10	6010B	01/22/10	7440-66-6	Zinc	1	47	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-14
SAMPLE

Lab Sample ID: ON35O
LIMS ID: 09-4950
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 73.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.7	**12.7**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**16.4**	
3050B	03/06/09	6010B	03/11/09	7439-92-1	Lead	3	3	U
CLP	03/03/09	7471A	03/04/09	7439-97-6	Mercury	0.06	0.06	U
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	1	**9**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	1	**27**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-14
DUPLICATE

Lab Sample ID: ON35O
LIMS ID: 09-4950
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	7 U	7 U	0.0%	+/- 7	L
Arsenic	6010B	7 U	7 U	0.0%	+/- 7	L
Cadmium	6010B	0.3 U	0.3 U	0.0%	+/- 0.3	L
Chromium	6010B	12.7	13.8	8.3%	+/- 20%	
Copper	6010B	16.4	16.7	1.8%	+/- 20%	
Lead	6010B	3 U	3 U	0.0%	+/- 3	L
Mercury	7471A	0.06 U	0.23	117%	+/- 0.06	L*
Nickel	6010B	9	10	10.5%	+/- 20%	
Silver	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Zinc	6010B	27	29	7.1%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-20
SAMPLE

Lab Sample ID: ON35U
LIMS ID: 09-4956
Matrix: Sediment
Data Release Authorized
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 63.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	7	7	U
3050B	03/06/09	6010B	03/11/09	**7440-43-9**	**Cadmium**	0.3	**0.6**	
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.7	**24.9**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**42.3**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	3	**34**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.06	**0.17**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	1	**20**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	1	**88**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-21
SAMPLE

Lab Sample ID: ON35V
LIMS ID: 09-4957
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Percent Total Solids: 65.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	7	7	U
3050B	03/06/09	6010B	03/11/09	**7440-43-9**	**Cadmium**	0.3	**0.3**	
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.7	**20.1**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**33.8**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	3	**18**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.06	**0.37**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	1	**13**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	1	**57**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-24
SAMPLE

Lab Sample ID: QF22D
LIMS ID: 10-729
Matrix: Sediment
Data Release Authorized:
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Percent Total Solids: 63.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/14/10	200.8	01/25/10	7440-36-0	Antimony	0.3	0.3	U
3050B	01/14/10	200.8	01/25/10	**7440-38-2**	**Arsenic**	0.3	**4.4**	
3050B	01/14/10	6010B	01/22/10	**7440-43-9**	**Cadmium**	0.3	**0.4**	
3050B	01/14/10	6010B	01/22/10	**7440-47-3**	**Chromium**	0.7	**21.6**	
3050B	01/14/10	6010B	01/22/10	**7440-48-4**	**Cobalt**	0.4	**7.1**	
3050B	01/14/10	6010B	01/22/10	**7440-50-8**	**Copper**	0.3	**39.1**	
3050B	01/14/10	6010B	01/22/10	**7439-92-1**	**Lead**	3	**16**	
CLP	01/14/10	7471A	01/18/10	**7439-97-6**	**Mercury**	0.03	**0.09**	
3050B	01/14/10	6010B	01/22/10	**7439-98-7**	**Molybdenum**	0.7	**1.2**	
3050B	01/14/10	6010B	01/22/10	**7440-02-0**	**Nickel**	1	**16**	
3050B	01/14/10	200.8	01/25/10	7782-49-2	Selenium	0.8	0.8	U
3050B	01/14/10	6010B	01/22/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/14/10	200.8	01/25/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	**7440-62-2**	**Vanadium**	0.4	**54.0**	
3050B	01/14/10	6010B	01/22/10	**7440-66-6**	**Zinc**	1	**62**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-26
SAMPLE

Lab Sample ID: ON50E
LIMS ID: 09-5073
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Percent Total Solids: 61.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	8	8	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	8	8	U
3050B	03/06/09	6010B	03/11/09	**7440-43-9**	**Cadmium**	0.3	**0.4**	
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.8	**23.3**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**49.3**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	3	**29**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.06	**0.23**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	2	**16**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.5	0.5	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	2	**81**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-27
SAMPLE

Lab Sample ID: QF22E
LIMS ID: 10-730
Matrix: Sediment
Data Release Authorized:
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Percent Total Solids: 64.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/14/10	200.8	01/25/10	7440-36-0	Antimony	0.3	0.3	U
3050B	01/14/10	200.8	01/25/10	**7440-38-2**	**Arsenic**	0.3	**4.4**	
3050B	01/14/10	6010B	01/22/10	**7440-43-9**	**Cadmium**	0.3	**0.3**	
3050B	01/14/10	6010B	01/22/10	**7440-47-3**	**Chromium**	0.7	**19.7**	
3050B	01/14/10	6010B	01/22/10	**7440-48-4**	**Cobalt**	0.4	**6.1**	
3050B	01/14/10	6010B	01/22/10	**7440-50-8**	**Copper**	0.3	**27.1**	
3050B	01/14/10	6010B	01/22/10	**7439-92-1**	**Lead**	3	**11**	
CLP	01/14/10	7471A	01/18/10	**7439-97-6**	**Mercury**	0.03	**0.07**	
3050B	01/14/10	6010B	01/22/10	**7439-98-7**	**Molybdenum**	0.7	**1.1**	
3050B	01/14/10	6010B	01/22/10	**7440-02-0**	**Nickel**	1	**12**	
3050B	01/14/10	200.8	01/25/10	7782-49-2	Selenium	0.7	0.7	U
3050B	01/14/10	6010B	01/22/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/14/10	200.8	01/25/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	**7440-62-2**	**Vanadium**	0.4	**51.1**	
3050B	01/14/10	6010B	01/22/10	**7440-66-6**	**Zinc**	1	**46**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-28
SAMPLE

Lab Sample ID: QF22F
LIMS ID: 10-731
Matrix: Sediment
Data Release Authorized:
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Percent Total Solids: 62.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/14/10	200.8	01/25/10	7440-36-0	Antimony	0.3	0.3	U
3050B	01/14/10	200.8	01/25/10	7440-38-2	Arsenic	0.3	5.5	
3050B	01/14/10	6010B	01/22/10	7440-43-9	Cadmium	0.3	0.6	
3050B	01/14/10	6010B	01/22/10	7440-47-3	Chromium	0.8	25.5	
3050B	01/14/10	6010B	01/22/10	7440-48-4	Cobalt	0.5	7.3	
3050B	01/14/10	6010B	01/22/10	7440-50-8	Copper	0.3	44.9	
3050B	01/14/10	6010B	01/22/10	7439-92-1	Lead	3	25	
CLP	01/14/10	7471A	01/18/10	7439-97-6	Mercury	0.03	0.15	
3050B	01/14/10	6010B	01/22/10	7439-98-7	Molybdenum	0.8	1.4	
3050B	01/14/10	6010B	01/22/10	7440-02-0	Nickel	2	19	
3050B	01/14/10	200.8	01/25/10	7782-49-2	Selenium	0.8	0.8	U
3050B	01/14/10	6010B	01/22/10	7440-22-4	Silver	0.5	0.5	U
3050B	01/14/10	200.8	01/25/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	7440-62-2	Vanadium	0.5	53.9	
3050B	01/14/10	6010B	01/22/10	7440-66-6	Zinc	2	76	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-29
SAMPLE

Lab Sample ID: ON50H
LIMS ID: 09-5076
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Percent Total Solids: 62.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	03/06/09	6010B	03/11/09	7440-36-0	Antimony	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-38-2	Arsenic	7	7	U
3050B	03/06/09	6010B	03/11/09	7440-43-9	Cadmium	0.3	0.3	U
3050B	03/06/09	6010B	03/11/09	**7440-47-3**	**Chromium**	0.7	**13.4**	
3050B	03/06/09	6010B	03/11/09	**7440-50-8**	**Copper**	0.3	**24.7**	
3050B	03/06/09	6010B	03/11/09	**7439-92-1**	**Lead**	3	**10**	
CLP	03/03/09	7471A	03/04/09	**7439-97-6**	**Mercury**	0.08	**0.12**	
3050B	03/06/09	6010B	03/11/09	**7440-02-0**	**Nickel**	1	**9**	
3050B	03/06/09	6010B	03/11/09	7440-22-4	Silver	0.4	0.4	U
3050B	03/06/09	6010B	03/11/09	**7440-66-6**	**Zinc**	1	**39**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-31
SAMPLE

Lab Sample ID: QF22G
LIMS ID: 10-732
Matrix: Sediment
Data Release Authorized
Reported: 01/26/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Percent Total Solids: 65.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/14/10	200.8	01/25/10	7440-36-0	Antimony	0.3	0.3	U
3050B	01/14/10	200.8	01/25/10	**7440-38-2**	**Arsenic**	0.3	**3.4**	
3050B	01/14/10	6010B	01/22/10	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	**7440-47-3**	**Chromium**	0.7	**19.0**	
3050B	01/14/10	6010B	01/22/10	**7440-48-4**	**Cobalt**	0.4	**6.5**	
3050B	01/14/10	6010B	01/22/10	**7440-50-8**	**Copper**	0.3	**27.7**	
3050B	01/14/10	6010B	01/22/10	7439-92-1	Lead	3	3	U
CLP	01/14/10	7471A	01/18/10	**7439-97-6**	**Mercury**	0.04	**0.04**	
3050B	01/14/10	6010B	01/22/10	**7439-98-7**	**Molybdenum**	0.7	**1.2**	
3050B	01/14/10	6010B	01/22/10	**7440-02-0**	**Nickel**	1	**12**	
3050B	01/14/10	200.8	01/25/10	7782-49-2	Selenium	0.7	0.7	U
3050B	01/14/10	6010B	01/22/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/14/10	200.8	01/25/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/14/10	6010B	01/22/10	**7440-62-2**	**Vanadium**	0.4	**56.5**	
3050B	01/14/10	6010B	01/22/10	**7440-66-6**	**Zinc**	1	**37**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T30-09-11-RB
SAMPLE

Lab Sample ID: ON35W
LIMS ID: 09-5006
Matrix: Water
Data Release Authorized:
Reported: 03/13/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	03/06/09	6010B	03/12/09	7440-36-0	Antimony	0.05	0.05	U
3010A	03/06/09	6010B	03/12/09	7440-38-2	Arsenic	0.05	0.05	U
3010A	03/06/09	6010B	03/12/09	7440-43-9	Cadmium	0.002	0.002	U
3010A	03/06/09	6010B	03/12/09	7440-47-3	Chromium	0.005	0.005	U
3010A	03/06/09	6010B	03/12/09	7440-50-8	Copper	0.002	0.002	U
3010A	03/06/09	6010B	03/12/09	7439-92-1	Lead	0.02	0.02	U
7470A	02/25/09	7470A	02/27/09	7439-97-6	Mercury	0.0001	0.0001	U
3010A	03/06/09	6010B	03/12/09	7440-02-0	Nickel	0.01	0.01	U
3010A	03/06/09	6010B	03/12/09	7440-22-4	Silver	0.003	0.003	U
3010A	03/06/09	6010B	03/12/09	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

Composite Metals

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-ITSED-AWMIS-01
SAMPLE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Data Release Authorized:
Reported: 01/12/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Percent Total Solids: 72.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/06/10	6010B	01/11/10	7440-36-0	Antimony	6	6	U
3050B	01/06/10	200.8	01/08/10	**7440-38-2**	**Arsenic**	0.3	**8.3**	
3050B	01/06/10	6010B	01/11/10	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	01/06/10	6010B	01/11/10	**7440-47-3**	**Chromium**	0.6	**24.2**	
3050B	01/06/10	6010B	01/11/10	**7440-48-4**	**Cobalt**	0.4	**6.4**	
3050B	01/06/10	6010B	01/11/10	**7440-50-8**	**Copper**	0.3	**39.1**	
3050B	01/06/10	6010B	01/11/10	**7439-92-1**	**Lead**	3	**50**	
CLP	01/06/10	7471A	01/08/10	**7439-97-6**	**Mercury**	0.03	**0.05**	
3050B	01/06/10	6010B	01/11/10	**7439-98-7**	**Molybdenum**	0.6	**1.6**	
3050B	01/06/10	6010B	01/11/10	**7440-02-0**	**Nickel**	1	**22**	
3050B	01/06/10	200.8	01/08/10	7782-49-2	Selenium	0.6	0.6	U
3050B	01/06/10	6010B	01/11/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/06/10	200.8	01/11/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/06/10	6010B	01/11/10	**7440-62-2**	**Vanadium**	0.4	**39.8**	
3050B	01/06/10	6010B	01/11/10	**7440-66-6**	**Zinc**	1	**101**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-ITSED-AWMIS-01
DUPLICATE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Data Release Authorized:
Reported: 01/12/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	6 U	6 U	0.0%	+/- 6	L
Arsenic	200.8	8.3	9.8	16.6%	+/- 20%	
Cadmium	6010B	0.5	0.4	22.2%	+/- 0.3	L
Chromium	6010B	24.2	18.8	25.1%	+/- 20%	*
Cobalt	6010B	6.4	4.9	26.5%	+/- 20%	*
Copper	6010B	39.1	33.3	16.0%	+/- 20%	
Lead	6010B	50	46	8.3%	+/- 20%	
Mercury	7471A	0.05	0.07	33.3%	+/- 0.03	L
Molybdenum	6010B	1.6	1.4	13.3%	+/- 0.6	L
Nickel	6010B	22	19	14.6%	+/- 20%	
Selenium	200.8	0.6 U	0.6 U	0.0%	+/- 0.6	L
Silver	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Vanadium	6010B	39.8	28.9	31.7%	+/- 20%	*
Zinc	6010B	101	90	11.5%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-ITSED-AWMIS-02
SAMPLE

Lab Sample ID: QC540
LIMS ID: 09-31457
Matrix: Sediment
Data Release Authorized:
Reported: 01/12/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Percent Total Solids: 77.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/06/10	6010B	01/11/10	7440-36-0	Antimony	6	6	U
3050B	01/06/10	200.8	01/08/10	**7440-38-2**	**Arsenic**	0.3	**7.9**	
3050B	01/06/10	6010B	01/11/10	**7440-43-9**	**Cadmium**	0.3	**0.6**	
3050B	01/06/10	6010B	01/11/10	**7440-47-3**	**Chromium**	0.6	**27.3**	
3050B	01/06/10	6010B	01/11/10	**7440-48-4**	**Cobalt**	0.4	**6.2**	
3050B	01/06/10	6010B	01/11/10	**7440-50-8**	**Copper**	0.3	**40.8**	
3050B	01/06/10	6010B	01/11/10	**7439-92-1**	**Lead**	3	**60**	
CLP	01/06/10	7471A	01/08/10	**7439-97-6**	**Mercury**	0.02	**0.08**	
3050B	01/06/10	6010B	01/11/10	**7439-98-7**	**Molybdenum**	0.6	**2.0**	
3050B	01/06/10	6010B	01/11/10	**7440-02-0**	**Nickel**	1	**24**	
3050B	01/06/10	200.8	01/08/10	7782-49-2	Selenium	0.6	0.6	U
3050B	01/06/10	6010B	01/11/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/06/10	200.8	01/11/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/06/10	6010B	01/11/10	**7440-62-2**	**Vanadium**	0.4	**43.4**	
3050B	01/06/10	6010B	01/11/10	**7440-66-6**	**Zinc**	1	**113**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-ITSED-AWMIS-03
SAMPLE

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Data Release Authorized:
Reported: 01/12/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Percent Total Solids: 73.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/06/10	6010B	01/11/10	7440-36-0	Antimony	6	6	U
3050B	01/06/10	200.8	01/08/10	7440-38-2	Arsenic	0.3	13.3	
3050B	01/06/10	6010B	01/11/10	7440-43-9	Cadmium	0.3	0.6	
3050B	01/06/10	6010B	01/11/10	7440-47-3	Chromium	0.6	44.8	
3050B	01/06/10	6010B	01/11/10	7440-48-4	Cobalt	0.4	6.8	
3050B	01/06/10	6010B	01/11/10	7440-50-8	Copper	0.3	41.4	
3050B	01/06/10	6010B	01/11/10	7439-92-1	Lead	3	49	
CLP	01/06/10	7471A	01/08/10	7439-97-6	Mercury	0.03	0.10	
3050B	01/06/10	6010B	01/11/10	7439-98-7	Molybdenum	0.6	2.2	
3050B	01/06/10	6010B	01/11/10	7440-02-0	Nickel	1	27	
3050B	01/06/10	200.8	01/08/10	7782-49-2	Selenium	0.6	0.6	U
3050B	01/06/10	6010B	01/11/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/06/10	200.8	01/11/10	7440-28-0	Thallium	0.3	0.3	U
3050B	01/06/10	6010B	01/11/10	7440-62-2	Vanadium	0.4	45.5	
3050B	01/06/10	6010B	01/11/10	7440-66-6	Zinc	1	117	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: EW09-ITSED-PAMIS-01
SAMPLE

Lab Sample ID: QC54Q
LIMS ID: 09-31459
Matrix: Sediment
Data Release Authorized:
Reported: 01/12/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Percent Total Solids: 73.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/06/10	6010B	01/11/10	7440-36-0	Antimony	6	6	U
3050B	01/06/10	200.8	01/08/10	**7440-38-2**	**Arsenic**	0.2	**7.7**	
3050B	01/06/10	6010B	01/11/10	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/06/10	6010B	01/11/10	**7440-47-3**	**Chromium**	0.6	**20.5**	
3050B	01/06/10	6010B	01/11/10	**7440-48-4**	**Cobalt**	0.4	**5.0**	
3050B	01/06/10	6010B	01/11/10	**7440-50-8**	**Copper**	0.3	**28.0**	
3050B	01/06/10	6010B	01/11/10	**7439-92-1**	**Lead**	3	**23**	
CLP	01/06/10	7471A	01/08/10	**7439-97-6**	**Mercury**	0.03	**0.08**	
3050B	01/06/10	6010B	01/11/10	**7439-98-7**	**Molybdenum**	0.6	**1.3**	
3050B	01/06/10	6010B	01/11/10	**7440-02-0**	**Nickel**	1	**20**	
3050B	01/06/10	200.8	01/08/10	7782-49-2	Selenium	0.6	0.6	U
3050B	01/06/10	6010B	01/11/10	7440-22-4	Silver	0.4	0.4	U
3050B	01/06/10	200.8	01/11/10	7440-28-0	Thallium	0.2	0.2	U
3050B	01/06/10	6010B	01/11/10	**7440-62-2**	**Vanadium**	0.4	**30.6**	
3050B	01/06/10	6010B	01/11/10	**7440-66-6**	**Zinc**	1	**57**	

U-Analyte undetected at given RL
RL-Reporting Limit

Round 1 Butyltins

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-003-010
SAMPLE

Lab Sample ID: OP35T
LIMS ID: 09-5999
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 13:39
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.67 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 41.9%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.4**	**19**	
DBT_ION	Dibutyltin Ion	5.1	< 5.1	U
BT_ION	**Butyltin Ion**	**3.6**	**3.6**	

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	75.6%
Tripentyl Tin Chloride	63.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-013-010
SAMPLE

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 13:26
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 6.08 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 31.3%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.2**	**4.1**	
DBT_ION	Dibutyltin Ion	4.8	< 4.8	U
BT_ION	Butyltin Ion	3.4	< 3.4	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	54.1%
Tripentyl Tin Chloride	50.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-024-010
SAMPLE

Lab Sample ID: OP35M
LIMS ID: 09-5992
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 13:13
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.55 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 46.2%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	3.5	**38**	
DBT_ION	Dibutyltin Ion	5.2	< 5.2	U
BT_ION	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	75.4%
Tripentyl Tin Chloride	55.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-029-010
SAMPLE

Lab Sample ID: OP35K
LIMS ID: 09-5990
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 12:59
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.74 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 50.4%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	3.4	**76**	
DBT_ION	**Dibutyltin Ion**	5.0	**6.9**	
BT_ION	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	71.3%
Tripentyl Tin Chloride	56.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-030-010
SAMPLE

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 12:46
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.35 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 54.5%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.6**	**27**	
DBT_ION	Dibutyltin Ion	5.4	< 5.4	U
BT_ION	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	68.2%
Tripentyl Tin Chloride	59.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-033-010
SAMPLE

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 12:33
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.36 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 47.4%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.6**	**170**	
DBT_ION	**Dibutyltin Ion**	**5.4**	**16**	
BT_ION	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	90.9%
Tripentyl Tin Chloride	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-034-010
SAMPLE

Lab Sample ID: OP35E
LIMS ID: 09-5984
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 12:20
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.75 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 51.6%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.4**	**30**	
DBT_ION	Dibutyltin Ion	5.0	< 5.0	U
BT_ION	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	68.9%
Tripentyl Tin Chloride	58.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-036-010
SAMPLE

Lab Sample ID: OP35D
LIMS ID: 09-5983
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/16/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/13/09 11:09
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.51 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 48.4%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.5**	**39**	
DBT_ION	Dibutyltin Ion	5.2	< 5.2	U
BT_ION	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	77.3%
Tripentyl Tin Chloride	62.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-113-010
SAMPLE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/11/09 17:16
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.47 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 40.3%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.5**	**6.3**	
DBT_ION	Dibutyltin Ion	5.3	< 5.3	U
BT_ION	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	94.1%
Tripentyl Tin Chloride	86.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-119-010
SAMPLE

Lab Sample ID: 0097N
LIMS ID: 09-5799
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 16:24
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.58 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 46.3%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.5**	**28**	
DBT_ION	Dibutyltin Ion	5.2	< 5.2	U
BT_ION	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	76.6%
Tripentyl Tin Chloride	73.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-122-010
SAMPLE

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 16:10
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.40 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 40.3%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.6**	**57**	
DBT_ION	Dibutyltin Ion	5.4	< 5.4	U
BT_ION	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	82.4%
Tripentyl Tin Chloride	74.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-127-010
SAMPLE

Lab Sample ID: 0097L
LIMS ID: 09-5797
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 15:57
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.82 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 38.6%

CAS Number	Analyte	RL	Result	Q
TBT_ION	Tributyltin Ion	3.3	83	
DBT_ION	Dibutyltin Ion	5.0	6.2	
BT_ION	Butyltin Ion	3.5	3.6	

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	85.8%
Tripentyl Tin Chloride	78.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-129-010
SAMPLE

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 15:44
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.33 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 34.7%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.6**	**11**	
DBT_ION	Dibutyltin Ion	5.4	< 5.4	U
BT_ION	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	82.2%
Tripentyl Tin Chloride	77.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-200-010
SAMPLE

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 15:02
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.35 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 42.6%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.6**	**28**	
DBT_ION	Dibutyltin Ion	5.4	< 5.4	U
BT_ION	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	80.0%
Tripentyl Tin Chloride	69.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-204-010
SAMPLE

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 14:49
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.76 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 37.7%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.4**	**8.9**	
DBT_ION	Dibutyltin Ion	5.0	< 5.0	U
BT_ION	Butyltin Ion	3.5	< 3.5	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	80.3%
Tripentyl Tin Chloride	73.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-207-010
SAMPLE

Lab Sample ID: 0097E
LIMS ID: 09-5790
Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 14:36
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.37 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 35.4%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.6**	**7.6**	
DBT_ION	Dibutyltin Ion	5.4	< 5.4	U
BT_ION	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	82.4%
Tripentyl Tin Chloride	76.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-216-010
SAMPLE

Lab Sample ID: 0097D
LIMS ID: 09-5789
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 13:29
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.18 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 26.6%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	3.7	5.9	
DBT_ION	Dibutyltin Ion	5.6	< 5.6	U
BT_ION	Butyltin Ion	3.9	< 3.9	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	90.2%
Tripentyl Tin Chloride	79.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-218-010
SAMPLE

Lab Sample ID: 0097B
LIMS ID: 09-5787
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 13:16
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.40 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 26.8%

CAS Number	Analyte	RL	Result	Q
TBT_ION	Tributyltin Ion	3.6	< 3.6	U
DBT_ION	Dibutyltin Ion	5.4	< 5.4	U
BT_ION	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	86.6%
Tripentyl Tin Chloride	76.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-300-010
SAMPLE

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/11/09 15:31
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.17 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 43.2%

CAS Number	Analyte	RL	Result	Q
TBT_ION	**Tributyltin Ion**	**3.7**	**29**	
DBT_ION	**Dibutyltin Ion**	**5.6**	**5.9**	
BT_ION	Butyltin Ion	4.0	< 4.0	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	86.4%
Tripentyl Tin Chloride	76.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS
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Sample ID: EW09-SS-014-RB
SAMPLE

Lab Sample ID: OP65A
LIMS ID: 09-6148
Matrix: Water
Data Release Authorized: MW
Reported: 03/16/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 10:15
Instrument/Analyst: NT8/VTS

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
TBT_ION	Tributyltin Ion	0.19	< 0.19	U
DBT_ION	Dibutyltin Ion	0.29	< 0.29	U
BT_ION	Butyltin Ion	0.20	< 0.20	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	71.0%
Tripentyl Tin Chloride	60.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-038-RB
SAMPLE

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Data Release Authorized:
Reported: 03/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 18:21
Instrument/Analyst: NT8/VTS

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
TBT_ION	Tributyltin Ion	0.19	< 0.19	U
DBT_ION	Dibutyltin Ion	0.29	< 0.29	U
BT_ION	Butyltin Ion	0.20	< 0.20	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	82.5%
Tripentyl Tin Chloride	93.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-102-RB
SAMPLE

Lab Sample ID: OP35V
LIMS ID: 09-6001
Matrix: Water
Data Release Authorized:
Reported: 03/12/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 18:34
Instrument/Analyst: NT8/VTS

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
TBT_ION	Tributyltin Ion	0.19	< 0.19	U
DBT_ION	Dibutyltin Ion	0.29	< 0.29	U
BT_ION	Butyltin Ion	0.20	< 0.20	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	88.0%
Tripentyl Tin Chloride	98.0%

Round 2 Butyltins

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-004-010
SAMPLE

Lab Sample ID: PE40C
LIMS ID: 09-14879
Matrix: Sediment
Data Release Authorized: VIB
Reported: 07/07/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 14:15
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.67 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 20.3%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	3.4	< 3.4	U
14488-53-0	Dibutyltin Ion	5.1	< 5.1	U
78763-54-9	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	67.4%
Tripentyl Tin Chloride	74.0%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PE40D
LIMS ID: 09-14880
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/07/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 14:31
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.53 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 22.6%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	3.5	< 3.5	U
14488-53-0	Dibutyltin Ion	5.2	< 5.2	U
78763-54-9	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	63.5%
Tripentyl Tin Chloride	66.9%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PE40F
LIMS ID: 09-14882
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/07/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 14:46
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.68 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 29.7%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.4**	**12**	
14488-53-0	**Dibutyltin Ion**	**5.1**	**11**	
78763-54-9	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	47.6%
Tripentyl Tin Chloride	46.3%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-017-010
SAMPLE

Lab Sample ID: PH64A
LIMS ID: 09-17251
Matrix: Sediment
Data Release Authorized:
Reported: 07/27/09

QC Report No: PH64-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/23/09
Date Analyzed: 07/24/09 14:45
Instrument/Analyst: NT1/YZ
Silica Gel Cleanup: No

Sample Amount: 5.14 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 48.7%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	3.8	80	
14488-53-0	Dibutyltin Ion	5.6	22	
78763-54-9	Butyltin Ion	4.0	7.6	

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	90.2%
Tripentyl Tin Chloride	113%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-022-010
SAMPLE

Lab Sample ID: PD97L
LIMS ID: 09-14508
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 15:25
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.23 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 26.3%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	3.7	< 3.7	U
14488-53-0	Dibutyltin Ion	5.5	< 5.5	U
78763-54-9	Butyltin Ion	3.9	< 3.9	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	61.3%
Tripentyl Tin Chloride	59.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-027-010
SAMPLE

Lab Sample ID: PE25B
LIMS ID: 09-14716
Matrix: Sediment
Data Release Authorized: VTB
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/02/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 11:41
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.42 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 47.7%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.6**	**30**	
14488-53-0	Dibutyltin Ion	5.3	< 5.3	U
78763-54-9	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	66.2%
Tripentyl Tin Chloride	49.2%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-038-010
SAMPLE

Lab Sample ID: PE25C
LIMS ID: 09-14717
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 11:56
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.54 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 41.7%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.5**	**48**	
14488-53-0	Dibutyltin Ion	5.2	< 5.2	U
78763-54-9	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	60.6%
Tripentyl Tin Chloride	55.3%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-100-010
SAMPLE

Lab Sample ID: PE25D
LIMS ID: 09-14718
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 12:12
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.69 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 38.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.4**	**59**	
14488-53-0	**Dibutyltin Ion**	**5.1**	**7.7**	
78763-54-9	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	74.2%
Tripentyl Tin Chloride	78.2%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-105-010
SAMPLE

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 20:15
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.43 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 54.9%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	3.6	140	
14488-53-0	Dibutyltin Ion	5.3	22	
78763-54-9	Butyltin Ion	3.8	4.6	

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	70.3%
Tripentyl Tin Chloride	71.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-105-010
DILUTION

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 16:55
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.43 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 54.9%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	7.1	**94**	
14488-53-0	**Dibutyltin Ion**	11	**17**	
78763-54-9	Butyltin Ion	7.5	< 7.5	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	51.0%
Tripentyl Tin Chloride	52.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-106-010
SAMPLE

Lab Sample ID: PE07G
LIMS ID: 09-14575
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 13:00
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.35 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 25.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	3.6	< 3.6	U
14488-53-0	Dibutyltin Ion	5.4	< 5.4	U
78763-54-9	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	74.9%
Tripentyl Tin Chloride	134%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-107-010
SAMPLE

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 12:13
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.58 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 26.9%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	3.5	< 3.5	U
14488-53-0	Dibutyltin Ion	5.2	< 5.2	U
78763-54-9	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	51.6%
Tripentyl Tin Chloride	41.9%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-108-010
SAMPLE

Lab Sample ID: PD95K
LIMS ID: 09-14488
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 17:56
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.23 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 25.6%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**7.4**	**31**	
14488-53-0	Dibutyltin Ion	11	< 11	U
78763-54-9	Butyltin Ion	7.8	< 7.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	54.1%
Tripentyl Tin Chloride	65.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-110-010
SAMPLE

Lab Sample ID: PE25E
LIMS ID: 09-14719
Matrix: Sediment
Data Release Authorized: VTJ
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 12:27
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.44 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 50.9%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.6**	**48**	
14488-53-0	**Dibutyltin Ion**	**5.3**	**9.2**	
78763-54-9	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	60.2%
Tripentyl Tin Chloride	59.5%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-114-010
SAMPLE

Lab Sample ID: PE25F
LIMS ID: 09-14720
Matrix: Sediment
Data Release Authorized: VTD
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 12:43
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.26 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 42.0%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.7**	**96**	
14488-53-0	**Dibutyltin Ion**	**5.5**	**7.3**	
78763-54-9	Butyltin Ion	3.9	< 3.9	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	68.6%
Tripentyl Tin Chloride	71.2%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-115-010
SAMPLE

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 20:46
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.31 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 47.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.6**	**53**	
14488-53-0	Dibutyltin Ion	5.4	< 5.4	U
78763-54-9	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	19.7%
Tripentyl Tin Chloride	45.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-115-010
DILUTION

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 17:26
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.31 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 47.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**7.3**	**180**	
14488-53-0	**Dibutyltin Ion**	**11**	**17**	
78763-54-9	Butyltin Ion	7.7	< 7.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	54.5%
Tripentyl Tin Chloride	56.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-118-010
SAMPLE

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 22:03
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.48 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 39.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.5**	**14**	
14488-53-0	Dibutyltin Ion	5.3	< 5.3	U
78763-54-9	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	61.8%
Tripentyl Tin Chloride	64.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-118-010
DILUTION

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 18:42
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.48 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 39.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**7.0**	**17**	
14488-53-0	Dibutyltin Ion	10	< 10	U
78763-54-9	Butyltin Ion	7.4	< 7.4	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	64.7%
Tripentyl Tin Chloride	66.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-123-010
SAMPLE

Lab Sample ID: PE14M
LIMS ID: 09-14624
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 14:39
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.27 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 41.7%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.7**	**37**	
14488-53-0	Dibutyltin Ion	5.5	< 5.5	U
78763-54-9	Butyltin Ion	3.9	< 3.9	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	72.3%
Tripentyl Tin Chloride	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS
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Sample ID: EW09-SS-124-010
SAMPLE

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 14:23
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.84 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 37.9%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.3**	**330**	**E**
14488-53-0	**Dibutyltin Ion**	**5.0**	**9.4**	
78763-54-9	Butyltin Ion	3.5	< 3.5	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	82.0%
Tripentyl Tin Chloride	144%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-124-010
DILUTION

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 17:28
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.84 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 37.9%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**6.6**	**360**	
14488-53-0	Dibutyltin Ion	9.9	< 9.9	U
78763-54-9	Butyltin Ion	7.0	< 7.0	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	78.3%
Tripentyl Tin Chloride	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-126-010
SAMPLE

Lab Sample ID: PE25I
LIMS ID: 09-14723
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 16:03
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 6.09 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 30.8%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**6.4**	**970**	**E**
14488-53-0	**Dibutyltin Ion**	**9.5**	**9.8**	
78763-54-9	Butyltin Ion	6.7	< 6.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	61.9%
Tripentyl Tin Chloride	64.8%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-126-010
DILUTION

Lab Sample ID: PE25I
LIMS ID: 09-14723
Matrix: Sediment
Data Release Authorized: VB
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 17:04
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 6.09 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 10.0
Alumina Cleanup: Yes
Moisture: 30.8%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**32**	**1,600**	
14488-53-0	Dibutyltin Ion	48	< 48	U
78763-54-9	Butyltin Ion	34	< 34	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	D
Tripentyl Tin Chloride	D

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-133-010
SAMPLE

Lab Sample ID: PD95J
LIMS ID: 09-14487
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 17:41
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.35 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 40.6%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**7.2**	**610**	**E**
14488-53-0	**Dibutyltin Ion**	**11**	**25**	
78763-54-9	Butyltin Ion	7.6	< 7.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	55.8%
Tripentyl Tin Chloride	59.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-133-010
DILUTION

Lab Sample ID: PD95J
LIMS ID: 09-14487
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/10/09 16:40
Instrument/Analyst: NT1/VTS
Silica Gel Cleanup: No

Sample Amount: 5.35 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 5.00
Alumina Cleanup: Yes
Moisture: 40.6%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	18	610	
14488-53-0	Dibutyltin Ion	27	< 27	U
78763-54-9	Butyltin Ion	19	< 19	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	61.3%
Tripentyl Tin Chloride	65.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-201-010
SAMPLE

Lab Sample ID: PE14G
LIMS ID: 09-14618
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 14:08
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.43 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 34.3%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	3.6	32	
14488-53-0	Dibutyltin Ion	5.3	< 5.3	U
78763-54-9	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	88.7%
Tripentyl Tin Chloride	190%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-201-010
DILUTION

Lab Sample ID: PE14G
LIMS ID: 09-14618
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 17:13
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.43 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 34.3%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**7.1**	**30**	
14488-53-0	Dibutyltin Ion	11	< 11	U
78763-54-9	Butyltin Ion	7.5	< 7.5	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	74.9%
Tripentyl Tin Chloride	116%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-203-010
SAMPLE

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 13:30
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.79 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 31.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.3**	**5.5**	
14488-53-0	Dibutyltin Ion	5.0	< 5.0	U
78763-54-9	Butyltin Ion	3.5	< 3.5	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	93.1%
Tripentyl Tin Chloride	199%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-203-010
DILUTION

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 16:42
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.79 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 31.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	6.7	< 6.7	U
14488-53-0	Dibutyltin Ion	10	< 10	U
78763-54-9	Butyltin Ion	7.1	< 7.1	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	74.9%
Tripentyl Tin Chloride	116%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-205-010
SAMPLE

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 13:15
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.63 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 33.4%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.4**	**7.8**	
14488-53-0	Dibutyltin Ion	5.1	< 5.1	U
78763-54-9	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	107%
Tripentyl Tin Chloride	248%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-205-010
DILUTION

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 16:27
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.63 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 33.4%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**6.9**	**6.9**	
14488-53-0	Dibutyltin Ion	10	< 10	U
78763-54-9	Butyltin Ion	7.3	< 7.3	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	74.9%
Tripentyl Tin Chloride	106%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-211-010
SAMPLE

Lab Sample ID: PE25G
LIMS ID: 09-14721
Matrix: Sediment
Data Release Authorized: VT
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 12:58
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.68 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 32.5%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.4**	**21**	
14488-53-0	Dibutyltin Ion	5.1	< 5.1	U
78763-54-9	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	66.9%
Tripentyl Tin Chloride	65.9%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-212-010
SAMPLE

Lab Sample ID: PE14E
LIMS ID: 09-14616
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 13:46
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.15 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 27.8%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.8**	**19**	
14488-53-0	Dibutyltin Ion	5.6	< 5.6	U
78763-54-9	Butyltin Ion	4.0	< 4.0	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	85.4%
Tripentyl Tin Chloride	183%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-212-010
DILUTION

Lab Sample ID: PE14E
LIMS ID: 09-14616
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 16:57
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.15 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 27.8%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**7.5**	**18**	
14488-53-0	Dibutyltin Ion	11	< 11	U
78763-54-9	Butyltin Ion	7.9	< 7.9	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	71.5%
Tripentyl Tin Chloride	123%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-214-010
SAMPLE

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 14:54
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.39 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 33.0%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.6**	**13**	
14488-53-0	Dibutyltin Ion	5.4	< 5.4	U
78763-54-9	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	76.9%
Tripentyl Tin Chloride	69.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-215-010
SAMPLE

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 15:09
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.44 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 54.7%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.6**	**23**	
14488-53-0	**Dibutyltin Ion**	**5.3**	**7.4**	
78763-54-9	Butyltin Ion	3.8	< 3.8	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	65.5%
Tripentyl Tin Chloride	55.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-219-010
SAMPLE

Lab Sample ID: PE25H
LIMS ID: 09-14722
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/07/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 13:14
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.26 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 25.6%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.7**	**22**	
14488-53-0	Dibutyltin Ion	5.5	< 5.5	U
78763-54-9	Butyltin Ion	3.9	< 3.9	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	63.5%
Tripentyl Tin Chloride	65.4%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-304-010
SAMPLE

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 20:30
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.29 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 56.0%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	3.7	130	
14488-53-0	**Dibutyltin Ion**	5.5	18	
78763-54-9	Butyltin Ion	3.9	< 3.9	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	84.1%
Tripentyl Tin Chloride	84.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-304-010
DILUTION

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/04/09 17:10
Instrument/Analyst: NT8/VTS
Silica Gel Cleanup: No

Sample Amount: 5.29 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes
Moisture: 56.0%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	7.3	120	
14488-53-0	**Dibutyltin Ion**	11	13	
78763-54-9	Butyltin Ion	7.7	< 7.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	61.3%
Tripentyl Tin Chloride	59.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-002-010-RB
SAMPLE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Data Release Authorized: MW
Reported: 07/01/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 09:37
Instrument/Analyst: NT8/YZ

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	0.19	< 0.19	U
14488-53-0	Dibutyltin Ion	0.29	< 0.29	U
78763-54-9	Butyltin Ion	0.20	< 0.20	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	86.8%
Tripentyl Tin Chloride	57.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-210-RB
SAMPLE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 10:39
Instrument/Analyst: NT8/YZ

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	0.19	< 0.19	U
14488-53-0	Dibutyltin Ion	0.29	< 0.29	U
78763-54-9	Butyltin Ion	0.20	< 0.20	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	80.5%
Tripentyl Tin Chloride	159%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-210-RB
DILUTION

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 15:17
Instrument/Analyst: NT8/YZ

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	0.39	< 0.39	U
14488-53-0	Dibutyltin Ion	0.58	< 0.58	U
78763-54-9	Butyltin Ion	0.41	< 0.41	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	71.8%
Tripentyl Tin Chloride	83.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-222-RB
SAMPLE

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 10:24
Instrument/Analyst: NT8/YZ

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	0.19	< 0.19	U
14488-53-0	Dibutyltin Ion	0.29	< 0.29	U
78763-54-9	Butyltin Ion	0.20	< 0.20	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	73.2%
Tripentyl Tin Chloride	154%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-SS-222-RB
DILUTION

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 15:02
Instrument/Analyst: NT8/YZ

Sample Amount: 100 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 2.00
Alumina Cleanup: Yes

CAS Number	Analyte	RL	Result	Q
36643-28-4	Tributyltin Ion	0.39	< 0.39	U
14488-53-0	Dibutyltin Ion	0.58	< 0.58	U
78763-54-9	Butyltin Ion	0.41	< 0.41	U

Reported in µg/L (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	59.6%
Tripentyl Tin Chloride	66.6%

Composite Butyltins

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-ITSED-AWMIS-01
SAMPLE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Data Release Authorized: VTB
Reported: 01/02/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 12/30/09 13:57
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.46 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 27.5%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.5**	**8.8**	
14488-53-0	Dibutyltin Ion	5.3	< 5.3	U
78763-54-9	Butyltin Ion	3.7	< 3.7	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	80.3%
Tripentyl Tin Chloride	55.0%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-ITSED-AWMIS-02
SAMPLE

Lab Sample ID: QC540
LIMS ID: 09-31457
Matrix: Sediment
Data Release Authorized: VT
Reported: 01/02/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 12/30/09 14:10
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.79 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 30.7%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.3**	**7.9**	
14488-53-0	Dibutyltin Ion	5.0	< 5.0	U
78763-54-9	Butyltin Ion	3.5	< 3.5	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	81.8%
Tripentyl Tin Chloride	56.7%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-ITSED-AWMIS-03
SAMPLE

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Data Release Authorized: VTS
Reported: 01/02/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 12/30/09 14:49
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.63 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 27.4%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.4**	**8.9**	
14488-53-0	**Dibutyltin Ion**	**5.1**	**5.3**	
78763-54-9	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	79.6%
Tripentyl Tin Chloride	57.1%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Tributyl Tins by Krone 1988 SIM GC/MS

Sample ID: EW09-ITSED-PAMIS-01
SAMPLE

Lab Sample ID: QC54Q
LIMS ID: 09-31459
Matrix: Sediment
Data Release Authorized: VTS
Reported: 01/02/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 12/30/09 15:03
Instrument/Analyst: NT8/YZ
Silica Gel Cleanup: No

Sample Amount: 5.64 g-dry-wt
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Alumina Cleanup: Yes
Moisture: 28.2%

CAS Number	Analyte	RL	Result	Q
36643-28-4	**Tributyltin Ion**	**3.4**	**11**	
14488-53-0	Dibutyltin Ion	5.1	< 5.1	U
78763-54-9	Butyltin Ion	3.6	< 3.6	U

Reported in µg/kg (ppb)

TBT Surrogate Recovery

Tripropyl Tin Chloride	79.5%
Tripentyl Tin Chloride	55.3%

FORM I

Round 1 Selected SVOCs by SIM

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-001-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35U
LIMS ID: 09-6000
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/19/09 17:46
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.7%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**17 B**
85-68-7	**Butylbenzylphthalate**	**15**	**29**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	65.6%	d5-Phenol	70.7%
2-Fluorophenol	62.1%	d4-2-Chlorophenol	81.9%
d4-1,2-Dichlorobenzene	59.6%	d5-Nitrobenzene	75.2%
2,4,6-Tribromophenol	81.9%	d14-p-Terphenyl	90.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-003-010**
 SAMPLE

Lab Sample ID: OP35T
LIMS ID: 09-5999
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/18/09 22:08
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**18**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	66.0%	d5-Phenol	65.6%
2-Fluorophenol	56.0%	d4-2-Chlorophenol	71.2%
d4-1,2-Dichlorobenzene	58.0%	d5-Nitrobenzene	72.4%
2,4,6-Tribromophenol	76.5%	d14-p-Terphenyl	82.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-005-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35S
LIMS ID: 09-5998
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/18/09 21:37
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.2%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.2	< 6.2 U
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	61.2%	d5-Phenol	61.3%
2-Fluorophenol	54.4%	d4-2-Chlorophenol	68.3%
d4-1,2-Dichlorobenzene	57.6%	d5-Nitrobenzene	67.6%
2,4,6-Tribromophenol	72.0%	d14-p-Terphenyl	73.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-008-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35R
LIMS ID: 09-5997
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/18/09 21:06
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**27**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	66.8%	d5-Phenol	65.1%
2-Fluorophenol	57.6%	d4-2-Chlorophenol	72.8%
d4-1,2-Dichlorobenzene	59.2%	d5-Nitrobenzene	73.2%
2,4,6-Tribromophenol	74.4%	d14-p-Terphenyl	74.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-011-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35Q
LIMS ID: 09-5996
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/18/09 20:34
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	5.9	< 5.9 U
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**53 B**
85-68-7	**Butylbenzylphthalate**	**15**	**18**
95-48-7	**2-Methylphenol**	**5.9**	**21**
105-67-9	**2,4-Dimethylphenol**	**5.9**	**16**
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	56.4%	d5-Phenol	63.7%
2-Fluorophenol	54.9%	d4-2-Chlorophenol	72.5%
d4-1,2-Dichlorobenzene	55.6%	d5-Nitrobenzene	72.0%
2,4,6-Tribromophenol	69.6%	d14-p-Terphenyl	76.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-013-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/18/09 20:03
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 31.3%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	5.9	< 5.9 U
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**41 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	29	< 29 U
87-86-5	Pentachlorophenol	29	< 29 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	29	< 29 U
62-75-9	N-Nitrosodimethylamine	29	< 29 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.8%	d5-Phenol	70.4%
2-Fluorophenol	65.1%	d4-2-Chlorophenol	77.6%
d4-1,2-Dichlorobenzene	63.6%	d5-Nitrobenzene	74.8%
2,4,6-Tribromophenol	73.1%	d14-p-Terphenyl	78.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-014-010**
 SAMPLE

Lab Sample ID: OP65B
LIMS ID: 09-6149
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/09/09
Date Analyzed: 03/19/09 15:39
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 44.8%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**13**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**56 B**
85-68-7	**Butylbenzylphthalate**	**15**	**26**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	55.2%	d5-Phenol	66.4%
2-Fluorophenol	52.3%	d4-2-Chlorophenol	66.1%
d4-1,2-Dichlorobenzene	50.0%	d5-Nitrobenzene	61.6%
2,4,6-Tribromophenol	63.5%	d14-p-Terphenyl	70.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-019-010
SAMPLE

Lab Sample ID: OP65D
LIMS ID: 09-6151
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/09/09
Date Analyzed: 03/19/09 16:42
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 53.4%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**20**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**29 B**
85-68-7	**Butylbenzylphthalate**	**15**	**22**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	65.6%	d5-Phenol	53.1%
2-Fluorophenol	34.9%	d4-2-Chlorophenol	65.9%
d4-1,2-Dichlorobenzene	55.6%	d5-Nitrobenzene	68.0%
2,4,6-Tribromophenol	73.1%	d14-p-Terphenyl	82.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-020-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35O
LIMS ID: 09-5994
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 22:18
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 53.8%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**15**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**27**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.8%	d5-Phenol	63.5%
2-Fluorophenol	60.3%	d4-2-Chlorophenol	77.3%
d4-1,2-Dichlorobenzene	58.8%	d5-Nitrobenzene	66.4%
2,4,6-Tribromophenol	90.4%	d14-p-Terphenyl	83.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-021-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP65E
LIMS ID: 09-6152
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/09/09
Date Analyzed: 03/19/09 17:14
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**9.6**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.0%	d5-Phenol	71.7%
2-Fluorophenol	67.2%	d4-2-Chlorophenol	83.5%
d4-1,2-Dichlorobenzene	64.8%	d5-Nitrobenzene	75.2%
2,4,6-Tribromophenol	87.2%	d14-p-Terphenyl	94.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-023-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35N
LIMS ID: 09-5993
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 21:45
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 57.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**18**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**27**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.8	< 6.8 Y
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	73.2%	d5-Phenol	63.5%
2-Fluorophenol	60.5%	d4-2-Chlorophenol	76.3%
d4-1,2-Dichlorobenzene	58.4%	d5-Nitrobenzene	70.0%
2,4,6-Tribromophenol	90.9%	d14-p-Terphenyl	88.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-024-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35M
LIMS ID: 09-5992
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 21:12
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**19**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**21**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	65.2%	d5-Phenol	53.6%
2-Fluorophenol	52.0%	d4-2-Chlorophenol	65.6%
d4-1,2-Dichlorobenzene	53.2%	d5-Nitrobenzene	61.2%
2,4,6-Tribromophenol	80.0%	d14-p-Terphenyl	78.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-025-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35L
LIMS ID: 09-5991
Matrix: Sediment
Data Release Authorized:
Reported: 09/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 20:39
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 45.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**16**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	3.0	< 3.0 UJ
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.2%	d5-Phenol	56.3%
2-Fluorophenol	54.7%	d4-2-Chlorophenol	67.5%
d4-1,2-Dichlorobenzene	54.0%	d5-Nitrobenzene	62.4%
2,4,6-Tribromophenol	81.9%	d14-p-Terphenyl	78.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-027-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35A
LIMS ID: 09-5980
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/02/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 13:28
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 53.3%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.0%	d5-Phenol	59.7%
2-Fluorophenol	61.9%	d4-2-Chlorophenol	69.1%
d4-1,2-Dichlorobenzene	60.4%	d5-Nitrobenzene	68.0%
2,4,6-Tribromophenol	79.2%	d14-p-Terphenyl	84.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-029-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35K
LIMS ID: 09-5990
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 20:07
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 50.4%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**17**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**21 B**
85-68-7	**Butylbenzylphthalate**	**15**	**29**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.0%	d5-Phenol	61.6%
2-Fluorophenol	60.3%	d4-2-Chlorophenol	75.7%
d4-1,2-Dichlorobenzene	58.4%	d5-Nitrobenzene	70.0%
2,4,6-Tribromophenol	88.3%	d14-p-Terphenyl	84.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-030-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 19:33
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 54.5%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**21**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**20**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	69.6%	d5-Phenol	60.0%
2-Fluorophenol	57.6%	d4-2-Chlorophenol	71.7%
d4-1,2-Dichlorobenzene	56.8%	d5-Nitrobenzene	64.8%
2,4,6-Tribromophenol	80.0%	d14-p-Terphenyl	78.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-031-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35I
LIMS ID: 09-5988
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 19:00
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 54.8%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**31**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**43 B**
85-68-7	**Butylbenzylphthalate**	**15**	**34**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.2%	d5-Phenol	57.1%
2-Fluorophenol	54.9%	d4-2-Chlorophenol	68.5%
d4-1,2-Dichlorobenzene	56.4%	d5-Nitrobenzene	61.6%
2,4,6-Tribromophenol	79.2%	d14-p-Terphenyl	78.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-032-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35H
LIMS ID: 09-5987
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 18:27
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 50.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**48**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**34 B**
85-68-7	**Butylbenzylphthalate**	**15**	**24**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	75.6%	d5-Phenol	64.8%
2-Fluorophenol	59.5%	d4-2-Chlorophenol	73.6%
d4-1,2-Dichlorobenzene	57.2%	d5-Nitrobenzene	66.8%
2,4,6-Tribromophenol	85.3%	d14-p-Terphenyl	90.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-033-010**
 SAMPLE

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 17:54
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	60.0%	d5-Phenol	48.8%
2-Fluorophenol	48.5%	d4-2-Chlorophenol	56.5%
d4-1,2-Dichlorobenzene	48.0%	d5-Nitrobenzene	57.6%
2,4,6-Tribromophenol	58.7%	d14-p-Terphenyl	76.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-034-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35E
LIMS ID: 09-5984
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 16:47
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 51.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**5.9**	**20**
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	62.0%	d5-Phenol	52.0%
2-Fluorophenol	52.0%	d4-2-Chlorophenol	59.5%
d4-1,2-Dichlorobenzene	52.0%	d5-Nitrobenzene	59.2%
2,4,6-Tribromophenol	68.8%	d14-p-Terphenyl	82.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-035-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35F
LIMS ID: 09-5985
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 17:21
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 47.8%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**6.7**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	54.4%	d5-Phenol	48.0%
2-Fluorophenol	48.0%	d4-2-Chlorophenol	55.5%
d4-1,2-Dichlorobenzene	47.6%	d5-Nitrobenzene	55.2%
2,4,6-Tribromophenol	56.8%	d14-p-Terphenyl	72.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-036-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35D
LIMS ID: 09-5983
Matrix: Sediment
Data Release Authorized:
Reported: 09/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 15:08
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 48.4%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**12**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	3.1	< 3.1 UJ
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	63.6%	d5-Phenol	54.1%
2-Fluorophenol	57.1%	d4-2-Chlorophenol	63.2%
d4-1,2-Dichlorobenzene	56.0%	d5-Nitrobenzene	64.8%
2,4,6-Tribromophenol	75.2%	d14-p-Terphenyl	78.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-038-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/07/09
Date Analyzed: 03/19/09 19:21
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**410**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**31**
85-68-7	**Butylbenzylphthalate**	**15**	**120**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	76.4%	d5-Phenol	77.1%
2-Fluorophenol	64.8%	d4-2-Chlorophenol	84.8%
d4-1,2-Dichlorobenzene	64.0%	d5-Nitrobenzene	78.8%
2,4,6-Tribromophenol	89.6%	d14-p-Terphenyl	96.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-100-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP33B
LIMS ID: 09-5979
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/07/09
Date Analyzed: 03/19/09 19:52
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.8%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**5.9**	**15**
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**52**
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.0%	d5-Phenol	68.0%
2-Fluorophenol	58.7%	d4-2-Chlorophenol	75.2%
d4-1,2-Dichlorobenzene	59.2%	d5-Nitrobenzene	69.2%
2,4,6-Tribromophenol	82.4%	d14-p-Terphenyl	85.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-101-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP33C
LIMS ID: 09-6002
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/07/09
Date Analyzed: 03/19/09 20:24
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 43.8%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**2,300 E**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**26**
85-68-7	**Butylbenzylphthalate**	**15**	**71**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	70.8%	d5-Phenol	71.7%
2-Fluorophenol	59.5%	d4-2-Chlorophenol	78.7%
d4-1,2-Dichlorobenzene	60.8%	d5-Nitrobenzene	69.2%
2,4,6-Tribromophenol	84.0%	d14-p-Terphenyl	92.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-102-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP35B
LIMS ID: 09-5981
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 14:01
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 42.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**11**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.2%	d5-Phenol	60.3%
2-Fluorophenol	61.1%	d4-2-Chlorophenol	68.3%
d4-1,2-Dichlorobenzene	60.8%	d5-Nitrobenzene	66.8%
2,4,6-Tribromophenol	88.0%	d14-p-Terphenyl	82.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-104-010**
 SAMPLE

Lab Sample ID: OP22F
LIMS ID: 09-5942
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/18/09 19:31
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 48.8%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	70.0%	d5-Phenol	65.6%
2-Fluorophenol	53.6%	d4-2-Chlorophenol	70.1%
d4-1,2-Dichlorobenzene	56.8%	d5-Nitrobenzene	64.8%
2,4,6-Tribromophenol	58.4%	d14-p-Terphenyl	77.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-109-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP22E
LIMS ID: 09-5941
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/18/09 19:00
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 54.8%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	44.0%	d5-Phenol	44.0%
2-Fluorophenol	38.7%	d4-2-Chlorophenol	47.7%
d4-1,2-Dichlorobenzene	39.2%	d5-Nitrobenzene	44.4%
2,4,6-Tribromophenol	38.4%	d14-p-Terphenyl	57.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-110-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP33D
LIMS ID: 09-6003
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/07/09
Date Analyzed: 03/19/09 20:56
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 53.0%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**7.7**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**20**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.2%	d5-Phenol	76.3%
2-Fluorophenol	54.7%	d4-2-Chlorophenol	75.2%
d4-1,2-Dichlorobenzene	58.8%	d5-Nitrobenzene	68.8%
2,4,6-Tribromophenol	84.0%	d14-p-Terphenyl	88.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-111-010
SAMPLE

Lab Sample ID: OP22D
LIMS ID: 09-5940
Matrix: Sediment
Data Release Authorized:
Reported: 09/29/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/18/09 18:28
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 17.0%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	1.8	< 1.8 UJ
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	59.6%	d5-Phenol	58.7%
2-Fluorophenol	50.7%	d4-2-Chlorophenol	64.5%
d4-1,2-Dichlorobenzene	55.2%	d5-Nitrobenzene	59.2%
2,4,6-Tribromophenol	63.5%	d14-p-Terphenyl	80.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-113-010**
 SAMPLE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/18/09 16:53
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**18**
120-82-1	**1,2,4-Trichlorobenzene**	**6.1**	**8.5**
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**24**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	75.6%	d5-Phenol	60.0%
2-Fluorophenol	51.5%	d4-2-Chlorophenol	63.7%
d4-1,2-Dichlorobenzene	51.2%	d5-Nitrobenzene	71.2%
2,4,6-Tribromophenol	90.1%	d14-p-Terphenyl	83.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-114-010
SAMPLE

Lab Sample ID: OP33E
LIMS ID: 09-6004
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/07/09
Date Analyzed: 03/19/09 21:27
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 44.7%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**16**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	63.2%	d5-Phenol	72.0%
2-Fluorophenol	51.5%	d4-2-Chlorophenol	72.0%
d4-1,2-Dichlorobenzene	55.2%	d5-Nitrobenzene	68.4%
2,4,6-Tribromophenol	81.1%	d14-p-Terphenyl	86.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-116-010**
 SAMPLE

Lab Sample ID: OP22A
LIMS ID: 09-5937
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/18/09 15:50
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 44.8%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.0%	d5-Phenol	70.1%
2-Fluorophenol	61.3%	d4-2-Chlorophenol	74.4%
d4-1,2-Dichlorobenzene	60.0%	d5-Nitrobenzene	68.4%
2,4,6-Tribromophenol	93.3%	d14-p-Terphenyl	86.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-119-010
SAMPLE

Lab Sample ID: 0097N
LIMS ID: 09-5799
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 22:56
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**31**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	16	< 16 U
84-66-2	**Diethylphthalate**	**16**	**23 B**
85-68-7	**Butylbenzylphthalate**	**16**	**22**
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	70.8%	d5-Phenol	68.0%
2-Fluorophenol	64.0%	d4-2-Chlorophenol	68.8%
d4-1,2-Dichlorobenzene	56.0%	d5-Nitrobenzene	71.2%
2,4,6-Tribromophenol	88.8%	d14-p-Terphenyl	78.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-120-010
SAMPLE

Lab Sample ID: 00970
LIMS ID: 09-5800
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 23:30
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 39.4%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**9.0**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**56 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	69.6%	d5-Phenol	62.4%
2-Fluorophenol	60.3%	d4-2-Chlorophenol	78.9%
d4-1,2-Dichlorobenzene	54.8%	d5-Nitrobenzene	64.4%
2,4,6-Tribromophenol	72.0%	d14-p-Terphenyl	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-122-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 22:23
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**14**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**22 B**
85-68-7	**Butylbenzylphthalate**	**15**	**17**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	69.2%	d5-Phenol	64.3%
2-Fluorophenol	60.8%	d4-2-Chlorophenol	66.4%
d4-1,2-Dichlorobenzene	51.2%	d5-Nitrobenzene	64.4%
2,4,6-Tribromophenol	77.6%	d14-p-Terphenyl	79.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-126-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP65C
LIMS ID: 09-6150
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/09/09
Date Analyzed: 03/19/09 16:11
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 32.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**28**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**22**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.4%	d5-Phenol	72.0%
2-Fluorophenol	62.7%	d4-2-Chlorophenol	82.4%
d4-1,2-Dichlorobenzene	60.0%	d5-Nitrobenzene	73.6%
2,4,6-Tribromophenol	82.4%	d14-p-Terphenyl	90.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-127-010
SAMPLE

Lab Sample ID: 0097L
LIMS ID: 09-5797
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 21:50
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**27**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**17 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.0%	d5-Phenol	63.5%
2-Fluorophenol	61.6%	d4-2-Chlorophenol	75.5%
d4-1,2-Dichlorobenzene	55.6%	d5-Nitrobenzene	67.6%
2,4,6-Tribromophenol	92.0%	d14-p-Terphenyl	72.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-129-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 21:17
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**25**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**30**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	70.0%	d5-Phenol	65.3%
2-Fluorophenol	63.5%	d4-2-Chlorophenol	78.9%
d4-1,2-Dichlorobenzene	60.0%	d5-Nitrobenzene	68.4%
2,4,6-Tribromophenol	79.5%	d14-p-Terphenyl	69.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-130-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097J
LIMS ID: 09-5795
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 20:44
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**53**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**15 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.4%	d5-Phenol	61.6%
2-Fluorophenol	57.1%	d4-2-Chlorophenol	62.1%
d4-1,2-Dichlorobenzene	50.0%	d5-Nitrobenzene	65.6%
2,4,6-Tribromophenol	80.5%	d14-p-Terphenyl	77.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-132-010
SAMPLE

Lab Sample ID: 0097P
LIMS ID: 09-5801
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/17/09 00:03
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**5.9**	**12**
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**25**
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.2%	d5-Phenol	59.5%
2-Fluorophenol	57.3%	d4-2-Chlorophenol	76.8%
d4-1,2-Dichlorobenzene	50.4%	d5-Nitrobenzene	61.2%
2,4,6-Tribromophenol	88.3%	d14-p-Terphenyl	75.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-200-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 19:37
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 42.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**10**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**26 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	73.2%	d5-Phenol	70.9%
2-Fluorophenol	67.2%	d4-2-Chlorophenol	85.3%
d4-1,2-Dichlorobenzene	57.6%	d5-Nitrobenzene	69.2%
2,4,6-Tribromophenol	79.2%	d14-p-Terphenyl	81.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-202-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097G
LIMS ID: 09-5792
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 19:04
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**65**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**25 B**
85-68-7	**Butylbenzylphthalate**	**15**	**17**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	69.2%	d5-Phenol	70.9%
2-Fluorophenol	67.7%	d4-2-Chlorophenol	67.2%
d4-1,2-Dichlorobenzene	63.6%	d5-Nitrobenzene	72.0%
2,4,6-Tribromophenol	78.9%	d14-p-Terphenyl	79.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-204-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 18:30
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**22**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**21 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	63.6%	d5-Phenol	63.2%
2-Fluorophenol	59.5%	d4-2-Chlorophenol	61.3%
d4-1,2-Dichlorobenzene	53.6%	d5-Nitrobenzene	64.8%
2,4,6-Tribromophenol	81.1%	d14-p-Terphenyl	72.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-207-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097E
LIMS ID: 09-5790
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 17:57
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 35.4%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**10**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**20 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	69.6%	d5-Phenol	66.1%
2-Fluorophenol	61.3%	d4-2-Chlorophenol	64.0%
d4-1,2-Dichlorobenzene	56.4%	d5-Nitrobenzene	66.8%
2,4,6-Tribromophenol	82.7%	d14-p-Terphenyl	84.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-211-010
SAMPLE

Lab Sample ID: OP33G
LIMS ID: 09-6009
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/07/09
Date Analyzed: 03/20/09 16:38
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.4%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**16**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	69.2%	d5-Phenol	86.4%
2-Fluorophenol	82.4%	d4-2-Chlorophenol	78.7%
d4-1,2-Dichlorobenzene	62.0%	d5-Nitrobenzene	70.0%
2,4,6-Tribromophenol	83.7%	d14-p-Terphenyl	90.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-216-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097D
LIMS ID: 09-5789
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 14:39
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 26.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**6.6**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	73.6%	d5-Phenol	69.3%
2-Fluorophenol	63.2%	d4-2-Chlorophenol	76.8%
d4-1,2-Dichlorobenzene	56.0%	d5-Nitrobenzene	67.6%
2,4,6-Tribromophenol	91.2%	d14-p-Terphenyl	81.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-217-010**
 SAMPLE

Lab Sample ID: 0097C
LIMS ID: 09-5788
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 17:24
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 25.5%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.2%	d5-Phenol	63.5%
2-Fluorophenol	61.3%	d4-2-Chlorophenol	71.7%
d4-1,2-Dichlorobenzene	56.8%	d5-Nitrobenzene	64.4%
2,4,6-Tribromophenol	80.3%	d14-p-Terphenyl	76.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-218-010**
 SAMPLE

Lab Sample ID: 0097B
LIMS ID: 09-5787
Matrix: Sediment
Data Release Authorized:
Reported: 09/29/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 16:50
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 26.8%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	1.8	< 1.8 UJ
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	70.0%	d5-Phenol	64.5%
2-Fluorophenol	61.9%	d4-2-Chlorophenol	73.9%
d4-1,2-Dichlorobenzene	58.4%	d5-Nitrobenzene	67.2%
2,4,6-Tribromophenol	73.3%	d14-p-Terphenyl	78.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-219-010
SAMPLE

Lab Sample ID: OP33H
LIMS ID: 09-6010
Matrix: Sediment
Data Release Authorized:
Reported: 09/29/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/07/09
Date Analyzed: 03/20/09 18:13
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 25.8%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	1.8	< 1.8 UJ
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**18**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	60.8%	d5-Phenol	69.3%
2-Fluorophenol	71.2%	d4-2-Chlorophenol	68.3%
d4-1,2-Dichlorobenzene	54.0%	d5-Nitrobenzene	60.8%
2,4,6-Tribromophenol	77.9%	d14-p-Terphenyl	81.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-220-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: 0097A
LIMS ID: 09-5786
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 16:18
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 25.7%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.6%	d5-Phenol	64.8%
2-Fluorophenol	61.3%	d4-2-Chlorophenol	63.5%
d4-1,2-Dichlorobenzene	56.0%	d5-Nitrobenzene	65.6%
2,4,6-Tribromophenol	81.1%	d14-p-Terphenyl	79.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-300-010**
 SAMPLE

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/16/09 20:10
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 43.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**19**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**29 B**
85-68-7	**Butylbenzylphthalate**	**15**	**24**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.8%	d5-Phenol	68.0%
2-Fluorophenol	60.8%	d4-2-Chlorophenol	63.2%
d4-1,2-Dichlorobenzene	54.0%	d5-Nitrobenzene	67.2%
2,4,6-Tribromophenol	78.7%	d14-p-Terphenyl	84.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-301-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP22B
LIMS ID: 09-5938
Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/18/09 16:21
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 45.7%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	50.0%	d5-Phenol	47.2%
2-Fluorophenol	42.1%	d4-2-Chlorophenol	51.7%
d4-1,2-Dichlorobenzene	41.2%	d5-Nitrobenzene	47.2%
2,4,6-Tribromophenol	57.6%	d14-p-Terphenyl	57.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-302-010**
 SAMPLE

Lab Sample ID: OP35C
LIMS ID: 09-5982
Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/09/09
Date Analyzed: 03/17/09 14:34
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 42.4%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	64.8%	d5-Phenol	57.3%
2-Fluorophenol	58.9%	d4-2-Chlorophenol	65.9%
d4-1,2-Dichlorobenzene	59.6%	d5-Nitrobenzene	65.6%
2,4,6-Tribromophenol	85.9%	d14-p-Terphenyl	86.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-014-RB
SAMPLE

Lab Sample ID: OP65A
LIMS ID: 09-6148
Matrix: Water
Data Release Authorized:
Reported: 03/20/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/09/09
Date Analyzed: 03/14/09 01:16
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	0.10	< 0.10 U
120-82-1	1,2,4-Trichlorobenzene	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.10	< 0.10 U
87-68-3	Hexachlorobutadiene	0.10	< 0.10 U
131-11-3	Dimethylphthalate	0.10	< 0.10 U
84-66-2	**Diethylphthalate**	**0.10**	**0.40**
85-68-7	Butylbenzylphthalate	0.10	< 0.10 U
95-48-7	2-Methylphenol	0.20	< 0.20 U
105-67-9	2,4-Dimethylphenol	0.20	< 0.20 U
86-30-6	N-Nitrosodiphenylamine	0.10	< 0.10 U
100-51-6	Benzyl Alcohol	0.50	< 0.50 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
95-50-1	1,2-Dichlorobenzene	0.10	< 0.10 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.50	< 0.50 U
62-75-9	N-Nitrosodimethylamine	0.50	< 0.50 U

Reported in μg/L (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	83.6%	d5-Phenol	77.1%
2-Fluorophenol	78.7%	d4-2-Chlorophenol	94.1%
d4-1,2-Dichlorobenzene	79.2%	d5-Nitrobenzene	85.2%
2,4,6-Tribromophenol	89.6%	d14-p-Terphenyl	95.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-038-RB**
Page 1 of 1 **SAMPLE**

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/09/09 16:34
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	0.10	< 0.10 U
120-82-1	1,2,4-Trichlorobenzene	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.10	< 0.10 U
87-68-3	Hexachlorobutadiene	0.10	< 0.10 U
131-11-3	Dimethylphthalate	0.10	< 0.10 U
84-66-2	Diethylphthalate	0.10	< 0.10 U
85-68-7	Butylbenzylphthalate	0.10	< 0.10 U
95-48-7	2-Methylphenol	0.20	< 0.20 U
105-67-9	2,4-Dimethylphenol	0.20	< 0.20 U
86-30-6	N-Nitrosodiphenylamine	0.10	< 0.10 U
100-51-6	Benzyl Alcohol	0.50	< 0.50 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
95-50-1	1,2-Dichlorobenzene	0.10	< 0.10 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.50	< 0.50 U
62-75-9	N-Nitrosodimethylamine	0.50	< 0.50 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.0%	d5-Phenol	70.1%
2-Fluorophenol	68.5%	d4-2-Chlorophenol	75.2%
d4-1,2-Dichlorobenzene	72.4%	d5-Nitrobenzene	92.0%
2,4,6-Tribromophenol	77.3%	d14-p-Terphenyl	90.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-102-RB
SAMPLE

Lab Sample ID: OP35V
LIMS ID: 09-6001
Matrix: Water
Data Release Authorized:
Reported: 04/02/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/12/09
Date Analyzed: 03/20/09 19:48
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	0.10	< 0.10 U
120-82-1	1,2,4-Trichlorobenzene	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.10	< 0.10 U
87-68-3	Hexachlorobutadiene	0.10	< 0.10 U
131-11-3	Dimethylphthalate	0.10	< 0.10 U
84-66-2	**Diethylphthalate**	**0.10**	**0.14**
85-68-7	Butylbenzylphthalate	0.10	< 0.10 U
95-48-7	2-Methylphenol	0.20	< 0.20 U
105-67-9	2,4-Dimethylphenol	0.20	< 0.20 U
86-30-6	N-Nitrosodiphenylamine	0.10	< 0.10 U
100-51-6	Benzyl Alcohol	0.50	< 0.50 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
95-50-1	1,2-Dichlorobenzene	0.10	< 0.10 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.50	< 0.50 U
62-75-9	N-Nitrosodimethylamine	0.50	< 0.50 U

Reported in μg/L (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	81.6%	d5-Phenol	94.7%
2-Fluorophenol	85.3%	d4-2-Chlorophenol	98.9%
d4-1,2-Dichlorobenzene	80.8%	d5-Nitrobenzene	92.4%
2,4,6-Tribromophenol	101%	d14-p-Terphenyl	102%

Round 2 Selected SVOCs by SIM

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-002-010
SAMPLE

Lab Sample ID: PE40B
LIMS ID: 09-14878
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 15:16
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	91.2%	d5-Phenol	108%
2-Fluorophenol	77.3%	d4-2-Chlorophenol	94.1%
d4-1,2-Dichlorobenzene	76.4%	d5-Nitrobenzene	79.2%
2,4,6-Tribromophenol	114%	d14-p-Terphenyl	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-004-010**
 SAMPLE

Lab Sample ID: PE40C
LIMS ID: 09-14879
Matrix: Sediment
Data Release Authorized:
Reported: 09/23/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 15:46
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	5.9	< 5.9 U
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	3.0	< 3.0 UJ
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	89.6%	d5-Phenol	107%
2-Fluorophenol	76.8%	d4-2-Chlorophenol	94.4%
d4-1,2-Dichlorobenzene	74.8%	d5-Nitrobenzene	78.8%
2,4,6-Tribromophenol	105%	d14-p-Terphenyl	112%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PE40D
LIMS ID: 09-14880
Matrix: Sediment
Data Release Authorized:
Reported: 09/30/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 16:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 22.6%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	5.9	< 5.9 U
120-82-1	1,2,4-Trichlorobenzene	3.0	< 3.0 UJ
118-74-1	Hexachlorobenzene	1.7	< 1.7 UJ
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	90.8%	d5-Phenol	107%
2-Fluorophenol	78.7%	d4-2-Chlorophenol	94.9%
d4-1,2-Dichlorobenzene	74.4%	d5-Nitrobenzene	77.6%
2,4,6-Tribromophenol	110%	d14-p-Terphenyl	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-007-010
SAMPLE

Lab Sample ID: PE40E
LIMS ID: 09-14881
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 16:45
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**19**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	91.2%	d5-Phenol	115%
2-Fluorophenol	78.4%	d4-2-Chlorophenol	98.9%
d4-1,2-Dichlorobenzene	74.8%	d5-Nitrobenzene	81.6%
2,4,6-Tribromophenol	105%	d14-p-Terphenyl	106%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-009-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07C
LIMS ID: 09-14571
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 19:12
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	**Dimethylphthalate**	**15**	**28**
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**51**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	85.6%	d5-Phenol	73.6%
2-Fluorophenol	65.3%	d4-2-Chlorophenol	90.1%
d4-1,2-Dichlorobenzene	62.0%	d5-Nitrobenzene	71.6%
2,4,6-Tribromophenol	97.1%	d14-p-Terphenyl	99.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PE40F
LIMS ID: 09-14882
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 17:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 29.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**10**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**38 B**
85-68-7	**Butylbenzylphthalate**	**15**	**41**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	95.2%	d5-Phenol	114%
2-Fluorophenol	79.5%	d4-2-Chlorophenol	104%
d4-1,2-Dichlorobenzene	76.0%	d5-Nitrobenzene	81.2%
2,4,6-Tribromophenol	110%	d14-p-Terphenyl	114%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-012-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07D
LIMS ID: 09-14572
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 19:43
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.4%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	5.8	< 5.8 U
120-82-1	1,2,4-Trichlorobenzene	5.8	< 5.8 U
118-74-1	Hexachlorobenzene	5.8	< 5.8 U
87-68-3	Hexachlorobutadiene	5.8	< 5.8 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.8	< 5.8 U
105-67-9	2,4-Dimethylphenol	5.8	< 5.8 U
86-30-6	N-Nitrosodiphenylamine	8.2	< 8.2 Y
100-51-6	Benzyl Alcohol	29	< 29 U
87-86-5	Pentachlorophenol	29	< 29 U
95-50-1	1,2-Dichlorobenzene	5.8	< 5.8 U
621-64-7	N-Nitroso-Di-N-Propylamine	29	< 29 U
62-75-9	N-Nitrosodimethylamine	29	< 29 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	81.6%	d5-Phenol	67.5%
2-Fluorophenol	65.9%	d4-2-Chlorophenol	87.2%
d4-1,2-Dichlorobenzene	66.4%	d5-Nitrobenzene	70.4%
2,4,6-Tribromophenol	103%	d14-p-Terphenyl	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-015-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 20:15
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 37.5%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**6.7**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**47**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.8%	d5-Phenol	75.7%
2-Fluorophenol	69.1%	d4-2-Chlorophenol	96.0%
d4-1,2-Dichlorobenzene	64.8%	d5-Nitrobenzene	74.8%
2,4,6-Tribromophenol	94.4%	d14-p-Terphenyl	104%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-016-010
SAMPLE

Lab Sample ID: PD97K
LIMS ID: 09-14507
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 20:01
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 28.6%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**100 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	86.4%	d5-Phenol	77.9%
2-Fluorophenol	70.9%	d4-2-Chlorophenol	85.9%
d4-1,2-Dichlorobenzene	68.4%	d5-Nitrobenzene	73.2%
2,4,6-Tribromophenol	97.9%	d14-p-Terphenyl	159%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-016-010
DILUTION

Lab Sample ID: PD97K
LIMS ID: 09-14507
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/15/09 15:16
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 28.6%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	45	< 45 U
84-66-2	**Diethylphthalate**	**45**	**110 B**
85-68-7	Butylbenzylphthalate	45	< 45 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	89	< 89 U
87-86-5	Pentachlorophenol	89	< 89 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	89	< 89 U
62-75-9	N-Nitrosodimethylamine	89	< 89 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	86.4%	d5-Phenol	93.6%
2-Fluorophenol	72.8%	d4-2-Chlorophenol	88.8%
d4-1,2-Dichlorobenzene	66.0%	d5-Nitrobenzene	70.8%
2,4,6-Tribromophenol	92.0%	d14-p-Terphenyl	108%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-017-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PD95A
LIMS ID: 09-14478
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 17:45
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 50.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**14**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**16 B**
85-68-7	**Butylbenzylphthalate**	**15**	**15**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	90.8%	d5-Phenol	118%
2-Fluorophenol	76.3%	d4-2-Chlorophenol	96.8%
d4-1,2-Dichlorobenzene	73.6%	d5-Nitrobenzene	79.2%
2,4,6-Tribromophenol	109%	d14-p-Terphenyl	107%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-018-010
SAMPLE

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 19:30
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	5.9	< 5.9 U
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**46 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	**2-Methylphenol**	**5.9**	**13**
105-67-9	**2,4-Dimethylphenol**	**5.9**	**15**
86-30-6	N-Nitrosodiphenylamine	47	< 47 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	90.8%	d5-Phenol	85.1%
2-Fluorophenol	72.5%	d4-2-Chlorophenol	92.3%
d4-1,2-Dichlorobenzene	68.8%	d5-Nitrobenzene	72.8%
2,4,6-Tribromophenol	85.3%	d14-p-Terphenyl	167%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-018-010
DILUTION

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/15/09 14:45
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	44	< 44 U
84-66-2	Diethylphthalate	44	< 44 U
85-68-7	Butylbenzylphthalate	44	< 44 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	34	< 34 Y
100-51-6	Benzyl Alcohol	89	< 89 U
87-86-5	Pentachlorophenol	89	< 89 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	89	< 89 U
62-75-9	N-Nitrosodimethylamine	89	< 89 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	84.0%	d5-Phenol	88.0%
2-Fluorophenol	68.0%	d4-2-Chlorophenol	84.8%
d4-1,2-Dichlorobenzene	58.8%	d5-Nitrobenzene	69.6%
2,4,6-Tribromophenol	84.8%	d14-p-Terphenyl	110%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-022-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PD97L
LIMS ID: 09-14508
Matrix: Sediment
Data Release Authorized:
Reported: 09/23/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 20:32
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	3.0	< 3.0 UJ
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**45 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	79.6%	d5-Phenol	74.4%
2-Fluorophenol	70.1%	d4-2-Chlorophenol	82.9%
d4-1,2-Dichlorobenzene	68.0%	d5-Nitrobenzene	70.8%
2,4,6-Tribromophenol	122%	d14-p-Terphenyl	136%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-022-010
DILUTION

Lab Sample ID: PD97L
LIMS ID: 09-14508
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/15/09 15:47
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	46	< 46 U
84-66-2	Diethylphthalate	46	< 46 U
85-68-7	Butylbenzylphthalate	46	< 46 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	92	< 92 U
87-86-5	Pentachlorophenol	92	< 92 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	92	< 92 U
62-75-9	N-Nitrosodimethylamine	92	< 92 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	78.0%	d5-Phenol	84.8%
2-Fluorophenol	70.4%	d4-2-Chlorophenol	81.6%
d4-1,2-Dichlorobenzene	64.8%	d5-Nitrobenzene	81.6%
2,4,6-Tribromophenol	102%	d14-p-Terphenyl	107%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-026-010
SAMPLE

Lab Sample ID: PD95B
LIMS ID: 09-14479
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 18:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 39.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**16**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**16 B**
85-68-7	**Butylbenzylphthalate**	**15**	**16**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	92.4%	d5-Phenol	116%
2-Fluorophenol	78.7%	d4-2-Chlorophenol	94.1%
d4-1,2-Dichlorobenzene	74.8%	d5-Nitrobenzene	82.0%
2,4,6-Tribromophenol	121%	d14-p-Terphenyl	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-028-010
SAMPLE

Lab Sample ID: PD97M
LIMS ID: 09-14509
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 21:03
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**36**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**59 B**
85-68-7	**Butylbenzylphthalate**	**15**	**46**
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	80.4%	d5-Phenol	78.4%
2-Fluorophenol	70.1%	d4-2-Chlorophenol	85.3%
d4-1,2-Dichlorobenzene	64.8%	d5-Nitrobenzene	61.6%
2,4,6-Tribromophenol	113%	d14-p-Terphenyl	124%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-028-010
DILUTION

Lab Sample ID: PD97M
LIMS ID: 09-14509
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/15/09 16:18
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**18**	**33**
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	46	< 46 U
84-66-2	**Diethylphthalate**	**46**	**67 B**
85-68-7	Butylbenzylphthalate	46	< 46 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	93	< 93 U
87-86-5	Pentachlorophenol	93	< 93 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	93	< 93 U
62-75-9	N-Nitrosodimethylamine	93	< 93 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	79.2%	d5-Phenol	87.2%
2-Fluorophenol	70.4%	d4-2-Chlorophenol	84.8%
d4-1,2-Dichlorobenzene	61.2%	d5-Nitrobenzene	67.2%
2,4,6-Tribromophenol	102%	d14-p-Terphenyl	98.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-037-010**
 SAMPLE

Lab Sample ID: PD95D
LIMS ID: 09-14481
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 18:45
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 47.5%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**240**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	**Dimethylphthalate**	**15**	**16**
84-66-2	**Diethylphthalate**	**15**	**27 B**
85-68-7	**Butylbenzylphthalate**	**15**	**36**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	90.4%	d5-Phenol	104%
2-Fluorophenol	75.7%	d4-2-Chlorophenol	93.6%
d4-1,2-Dichlorobenzene	72.8%	d5-Nitrobenzene	76.0%
2,4,6-Tribromophenol	103%	d14-p-Terphenyl	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-039-010
SAMPLE

Lab Sample ID: PD97O
LIMS ID: 09-14511
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 22:03
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 31.5%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**15 B**
85-68-7	**Butylbenzylphthalate**	15	**22**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	75.2%	d5-Phenol	74.7%
2-Fluorophenol	69.1%	d4-2-Chlorophenol	81.1%
d4-1,2-Dichlorobenzene	65.6%	d5-Nitrobenzene	67.6%
2,4,6-Tribromophenol	118%	d14-p-Terphenyl	131%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-039-010
DILUTION

Lab Sample ID: PD97O
LIMS ID: 09-14511
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/15/09 12:42
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 31.5%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	45	< 45 U
84-66-2	Diethylphthalate	45	< 45 U
85-68-7	Butylbenzylphthalate	45	< 45 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	90	< 90 U
87-86-5	Pentachlorophenol	90	< 90 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	90	< 90 U
62-75-9	N-Nitrosodimethylamine	90	< 90 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	74.4%	d5-Phenol	84.0%
2-Fluorophenol	67.2%	d4-2-Chlorophenol	78.4%
d4-1,2-Dichlorobenzene	58.8%	d5-Nitrobenzene	64.8%
2,4,6-Tribromophenol	89.6%	d14-p-Terphenyl	93.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-040-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PD95C
LIMS ID: 09-14480
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 13:42
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 58.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**57**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**40 B**
85-68-7	**Butylbenzylphthalate**	**15**	**37**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	90.0%	d5-Phenol	113%
2-Fluorophenol	76.5%	d4-2-Chlorophenol	94.4%
d4-1,2-Dichlorobenzene	71.6%	d5-Nitrobenzene	80.4%
2,4,6-Tribromophenol	102%	d14-p-Terphenyl	94.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-103-010
SAMPLE

Lab Sample ID: PD95E
LIMS ID: 09-14482
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 19:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 51.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**320**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**33**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	79.2%	d5-Phenol	93.6%
2-Fluorophenol	68.0%	d4-2-Chlorophenol	85.3%
d4-1,2-Dichlorobenzene	62.4%	d5-Nitrobenzene	68.4%
2,4,6-Tribromophenol	94.9%	d14-p-Terphenyl	94.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-105-010
SAMPLE

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 19:45
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 54.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**30**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**65**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	**2,4-Dimethylphenol**	**6.1**	**6.1**
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	86.0%	d5-Phenol	106%
2-Fluorophenol	73.6%	d4-2-Chlorophenol	93.3%
d4-1,2-Dichlorobenzene	66.4%	d5-Nitrobenzene	72.0%
2,4,6-Tribromophenol	104%	d14-p-Terphenyl	90.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-106-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07G
LIMS ID: 09-14575
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 21:17
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 25.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**6.1**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	14	< 14 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.0%	d5-Phenol	71.7%
2-Fluorophenol	70.4%	d4-2-Chlorophenol	97.6%
d4-1,2-Dichlorobenzene	68.4%	d5-Nitrobenzene	70.4%
2,4,6-Tribromophenol	94.4%	d14-p-Terphenyl	96.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-107-010**
 SAMPLE

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 20:46
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**7.4**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	16	< 16 U
84-66-2	Diethylphthalate	16	< 16 U
85-68-7	**Butylbenzylphthalate**	**16**	**20**
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.8%	d5-Phenol	74.7%
2-Fluorophenol	70.4%	d4-2-Chlorophenol	93.1%
d4-1,2-Dichlorobenzene	69.2%	d5-Nitrobenzene	71.2%
2,4,6-Tribromophenol	94.7%	d14-p-Terphenyl	111%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-108-010
SAMPLE

Lab Sample ID: PD95K
LIMS ID: 09-14488
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 22:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 25.6%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**24 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	81.6%	d5-Phenol	86.1%
2-Fluorophenol	68.0%	d4-2-Chlorophenol	79.5%
d4-1,2-Dichlorobenzene	66.8%	d5-Nitrobenzene	66.4%
2,4,6-Tribromophenol	109%	d14-p-Terphenyl	113%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-112-010**
 SAMPLE

Lab Sample ID: PD95G
LIMS ID: 09-14484
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 20:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 51.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**30**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**20**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	79.6%	d5-Phenol	98.1%
2-Fluorophenol	72.0%	d4-2-Chlorophenol	88.0%
d4-1,2-Dichlorobenzene	67.2%	d5-Nitrobenzene	71.2%
2,4,6-Tribromophenol	100%	d14-p-Terphenyl	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-115-010**
 SAMPLE

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 21:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 47.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**26**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**30 B**
85-68-7	**Butylbenzylphthalate**	**15**	**39**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	87.6%	d5-Phenol	108%
2-Fluorophenol	77.9%	d4-2-Chlorophenol	96.0%
d4-1,2-Dichlorobenzene	73.6%	d5-Nitrobenzene	75.6%
2,4,6-Tribromophenol	107%	d14-p-Terphenyl	112%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-118-010**
 SAMPLE

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 22:46
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**7.2**
120-82-1	**1,2,4-Trichlorobenzene**	**6.0**	**7.2**
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	77.6%	d5-Phenol	89.6%
2-Fluorophenol	64.5%	d4-2-Chlorophenol	75.7%
d4-1,2-Dichlorobenzene	61.6%	d5-Nitrobenzene	65.2%
2,4,6-Tribromophenol	106%	d14-p-Terphenyl	110%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-121-010**
 SAMPLE

Lab Sample ID: PD95M
LIMS ID: 09-14490
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 23:15
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 45.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**18**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**18 B**
85-68-7	**Butylbenzylphthalate**	**15**	**15**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	84.0%	d5-Phenol	91.7%
2-Fluorophenol	70.9%	d4-2-Chlorophenol	82.1%
d4-1,2-Dichlorobenzene	68.8%	d5-Nitrobenzene	73.6%
2,4,6-Tribromophenol	108%	d14-p-Terphenyl	111%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-123-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE14M
LIMS ID: 09-14624
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/02/09 16:19
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 41.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**21**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**21**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	73.6%	d5-Phenol	67.7%
2-Fluorophenol	64.8%	d4-2-Chlorophenol	82.4%
d4-1,2-Dichlorobenzene	61.2%	d5-Nitrobenzene	67.2%
2,4,6-Tribromophenol	98.7%	d14-p-Terphenyl	88.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-124-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/02/09 15:48
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 37.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**86**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**16**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	74.8%	d5-Phenol	72.3%
2-Fluorophenol	67.7%	d4-2-Chlorophenol	86.4%
d4-1,2-Dichlorobenzene	64.8%	d5-Nitrobenzene	71.6%
2,4,6-Tribromophenol	89.1%	d14-p-Terphenyl	93.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-125-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE14K
LIMS ID: 09-14622
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/02/09 15:16
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**13**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	77.6%	d5-Phenol	71.7%
2-Fluorophenol	66.9%	d4-2-Chlorophenol	84.3%
d4-1,2-Dichlorobenzene	63.2%	d5-Nitrobenzene	67.6%
2,4,6-Tribromophenol	88.5%	d14-p-Terphenyl	95.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-128-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE14J
LIMS ID: 09-14621
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 21:38
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**21**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	16	< 16 U
84-66-2	Diethylphthalate	16	< 16 U
85-68-7	**Butylbenzylphthalate**	**16**	**24**
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	80.8%	d5-Phenol	66.1%
2-Fluorophenol	66.7%	d4-2-Chlorophenol	80.8%
d4-1,2-Dichlorobenzene	68.0%	d5-Nitrobenzene	70.4%
2,4,6-Tribromophenol	97.1%	d14-p-Terphenyl	88.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-131-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE14I
LIMS ID: 09-14620
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 21:07
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 42.1%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**49**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**20**
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	84.4%	d5-Phenol	71.5%
2-Fluorophenol	70.9%	d4-2-Chlorophenol	87.2%
d4-1,2-Dichlorobenzene	70.0%	d5-Nitrobenzene	77.6%
2,4,6-Tribromophenol	94.1%	d14-p-Terphenyl	96.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-133-010**
 SAMPLE

Lab Sample ID: PD95J
LIMS ID: 09-14487
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 21:45
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**15**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**24 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	79.6%	d5-Phenol	91.7%
2-Fluorophenol	67.2%	d4-2-Chlorophenol	79.7%
d4-1,2-Dichlorobenzene	64.0%	d5-Nitrobenzene	64.4%
2,4,6-Tribromophenol	99.7%	d14-p-Terphenyl	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-134-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE14H
LIMS ID: 09-14619
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 20:36
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 38.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**17**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**17**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	80.4%	d5-Phenol	66.1%
2-Fluorophenol	67.2%	d4-2-Chlorophenol	82.1%
d4-1,2-Dichlorobenzene	69.6%	d5-Nitrobenzene	74.4%
2,4,6-Tribromophenol	104%	d14-p-Terphenyl	90.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-201-010**
 SAMPLE

Lab Sample ID: PE14G
LIMS ID: 09-14618
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 20:04
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**5.9**	**32**
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	78.4%	d5-Phenol	60.3%
2-Fluorophenol	64.0%	d4-2-Chlorophenol	76.5%
d4-1,2-Dichlorobenzene	65.6%	d5-Nitrobenzene	70.8%
2,4,6-Tribromophenol	97.3%	d14-p-Terphenyl	89.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-203-010**
 SAMPLE

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 18:29
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 31.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**5.8**	**10**
120-82-1	1,2,4-Trichlorobenzene	5.8	< 5.8 U
118-74-1	Hexachlorobenzene	5.8	< 5.8 U
87-68-3	Hexachlorobutadiene	5.8	< 5.8 U
131-11-3	Dimethylphthalate	14	< 14 U
84-66-2	Diethylphthalate	14	< 14 U
85-68-7	**Butylbenzylphthalate**	**14**	**17**
95-48-7	2-Methylphenol	5.8	< 5.8 U
105-67-9	2,4-Dimethylphenol	5.8	< 5.8 U
86-30-6	N-Nitrosodiphenylamine	5.8	< 5.8 U
100-51-6	Benzyl Alcohol	29	< 29 U
87-86-5	Pentachlorophenol	29	< 29 U
95-50-1	1,2-Dichlorobenzene	5.8	< 5.8 U
621-64-7	N-Nitroso-Di-N-Propylamine	29	< 29 U
62-75-9	N-Nitrosodimethylamine	29	< 29 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	77.2%	d5-Phenol	68.3%
2-Fluorophenol	68.5%	d4-2-Chlorophenol	84.3%
d4-1,2-Dichlorobenzene	70.8%	d5-Nitrobenzene	76.0%
2,4,6-Tribromophenol	107%	d14-p-Terphenyl	89.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-205-010**
 SAMPLE

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 17:58
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.2**	**30**
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	16	< 16 U
84-66-2	Diethylphthalate	16	< 16 U
85-68-7	**Butylbenzylphthalate**	**16**	**19**
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	78.0%	d5-Phenol	66.9%
2-Fluorophenol	67.2%	d4-2-Chlorophenol	82.9%
d4-1,2-Dichlorobenzene	69.6%	d5-Nitrobenzene	74.0%
2,4,6-Tribromophenol	95.5%	d14-p-Terphenyl	96.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-206-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 16:36
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**7.9**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**82**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	**2,4-Dimethylphenol**	**6.1**	**10**
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	88.0%	d5-Phenol	79.7%
2-Fluorophenol	71.2%	d4-2-Chlorophenol	94.9%
d4-1,2-Dichlorobenzene	62.4%	d5-Nitrobenzene	72.4%
2,4,6-Tribromophenol	93.3%	d14-p-Terphenyl	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-208-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 21:48
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**17**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**290**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	**2,4-Dimethylphenol**	**6.0**	**17**
86-30-6	N-Nitrosodiphenylamine	20	< 20 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	86.0%	d5-Phenol	71.5%
2-Fluorophenol	67.5%	d4-2-Chlorophenol	91.7%
d4-1,2-Dichlorobenzene	62.4%	d5-Nitrobenzene	69.2%
2,4,6-Tribromophenol	97.3%	d14-p-Terphenyl	192%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-208-010**
Page 1 of 1 **DILUTION**

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 11:43
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**18**	**18**
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	45	< 45 U
84-66-2	Diethylphthalate	45	< 45 U
85-68-7	**Butylbenzylphthalate**	**45**	**150**
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	**2,4-Dimethylphenol**	**18**	**18**
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	90	< 90 U
87-86-5	Pentachlorophenol	90	< 90 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	90	< 90 U
62-75-9	N-Nitrosodimethylamine	90	< 90 U

Reported in $\mu g/kg$ (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	91.2%	d5-Phenol	83.2%
2-Fluorophenol	72.8%	d4-2-Chlorophenol	93.6%
d4-1,2-Dichlorobenzene	63.6%	d5-Nitrobenzene	73.2%
2,4,6-Tribromophenol	96.0%	d14-p-Terphenyl	115%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-209-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE14F
LIMS ID: 09-14617
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 19:33
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.5%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**11**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	75.2%	d5-Phenol	64.5%
2-Fluorophenol	65.6%	d4-2-Chlorophenol	79.7%
d4-1,2-Dichlorobenzene	66.4%	d5-Nitrobenzene	74.0%
2,4,6-Tribromophenol	97.6%	d14-p-Terphenyl	90.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-210-010**
 SAMPLE

Lab Sample ID: PE14B
LIMS ID: 09-14613
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 17:27
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	**Pentachlorophenol**	**30**	**72**
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	79.6%	d5-Phenol	72.5%
2-Fluorophenol	67.7%	d4-2-Chlorophenol	84.3%
d4-1,2-Dichlorobenzene	70.0%	d5-Nitrobenzene	76.4%
2,4,6-Tribromophenol	88.5%	d14-p-Terphenyl	96.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-212-010**
 SAMPLE

Lab Sample ID: PE14E
LIMS ID: 09-14616
Matrix: Sediment
Data Release Authorized:
Reported: 09/23/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 19:01
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 27.8%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**8.4**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	3.0	< 3.0 UJ
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	74.4%	d5-Phenol	60.3%
2-Fluorophenol	61.9%	d4-2-Chlorophenol	74.9%
d4-1,2-Dichlorobenzene	63.6%	d5-Nitrobenzene	69.6%
2,4,6-Tribromophenol	88.3%	d14-p-Terphenyl	85.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-213-010
SAMPLE

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 18:28
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 36.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**17**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**27 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	**2,4-Dimethylphenol**	**6.0**	**7.7**
86-30-6	N-Nitrosodiphenylamine	6.6	< 6.6 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	84.4%	d5-Phenol	74.9%
2-Fluorophenol	68.0%	d4-2-Chlorophenol	79.5%
d4-1,2-Dichlorobenzene	63.2%	d5-Nitrobenzene	75.6%
2,4,6-Tribromophenol	104%	d14-p-Terphenyl	96.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-214-010**
 SAMPLE

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 17:58
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.0%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**23**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**34 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	**2,4-Dimethylphenol**	**6.1**	**9.7**
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	84.8%	d5-Phenol	84.8%
2-Fluorophenol	70.7%	d4-2-Chlorophenol	85.9%
d4-1,2-Dichlorobenzene	68.0%	d5-Nitrobenzene	86.8%
2,4,6-Tribromophenol	110%	d14-p-Terphenyl	104%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-215-010
SAMPLE

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 18:59
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 54.7%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**10**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**43 B**
85-68-7	**Butylbenzylphthalate**	**15**	**43**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	**2,4-Dimethylphenol**	**6.0**	**9.6**
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	88.4%	d5-Phenol	82.9%
2-Fluorophenol	73.6%	d4-2-Chlorophenol	87.2%
d4-1,2-Dichlorobenzene	69.2%	d5-Nitrobenzene	70.4%
2,4,6-Tribromophenol	106%	d14-p-Terphenyl	112%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-215-010
DILUTION

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/15/09 14:14
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 54.7%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	45	< 45 U
84-66-2	Diethylphthalate	45	< 45 U
85-68-7	Butylbenzylphthalate	45	< 45 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	90	< 90 U
87-86-5	Pentachlorophenol	90	< 90 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	90	< 90 U
62-75-9	N-Nitrosodimethylamine	90	< 90 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.2%	d5-Phenol	75.2%
2-Fluorophenol	60.8%	d4-2-Chlorophenol	71.2%
d4-1,2-Dichlorobenzene	52.8%	d5-Nitrobenzene	55.2%
2,4,6-Tribromophenol	88.0%	d14-p-Terphenyl	85.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-221-010**
 SAMPLE

Lab Sample ID: PE07B
LIMS ID: 09-14570
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 18:41
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 27.0%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	86.4%	d5-Phenol	72.0%
2-Fluorophenol	72.0%	d4-2-Chlorophenol	88.8%
d4-1,2-Dichlorobenzene	70.4%	d5-Nitrobenzene	75.6%
2,4,6-Tribromophenol	101%	d14-p-Terphenyl	107%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-222-010**
 SAMPLE

Lab Sample ID: PE07A
LIMS ID: 09-14569
Matrix: Sediment
Data Release Authorized
Reported: 09/29/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 18:09
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 22.5%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	1.8	< 1.8 UJ
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.0%	d5-Phenol	68.5%
2-Fluorophenol	66.4%	d4-2-Chlorophenol	84.8%
d4-1,2-Dichlorobenzene	65.2%	d5-Nitrobenzene	70.8%
2,4,6-Tribromophenol	102%	d14-p-Terphenyl	104%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-223-010
SAMPLE

Lab Sample ID: PD97A
LIMS ID: 09-14497
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 17:27
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 28.1%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	5.9	< 5.9 U
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**32 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	73.6%	d5-Phenol	66.7%
2-Fluorophenol	64.0%	d4-2-Chlorophenol	73.9%
d4-1,2-Dichlorobenzene	66.0%	d5-Nitrobenzene	70.8%
2,4,6-Tribromophenol	113%	d14-p-Terphenyl	98.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-303-010**
 SAMPLE

Lab Sample ID: PD97N
LIMS ID: 09-14510
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 21:33
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 57.1%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**25**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**42 B**
85-68-7	**Butylbenzylphthalate**	**15**	**46**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.4%	d5-Phenol	66.9%
2-Fluorophenol	57.6%	d4-2-Chlorophenol	72.5%
d4-1,2-Dichlorobenzene	52.8%	d5-Nitrobenzene	44.8%
2,4,6-Tribromophenol	112%	d14-p-Terphenyl	118%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-303-010
DILUTION

Lab Sample ID: PD97N
LIMS ID: 09-14510
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/15/09 16:49
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 57.1%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**18**	**24**
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	46	< 46 U
84-66-2	Diethylphthalate	46	< 46 U
85-68-7	Butylbenzylphthalate	46	< 46 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	91	< 91 U
87-86-5	Pentachlorophenol	91	< 91 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	91	< 91 U
62-75-9	N-Nitrosodimethylamine	91	< 91 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	70.8%	d5-Phenol	76.8%
2-Fluorophenol	57.6%	d4-2-Chlorophenol	70.4%
d4-1,2-Dichlorobenzene	49.2%	d5-Nitrobenzene	50.4%
2,4,6-Tribromophenol	88.8%	d14-p-Terphenyl	84.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-304-010**
 SAMPLE

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/30/09
Date Analyzed: 07/06/09 20:45
Instrument/Analyst: NT2/VTS
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 56.0%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**25**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**44**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	**2,4-Dimethylphenol**	**6.1**	**6.1**
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.4%	d5-Phenol	109%
2-Fluorophenol	75.7%	d4-2-Chlorophenol	92.0%
d4-1,2-Dichlorobenzene	72.4%	d5-Nitrobenzene	73.2%
2,4,6-Tribromophenol	101%	d14-p-Terphenyl	106%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-305-010**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 22:19
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 43.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**7.9**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	**2,4-Dimethylphenol**	**6.1**	**7.9**
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.8%	d5-Phenol	70.1%
2-Fluorophenol	69.6%	d4-2-Chlorophenol	93.6%
d4-1,2-Dichlorobenzene	64.8%	d5-Nitrobenzene	66.4%
2,4,6-Tribromophenol	108%	d14-p-Terphenyl	138%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LSO-01SE-080723**
 SAMPLE

Lab Sample ID: PE25A
LIMS ID: 09-14715
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/17/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 07/23/08
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/13/09 16:57
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.1%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**20**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**70 B**
85-68-7	**Butylbenzylphthalate**	**15**	**81**
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	**Pentachlorophenol**	**30**	**59**
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.8%	d5-Phenol	101%
2-Fluorophenol	80.5%	d4-2-Chlorophenol	99.2%
d4-1,2-Dichlorobenzene	69.2%	d5-Nitrobenzene	109%
2,4,6-Tribromophenol	112%	d14-p-Terphenyl	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-SS-002-010-RB
SAMPLE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 15:22
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	0.10	< 0.10 U
120-82-1	1,2,4-Trichlorobenzene	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.10	< 0.10 U
87-68-3	Hexachlorobutadiene	0.10	< 0.10 U
131-11-3	Dimethylphthalate	0.10	< 0.10 U
84-66-2	**Diethylphthalate**	**0.10**	**0.21**
85-68-7	Butylbenzylphthalate	0.10	< 0.10 U
95-48-7	2-Methylphenol	0.20	< 0.20 U
105-67-9	2,4-Dimethylphenol	0.20	< 0.20 U
86-30-6	N-Nitrosodiphenylamine	0.10	< 0.10 U
100-51-6	Benzyl Alcohol	0.50	< 0.50 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
95-50-1	1,2-Dichlorobenzene	0.10	< 0.10 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.50	< 0.50 U
62-75-9	N-Nitrosodimethylamine	0.50	< 0.50 U

Reported in μg/L (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	93.2%	d5-Phenol	94.1%
2-Fluorophenol	85.6%	d4-2-Chlorophenol	104%
d4-1,2-Dichlorobenzene	77.6%	d5-Nitrobenzene	95.6%
2,4,6-Tribromophenol	108%	d14-p-Terphenyl	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-210-RB**
 SAMPLE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 13:48
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	0.10	< 0.10 U
120-82-1	1,2,4-Trichlorobenzene	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.10	< 0.10 U
87-68-3	Hexachlorobutadiene	0.10	< 0.10 U
131-11-3	Dimethylphthalate	0.10	< 0.10 U
84-66-2	Diethylphthalate	0.10	< 0.10 U
85-68-7	Butylbenzylphthalate	0.10	< 0.10 U
95-48-7	2-Methylphenol	0.20	< 0.20 U
105-67-9	2,4-Dimethylphenol	0.20	< 0.20 U
86-30-6	N-Nitrosodiphenylamine	0.10	< 0.10 U
100-51-6	Benzyl Alcohol	0.50	< 0.50 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
95-50-1	1,2-Dichlorobenzene	0.10	< 0.10 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.50	< 0.50 U
62-75-9	N-Nitrosodimethylamine	0.50	< 0.50 U

Reported in μg/L (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	88.0%	d5-Phenol	90.3%
2-Fluorophenol	83.7%	d4-2-Chlorophenol	101%
d4-1,2-Dichlorobenzene	79.2%	d5-Nitrobenzene	91.0%
2,4,6-Tribromophenol	111%	d14-p-Terphenyl	99.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-SS-222-RB**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 13:17
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	0.10	< 0.10 U
120-82-1	1,2,4-Trichlorobenzene	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.10	< 0.10 U
87-68-3	Hexachlorobutadiene	0.10	< 0.10 U
131-11-3	Dimethylphthalate	0.10	< 0.10 U
84-66-2	Diethylphthalate	0.10	< 0.10 U
85-68-7	Butylbenzylphthalate	0.10	< 0.10 U
95-48-7	2-Methylphenol	0.20	< 0.20 U
105-67-9	2,4-Dimethylphenol	0.20	< 0.20 U
86-30-6	N-Nitrosodiphenylamine	0.10	< 0.10 U
100-51-6	Benzyl Alcohol	0.50	< 0.50 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
95-50-1	1,2-Dichlorobenzene	0.10	< 0.10 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.50	< 0.50 U
62-75-9	N-Nitrosodimethylamine	0.50	< 0.50 U

Reported in μg/L (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	91.0%	d5-Phenol	100%
2-Fluorophenol	91.3%	d4-2-Chlorophenol	109%
d4-1,2-Dichlorobenzene	85.1%	d5-Nitrobenzene	100%
2,4,6-Tribromophenol	116%	d14-p-Terphenyl	102%

T30 Selected SVOCs by SIM

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-01**
Page 1 of 1 **SAMPLE**

Lab Sample ID: ON35A
LIMS ID: 09-4935
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 17:43
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 32.3%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**6.1**	**7.9**
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**13**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	28	< 28 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	82.8%	d5-Phenol	67.5%
2-Fluorophenol	63.5%	d4-2-Chlorophenol	66.4%
d4-1,2-Dichlorobenzene	69.2%	d5-Nitrobenzene	80.4%
2,4,6-Tribromophenol	80.5%	d14-p-Terphenyl	82.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-03**
Page 1 of 1 **SAMPLE**

Lab Sample ID: ON35C
LIMS ID: 09-4937
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 18:18
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 27.6%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**5.9**	**15**
106-46-7	**1,4-Dichlorobenzene**	**5.9**	**5.9**
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	5.9	< 5.9 U
100-51-6	Benzyl Alcohol	29	< 29 U
87-86-5	Pentachlorophenol	29	< 29 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	29	< 29 U
62-75-9	N-Nitrosodimethylamine	29	< 29 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	76.0%	d5-Phenol	69.3%
2-Fluorophenol	66.1%	d4-2-Chlorophenol	69.6%
d4-1,2-Dichlorobenzene	70.8%	d5-Nitrobenzene	70.8%
2,4,6-Tribromophenol	82.7%	d14-p-Terphenyl	88.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-101**
Page 1 of 1 **SAMPLE**

Lab Sample ID: ON35D
LIMS ID: 09-4938
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 18:53
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 25.4%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**6.0**	**17**
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**6.6**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	75.2%	d5-Phenol	66.4%
2-Fluorophenol	64.8%	d4-2-Chlorophenol	68.0%
d4-1,2-Dichlorobenzene	69.6%	d5-Nitrobenzene	70.4%
2,4,6-Tribromophenol	66.1%	d14-p-Terphenyl	86.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-04**
 SAMPLE

Lab Sample ID: QF22A
LIMS ID: 10-726
Matrix: Sediment
Data Release Authorized:
Reported: 01/20/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/15/10
Date Analyzed: 01/19/10 17:27
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 29.4%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	59.2%	d5-Phenol	55.2%
2-Fluorophenol	45.9%	d4-2-Chlorophenol	45.1%
d4-1,2-Dichlorobenzene	52.8%	d5-Nitrobenzene	58.4%
2,4,6-Tribromophenol	55.2%	d14-p-Terphenyl	73.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-06**
 SAMPLE

Lab Sample ID: QF22B
LIMS ID: 10-727
Matrix: Sediment
Data Release Authorized:
Reported: 01/20/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/15/10
Date Analyzed: 01/19/10 19:09
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.6%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**6.6**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	12	< 12 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	73.2%	d5-Phenol	62.1%
2-Fluorophenol	51.2%	d4-2-Chlorophenol	51.7%
d4-1,2-Dichlorobenzene	59.2%	d5-Nitrobenzene	66.0%
2,4,6-Tribromophenol	66.7%	d14-p-Terphenyl	76.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-07**
 SAMPLE

Lab Sample ID: ON35H
LIMS ID: 09-4943
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 19:28
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 43.4%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**6.0**	**8.4**
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	46	< 46 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.8%	d5-Phenol	59.7%
2-Fluorophenol	51.2%	d4-2-Chlorophenol	54.7%
d4-1,2-Dichlorobenzene	61.2%	d5-Nitrobenzene	62.8%
2,4,6-Tribromophenol	62.4%	d14-p-Terphenyl	79.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-09**
Page 1 of 1 **SAMPLE**

Lab Sample ID: ON35J
LIMS ID: 09-4945
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 21:12
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.9%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	6.0	< 6.0 U
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	74.0%	d5-Phenol	58.1%
2-Fluorophenol	60.0%	d4-2-Chlorophenol	80.3%
d4-1,2-Dichlorobenzene	68.4%	d5-Nitrobenzene	66.4%
2,4,6-Tribromophenol	8.0%	d14-p-Terphenyl	83.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-09**
Page 1 of 1 **DILUTION**

Lab Sample ID: ON35J
LIMS ID: 09-4945
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/14/09 01:49
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 21.9%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	18	< 18 U
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	45	< 45 U
85-68-7	Butylbenzylphthalate	45	< 45 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	90	< 90 U
87-86-5	Pentachlorophenol	90	< 90 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	90	< 90 U
62-75-9	N-Nitrosodimethylamine	90	< 90 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	81.6%	d5-Phenol	69.6%
2-Fluorophenol	68.0%	d4-2-Chlorophenol	81.6%
d4-1,2-Dichlorobenzene	72.0%	d5-Nitrobenzene	72.0%
2,4,6-Tribromophenol	88.0%	d14-p-Terphenyl	104%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-13**
Page 1 of 1 **SAMPLE**

Lab Sample ID: QF22C
LIMS ID: 10-728
Matrix: Sediment
Data Release Authorized:
Reported: 01/20/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/15/10
Date Analyzed: 01/19/10 19:43
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	**Diethylphthalate**	**15**	**15 B**
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	63.6%	d5-Phenol	58.1%
2-Fluorophenol	49.3%	d4-2-Chlorophenol	48.5%
d4-1,2-Dichlorobenzene	58.8%	d5-Nitrobenzene	64.8%
2,4,6-Tribromophenol	58.7%	d14-p-Terphenyl	73.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-14**
 SAMPLE

Lab Sample ID: ON35O
LIMS ID: 09-4950
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 21:47
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	6.2	< 6.2 U
106-46-7	1,4-Dichlorobenzene	6.2	< 6.2 U
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	16	< 16 U
85-68-7	Butylbenzylphthalate	16	< 16 U
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	76.4%	d5-Phenol	66.1%
2-Fluorophenol	65.3%	d4-2-Chlorophenol	84.8%
d4-1,2-Dichlorobenzene	73.2%	d5-Nitrobenzene	76.0%
2,4,6-Tribromophenol	1.9%	d14-p-Terphenyl	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-14**
 DILUTION

Lab Sample ID: ON35O
LIMS ID: 09-4950
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/14/09 02:22
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-68-3	Hexachlorobutadiene	19	< 19 U
131-11-3	Dimethylphthalate	47	< 47 U
85-68-7	Butylbenzylphthalate	47	< 47 U
95-48-7	2-Methylphenol	19	< 19 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
100-51-6	Benzyl Alcohol	93	< 93 U
87-86-5	Pentachlorophenol	93	< 93 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	93	< 93 U
62-75-9	N-Nitrosodimethylamine	93	< 93 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	76.8%	d5-Phenol	70.4%
2-Fluorophenol	69.6%	d4-2-Chlorophenol	82.4%
d4-1,2-Dichlorobenzene	73.2%	d5-Nitrobenzene	69.6%
2,4,6-Tribromophenol	66.4%	d14-p-Terphenyl	108%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-20**
 SAMPLE

Lab Sample ID: ON35U
LIMS ID: 09-4956
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 22:22
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**5.8**	**19**
106-46-7	1,4-Dichlorobenzene	5.8	< 5.8 U
120-82-1	1,2,4-Trichlorobenzene	5.8	< 5.8 U
118-74-1	Hexachlorobenzene	5.8	< 5.8 U
87-68-3	Hexachlorobutadiene	5.8	< 5.8 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	5.8	< 5.8 U
105-67-9	2,4-Dimethylphenol	5.8	< 5.8 U
86-30-6	N-Nitrosodiphenylamine	5.8	< 5.8 U
100-51-6	Benzyl Alcohol	29	< 29 U
87-86-5	Pentachlorophenol	29	< 29 U
95-50-1	1,2-Dichlorobenzene	5.8	< 5.8 U
621-64-7	N-Nitroso-Di-N-Propylamine	29	< 29 U
62-75-9	N-Nitrosodimethylamine	29	< 29 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	74.0%	d5-Phenol	69.3%
2-Fluorophenol	65.9%	d4-2-Chlorophenol	84.3%
d4-1,2-Dichlorobenzene	71.6%	d5-Nitrobenzene	69.6%
2,4,6-Tribromophenol	2.1%	d14-p-Terphenyl	86.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-20**
Page 1 of 1 **DILUTION**

Lab Sample ID: ON35U
LIMS ID: 09-4956
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/14/09 02:55
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**18**	**21**
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	44	< 44 U
85-68-7	Butylbenzylphthalate	44	< 44 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	88	< 88 U
87-86-5	Pentachlorophenol	88	< 88 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	88	< 88 U
62-75-9	N-Nitrosodimethylamine	88	< 88 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	80.4%	d5-Phenol	71.2%
2-Fluorophenol	69.6%	d4-2-Chlorophenol	72.0%
d4-1,2-Dichlorobenzene	73.2%	d5-Nitrobenzene	73.2%
2,4,6-Tribromophenol	68.8%	d14-p-Terphenyl	98.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-21**
Page 1 of 1 **SAMPLE**

Lab Sample ID: ON35V
LIMS ID: 09-4957
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 22:56
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**5.8**	**9.9**
106-46-7	1,4-Dichlorobenzene	5.8	< 5.8 U
120-82-1	1,2,4-Trichlorobenzene	5.8	< 5.8 U
118-74-1	Hexachlorobenzene	5.8	< 5.8 U
87-68-3	Hexachlorobutadiene	5.8	< 5.8 U
131-11-3	Dimethylphthalate	14	< 14 U
85-68-7	Butylbenzylphthalate	14	< 14 U
95-48-7	2-Methylphenol	5.8	< 5.8 U
105-67-9	2,4-Dimethylphenol	5.8	< 5.8 U
86-30-6	N-Nitrosodiphenylamine	5.8	< 5.8 U
100-51-6	Benzyl Alcohol	29	< 29 U
87-86-5	Pentachlorophenol	29	< 29 U
95-50-1	1,2-Dichlorobenzene	5.8	< 5.8 U
621-64-7	N-Nitroso-Di-N-Propylamine	29	< 29 U
62-75-9	N-Nitrosodimethylamine	29	< 29 U

Reported in $\mu g/kg$ (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	73.6%	d5-Phenol	66.1%
2-Fluorophenol	62.7%	d4-2-Chlorophenol	82.7%
d4-1,2-Dichlorobenzene	69.2%	d5-Nitrobenzene	66.4%
2,4,6-Tribromophenol	3.5%	d14-p-Terphenyl	84.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-21**
Page 1 of 1 **DILUTION**

Lab Sample ID: ON35V
LIMS ID: 09-4957
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 03/05/09
Date Analyzed: 03/14/09 03:28
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	17	< 17 U
106-46-7	1,4-Dichlorobenzene	17	< 17 U
120-82-1	1,2,4-Trichlorobenzene	17	< 17 U
118-74-1	Hexachlorobenzene	17	< 17 U
87-68-3	Hexachlorobutadiene	17	< 17 U
131-11-3	Dimethylphthalate	44	< 44 U
85-68-7	Butylbenzylphthalate	44	< 44 U
95-48-7	2-Methylphenol	17	< 17 U
105-67-9	2,4-Dimethylphenol	17	< 17 U
86-30-6	N-Nitrosodiphenylamine	17	< 17 U
100-51-6	Benzyl Alcohol	87	< 87 U
87-86-5	Pentachlorophenol	87	< 87 U
95-50-1	1,2-Dichlorobenzene	17	< 17 U
621-64-7	N-Nitroso-Di-N-Propylamine	87	< 87 U
62-75-9	N-Nitrosodimethylamine	87	< 87 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	79.2%	d5-Phenol	72.8%
2-Fluorophenol	68.8%	d4-2-Chlorophenol	81.6%
d4-1,2-Dichlorobenzene	68.4%	d5-Nitrobenzene	73.2%
2,4,6-Tribromophenol	70.4%	d14-p-Terphenyl	97.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-24**
 SAMPLE

Lab Sample ID: QF22D
LIMS ID: 10-729
Matrix: Sediment
Data Release Authorized:
Reported: 01/20/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/15/10
Date Analyzed: 01/19/10 20:17
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.2%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**7.2**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	9.0	< 9.0 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	64.0%	d5-Phenol	55.2%
2-Fluorophenol	46.7%	d4-2-Chlorophenol	46.1%
d4-1,2-Dichlorobenzene	54.4%	d5-Nitrobenzene	59.2%
2,4,6-Tribromophenol	60.0%	d14-p-Terphenyl	69.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-26**
 SAMPLE

Lab Sample ID: ON50E
LIMS ID: 09-5073
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 03/05/09
Date Analyzed: 03/10/09 23:31
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 43.5%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**6.1**	**27**
106-46-7	**1,4-Dichlorobenzene**	**6.1**	**120**
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	74.4%	d5-Phenol	67.7%
2-Fluorophenol	62.1%	d4-2-Chlorophenol	80.8%
d4-1,2-Dichlorobenzene	68.8%	d5-Nitrobenzene	67.2%
2,4,6-Tribromophenol	2.4%	d14-p-Terphenyl	87.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-26**
Page 1 of 1 **DILUTION**

Lab Sample ID: ON50E
LIMS ID: 09-5073
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 03/05/09
Date Analyzed: 03/14/09 04:01
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 43.5%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**18**	**31**
106-46-7	**1,4-Dichlorobenzene**	**18**	**120**
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	46	< 46 U
85-68-7	Butylbenzylphthalate	46	< 46 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	91	< 91 U
87-86-5	Pentachlorophenol	91	< 91 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	91	< 91 U
62-75-9	N-Nitrosodimethylamine	91	< 91 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	80.4%	d5-Phenol	72.0%
2-Fluorophenol	67.2%	d4-2-Chlorophenol	81.6%
d4-1,2-Dichlorobenzene	69.6%	d5-Nitrobenzene	72.0%
2,4,6-Tribromophenol	68.8%	d14-p-Terphenyl	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-27**
 SAMPLE

Lab Sample ID: QF22E
LIMS ID: 10-730
Matrix: Sediment
Data Release Authorized:
Reported: 01/20/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/15/10
Date Analyzed: 01/19/10 20:51
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	60.4%	d5-Phenol	54.9%
2-Fluorophenol	46.9%	d4-2-Chlorophenol	46.7%
d4-1,2-Dichlorobenzene	55.2%	d5-Nitrobenzene	59.6%
2,4,6-Tribromophenol	60.0%	d14-p-Terphenyl	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-28**
 SAMPLE

Lab Sample ID: QF22F
LIMS ID: 10-731
Matrix: Sediment
Data Release Authorized:
Reported: 01/20/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/15/10
Date Analyzed: 01/19/10 21:25
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.5%

CAS Number	Analyte	RL	Result
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**7.8**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**30**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.0%	d5-Phenol	58.1%
2-Fluorophenol	47.2%	d4-2-Chlorophenol	48.0%
d4-1,2-Dichlorobenzene	55.6%	d5-Nitrobenzene	61.2%
2,4,6-Tribromophenol	64.5%	d14-p-Terphenyl	73.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-29**
Page 1 of 1 **SAMPLE**

Lab Sample ID: ON50H
LIMS ID: 09-5076
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 03/05/09
Date Analyzed: 03/10/09 00:06
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**6.1**	**9.7**
106-46-7	1,4-Dichlorobenzene	6.1	< 6.1 U
120-82-1	1,2,4-Trichlorobenzene	6.1	< 6.1 U
118-74-1	Hexachlorobenzene	6.1	< 6.1 U
87-68-3	Hexachlorobutadiene	6.1	< 6.1 U
131-11-3	Dimethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.1	< 6.1 U
105-67-9	2,4-Dimethylphenol	6.1	< 6.1 U
86-30-6	N-Nitrosodiphenylamine	6.1	< 6.1 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.1	< 6.1 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	72.4%	d5-Phenol	62.7%
2-Fluorophenol	57.6%	d4-2-Chlorophenol	73.1%
d4-1,2-Dichlorobenzene	62.4%	d5-Nitrobenzene	64.8%
2,4,6-Tribromophenol	1.3%	d14-p-Terphenyl	84.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-29**
DILUTION

Lab Sample ID: ON50H
LIMS ID: 09-5076
Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 03/05/09
Date Analyzed: 03/14/09 04:34
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	18	< 18 U
106-46-7	1,4-Dichlorobenzene	18	< 18 U
120-82-1	1,2,4-Trichlorobenzene	18	< 18 U
118-74-1	Hexachlorobenzene	18	< 18 U
87-68-3	Hexachlorobutadiene	18	< 18 U
131-11-3	Dimethylphthalate	46	< 46 U
85-68-7	Butylbenzylphthalate	46	< 46 U
95-48-7	2-Methylphenol	18	< 18 U
105-67-9	2,4-Dimethylphenol	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	18	< 18 U
100-51-6	Benzyl Alcohol	91	< 91 U
87-86-5	Pentachlorophenol	91	< 91 U
95-50-1	1,2-Dichlorobenzene	18	< 18 U
621-64-7	N-Nitroso-Di-N-Propylamine	91	< 91 U
62-75-9	N-Nitrosodimethylamine	91	< 91 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	76.8%	d5-Phenol	66.4%
2-Fluorophenol	59.2%	d4-2-Chlorophenol	75.2%
d4-1,2-Dichlorobenzene	63.6%	d5-Nitrobenzene	67.2%
2,4,6-Tribromophenol	67.2%	d14-p-Terphenyl	98.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-31**
 SAMPLE

Lab Sample ID: QF22G
LIMS ID: 10-732
Matrix: Sediment
Data Release Authorized:
Reported: 01/20/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/15/10
Date Analyzed: 01/19/10 21:59
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 33.0%

CAS Number	Analyte	RL	Result
106-46-7	1,4-Dichlorobenzene	6.2	< 6.2 U
120-82-1	1,2,4-Trichlorobenzene	6.2	< 6.2 U
118-74-1	Hexachlorobenzene	6.2	< 6.2 U
87-68-3	Hexachlorobutadiene	6.2	< 6.2 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	Butylbenzylphthalate	15	< 15 U
95-48-7	2-Methylphenol	6.2	< 6.2 U
105-67-9	2,4-Dimethylphenol	6.2	< 6.2 U
86-30-6	N-Nitrosodiphenylamine	6.2	< 6.2 U
100-51-6	Benzyl Alcohol	31	< 31 U
87-86-5	Pentachlorophenol	31	< 31 U
95-50-1	1,2-Dichlorobenzene	6.2	< 6.2 U
621-64-7	N-Nitroso-Di-N-Propylamine	31	< 31 U
62-75-9	N-Nitrosodimethylamine	31	< 31 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	62.8%	d5-Phenol	56.0%
2-Fluorophenol	46.9%	d4-2-Chlorophenol	46.9%
d4-1,2-Dichlorobenzene	56.0%	d5-Nitrobenzene	61.2%
2,4,6-Tribromophenol	61.9%	d14-p-Terphenyl	76.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: T30-09-11-RB**
Page 1 of 1 **SAMPLE**

Lab Sample ID: ON35W
LIMS ID: 09-5006
Matrix: Water
Data Release Authorized:
Reported: 03/04/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/24/09
Date Analyzed: 03/03/09 20:43
Instrument/Analyst: NT2/PK

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
106-46-7	1,4-Dichlorobenzene	0.10	< 0.10 U
120-82-1	1,2,4-Trichlorobenzene	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.10	< 0.10 U
87-68-3	Hexachlorobutadiene	0.10	< 0.10 U
131-11-3	Dimethylphthalate	0.10	< 0.10 U
85-68-7	Butylbenzylphthalate	0.10	< 0.10 U
95-48-7	2-Methylphenol	0.20	< 0.20 U
105-67-9	2,4-Dimethylphenol	0.20	< 0.20 U
86-30-6	N-Nitrosodiphenylamine	0.10	< 0.10 U
100-51-6	Benzyl Alcohol	0.50	< 0.50 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
95-50-1	1,2-Dichlorobenzene	0.10	< 0.10 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.50	< 0.50 U
62-75-9	N-Nitrosodimethylamine	0.50	< 0.50 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	90.8%	d5-Phenol	86.1%
2-Fluorophenol	84.3%	d4-2-Chlorophenol	91.7%
d4-1,2-Dichlorobenzene	76.8%	d5-Nitrobenzene	98.0%
2,4,6-Tribromophenol	85.1%	d14-p-Terphenyl	86.4%

Composite Selected SVOCs by SIM

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-ITSED-AWMIS-01**
 SAMPLE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 01/05/10 17:39
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 27.5%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**5.9**	**31**
106-46-7	**1,4-Dichlorobenzene**	**5.9**	**12**
120-82-1	1,2,4-Trichlorobenzene	5.9	< 5.9 U
118-74-1	Hexachlorobenzene	5.9	< 5.9 U
87-68-3	Hexachlorobutadiene	5.9	< 5.9 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**31**
95-48-7	2-Methylphenol	5.9	< 5.9 U
105-67-9	2,4-Dimethylphenol	5.9	< 5.9 U
86-30-6	N-Nitrosodiphenylamine	8.3	< 8.3 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	5.9	< 5.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	68.0%	d5-Phenol	66.7%
2-Fluorophenol	51.2%	d4-2-Chlorophenol	53.6%
d4-1,2-Dichlorobenzene	57.6%	d5-Nitrobenzene	60.0%
2,4,6-Tribromophenol	64.3%	d14-p-Terphenyl	80.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-ITSED-AWMIS-02**
Page 1 of 1 **SAMPLE**

Lab Sample ID: QC540
LIMS ID: 09-31457
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 01/05/10 18:13
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 17.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**5.8**	**32**
106-46-7	1,4-Dichlorobenzene	5.8	< 5.8 U
120-82-1	1,2,4-Trichlorobenzene	5.8	< 5.8 U
118-74-1	Hexachlorobenzene	5.8	< 5.8 U
87-68-3	Hexachlorobutadiene	5.8	< 5.8 U
131-11-3	Dimethylphthalate	14	< 14 U
84-66-2	**Diethylphthalate**	**14**	**23 B**
85-68-7	**Butylbenzylphthalate**	**14**	**82**
95-48-7	2-Methylphenol	5.8	< 5.8 U
105-67-9	2,4-Dimethylphenol	5.8	< 5.8 U
86-30-6	N-Nitrosodiphenylamine	9.8	< 9.8 Y
100-51-6	Benzyl Alcohol	29	< 29 U
87-86-5	**Pentachlorophenol**	**29**	**42**
95-50-1	1,2-Dichlorobenzene	5.8	< 5.8 U
621-64-7	N-Nitroso-Di-N-Propylamine	29	< 29 U
62-75-9	N-Nitrosodimethylamine	29	< 29 U

Reported in μg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	66.0%	d5-Phenol	62.9%
2-Fluorophenol	49.3%	d4-2-Chlorophenol	50.7%
d4-1,2-Dichlorobenzene	58.8%	d5-Nitrobenzene	60.4%
2,4,6-Tribromophenol	59.5%	d14-p-Terphenyl	79.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: EW09-ITSED-AWMIS-03**
 SAMPLE

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 01/05/10 19:54
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**6.0**	**66**
106-46-7	1,4-Dichlorobenzene	6.0	< 6.0 U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**18**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	8.3	< 8.3 Y
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	67.6%	d5-Phenol	62.9%
2-Fluorophenol	49.6%	d4-2-Chlorophenol	51.2%
d4-1,2-Dichlorobenzene	58.4%	d5-Nitrobenzene	60.4%
2,4,6-Tribromophenol	62.9%	d14-p-Terphenyl	90.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: EW09-ITSED-PAMIS-01
SAMPLE

Lab Sample ID: QC54Q
LIMS ID: 09-31459
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/26/09
Date Analyzed: 01/05/10 20:27
Instrument/Analyst: NT2/PK
GPC Cleanup: Yes
Silica Gel Cleanup: No
Alumina Cleanup: No

Sample Amount: 16.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
53-70-3	**Dibenz(a,h)anthracene**	**6.0**	**39**
106-46-7	**1,4-Dichlorobenzene**	**6.0**	**8.9**
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0 U
118-74-1	Hexachlorobenzene	6.0	< 6.0 U
87-68-3	Hexachlorobutadiene	6.0	< 6.0 U
131-11-3	Dimethylphthalate	15	< 15 U
84-66-2	Diethylphthalate	15	< 15 U
85-68-7	**Butylbenzylphthalate**	**15**	**17**
95-48-7	2-Methylphenol	6.0	< 6.0 U
105-67-9	2,4-Dimethylphenol	6.0	< 6.0 U
86-30-6	N-Nitrosodiphenylamine	6.0	< 6.0 U
100-51-6	Benzyl Alcohol	30	< 30 U
87-86-5	Pentachlorophenol	30	< 30 U
95-50-1	1,2-Dichlorobenzene	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	30	< 30 U
62-75-9	N-Nitrosodimethylamine	30	< 30 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorobiphenyl	60.8%	d5-Phenol	57.9%
2-Fluorophenol	45.9%	d4-2-Chlorophenol	47.2%
d4-1,2-Dichlorobenzene	52.4%	d5-Nitrobenzene	53.6%
2,4,6-Tribromophenol	54.9%	d14-p-Terphenyl	72.0%

Round 1 SVOCs

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-001-010
SAMPLE

Lab Sample ID: OP35U
LIMS ID: 09-6000
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 21:22
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 46.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**24**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	**Diethylphthalate**	**20**	**36 B**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-001-010
SAMPLE

Lab Sample ID: OP35U
LIMS ID: 09-6000
Matrix: Sediment
Date Analyzed: 03/13/09 21:22

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**57**
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**110**
129-00-0	**Pyrene**	**20**	**83**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**55**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**100**
218-01-9	**Chrysene**	**20**	**92**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**88**
207-08-9	**Benzo(k)fluoranthene**	**20**	**69**
50-32-8	**Benzo(a)pyrene**	**20**	**55**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**20**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.2%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	85.6%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	66.7%	2-Fluorophenol	74.4%
2,4,6-Tribromophenol	106%	d4-2-Chlorophenol	73.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-003-010
SAMPLE

Lab Sample ID: OP35T
LIMS ID: 09-5999
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 14:20
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**26**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-003-010
SAMPLE

Lab Sample ID: OP35T
LIMS ID: 09-5999
Matrix: Sediment
Date Analyzed: 03/18/09 14:20

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**160**
86-74-8	**Carbazole**	**19**	**28**
120-12-7	**Anthracene**	**19**	**55**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**550**
129-00-0	**Pyrene**	**19**	**380**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**130**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**230**
218-01-9	**Chrysene**	**19**	**330**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**180**
207-08-9	**Benzo(k)fluoranthene**	**19**	**210**
50-32-8	**Benzo(a)pyrene**	**19**	**120**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**48**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**46**
62-53-3	Aniline	19	< 19 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	49.2%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	82.8%	d4-1,2-Dichlorobenzene	48.0%
d5-Phenol	64.0%	2-Fluorophenol	67.2%
2,4,6-Tribromophenol	101%	d4-2-Chlorophenol	67.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-005-010
SAMPLE

Lab Sample ID: OP35S
LIMS ID: 09-5998
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 13:47
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 46.2%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**22**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**42**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	**Diethylphthalate**	**20**	**27 B**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**20**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-005-010
SAMPLE

Lab Sample ID: OP35S
LIMS ID: 09-5998
Matrix: Sediment
Date Analyzed: 03/18/09 13:47

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**330**
86-74-8	**Carbazole**	**20**	**83**
120-12-7	**Anthracene**	**20**	**120**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**3,700 E**
129-00-0	**Pyrene**	**20**	**2,300 E**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**500**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**330**
218-01-9	**Chrysene**	**20**	**1,400**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**800**
207-08-9	**Benzo(k)fluoranthene**	**20**	**760**
50-32-8	**Benzo(a)pyrene**	**20**	**400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**150**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**57**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**130**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	50.0%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	88.8%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	64.8%	2-Fluorophenol	66.7%
2,4,6-Tribromophenol	88.0%	d4-2-Chlorophenol	68.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-005-010
DILUTION

Lab Sample ID: OP35S
LIMS ID: 09-5998
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 16:01
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 6.00
Percent Moisture: 46.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	120	< 120 U
111-44-4	Bis-(2-Chloroethyl) Ether	120	< 120 U
95-57-8	2-Chlorophenol	120	< 120 U
541-73-1	1,3-Dichlorobenzene	120	< 120 U
106-46-7	1,4-Dichlorobenzene	120	< 120 U
100-51-6	Benzyl Alcohol	120	< 120 U
95-50-1	1,2-Dichlorobenzene	120	< 120 U
95-48-7	2-Methylphenol	120	< 120 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	120	< 120 U
106-44-5	4-Methylphenol	120	< 120 U
621-64-7	N-Nitroso-Di-N-Propylamine	590	< 590 U
67-72-1	Hexachloroethane	120	< 120 U
98-95-3	Nitrobenzene	120	< 120 U
78-59-1	Isophorone	120	< 120 U
88-75-5	2-Nitrophenol	590	< 590 U
105-67-9	2,4-Dimethylphenol	120	< 120 U
65-85-0	Benzoic Acid	1,200	< 1,200 U
111-91-1	bis(2-Chloroethoxy) Methane	120	< 120 U
120-83-2	2,4-Dichlorophenol	590	< 590 U
120-82-1	1,2,4-Trichlorobenzene	120	< 120 U
91-20-3	Naphthalene	120	< 120 U
106-47-8	4-Chloroaniline	590	< 590 U
87-68-3	Hexachlorobutadiene	120	< 120 U
59-50-7	4-Chloro-3-methylphenol	590	< 590 U
91-57-6	2-Methylnaphthalene	120	< 120 U
77-47-4	Hexachlorocyclopentadiene	590	< 590 U
88-06-2	2,4,6-Trichlorophenol	590	< 590 U
95-95-4	2,4,5-Trichlorophenol	590	< 590 U
91-58-7	2-Chloronaphthalene	120	< 120 U
88-74-4	2-Nitroaniline	590	< 590 U
131-11-3	Dimethylphthalate	120	< 120 U
208-96-8	Acenaphthylene	120	< 120 U
99-09-2	3-Nitroaniline	590	< 590 U
83-32-9	Acenaphthene	120	< 120 U
51-28-5	2,4-Dinitrophenol	1,200	< 1,200 U
100-02-7	4-Nitrophenol	590	< 590 U
132-64-9	Dibenzofuran	120	< 120 U
606-20-2	2,6-Dinitrotoluene	590	< 590 U
121-14-2	2,4-Dinitrotoluene	590	< 590 U
84-66-2	Diethylphthalate	120	< 120 U
7005-72-3	4-Chlorophenyl-phenylether	120	< 120 U
86-73-7	Fluorene	120	< 120 U
100-01-6	4-Nitroaniline	590	< 590 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,200	< 1,200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-005-010
DILUTION

Lab Sample ID: OP35S
LIMS ID: 09-5998
Matrix: Sediment
Date Analyzed: 03/18/09 16:01

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	120	< 120 U
101-55-3	4-Bromophenyl-phenylether	120	< 120 U
118-74-1	Hexachlorobenzene	120	< 120 U
87-86-5	Pentachlorophenol	590	< 590 U
85-01-8	**Phenanthrene**	**120**	**340**
86-74-8	Carbazole	120	< 120 U
120-12-7	**Anthracene**	**120**	**130**
84-74-2	Di-n-Butylphthalate	120	< 120 U
206-44-0	**Fluoranthene**	**120**	**5,000**
129-00-0	**Pyrene**	**120**	**2,400**
85-68-7	Butylbenzylphthalate	120	< 120 U
91-94-1	3,3'-Dichlorobenzidine	590	< 590 U
56-55-3	**Benzo(a)anthracene**	**120**	**550**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**120**	**300**
218-01-9	**Chrysene**	**120**	**1,500**
117-84-0	Di-n-Octyl phthalate	120	< 120 U
205-99-2	**Benzo(b)fluoranthene**	**120**	**650**
207-08-9	**Benzo(k)fluoranthene**	**120**	**1,000**
50-32-8	**Benzo(a)pyrene**	**120**	**420**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**120**	**150**
53-70-3	Dibenz(a,h)anthracene	120	< 120 U
191-24-2	**Benzo(g,h,i)perylene**	**120**	**150**
62-53-3	Aniline	120	< 120 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	120	< 120 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.3%	2-Fluorobiphenyl	73.4%
d14-p-Terphenyl	78.2%	d4-1,2-Dichlorobenzene	50.4%
d5-Phenol	61.8%	2-Fluorophenol	59.2%
2,4,6-Tribromophenol	76.6%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-008-010
SAMPLE

Lab Sample ID: OP35R
LIMS ID: 09-5997
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 13:14
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**47**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**37**
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	**Dibenzofuran**	**20**	**20**
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**46**
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-008-010
SAMPLE

Lab Sample ID: OP35R
LIMS ID: 09-5997
Matrix: Sediment
Date Analyzed: 03/18/09 13:14

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**20**	**300**
86-74-8	**Carbazole**	**20**	**68**
120-12-7	**Anthracene**	**20**	**210**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**840**
129-00-0	**Pyrene**	**20**	**980**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**20**	**380**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**540**
218-01-9	**Chrysene**	**20**	**1,000**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**680**
207-08-9	**Benzo(k)fluoranthene**	**20**	**560**
50-32-8	**Benzo(a)pyrene**	**20**	**470**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**160**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**65**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**140**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	51.2%	2-Fluorobiphenyl	74.8%
d14-p-Terphenyl	92.8%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	69.1%	2-Fluorophenol	69.1%
2,4,6-Tribromophenol	97.1%	d4-2-Chlorophenol	71.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-011-010
SAMPLE

Lab Sample ID: OP35Q
LIMS ID: 09-5996
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 12:41
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**22**
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**28**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**25**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-011-010
SAMPLE

Lab Sample ID: OP35Q
LIMS ID: 09-5996
Matrix: Sediment
Date Analyzed: 03/18/09 12:41

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**240**
86-74-8	**Carbazole**	**19**	**50**
120-12-7	**Anthracene**	**19**	**87**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**500**
129-00-0	**Pyrene**	**19**	**730**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**190**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**370**
218-01-9	**Chrysene**	**19**	**450**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**380**
207-08-9	**Benzo(k)fluoranthene**	**19**	**380**
50-32-8	**Benzo(a)pyrene**	**19**	**360**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**120**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**41**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**110**
62-53-3	Aniline	19	< 19 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.8%	2-Fluorobiphenyl	76.0%
d14-p-Terphenyl	93.6%	d4-1,2-Dichlorobenzene	56.0%
d5-Phenol	74.1%	2-Fluorophenol	73.6%
2,4,6-Tribromophenol	94.9%	d4-2-Chlorophenol	76.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-013-010
SAMPLE

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 12:08
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 31.3%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**270**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	**4-Methylphenol**	**19**	**21**
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**33**
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	**2-Methylnaphthalene**	**19**	**33**
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**120**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	**Dibenzofuran**	**19**	**98**
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**140**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-013-010
SAMPLE

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Date Analyzed: 03/18/09 12:08

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**980**
86-74-8	**Carbazole**	**19**	**170**
120-12-7	**Anthracene**	**19**	**240**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**1,200**
129-00-0	**Pyrene**	**19**	**860**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**510**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**130**
218-01-9	**Chrysene**	**19**	**780**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**580**
207-08-9	**Benzo(k)fluoranthene**	**19**	**480**
50-32-8	**Benzo(a)pyrene**	**19**	**480**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**260**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**120**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**230**
62-53-3	Aniline	19	< 19 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	**1-Methylnaphthalene**	**19**	**20**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.6%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	56.4%
d5-Phenol	69.3%	2-Fluorophenol	71.2%
2,4,6-Tribromophenol	84.8%	d4-2-Chlorophenol	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-014-010
SAMPLE

Lab Sample ID: OP65B
LIMS ID: 09-6149
Matrix: Sediment
Data Release Authorized: VN
Reported: 05/06/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 17:52
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 44.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**19 J**
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**13 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	**Dibenzofuran**	**19**	**11 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-014-010
SAMPLE

Lab Sample ID: OP65B
LIMS ID: 09-6149
Matrix: Sediment
Date Analyzed: 03/13/09 17:52

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**24**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**120**
86-74-8	**Carbazole**	**19**	**36**
120-12-7	**Anthracene**	**19**	**120**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**410**
129-00-0	**Pyrene**	**19**	**240**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**170**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**190 B**
218-01-9	**Chrysene**	**19**	**360**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**280**
207-08-9	**Benzo(k)fluoranthene**	**19**	**200**
50-32-8	**Benzo(a)pyrene**	**19**	**200**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**82**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**35**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**81**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.2%	2-Fluorobiphenyl	72.8%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	64.8%	2-Fluorophenol	72.0%
2,4,6-Tribromophenol	79.5%	d4-2-Chlorophenol	70.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-019-010
SAMPLE

Lab Sample ID: OP65D
LIMS ID: 09-6151
Matrix: Sediment
Data Release Authorized: VJS
Reported: 05/06/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 20:12
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 53.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**10 J**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**12 J**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**11 J**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**32**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**21**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**21**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-019-010
SAMPLE

Lab Sample ID: OP65D
LIMS ID: 09-6151
Matrix: Sediment
Date Analyzed: 03/13/09 20:12

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**49**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**240**
86-74-8	**Carbazole**	**20**	**35**
120-12-7	**Anthracene**	**20**	**160**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**620**
129-00-0	**Pyrene**	**20**	**450**
85-68-7	**Butylbenzylphthalate**	**20**	**12 J**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**290**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**180**
218-01-9	**Chrysene**	**20**	**450**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**410**
207-08-9	**Benzo(k)fluoranthene**	**20**	**280**
50-32-8	**Benzo(a)pyrene**	**20**	**280**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**92**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**31**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**84**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.4%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	87.2%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	70.1%	2-Fluorophenol	75.5%
2,4,6-Tribromophenol	95.5%	d4-2-Chlorophenol	76.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-020-010
SAMPLE

Lab Sample ID: OP35O
LIMS ID: 09-5994
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 11:36
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 53.8%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**20**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**30**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**22**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**73**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**60**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**46**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**110**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-020-010
SAMPLE

Lab Sample ID: OP35O
LIMS ID: 09-5994
Matrix: Sediment
Date Analyzed: 03/18/09 11:36

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**740**
86-74-8	**Carbazole**	**20**	**110**
120-12-7	**Anthracene**	**20**	**390**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**1,900 E**
129-00-0	**Pyrene**	**20**	**1,500**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**740**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**240**
218-01-9	**Chrysene**	**20**	**1,400**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**890**
207-08-9	**Benzo(k)fluoranthene**	**20**	**740**
50-32-8	**Benzo(a)pyrene**	**20**	**760**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**330**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**140**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**330**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.4%	2-Fluorobiphenyl	81.2%
d14-p-Terphenyl	88.0%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	72.3%	2-Fluorophenol	74.9%
2,4,6-Tribromophenol	87.2%	d4-2-Chlorophenol	75.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-020-010
DILUTION

Lab Sample ID: OP35O
LIMS ID: 09-5994
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/18/09 14:53
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 53.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
111-44-4	Bis-(2-Chloroethyl) Ether	58	< 58 U
95-57-8	2-Chlorophenol	58	< 58 U
541-73-1	1,3-Dichlorobenzene	58	< 58 U
106-46-7	1,4-Dichlorobenzene	58	< 58 U
100-51-6	Benzyl Alcohol	58	< 58 U
95-50-1	1,2-Dichlorobenzene	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	58	< 58 U
98-95-3	Nitrobenzene	58	< 58 U
78-59-1	Isophorone	58	< 58 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
65-85-0	Benzoic Acid	580	< 580 U
111-91-1	bis(2-Chloroethoxy) Methane	58	< 58 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	58	< 58 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	58	< 58 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	58	< 58 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	**Acenaphthylene**	**58**	**75**
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	**Acenaphthene**	**58**	**65**
51-28-5	2,4-Dinitrophenol	580	< 580 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	58	< 58 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	58	< 58 U
7005-72-3	4-Chlorophenyl-phenylether	58	< 58 U
86-73-7	**Fluorene**	**58**	**97**
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	580	< 580 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-020-010
DILUTION

Lab Sample ID: OP35O
LIMS ID: 09-5994
Matrix: Sediment
Date Analyzed: 03/18/09 14:53

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	58	< 58 U
101-55-3	4-Bromophenyl-phenylether	58	< 58 U
118-74-1	Hexachlorobenzene	58	< 58 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**58**	**760**
86-74-8	**Carbazole**	**58**	**110**
120-12-7	**Anthracene**	**58**	**410**
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	**Fluoranthene**	**58**	**2,100**
129-00-0	**Pyrene**	**58**	**1,600**
85-68-7	Butylbenzylphthalate	58	< 58 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**58**	**790**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**58**	**240**
218-01-9	**Chrysene**	**58**	**1,400**
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	**Benzo(b)fluoranthene**	**58**	**770**
207-08-9	**Benzo(k)fluoranthene**	**58**	**1,000**
50-32-8	**Benzo(a)pyrene**	**58**	**780**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**58**	**240**
53-70-3	Dibenz(a,h)anthracene	58	< 58 U
191-24-2	**Benzo(g,h,i)perylene**	**58**	**210**
62-53-3	Aniline	58	< 58 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.9%	2-Fluorobiphenyl	76.4%
d14-p-Terphenyl	84.2%	d4-1,2-Dichlorobenzene	53.5%
d5-Phenol	67.8%	2-Fluorophenol	72.0%
2,4,6-Tribromophenol	92.0%	d4-2-Chlorophenol	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-021-010
SAMPLE

Lab Sample ID: OP65E
LIMS ID: 09-6152
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/06/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 20:47
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-021-010
SAMPLE

Lab Sample ID: OP65E
LIMS ID: 09-6152
Matrix: Sediment
Date Analyzed: 03/13/09 20:47

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	**Diethylphthalate**	**20**	**24**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**48**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**23**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**120**
129-00-0	**Pyrene**	**20**	**94**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**48**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**97**
218-01-9	**Chrysene**	**20**	**78**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**99**
207-08-9	**Benzo(k)fluoranthene**	**20**	**58**
50-32-8	**Benzo(a)pyrene**	**20**	**59**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**23**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**23**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.6%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	84.0%	d4-1,2-Dichlorobenzene	64.0%
d5-Phenol	65.9%	2-Fluorophenol	73.6%
2,4,6-Tribromophenol	97.3%	d4-2-Chlorophenol	72.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-023-010
SAMPLE

Lab Sample ID: OP35N
LIMS ID: 09-5993
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 22:28
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 57.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**24**
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**20**
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**26**
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**26**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-023-010
SAMPLE

Lab Sample ID: OP35N
LIMS ID: 09-5993
Matrix: Sediment
Date Analyzed: 03/16/09 22:28

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**180**
86-74-8	**Carbazole**	**20**	**40**
120-12-7	**Anthracene**	**20**	**88**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**480**
129-00-0	**Pyrene**	**20**	**350**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**200**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**200**
218-01-9	**Chrysene**	**20**	**380**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**290**
207-08-9	**Benzo(k)fluoranthene**	**20**	**340**
50-32-8	**Benzo(a)pyrene**	**20**	**220**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**76**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**31**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**75**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.4%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	81.2%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	64.8%	2-Fluorophenol	73.3%
2,4,6-Tribromophenol	92.0%	d4-2-Chlorophenol	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-024-010
SAMPLE

Lab Sample ID: OP35M
LIMS ID: 09-5992
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 21:55
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 46.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-024-010
SAMPLE

Lab Sample ID: OP35M
LIMS ID: 09-5992
Matrix: Sediment
Date Analyzed: 03/16/09 21:55

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**88**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**52**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**220**
129-00-0	**Pyrene**	**20**	**190**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**110**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**140**
218-01-9	**Chrysene**	**20**	**220**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**250**
207-08-9	**Benzo(k)fluoranthene**	**20**	**150**
50-32-8	**Benzo(a)pyrene**	**20**	**140**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**53**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**51**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.8%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	72.4%	d4-1,2-Dichlorobenzene	49.6%
d5-Phenol	56.5%	2-Fluorophenol	65.6%
2,4,6-Tribromophenol	89.3%	d4-2-Chlorophenol	63.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-025-010
SAMPLE

Lab Sample ID: OP35L
LIMS ID: 09-5991
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 21:22
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 45.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**23**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-025-010
SAMPLE

Lab Sample ID: OP35L
LIMS ID: 09-5991
Matrix: Sediment
Date Analyzed: 03/16/09 21:22

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**120**
86-74-8	**Carbazole**	**20**	**24**
120-12-7	**Anthracene**	**20**	**59**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**340**
129-00-0	**Pyrene**	**20**	**310**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**180**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**170**
218-01-9	**Chrysene**	**20**	**330**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**350**
207-08-9	**Benzo(k)fluoranthene**	**20**	**280**
50-32-8	**Benzo(a)pyrene**	**20**	**240**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**82**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**22**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**79**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.4%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	48.4%
d5-Phenol	57.9%	2-Fluorophenol	65.1%
2,4,6-Tribromophenol	90.1%	d4-2-Chlorophenol	63.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-027-010
SAMPLE

Lab Sample ID: OP35A
LIMS ID: 09-5980
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/02/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 14:15
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 53.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**35**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**20**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**34**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-027-010
SAMPLE

Lab Sample ID: OP35A
LIMS ID: 09-5980
Matrix: Sediment
Date Analyzed: 03/16/09 14:15

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**270**
86-74-8	**Carbazole**	**20**	**62**
120-12-7	**Anthracene**	**20**	**140**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**590**
129-00-0	**Pyrene**	**20**	**500**
85-68-7	**Butylbenzylphthalate**	**20**	**200**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**240**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**310**
218-01-9	**Chrysene**	**20**	**540**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**390**
207-08-9	**Benzo(k)fluoranthene**	**20**	**370**
50-32-8	**Benzo(a)pyrene**	**20**	**300**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**140**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**62**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**140**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	76.4%
d14-p-Terphenyl	90.4%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	78.1%	2-Fluorophenol	79.7%
2,4,6-Tribromophenol	92.8%	d4-2-Chlorophenol	81.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-029-010
SAMPLE

Lab Sample ID: OP35K
LIMS ID: 09-5990
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 20:49
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 50.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**20**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**21**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-029-010
SAMPLE

Lab Sample ID: OP35K
LIMS ID: 09-5990
Matrix: Sediment
Date Analyzed: 03/16/09 20:49

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**170**
86-74-8	**Carbazole**	**20**	**25**
120-12-7	**Anthracene**	**20**	**64**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**280**
129-00-0	**Pyrene**	**20**	**300**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**140**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**170**
218-01-9	**Chrysene**	**20**	**230**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**280**
207-08-9	**Benzo(k)fluoranthene**	**20**	**220**
50-32-8	**Benzo(a)pyrene**	**20**	**190**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**72**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**68**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.8%	2-Fluorobiphenyl	64.0%
d14-p-Terphenyl	80.8%	d4-1,2-Dichlorobenzene	52.4%
d5-Phenol	64.3%	2-Fluorophenol	69.1%
2,4,6-Tribromophenol	85.9%	d4-2-Chlorophenol	69.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-030-010
SAMPLE

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 20:16
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 54.5%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**350**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-030-010
SAMPLE

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Date Analyzed: 03/16/09 20:16

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**84**
86-74-8	**Carbazole**	**20**	**20**
120-12-7	**Anthracene**	**20**	**36**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**200**
129-00-0	**Pyrene**	**20**	**190**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**100**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**160**
218-01-9	**Chrysene**	**20**	**200**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**200**
207-08-9	**Benzo(k)fluoranthene**	**20**	**150**
50-32-8	**Benzo(a)pyrene**	**20**	**130**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**48**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**48**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.8%	2-Fluorobiphenyl	62.4%
d14-p-Terphenyl	73.2%	d4-1,2-Dichlorobenzene	50.8%
d5-Phenol	61.6%	2-Fluorophenol	65.3%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	66.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-031-010
SAMPLE

Lab Sample ID: OP35I
LIMS ID: 09-5988
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 19:43
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 54.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**21**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**21**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-031-010
SAMPLE

Lab Sample ID: OP35I
LIMS ID: 09-5988
Matrix: Sediment
Date Analyzed: 03/16/09 19:43

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**150**
86-74-8	**Carbazole**	**20**	**29**
120-12-7	**Anthracene**	**20**	**78**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**370**
129-00-0	**Pyrene**	**20**	**300**
85-68-7	**Butylbenzylphthalate**	**20**	**36**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**210**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**200**
218-01-9	**Chrysene**	**20**	**420**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**340**
207-08-9	**Benzo(k)fluoranthene**	**20**	**280**
50-32-8	**Benzo(a)pyrene**	**20**	**220**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**74**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**34**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**72**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	50.4%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	73.2%	d4-1,2-Dichlorobenzene	51.6%
d5-Phenol	63.2%	2-Fluorophenol	67.2%
2,4,6-Tribromophenol	92.5%	d4-2-Chlorophenol	68.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-032-010
SAMPLE

Lab Sample ID: OP35H
LIMS ID: 09-5987
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 19:10
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 50.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**22**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-032-010
SAMPLE

Lab Sample ID: OP35H
LIMS ID: 09-5987
Matrix: Sediment
Date Analyzed: 03/16/09 19:10

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**79**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**36**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**200**
129-00-0	**Pyrene**	**20**	**180**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**110**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**180**
218-01-9	**Chrysene**	**20**	**200**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**150**
207-08-9	**Benzo(k)fluoranthene**	**20**	**210**
50-32-8	**Benzo(a)pyrene**	**20**	**130**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**49**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**20**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**51**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	50.0%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	77.6%	d4-1,2-Dichlorobenzene	53.2%
d5-Phenol	66.1%	2-Fluorophenol	69.3%
2,4,6-Tribromophenol	88.5%	d4-2-Chlorophenol	70.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-033-010
SAMPLE

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 18:37
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-033-010
SAMPLE

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Date Analyzed: 03/16/09 18:37

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**55**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**27**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**140**
129-00-0	**Pyrene**	**20**	**170**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**76**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**130**
218-01-9	**Chrysene**	**20**	**130**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**150**
207-08-9	**Benzo(k)fluoranthene**	**20**	**130**
50-32-8	**Benzo(a)pyrene**	**20**	**100**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**41**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**43**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	47.2%	2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	50.8%
d5-Phenol	60.5%	2-Fluorophenol	66.7%
2,4,6-Tribromophenol	79.5%	d4-2-Chlorophenol	65.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-034-010
SAMPLE

Lab Sample ID: OP35E
LIMS ID: 09-5984
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 17:31
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 51.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**21**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-034-010
SAMPLE

Lab Sample ID: OP35E
LIMS ID: 09-5984
Matrix: Sediment
Date Analyzed: 03/16/09 17:31

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**57**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**20**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**120**
129-00-0	**Pyrene**	**20**	**120**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**54**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**110**
218-01-9	**Chrysene**	**20**	**96**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**100**
207-08-9	**Benzo(k)fluoranthene**	**20**	**68**
50-32-8	**Benzo(a)pyrene**	**20**	**66**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**28**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**29**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	50.0%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	71.6%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	60.3%	2-Fluorophenol	67.5%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	67.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-035-010
SAMPLE

Lab Sample ID: OP35F
LIMS ID: 09-5985
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 18:04
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-035-010
SAMPLE

Lab Sample ID: OP35F
LIMS ID: 09-5985
Matrix: Sediment
Date Analyzed: 03/16/09 18:04

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**77**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**39**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**210**
129-00-0	**Pyrene**	**20**	**260**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**95**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**120**
218-01-9	**Chrysene**	**20**	**180**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**200**
207-08-9	**Benzo(k)fluoranthene**	**20**	**140**
50-32-8	**Benzo(a)pyrene**	**20**	**130**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**51**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**50**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.8%	2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	47.6%
d5-Phenol	60.3%	2-Fluorophenol	65.3%
2,4,6-Tribromophenol	84.3%	d4-2-Chlorophenol	66.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-036-010
SAMPLE

Lab Sample ID: OP35D
LIMS ID: 09-5983
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 15:53
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 48.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**22**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-036-010
SAMPLE

Lab Sample ID: OP35D
LIMS ID: 09-5983
Matrix: Sediment
Date Analyzed: 03/16/09 15:53

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**77**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**42**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**160**
129-00-0	**Pyrene**	**20**	**160**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**87**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**160**
218-01-9	**Chrysene**	**20**	**160**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**140**
207-08-9	**Benzo(k)fluoranthene**	**20**	**110**
50-32-8	**Benzo(a)pyrene**	**20**	**100**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**51**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**23**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**52**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	51.6%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	76.8%	d4-1,2-Dichlorobenzene	56.0%
d5-Phenol	66.4%	2-Fluorophenol	71.2%
2,4,6-Tribromophenol	84.3%	d4-2-Chlorophenol	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-038-010
SAMPLE

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 16:55
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**14 J**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**460**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**20**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**25**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**18 J**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	**Dimethylphthalate**	**20**	**17 J**
208-96-8	**Acenaphthylene**	**20**	**25**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**18 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**15 J**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**19 J**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-038-010
SAMPLE

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Date Analyzed: 03/11/09 16:55

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	160
86-74-8	Carbazole	20	42
120-12-7	Anthracene	20	94
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	850
129-00-0	Pyrene	20	970
85-68-7	Butylbenzylphthalate	20	46
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	360
117-81-7	bis(2-Ethylhexyl)phthalate	20	340
218-01-9	Chrysene	20	560
117-84-0	Di-n-Octyl phthalate	20	14 J
205-99-2	Benzo(b)fluoranthene	20	460
207-08-9	Benzo(k)fluoranthene	20	410
50-32-8	Benzo(a)pyrene	20	360
193-39-5	Indeno(1,2,3-cd)pyrene	20	120
53-70-3	Dibenz(a,h)anthracene	20	29
191-24-2	Benzo(g,h,i)perylene	20	120
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	11 J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	51.2%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	65.6%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	61.9%	2-Fluorophenol	61.1%
2,4,6-Tribromophenol	70.4%	d4-2-Chlorophenol	65.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-100-010
SAMPLE

Lab Sample ID: OP33B
LIMS ID: 09-5979
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 17:29
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**24**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**28**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**15 J**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**18 J**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**15 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**15 J**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**23**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-100-010
SAMPLE

Lab Sample ID: OP33B
LIMS ID: 09-5979
Matrix: Sediment
Date Analyzed: 03/11/09 17:29

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**190**
86-74-8	**Carbazole**	**20**	**29**
120-12-7	**Anthracene**	**20**	**80**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**370**
129-00-0	**Pyrene**	**20**	**380**
85-68-7	**Butylbenzylphthalate**	**20**	**190**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**170**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**320**
218-01-9	**Chrysene**	**20**	**290**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**250**
207-08-9	**Benzo(k)fluoranthene**	**20**	**300**
50-32-8	**Benzo(a)pyrene**	**20**	**240**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**92**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**29**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**97**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	**1-Methylnaphthalene**	**20**	**11 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.0%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	56.4%
d5-Phenol	64.3%	2-Fluorophenol	64.3%
2,4,6-Tribromophenol	72.5%	d4-2-Chlorophenol	69.3%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-101-010
SAMPLE

Lab Sample ID: OP33C
LIMS ID: 09-6002
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 19:12
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 43.8%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**18 J**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**3,800 E**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	**4-Methylphenol**	**19**	**81**
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**34**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**27**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**21**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**34**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**30**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**50**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-101-010
SAMPLE

Lab Sample ID: OP33C
LIMS ID: 09-6002
Matrix: Sediment
Date Analyzed: 03/11/09 19:12

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	Phenanthrene	19	360
86-74-8	Carbazole	19	53
120-12-7	Anthracene	19	130
84-74-2	Di-n-Butylphthalate	19	17 J
206-44-0	Fluoranthene	19	510
129-00-0	Pyrene	19	540
85-68-7	Butylbenzylphthalate	19	44
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	280
117-81-7	bis(2-Ethylhexyl)phthalate	19	1,000
218-01-9	Chrysene	19	460
117-84-0	Di-n-Octyl phthalate	19	21
205-99-2	Benzo(b)fluoranthene	19	390
207-08-9	Benzo(k)fluoranthene	19	450
50-32-8	Benzo(a)pyrene	19	320
193-39-5	Indeno(1,2,3-cd)pyrene	19	98
53-70-3	Dibenz(a,h)anthracene	19	36
191-24-2	Benzo(g,h,i)perylene	19	96
62-53-3	Aniline	19	< 19 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	19	16 J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	45.2%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	57.3%	2-Fluorophenol	57.6%
2,4,6-Tribromophenol	69.3%	d4-2-Chlorophenol	64.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-101-010
DILUTION

Lab Sample ID: OP33C
LIMS ID: 09-6002
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/13/09 13:47
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 5.00
Percent Moisture: 43.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	97	< 97 U
111-44-4	Bis-(2-Chloroethyl) Ether	97	< 97 U
95-57-8	2-Chlorophenol	97	< 97 U
541-73-1	1,3-Dichlorobenzene	97	< 97 U
106-46-7	**1,4-Dichlorobenzene**	**97**	**4,200**
100-51-6	Benzyl Alcohol	97	< 97 U
95-50-1	1,2-Dichlorobenzene	97	< 97 U
95-48-7	2-Methylphenol	97	< 97 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	97	< 97 U
106-44-5	4-Methylphenol	97	< 97 U
621-64-7	N-Nitroso-Di-N-Propylamine	480	< 480 U
67-72-1	Hexachloroethane	97	< 97 U
98-95-3	Nitrobenzene	97	< 97 U
78-59-1	Isophorone	97	< 97 U
88-75-5	2-Nitrophenol	480	< 480 U
105-67-9	2,4-Dimethylphenol	97	< 97 U
65-85-0	Benzoic Acid	970	< 970 U
111-91-1	bis(2-Chloroethoxy) Methane	97	< 97 U
120-83-2	2,4-Dichlorophenol	480	< 480 U
120-82-1	1,2,4-Trichlorobenzene	97	< 97 U
91-20-3	Naphthalene	97	< 97 U
106-47-8	4-Chloroaniline	480	< 480 U
87-68-3	Hexachlorobutadiene	97	< 97 U
59-50-7	4-Chloro-3-methylphenol	480	< 480 U
91-57-6	2-Methylnaphthalene	97	< 97 U
77-47-4	Hexachlorocyclopentadiene	480	< 480 U
88-06-2	2,4,6-Trichlorophenol	480	< 480 U
95-95-4	2,4,5-Trichlorophenol	480	< 480 U
91-58-7	2-Chloronaphthalene	97	< 97 U
88-74-4	2-Nitroaniline	480	< 480 U
131-11-3	Dimethylphthalate	97	< 97 U
208-96-8	Acenaphthylene	97	< 97 U
99-09-2	3-Nitroaniline	480	< 480 U
83-32-9	Acenaphthene	97	< 97 U
51-28-5	2,4-Dinitrophenol	970	< 970 U
100-02-7	4-Nitrophenol	480	< 480 U
132-64-9	Dibenzofuran	97	< 97 U
606-20-2	2,6-Dinitrotoluene	480	< 480 U
121-14-2	2,4-Dinitrotoluene	480	< 480 U
84-66-2	Diethylphthalate	97	< 97 U
7005-72-3	4-Chlorophenyl-phenylether	97	< 97 U
86-73-7	Fluorene	97	< 97 U
100-01-6	4-Nitroaniline	480	< 480 U
534-52-1	4,6-Dinitro-2-Methylphenol	970	< 970 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-101-010
DILUTION

Lab Sample ID: OP33C
LIMS ID: 09-6002
Matrix: Sediment
Date Analyzed: 03/13/09 13:47

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	97	< 97 U
101-55-3	4-Bromophenyl-phenylether	97	< 97 U
118-74-1	Hexachlorobenzene	97	< 97 U
87-86-5	Pentachlorophenol	480	< 480 U
85-01-8	**Phenanthrene**	**97**	**330**
86-74-8	Carbazole	97	< 97 U
120-12-7	**Anthracene**	**97**	**120**
84-74-2	Di-n-Butylphthalate	97	< 97 U
206-44-0	**Fluoranthene**	**97**	**600**
129-00-0	**Pyrene**	**97**	**460**
85-68-7	Butylbenzylphthalate	97	< 97 U
91-94-1	3,3'-Dichlorobenzidine	480	< 480 U
56-55-3	**Benzo(a)anthracene**	**97**	**260**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**97**	**860**
218-01-9	**Chrysene**	**97**	**430**
117-84-0	Di-n-Octyl phthalate	97	< 97 U
205-99-2	**Benzo(b)fluoranthene**	**97**	**290**
207-08-9	**Benzo(k)fluoranthene**	**97**	**350**
50-32-8	**Benzo(a)pyrene**	**97**	**290**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**97**	**150**
53-70-3	Dibenz(a,h)anthracene	97	< 97 U
191-24-2	**Benzo(g,h,i)perylene**	**97**	**170**
62-53-3	Aniline	97	< 97 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	97	< 97 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	46.4%	2-Fluorobiphenyl	59.8%
d14-p-Terphenyl	53.0%	d4-1,2-Dichlorobenzene	46.8%
d5-Phenol	54.3%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	62.0%	d4-2-Chlorophenol	56.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-102-010
SAMPLE

Lab Sample ID: OP35B
LIMS ID: 09-5981
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 14:47
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 42.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**25**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-102-010
SAMPLE

Lab Sample ID: OP35B
LIMS ID: 09-5981
Matrix: Sediment
Date Analyzed: 03/16/09 14:47

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**75**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**34**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**150**
129-00-0	**Pyrene**	**20**	**160**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**88**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**130**
218-01-9	**Chrysene**	**20**	**170**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**130**
207-08-9	**Benzo(k)fluoranthene**	**20**	**130**
50-32-8	**Benzo(a)pyrene**	**20**	**110**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**53**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**21**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**60**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.6%	2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	82.8%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	70.9%	2-Fluorophenol	76.5%
2,4,6-Tribromophenol	85.3%	d4-2-Chlorophenol	75.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-104-010
SAMPLE

Lab Sample ID: OP22F
LIMS ID: 09-5942
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/02/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/11/09 19:00
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 48.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**19 J**
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	**2-Methylnaphthalene**	**20**	**12 J**
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**35**
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**14 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	**Dibenzofuran**	**20**	**18 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-104-010
SAMPLE

Lab Sample ID: OP22F
LIMS ID: 09-5942
Matrix: Sediment
Date Analyzed: 03/11/09 19:00

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	**Diethylphthalate**	**20**	**34 B**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**45**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**310**
86-74-8	**Carbazole**	**20**	**32**
120-12-7	**Anthracene**	**20**	**190**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**810**
129-00-0	**Pyrene**	**20**	**860**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**740**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**82**
218-01-9	**Chrysene**	**20**	**1,000**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**1,100**
207-08-9	**Benzo(k)fluoranthene**	**20**	**570**
50-32-8	**Benzo(a)pyrene**	**20**	**740**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**290**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**140**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**260**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine	99	< 99 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	64.8%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	65.6%	2-Fluorophenol	61.6%
2,4,6-Tribromophenol	76.0%	d4-2-Chlorophenol	64.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-109-010
SAMPLE

Lab Sample ID: OP22E
LIMS ID: 09-5941
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/02/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/11/09 18:26
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 54.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**11 J**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**10 J**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-109-010
SAMPLE

Lab Sample ID: OP22E
LIMS ID: 09-5941
Matrix: Sediment
Date Analyzed: 03/11/09 18:26

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**10 J**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**73**
86-74-8	**Carbazole**	**20**	**11 J**
120-12-7	**Anthracene**	**20**	**41**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**220**
129-00-0	**Pyrene**	**20**	**200**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**130**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**69**
218-01-9	**Chrysene**	**20**	**190**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**180**
207-08-9	**Benzo(k)fluoranthene**	**20**	**120**
50-32-8	**Benzo(a)pyrene**	**20**	**130**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**53**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**20**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**54**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine	98	< 98 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	61.2%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	63.2%	2-Fluorophenol	57.9%
2,4,6-Tribromophenol	69.9%	d4-2-Chlorophenol	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-110-010
SAMPLE

Lab Sample ID: OP33D
LIMS ID: 09-6003
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 19:47
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 53.0%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**24**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**17 J**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**22**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**13 J**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	**Dimethylphthalate**	**20**	**13 J**
208-96-8	**Acenaphthylene**	**20**	**24**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**14 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**14 J**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**18 J**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-110-010
SAMPLE

Lab Sample ID: OP33D
LIMS ID: 09-6003
Matrix: Sediment
Date Analyzed: 03/11/09 19:47

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	140
86-74-8	Carbazole	20	37
120-12-7	Anthracene	20	88
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	320
129-00-0	Pyrene	20	330
85-68-7	Butylbenzylphthalate	20	18 J
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	150
117-81-7	bis(2-Ethylhexyl)phthalate	20	180
218-01-9	Chrysene	20	280
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	270
207-08-9	Benzo(k)fluoranthene	20	380
50-32-8	Benzo(a)pyrene	20	220
193-39-5	Indeno(1,2,3-cd)pyrene	20	72
53-70-3	Dibenz(a,h)anthracene	20	28
191-24-2	Benzo(g,h,i)perylene	20	68
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	49.6%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	68.8%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	62.1%	2-Fluorophenol	67.5%
2,4,6-Tribromophenol	78.4%	d4-2-Chlorophenol	67.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-111-010
SAMPLE

Lab Sample ID: OP22D
LIMS ID: 09-5940
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/02/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/11/09 17:51
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-111-010
SAMPLE

Lab Sample ID: OP22D
LIMS ID: 09-5940
Matrix: Sediment
Date Analyzed: 03/11/09 17:51

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	**Diethylphthalate**	**19**	**27 B**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**12 J**
129-00-0	**Pyrene**	**19**	**18 J**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**9.8 J**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**18 J**
218-01-9	**Chrysene**	**19**	**12 J**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**14 J**
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U
62-53-3	Aniline	19	< 19 U
62-75-9	N-Nitrosodimethylamine	96	< 96 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	62.4%	2-Fluorophenol	58.7%
2,4,6-Tribromophenol	73.6%	d4-2-Chlorophenol	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-113-010
SAMPLE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/02/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/11/09 16:08
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**17 J**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**31**
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**22**
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	**2-Methylnaphthalene**	**20**	**13 J**
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**9.9 J**
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**15 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	**Dibenzofuran**	**20**	**14 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-113-010
SAMPLE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Date Analyzed: 03/11/09 16:08

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**21**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**80**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**38**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**210**
129-00-0	**Pyrene**	**20**	**230**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**78**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**66**
218-01-9	**Chrysene**	**20**	**110**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**83**
207-08-9	**Benzo(k)fluoranthene**	**20**	**84**
50-32-8	**Benzo(a)pyrene**	**20**	**75**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**33**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**11 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**38**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine	99	< 99 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.4%	2-Fluorobiphenyl	80.8%
d14-p-Terphenyl	76.0%	d4-1,2-Dichlorobenzene	66.8%
d5-Phenol	75.2%	2-Fluorophenol	70.7%
2,4,6-Tribromophenol	86.1%	d4-2-Chlorophenol	73.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-114-010
SAMPLE

Lab Sample ID: OP33E
LIMS ID: 09-6004
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 20:22
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 44.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**10 J**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**27**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**12 J**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**17 J**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**29**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**22**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**19 J**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-114-010
SAMPLE

Lab Sample ID: OP33E
LIMS ID: 09-6004
Matrix: Sediment
Date Analyzed: 03/11/09 20:22

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	100
86-74-8	Carbazole	20	24
120-12-7	Anthracene	20	61
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	210
129-00-0	Pyrene	20	350
85-68-7	Butylbenzylphthalate	20	17 J
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	110
117-81-7	bis(2-Ethylhexyl)phthalate	20	230
218-01-9	Chrysene	20	200
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	280
207-08-9	Benzo(k)fluoranthene	20	230
50-32-8	Benzo(a)pyrene	20	190
193-39-5	Indeno(1,2,3-cd)pyrene	20	57
53-70-3	Dibenz(a,h)anthracene	20	18 J
191-24-2	Benzo(g,h,i)perylene	20	58
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	9.9 J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	46.0%	2-Fluorobiphenyl	60.4%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	50.4%
d5-Phenol	55.5%	2-Fluorophenol	62.7%
2,4,6-Tribromophenol	77.1%	d4-2-Chlorophenol	61.9%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-116-010
SAMPLE

Lab Sample ID: OP22A
LIMS ID: 09-5937
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/02/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/11/09 14:59
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 44.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**23**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**9.7 J**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**11 J**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**14 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**13 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-116-010
SAMPLE

Lab Sample ID: OP22A
LIMS ID: 09-5937
Matrix: Sediment
Date Analyzed: 03/11/09 14:59

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	**Diethylphthalate**	**19**	**25 B**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**15 J**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**71**
86-74-8	**Carbazole**	**19**	**10 J**
120-12-7	**Anthracene**	**19**	**40**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**100**
129-00-0	**Pyrene**	**19**	**300**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**65**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**150**
218-01-9	**Chrysene**	**19**	**120**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**130**
207-08-9	**Benzo(k)fluoranthene**	**19**	**100**
50-32-8	**Benzo(a)pyrene**	**19**	**100**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**45**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**11 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**54**
62-53-3	Aniline	19	< 19 U
62-75-9	N-Nitrosodimethylamine	97	< 97 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.8%	2-Fluorobiphenyl	78.0%
d14-p-Terphenyl	83.2%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	75.5%	2-Fluorophenol	68.3%
2,4,6-Tribromophenol	94.1%	d4-2-Chlorophenol	71.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-119-010
SAMPLE

Lab Sample ID: 0097N
LIMS ID: 09-5799
Matrix: Sediment
Data Release Authorized: VTD
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 02:03
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 46.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-119-010
SAMPLE

Lab Sample ID: 0097N
LIMS ID: 09-5799
Matrix: Sediment
Date Analyzed: 03/10/09 02:03

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**53**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**27**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**100**
129-00-0	**Pyrene**	**20**	**130**
85-68-7	**Butylbenzylphthalate**	**20**	**14 J**
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**65**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**150**
218-01-9	**Chrysene**	**20**	**110**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**140**
207-08-9	**Benzo(k)fluoranthene**	**20**	**100**
50-32-8	**Benzo(a)pyrene**	**20**	**94**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**28**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**12 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**27**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	42.0%	2-Fluorobiphenyl	50.4%
d14-p-Terphenyl	58.0%	d4-1,2-Dichlorobenzene	44.4%
d5-Phenol	51.2%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	74.4%	d4-2-Chlorophenol	58.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-120-010
SAMPLE

Lab Sample ID: 00970
LIMS ID: 09-5800
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 02:38
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 39.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-120-010
SAMPLE

Lab Sample ID: 00970
LIMS ID: 09-5800
Matrix: Sediment
Date Analyzed: 03/10/09 02:38

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**56**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**16 J**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**110**
129-00-0	**Pyrene**	**20**	**150**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**41**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**130**
218-01-9	**Chrysene**	**20**	**61**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**89**
207-08-9	**Benzo(k)fluoranthene**	**20**	**69**
50-32-8	**Benzo(a)pyrene**	**20**	**67**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**17 J**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**18 J**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	46.8%	2-Fluorobiphenyl	56.4%
d14-p-Terphenyl	65.2%	d4-1,2-Dichlorobenzene	52.4%
d5-Phenol	56.8%	2-Fluorophenol	60.8%
2,4,6-Tribromophenol	74.7%	d4-2-Chlorophenol	64.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-122-010
SAMPLE

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Data Release Authorized: VTD
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 01:29
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-122-010
SAMPLE

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Date Analyzed: 03/10/09 01:29

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**40**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**20**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**97**
129-00-0	**Pyrene**	**20**	**150**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**53**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**66**
218-01-9	**Chrysene**	**20**	**95**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**120**
207-08-9	**Benzo(k)fluoranthene**	**20**	**90**
50-32-8	**Benzo(a)pyrene**	**20**	**76**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**25**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**9.8 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**26**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	45.2%	2-Fluorobiphenyl	54.0%
d14-p-Terphenyl	62.8%	d4-1,2-Dichlorobenzene	49.6%
d5-Phenol	50.7%	2-Fluorophenol	56.8%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	60.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-126-010
SAMPLE

Lab Sample ID: OP65C
LIMS ID: 09-6150
Matrix: Sediment
Data Release Authorized: VB
Reported: 05/06/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 18:27
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 32.2%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**14 J**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**11 J**
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-126-010
SAMPLE

Lab Sample ID: OP65C
LIMS ID: 09-6150
Matrix: Sediment
Date Analyzed: 03/13/09 18:27

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**54**
86-74-8	**Carbazole**	**20**	**16 J**
120-12-7	**Anthracene**	**20**	**28**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**150**
129-00-0	**Pyrene**	**20**	**210**
85-68-7	**Butylbenzylphthalate**	**20**	**13 J**
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**64**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**120**
218-01-9	**Chrysene**	**20**	**130**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**190**
207-08-9	**Benzo(k)fluoranthene**	**20**	**120**
50-32-8	**Benzo(a)pyrene**	**20**	**120**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**47**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**20 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**51**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	91.2%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	72.5%	2-Fluorophenol	79.5%
2,4,6-Tribromophenol	102%	d4-2-Chlorophenol	77.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-127-010
SAMPLE

Lab Sample ID: 0097L
LIMS ID: 09-5797
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 00:54
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-127-010
SAMPLE

Lab Sample ID: 0097L
LIMS ID: 09-5797
Matrix: Sediment
Date Analyzed: 03/10/09 00:54

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**48**
86-74-8	**Carbazole**	**20**	**11 J**
120-12-7	**Anthracene**	**20**	**24**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**110**
129-00-0	**Pyrene**	**20**	**120**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**52**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**59**
218-01-9	**Chrysene**	**20**	**86**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**110**
207-08-9	**Benzo(k)fluoranthene**	**20**	**83**
50-32-8	**Benzo(a)pyrene**	**20**	**80**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**25**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**10 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**25**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	46.0%	2-Fluorobiphenyl	54.8%
d14-p-Terphenyl	62.0%	d4-1,2-Dichlorobenzene	48.0%
d5-Phenol	53.6%	2-Fluorophenol	56.8%
2,4,6-Tribromophenol	82.1%	d4-2-Chlorophenol	61.6%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-129-010
SAMPLE

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Data Release Authorized: VT
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 00:20
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**13 J**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-129-010
SAMPLE

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Date Analyzed: 03/10/09 00:20

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**12 J**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**120**
86-74-8	**Carbazole**	**20**	**15 J**
120-12-7	**Anthracene**	**20**	**30**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**290**
129-00-0	**Pyrene**	**20**	**210**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**79**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**91**
218-01-9	**Chrysene**	**20**	**140**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**140**
207-08-9	**Benzo(k)fluoranthene**	**20**	**110**
50-32-8	**Benzo(a)pyrene**	**20**	**89**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**30**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**27**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	50.0%	2-Fluorobiphenyl	60.8%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	58.7%	2-Fluorophenol	63.5%
2,4,6-Tribromophenol	88.3%	d4-2-Chlorophenol	67.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-130-010
SAMPLE

Lab Sample ID: 0097J
LIMS ID: 09-5795
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 12:30
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-130-010
SAMPLE

Lab Sample ID: 0097J
LIMS ID: 09-5795
Matrix: Sediment
Date Analyzed: 03/10/09 12:30

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**63**
86-74-8	**Carbazole**	**20**	**10 J**
120-12-7	**Anthracene**	**20**	**24**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**190**
129-00-0	**Pyrene**	**20**	**150**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**66**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**55**
218-01-9	**Chrysene**	**20**	**110**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**96**
207-08-9	**Benzo(k)fluoranthene**	**20**	**92**
50-32-8	**Benzo(a)pyrene**	**20**	**79**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**49**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**17 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**57**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	39.2%	2-Fluorobiphenyl	46.0%
d14-p-Terphenyl	42.4%	d4-1,2-Dichlorobenzene	34.6%
d5-Phenol	56.8%	2-Fluorophenol	53.6%
2,4,6-Tribromophenol	59.2%	d4-2-Chlorophenol	57.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-132-010
SAMPLE

Lab Sample ID: 0097P
LIMS ID: 09-5801
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 11:55
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**18 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-132-010
SAMPLE

Lab Sample ID: 0097P
LIMS ID: 09-5801
Matrix: Sediment
Date Analyzed: 03/10/09 11:55

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**63**
86-74-8	**Carbazole**	**20**	**10 J**
120-12-7	**Anthracene**	**20**	**29**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**120**
129-00-0	**Pyrene**	**20**	**120**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**77**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**160**
218-01-9	**Chrysene**	**20**	**130**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**160**
207-08-9	**Benzo(k)fluoranthene**	**20**	**77**
50-32-8	**Benzo(a)pyrene**	**20**	**99**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**66**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**23**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**76**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.6%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	57.6%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	65.9%	2-Fluorophenol	66.9%
2,4,6-Tribromophenol	70.9%	d4-2-Chlorophenol	70.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-200-010
SAMPLE

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Data Release Authorized: VD
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 22:36
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 42.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**13 J**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**18 J**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**12 J**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**19 J**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**13 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-200-010
SAMPLE

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Date Analyzed: 03/09/09 22:36

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	**Diethylphthalate**	**19**	**25**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**19 J**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**150**
86-74-8	**Carbazole**	**19**	**26**
120-12-7	**Anthracene**	**19**	**66**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**420**
129-00-0	**Pyrene**	**19**	**840**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**140**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**150**
218-01-9	**Chrysene**	**19**	**310**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**320**
207-08-9	**Benzo(k)fluoranthene**	**19**	**360**
50-32-8	**Benzo(a)pyrene**	**19**	**320**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**75**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**34**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**74**
62-53-3	Aniline	19	< 19 U
90-12-0	**1-Methylnaphthalene**	**19**	**13 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	49.2%	2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	53.6%
d5-Phenol	59.7%	2-Fluorophenol	61.1%
2,4,6-Tribromophenol	77.1%	d4-2-Chlorophenol	65.6%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-202-010
SAMPLE

Lab Sample ID: 0097G
LIMS ID: 09-5792
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 22:02
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**14 J**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**10 J**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**15 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-202-010
SAMPLE

Lab Sample ID: 0097G
LIMS ID: 09-5792
Matrix: Sediment
Date Analyzed: 03/09/09 22:02

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	**Diethylphthalate**	**19**	**74**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**17 J**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**120**
86-74-8	**Carbazole**	**19**	**15 J**
120-12-7	**Anthracene**	**19**	**36**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**270**
129-00-0	**Pyrene**	**19**	**230**
85-68-7	**Butylbenzylphthalate**	**19**	**22**
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**110**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**75**
218-01-9	**Chrysene**	**19**	**160**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**170**
207-08-9	**Benzo(k)fluoranthene**	**19**	**100**
50-32-8	**Benzo(a)pyrene**	**19**	**120**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**48**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**22**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**46**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	49.6%	2-Fluorobiphenyl	57.2%
d14-p-Terphenyl	65.6%	d4-1,2-Dichlorobenzene	52.4%
d5-Phenol	54.4%	2-Fluorophenol	60.5%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	62.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-204-010
SAMPLE

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 21:27
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**12 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-204-010
SAMPLE

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Date Analyzed: 03/09/09 21:27

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	**Diethylphthalate**	**19**	**20**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**10 J**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**84**
86-74-8	**Carbazole**	**19**	**11 J**
120-12-7	**Anthracene**	**19**	**35**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**170**
129-00-0	**Pyrene**	**19**	**160**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**94**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**63**
218-01-9	**Chrysene**	**19**	**150**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**160**
207-08-9	**Benzo(k)fluoranthene**	**19**	**100**
50-32-8	**Benzo(a)pyrene**	**19**	**120**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**55**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**18 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**55**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	62.4%
d14-p-Terphenyl	69.2%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	61.3%	2-Fluorophenol	67.7%
2,4,6-Tribromophenol	85.1%	d4-2-Chlorophenol	69.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-207-010
SAMPLE

Lab Sample ID: 0097E
LIMS ID: 09-5790
Matrix: Sediment
Data Release Authorized: VTJ
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 20:53
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 35.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-207-010
SAMPLE

Lab Sample ID: 0097E
LIMS ID: 09-5790
Matrix: Sediment
Date Analyzed: 03/09/09 20:53

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	**Diethylphthalate**	**20**	**24**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**10 J**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**78**
86-74-8	**Carbazole**	**20**	**12 J**
120-12-7	**Anthracene**	**20**	**33**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**160**
129-00-0	**Pyrene**	**20**	**170**
85-68-7	**Butylbenzylphthalate**	**20**	**37**
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**100**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**56**
218-01-9	**Chrysene**	**20**	**160**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**180**
207-08-9	**Benzo(k)fluoranthene**	**20**	**100**
50-32-8	**Benzo(a)pyrene**	**20**	**120**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**61**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**18 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**59**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.2%	2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	60.8%	2-Fluorophenol	67.5%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-211-010
SAMPLE

Lab Sample ID: OP33G
LIMS ID: 09-6009
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 20:56
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.4%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**40**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**10 J**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**23**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**10 J**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**20**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**16 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**14 J**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**18 J**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-211-010
SAMPLE

Lab Sample ID: OP33G
LIMS ID: 09-6009
Matrix: Sediment
Date Analyzed: 03/11/09 20:56

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	Phenanthrene	19	140
86-74-8	Carbazole	19	29
120-12-7	Anthracene	19	63
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	Fluoranthene	19	300
129-00-0	Pyrene	19	300
85-68-7	Butylbenzylphthalate	19	22
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	130
117-81-7	bis(2-Ethylhexyl)phthalate	19	830
218-01-9	Chrysene	19	230
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	320
207-08-9	Benzo(k)fluoranthene	19	300
50-32-8	Benzo(a)pyrene	19	210
193-39-5	Indeno(1,2,3-cd)pyrene	19	63
53-70-3	Dibenz(a,h)anthracene	19	20
191-24-2	Benzo(g,h,i)perylene	19	66
62-53-3	Aniline	19	< 19 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.0%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	65.6%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	58.4%	2-Fluorophenol	65.1%
2,4,6-Tribromophenol	75.2%	d4-2-Chlorophenol	64.3%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-216-010
SAMPLE

Lab Sample ID: 0097D
LIMS ID: 09-5789
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 19:08
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**37**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**10 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-216-010
SAMPLE

Lab Sample ID: 0097D
LIMS ID: 09-5789
Matrix: Sediment
Date Analyzed: 03/09/09 19:08

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**13 J**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**87**
86-74-8	**Carbazole**	**19**	**9.8 J**
120-12-7	**Anthracene**	**19**	**42**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**130**
129-00-0	**Pyrene**	**19**	**130**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**91**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**51**
218-01-9	**Chrysene**	**19**	**190**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**110**
207-08-9	**Benzo(k)fluoranthene**	**19**	**110**
50-32-8	**Benzo(a)pyrene**	**19**	**93**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**55**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**16 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**56**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.6%	2-Fluorobiphenyl	60.8%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	51.2%
d5-Phenol	65.1%	2-Fluorophenol	69.9%
2,4,6-Tribromophenol	84.3%	d4-2-Chlorophenol	72.0%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-217-010
SAMPLE

Lab Sample ID: 0097C
LIMS ID: 09-5788
Matrix: Sediment
Data Release Authorized: VJS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 18:34
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-217-010
SAMPLE

Lab Sample ID: 0097C
LIMS ID: 09-5788
Matrix: Sediment
Date Analyzed: 03/09/09 18:34

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**21**
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**14 J**
206-44-0	**Fluoranthene**	**20**	**41**
129-00-0	**Pyrene**	**20**	**36**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**25**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**25**
218-01-9	**Chrysene**	**20**	**41**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**25**
207-08-9	**Benzo(k)fluoranthene**	**20**	**51**
50-32-8	**Benzo(a)pyrene**	**20**	**31**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**20**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**25**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	70.0%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	61.6%	2-Fluorophenol	64.3%
2,4,6-Tribromophenol	72.0%	d4-2-Chlorophenol	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-218-010
SAMPLE

Lab Sample ID: 0097B
LIMS ID: 09-5787
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 17:59
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	20	< 20 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-218-010
SAMPLE

Lab Sample ID: 0097B
LIMS ID: 09-5787
Matrix: Sediment
Date Analyzed: 03/09/09 17:59

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**11 J**
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**17 J**
129-00-0	**Pyrene**	**20**	**21**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**120**
218-01-9	**Chrysene**	**20**	**12 J**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**14 J**
207-08-9	**Benzo(k)fluoranthene**	**20**	**13 J**
50-32-8	**Benzo(a)pyrene**	**20**	**12 J**
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**10 J**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.0%	2-Fluorobiphenyl	53.6%
d14-p-Terphenyl	64.8%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	56.3%	2-Fluorophenol	61.1%
2,4,6-Tribromophenol	72.5%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-219-010
SAMPLE

Lab Sample ID: OP33H
LIMS ID: 09-6010
Matrix: Sediment
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 21:31
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.8%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**15 J**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**16 J**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**35**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**13 J**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**16 J**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**19 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**14 J**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**31**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-219-010
SAMPLE

Lab Sample ID: OP33H
LIMS ID: 09-6010
Matrix: Sediment
Date Analyzed: 03/11/09 21:31

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	170
86-74-8	Carbazole	20	22
120-12-7	Anthracene	20	130
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	260
129-00-0	Pyrene	20	240
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	120
117-81-7	bis(2-Ethylhexyl)phthalate	20	56
218-01-9	Chrysene	20	170
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	190
207-08-9	Benzo(k)fluoranthene	20	160
50-32-8	Benzo(a)pyrene	20	140
193-39-5	Indeno(1,2,3-cd)pyrene	20	39
53-70-3	Dibenz(a,h)anthracene	20	13 J
191-24-2	Benzo(g,h,i)perylene	20	41
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.4%	2-Fluorobiphenyl	62.4%
d14-p-Terphenyl	62.8%	d4-1,2-Dichlorobenzene	58.4%
d5-Phenol	58.4%	2-Fluorophenol	67.5%
2,4,6-Tribromophenol	72.8%	d4-2-Chlorophenol	65.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-220-010
SAMPLE

Lab Sample ID: 0097A
LIMS ID: 09-5786
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 17:25
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**230**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**140**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**330**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**100**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-220-010
SAMPLE

Lab Sample ID: 0097A
LIMS ID: 09-5786
Matrix: Sediment
Date Analyzed: 03/09/09 17:25

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**300**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**2,300 E**
86-74-8	**Carbazole**	**20**	**150**
120-12-7	**Anthracene**	**20**	**270**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**1,600 E**
129-00-0	**Pyrene**	**20**	**1,700 E**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**510**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**30**
218-01-9	**Chrysene**	**20**	**680**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**390**
207-08-9	**Benzo(k)fluoranthene**	**20**	**470**
50-32-8	**Benzo(a)pyrene**	**20**	**620**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**330**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**160**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**420**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**120**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.8%	2-Fluorobiphenyl	65.2%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	60.0%
d5-Phenol	64.3%	2-Fluorophenol	68.3%
2,4,6-Tribromophenol	90.7%	d4-2-Chlorophenol	71.7%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-220-010
DILUTION

Lab Sample ID: 0097A
LIMS ID: 09-5786
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 13:04
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 25.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	**Naphthalene**	**59**	**240**
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	**2-Methylnaphthalene**	**59**	**140**
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	**Acenaphthene**	**59**	**340**
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	**Dibenzofuran**	**59**	**100**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-220-010
DILUTION

Lab Sample ID: 0097A
LIMS ID: 09-5786
Matrix: Sediment
Date Analyzed: 03/10/09 13:04

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	**Fluorene**	**59**	**290**
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	**Phenanthrene**	**59**	**2,500**
86-74-8	**Carbazole**	**59**	**140**
120-12-7	**Anthracene**	**59**	**270**
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**1,600**
129-00-0	**Pyrene**	**59**	**1,800**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	**Benzo(a)anthracene**	**59**	**540**
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	**Chrysene**	**59**	**710**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**400**
207-08-9	**Benzo(k)fluoranthene**	**59**	**440**
50-32-8	**Benzo(a)pyrene**	**59**	**630**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**350**
53-70-3	**Dibenz(a,h)anthracene**	**59**	**110**
191-24-2	**Benzo(g,h,i)perylene**	**59**	**440**
62-53-3	Aniline	59	< 59 U
90-12-0	**1-Methylnaphthalene**	**59**	**120**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.5%	2-Fluorobiphenyl	70.1%
d14-p-Terphenyl	69.6%	d4-1,2-Dichlorobenzene	63.0%
d5-Phenol	69.8%	2-Fluorophenol	69.1%
2,4,6-Tribromophenol	72.6%	d4-2-Chlorophenol	75.5%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-300-010
SAMPLE

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/09/09 23:11
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 43.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
111-44-4	Bis-(2-Chloroethyl) Ether	58	< 58 U
95-57-8	2-Chlorophenol	58	< 58 U
541-73-1	1,3-Dichlorobenzene	58	< 58 U
106-46-7	1,4-Dichlorobenzene	58	< 58 U
100-51-6	Benzyl Alcohol	58	< 58 U
95-50-1	1,2-Dichlorobenzene	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	58	< 58 U
98-95-3	Nitrobenzene	58	< 58 U
78-59-1	Isophorone	58	< 58 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
65-85-0	Benzoic Acid	580	< 580 U
111-91-1	bis(2-Chloroethoxy) Methane	58	< 58 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	58	< 58 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	58	< 58 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	58	< 58 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	**Acenaphthylene**	**58**	**630**
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	**Acenaphthene**	**58**	**120**
51-28-5	2,4-Dinitrophenol	580	< 580 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	**Dibenzofuran**	**58**	**130**

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-300-010
SAMPLE

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Date Analyzed: 03/09/09 23:11

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	58	< 58 U
7005-72-3	4-Chlorophenyl-phenylether	58	< 58 U
86-73-7	**Fluorene**	**58**	**230**
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	580	< 580 U
86-30-6	N-Nitrosodiphenylamine	58	< 58 U
101-55-3	4-Bromophenyl-phenylether	58	< 58 U
118-74-1	Hexachlorobenzene	58	< 58 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**58**	**4,800 E**
86-74-8	**Carbazole**	**58**	**830**
120-12-7	**Anthracene**	**58**	**740**
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	**Fluoranthene**	**58**	**44,000 E**
129-00-0	**Pyrene**	**58**	**24,000 E**
85-68-7	Butylbenzylphthalate	58	< 58 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**58**	**4,100**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**58**	**200**
218-01-9	**Chrysene**	**58**	**11,000 E**
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	**Benzo(b)fluoranthene**	**58**	**6,900 E**
207-08-9	**Benzo(k)fluoranthene**	**58**	**4,900 E**
50-32-8	**Benzo(a)pyrene**	**58**	**2,500**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**58**	**690**
53-70-3	**Dibenz(a,h)anthracene**	**58**	**180**
191-24-2	**Benzo(g,h,i)perylene**	**58**	**520**
62-53-3	Aniline	58	< 58 U
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.6%	2-Fluorobiphenyl	56.0%
d14-p-Terphenyl	67.7%	d4-1,2-Dichlorobenzene	48.1%
d5-Phenol	47.9%	2-Fluorophenol	58.6%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	59.2%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-300-010
DILUTION

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 14:13
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 43.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	190	< 190 U
111-44-4	Bis-(2-Chloroethyl) Ether	190	< 190 U
95-57-8	2-Chlorophenol	190	< 190 U
541-73-1	1,3-Dichlorobenzene	190	< 190 U
106-46-7	1,4-Dichlorobenzene	190	< 190 U
100-51-6	Benzyl Alcohol	190	< 190 U
95-50-1	1,2-Dichlorobenzene	190	< 190 U
95-48-7	2-Methylphenol	190	< 190 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	190	< 190 U
106-44-5	4-Methylphenol	190	< 190 U
621-64-7	N-Nitroso-Di-N-Propylamine	960	< 960 U
67-72-1	Hexachloroethane	190	< 190 U
98-95-3	Nitrobenzene	190	< 190 U
78-59-1	Isophorone	190	< 190 U
88-75-5	2-Nitrophenol	960	< 960 U
105-67-9	2,4-Dimethylphenol	190	< 190 U
65-85-0	Benzoic Acid	1,900	< 1,900 U
111-91-1	bis(2-Chloroethoxy) Methane	190	< 190 U
120-83-2	2,4-Dichlorophenol	960	< 960 U
120-82-1	1,2,4-Trichlorobenzene	190	< 190 U
91-20-3	Naphthalene	190	< 190 U
106-47-8	4-Chloroaniline	960	< 960 U
87-68-3	Hexachlorobutadiene	190	< 190 U
59-50-7	4-Chloro-3-methylphenol	960	< 960 U
91-57-6	2-Methylnaphthalene	190	< 190 U
77-47-4	Hexachlorocyclopentadiene	960	< 960 U
88-06-2	2,4,6-Trichlorophenol	960	< 960 U
95-95-4	2,4,5-Trichlorophenol	960	< 960 U
91-58-7	2-Chloronaphthalene	190	< 190 U
88-74-4	2-Nitroaniline	960	< 960 U
131-11-3	Dimethylphthalate	190	< 190 U
208-96-8	**Acenaphthylene**	**190**	**500**
99-09-2	3-Nitroaniline	960	< 960 U
83-32-9	Acenaphthene	190	< 190 U
51-28-5	2,4-Dinitrophenol	1,900	< 1,900 U
100-02-7	4-Nitrophenol	960	< 960 U
132-64-9	Dibenzofuran	190	< 190 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-300-010
DILUTION

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Date Analyzed: 03/10/09 14:13

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	960	< 960 U
121-14-2	2,4-Dinitrotoluene	960	< 960 U
84-66-2	Diethylphthalate	190	< 190 U
7005-72-3	4-Chlorophenyl-phenylether	190	< 190 U
86-73-7	**Fluorene**	**190**	**300**
100-01-6	4-Nitroaniline	960	< 960 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,900	< 1,900 U
86-30-6	N-Nitrosodiphenylamine	190	< 190 U
101-55-3	4-Bromophenyl-phenylether	190	< 190 U
118-74-1	Hexachlorobenzene	190	< 190 U
87-86-5	Pentachlorophenol	960	< 960 U
85-01-8	**Phenanthrene**	**190**	**5,200**
86-74-8	**Carbazole**	**190**	**800**
120-12-7	**Anthracene**	**190**	**680**
84-74-2	Di-n-Butylphthalate	190	< 190 U
206-44-0	**Fluoranthene**	**190**	**64,000 E**
129-00-0	**Pyrene**	**190**	**32,000 E**
85-68-7	Butylbenzylphthalate	190	< 190 U
91-94-1	3,3'-Dichlorobenzidine	960	< 960 U
56-55-3	**Benzo(a)anthracene**	**190**	**3,900**
117-81-7	bis(2-Ethylhexyl)phthalate	190	< 190 U
218-01-9	**Chrysene**	**190**	**13,000**
117-84-0	Di-n-Octyl phthalate	190	< 190 U
205-99-2	**Benzo(b)fluoranthene**	**190**	**6,600**
207-08-9	**Benzo(k)fluoranthene**	**190**	**4,200**
50-32-8	**Benzo(a)pyrene**	**190**	**2,400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**190**	**1,300**
53-70-3	**Dibenz(a,h)anthracene**	**190**	**390**
191-24-2	**Benzo(g,h,i)perylene**	**190**	**1,200**
62-53-3	Aniline	190	< 190 U
90-12-0	1-Methylnaphthalene	190	< 190 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	47.6%	2-Fluorobiphenyl	58.8%
d14-p-Terphenyl	56.4%	d4-1,2-Dichlorobenzene	47.2%
d5-Phenol	58.7%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	66.4%	d4-2-Chlorophenol	64.3%

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-300-010
DILUTION

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/01/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/04/09
Date Analyzed: 03/10/09 13:38
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 50.0
Percent Moisture: 43.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	960	< 960 U
111-44-4	Bis-(2-Chloroethyl) Ether	960	< 960 U
95-57-8	2-Chlorophenol	960	< 960 U
541-73-1	1,3-Dichlorobenzene	960	< 960 U
106-46-7	1,4-Dichlorobenzene	960	< 960 U
100-51-6	Benzyl Alcohol	960	< 960 U
95-50-1	1,2-Dichlorobenzene	960	< 960 U
95-48-7	2-Methylphenol	960	< 960 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	960	< 960 U
106-44-5	4-Methylphenol	960	< 960 U
621-64-7	N-Nitroso-Di-N-Propylamine	4,800	< 4,800 U
67-72-1	Hexachloroethane	960	< 960 U
98-95-3	Nitrobenzene	960	< 960 U
78-59-1	Isophorone	960	< 960 U
88-75-5	2-Nitrophenol	4,800	< 4,800 U
105-67-9	2,4-Dimethylphenol	960	< 960 U
65-85-0	Benzoic Acid	9,600	< 9,600 U
111-91-1	bis(2-Chloroethoxy) Methane	960	< 960 U
120-83-2	2,4-Dichlorophenol	4,800	< 4,800 U
120-82-1	1,2,4-Trichlorobenzene	960	< 960 U
91-20-3	Naphthalene	960	< 960 U
106-47-8	4-Chloroaniline	4,800	< 4,800 U
87-68-3	Hexachlorobutadiene	960	< 960 U
59-50-7	4-Chloro-3-methylphenol	4,800	< 4,800 U
91-57-6	2-Methylnaphthalene	960	< 960 U
77-47-4	Hexachlorocyclopentadiene	4,800	< 4,800 U
88-06-2	2,4,6-Trichlorophenol	4,800	< 4,800 U
95-95-4	2,4,5-Trichlorophenol	4,800	< 4,800 U
91-58-7	2-Chloronaphthalene	960	< 960 U
88-74-4	2-Nitroaniline	4,800	< 4,800 U
131-11-3	Dimethylphthalate	960	< 960 U
208-96-8	Acenaphthylene	960	< 960 U
99-09-2	3-Nitroaniline	4,800	< 4,800 U
83-32-9	Acenaphthene	960	< 960 U
51-28-5	2,4-Dinitrophenol	9,600	< 9,600 U
100-02-7	4-Nitrophenol	4,800	< 4,800 U
132-64-9	Dibenzofuran	960	< 960 U

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-300-010
DILUTION

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Date Analyzed: 03/10/09 13:38

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	4,800	< 4,800 U
121-14-2	2,4-Dinitrotoluene	4,800	< 4,800 U
84-66-2	Diethylphthalate	960	< 960 U
7005-72-3	4-Chlorophenyl-phenylether	960	< 960 U
86-73-7	Fluorene	960	< 960 U
100-01-6	4-Nitroaniline	4,800	< 4,800 U
534-52-1	4,6-Dinitro-2-Methylphenol	9,600	< 9,600 U
86-30-6	N-Nitrosodiphenylamine	960	< 960 U
101-55-3	4-Bromophenyl-phenylether	960	< 960 U
118-74-1	Hexachlorobenzene	960	< 960 U
87-86-5	Pentachlorophenol	4,800	< 4,800 U
85-01-8	**Phenanthrene**	**960**	**5,400**
86-74-8	Carbazole	960	< 960 U
120-12-7	Anthracene	960	< 960 U
84-74-2	Di-n-Butylphthalate	960	< 960 U
206-44-0	**Fluoranthene**	**960**	**75,000**
129-00-0	**Pyrene**	**960**	**41,000**
85-68-7	Butylbenzylphthalate	960	< 960 U
91-94-1	3,3'-Dichlorobenzidine	4,800	< 4,800 U
56-55-3	**Benzo(a)anthracene**	**960**	**4,100**
117-81-7	bis(2-Ethylhexyl)phthalate	960	< 960 U
218-01-9	**Chrysene**	**960**	**14,000**
117-84-0	Di-n-Octyl phthalate	960	< 960 U
205-99-2	**Benzo(b)fluoranthene**	**960**	**5,700**
207-08-9	**Benzo(k)fluoranthene**	**960**	**5,000**
50-32-8	**Benzo(a)pyrene**	**960**	**2,400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**960**	**1,400**
53-70-3	Dibenz(a,h)anthracene	960	< 960 U
191-24-2	**Benzo(g,h,i)perylene**	**960**	**1,300**
62-53-3	Aniline	960	< 960 U
90-12-0	1-Methylnaphthalene	960	< 960 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-301-010
SAMPLE

Lab Sample ID: OP22B
LIMS ID: 09-5938
Matrix: Sediment
Data Release Authorized: VTS
Reported: 05/02/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/11/09 15:34
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 45.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**14 J**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**23**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**20**	**11 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**20**	**12 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-301-010
SAMPLE

Lab Sample ID: OP22B
LIMS ID: 09-5938
Matrix: Sediment
Date Analyzed: 03/11/09 15:34

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**13 J**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**56**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**36**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**88**
129-00-0	**Pyrene**	**20**	**310**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**20**	**59**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**130**
218-01-9	**Chrysene**	**20**	**100**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**130**
207-08-9	**Benzo(k)fluoranthene**	**20**	**76**
50-32-8	**Benzo(a)pyrene**	**20**	**89**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**39**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**14 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**46**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine	97	< 97 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	72.8%	d4-1,2-Dichlorobenzene	60.4%
d5-Phenol	68.8%	2-Fluorophenol	63.7%
2,4,6-Tribromophenol	77.9%	d4-2-Chlorophenol	67.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-302-010
SAMPLE

Lab Sample ID: OP35C
LIMS ID: 09-5982
Matrix: Sediment
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 15:20
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 42.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	**Dimethylphthalate**	**20**	**69**
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-302-010
SAMPLE

Lab Sample ID: OP35C
LIMS ID: 09-5982
Matrix: Sediment
Date Analyzed: 03/16/09 15:20

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**69**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**30**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**180**
129-00-0	**Pyrene**	**20**	**150**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**64**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**100**
218-01-9	**Chrysene**	**20**	**130**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**97**
207-08-9	**Benzo(k)fluoranthene**	**20**	**94**
50-32-8	**Benzo(a)pyrene**	**20**	**74**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**40**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**42**
62-53-3	Aniline	20	< 20 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.2%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	82.0%	d4-1,2-Dichlorobenzene	62.0%
d5-Phenol	71.2%	2-Fluorophenol	76.0%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	76.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-014-RB
SAMPLE

Lab Sample ID: OP65A
LIMS ID: 09-6148
Matrix: Water
Data Release Authorized: VJB
Reported: 05/06/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 12:37
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-014-RB
SAMPLE

Lab Sample ID: OP65A
LIMS ID: 09-6148
Matrix: Water
Date Analyzed: 03/13/09 12:37

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1.0**	**0.6 JB**
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
62-53-3	Aniline	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.6%	2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	88.0%	d4-1,2-Dichlorobenzene	70.8%
d5-Phenol	76.3%	2-Fluorophenol	74.4%
2,4,6-Tribromophenol	82.1%	d4-2-Chlorophenol	85.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-038-RB
SAMPLE

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Data Release Authorized:
Reported: 05/12/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 15:11
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-038-RB
SAMPLE

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Date Analyzed: 03/11/09 15:11

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1.0**	**0.7 J**
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
62-53-3	Aniline	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	77.6%	2-Fluorobiphenyl	88.4%
d14-p-Terphenyl	118%	d4-1,2-Dichlorobenzene	79.2%
d5-Phenol	92.0%	2-Fluorophenol	89.6%
2,4,6-Tribromophenol	100%	d4-2-Chlorophenol	103%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-102-RB
SAMPLE

Lab Sample ID: OP35V
LIMS ID: 09-6001
Matrix: Water
Data Release Authorized:
Reported: 05/11/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/11/09 15:46
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-102-RB
SAMPLE

Lab Sample ID: OP35V
LIMS ID: 09-6001
Matrix: Water
Date Analyzed: 03/11/09 15:46

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
62-53-3	Aniline	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine		NA
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.4%	2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	96.0%	d4-1,2-Dichlorobenzene	70.4%
d5-Phenol	77.6%	2-Fluorophenol	77.3%
2,4,6-Tribromophenol	85.1%	d4-2-Chlorophenol	88.8%

Round 2 SVOCs

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-002-010
SAMPLE

Lab Sample ID: PE40B
LIMS ID: 09-14878
Matrix: Sediment
Data Release Authorized:
Reported: 07/21/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/08/09 16:57
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-002-010
SAMPLE

Lab Sample ID: PE40B
LIMS ID: 09-14878
Matrix: Sediment
Date Analyzed: 07/08/09 16:57

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**82**
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**20**
206-44-0	**Fluoranthene**	**20**	**130**
129-00-0	**Pyrene**	**20**	**96**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**49**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**63**
218-01-9	**Chrysene**	**20**	**97**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**71**
207-08-9	**Benzo(k)fluoranthene**	**20**	**71**
50-32-8	**Benzo(a)pyrene**	**20**	**62**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**34**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**34**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.2%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	58.0%	d4-1,2-Dichlorobenzene	51.6%
d5-Phenol	61.3%	2-Fluorophenol	56.0%
2,4,6-Tribromophenol	67.5%	d4-2-Chlorophenol	58.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-002-010
SAMPLE

Lab Sample ID: PH68B
LIMS ID: 09-17273
Matrix: Sediment
Data Release Authorized:
Reported: 07/23/09

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 07/18/09
Date Analyzed: 07/20/09 19:02
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	**Benzoic Acid**	**200**	**230**
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	**Diethylphthalate**	**20**	**20 J**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-002-010
SAMPLE

Lab Sample ID: PH68B
LIMS ID: 09-17273
Matrix: Sediment
Date Analyzed: 07/20/09 19:02

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**20**	**46**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**13 J**
84-74-2	**Di-n-Butylphthalate**	**20**	**280**
206-44-0	**Fluoranthene**	**20**	**82**
129-00-0	**Pyrene**	**20**	**72**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**20**	**37**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**64**
218-01-9	**Chrysene**	**20**	**73**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**60**
207-08-9	**Benzo(k)fluoranthene**	**20**	**60**
50-32-8	**Benzo(a)pyrene**	**20**	**43**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**27**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**10 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**26**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.8%	2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	49.2%
d5-Phenol	53.3%	2-Fluorophenol	50.4%
2,4,6-Tribromophenol	68.5%	d4-2-Chlorophenol	54.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-004-010
SAMPLE

Lab Sample ID: PE40C
LIMS ID: 09-14879
Matrix: Sediment
Data Release Authorized:
Reported: 07/21/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/08/09 17:32
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-004-010
SAMPLE

Lab Sample ID: PE40C
LIMS ID: 09-14879
Matrix: Sediment
Date Analyzed: 07/08/09 17:32

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**50**
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**130**
129-00-0	**Pyrene**	**19**	**100**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**35**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**83**
218-01-9	**Chrysene**	**19**	**78**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**45**
207-08-9	**Benzo(k)fluoranthene**	**19**	**45**
50-32-8	**Benzo(a)pyrene**	**19**	**37**
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**20**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	64.0%	2-Fluorophenol	59.5%
2,4,6-Tribromophenol	71.7%	d4-2-Chlorophenol	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-004-010
SAMPLE

Lab Sample ID: PH68C
LIMS ID: 09-17274
Matrix: Sediment
Data Release Authorized:
Reported: 07/23/09

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 07/18/09
Date Analyzed: 07/20/09 19:37
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**32**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-004-010
SAMPLE

Lab Sample ID: PH68C
LIMS ID: 09-17274
Matrix: Sediment
Date Analyzed: 07/20/09 19:37

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**35**
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**49**
129-00-0	**Pyrene**	**19**	**45**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**26**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**74**
218-01-9	**Chrysene**	**19**	**49**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**36**
207-08-9	**Benzo(k)fluoranthene**	**19**	**36**
50-32-8	**Benzo(a)pyrene**	**19**	**29**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**14 J**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**14 J**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	47.6%	2-Fluorobiphenyl	52.8%
d14-p-Terphenyl	59.6%	d4-1,2-Dichlorobenzene	45.2%
d5-Phenol	48.0%	2-Fluorophenol	45.1%
2,4,6-Tribromophenol	59.5%	d4-2-Chlorophenol	47.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PE40D
LIMS ID: 09-14880
Matrix: Sediment
Data Release Authorized:
Reported: 07/21/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/08/09 19:15
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 22.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PE40D
LIMS ID: 09-14880
Matrix: Sediment
Date Analyzed: 07/08/09 19:15

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**130**
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**360**
129-00-0	**Pyrene**	**20**	**230**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**46**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**32**
218-01-9	**Chrysene**	**20**	**170**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**84**
207-08-9	**Benzo(k)fluoranthene**	**20**	**84**
50-32-8	**Benzo(a)pyrene**	**20**	**46**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**22**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**22**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.4%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	64.4%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	62.9%	2-Fluorophenol	59.2%
2,4,6-Tribromophenol	69.3%	d4-2-Chlorophenol	61.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PH68D
LIMS ID: 09-17275
Matrix: Sediment
Data Release Authorized:
Reported: 07/23/09

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 07/18/09
Date Analyzed: 07/20/09 21:23
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 22.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**15 J**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	**Benzoic Acid**	**190**	**260**
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	**Dimethylphthalate**	**19**	**30**
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**10 J**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PH68D
LIMS ID: 09-17275
Matrix: Sediment
Date Analyzed: 07/20/09 21:23

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**72**
86-74-8	**Carbazole**	**19**	**15 J**
120-12-7	**Anthracene**	**19**	**30**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**200**
129-00-0	**Pyrene**	**19**	**140**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**93**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**52**
218-01-9	**Chrysene**	**19**	**220**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**130**
207-08-9	**Benzo(k)fluoranthene**	**19**	**130**
50-32-8	**Benzo(a)pyrene**	**19**	**92**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**30**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**14 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**27**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.4%	2-Fluorobiphenyl	58.0%
d14-p-Terphenyl	65.2%	d4-1,2-Dichlorobenzene	47.6%
d5-Phenol	52.8%	2-Fluorophenol	49.3%
2,4,6-Tribromophenol	67.7%	d4-2-Chlorophenol	53.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-007-010
SAMPLE

Lab Sample ID: PE40E
LIMS ID: 09-14881
Matrix: Sediment
Data Release Authorized:
Reported: 07/21/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/08/09 19:50
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 24.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-007-010
SAMPLE

Lab Sample ID: PE40E
LIMS ID: 09-14881
Matrix: Sediment
Date Analyzed: 07/08/09 19:50

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**20**	**110**
86-74-8	**Carbazole**	**20**	**26**
120-12-7	**Anthracene**	**20**	**68**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**300**
129-00-0	**Pyrene**	**20**	**200**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**20**	**140**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**240**
218-01-9	**Chrysene**	**20**	**330**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**200**
207-08-9	**Benzo(k)fluoranthene**	**20**	**200**
50-32-8	**Benzo(a)pyrene**	**20**	**160**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**47**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**47**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.6%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	56.8%	d4-1,2-Dichlorobenzene	49.2%
d5-Phenol	62.4%	2-Fluorophenol	56.0%
2,4,6-Tribromophenol	73.1%	d4-2-Chlorophenol	59.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-007-010
SAMPLE

Lab Sample ID: PH68E
LIMS ID: 09-17276
Matrix: Sediment
Data Release Authorized:
Reported: 07/23/09

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 07/18/09
Date Analyzed: 07/20/09 21:58
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 24.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**21**	**58**
111-44-4	Bis-(2-Chloroethyl) Ether	21	< 21 U
95-57-8	2-Chlorophenol	21	< 21 U
541-73-1	1,3-Dichlorobenzene	21	< 21 U
106-46-7	1,4-Dichlorobenzene	21	< 21 U
100-51-6	Benzyl Alcohol	21	< 21 U
95-50-1	1,2-Dichlorobenzene	21	< 21 U
95-48-7	2-Methylphenol	21	< 21 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	21	< 21 U
106-44-5	4-Methylphenol	21	< 21 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	21	< 21 U
98-95-3	Nitrobenzene	21	< 21 U
78-59-1	Isophorone	21	< 21 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	21	< 21 U
65-85-0	Benzoic Acid	210	< 210 U
111-91-1	bis(2-Chloroethoxy) Methane	21	< 21 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	21	< 21 U
91-20-3	**Naphthalene**	**21**	**13 J**
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	21	< 21 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	21	< 21 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	21	< 21 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	21	< 21 U
208-96-8	**Acenaphthylene**	**21**	**13 J**
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	21	< 21 U
51-28-5	2,4-Dinitrophenol	210	< 210 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	21	< 21 U
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	21	< 21 U
7005-72-3	4-Chlorophenyl-phenylether	21	< 21 U
86-73-7	**Fluorene**	**21**	**13 J**
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	210	< 210 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-007-010
SAMPLE

Lab Sample ID: PH68E
LIMS ID: 09-17276
Matrix: Sediment
Date Analyzed: 07/20/09 21:58

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	21	< 21 U
101-55-3	4-Bromophenyl-phenylether	21	< 21 U
118-74-1	Hexachlorobenzene	21	< 21 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**21**	**97**
86-74-8	**Carbazole**	**21**	**23**
120-12-7	**Anthracene**	**21**	**53**
84-74-2	**Di-n-Butylphthalate**	**21**	**42**
206-44-0	**Fluoranthene**	**21**	**240**
129-00-0	**Pyrene**	**21**	**210**
85-68-7	**Butylbenzylphthalate**	**21**	**20 J**
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**21**	**120**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**21**	**210**
218-01-9	**Chrysene**	**21**	**330**
117-84-0	Di-n-Octyl phthalate	21	< 21 U
205-99-2	**Benzo(b)fluoranthene**	**21**	**200**
207-08-9	**Benzo(k)fluoranthene**	**21**	**200**
50-32-8	**Benzo(a)pyrene**	**21**	**150**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**21**	**46**
53-70-3	**Dibenz(a,h)anthracene**	**21**	**19 J**
191-24-2	**Benzo(g,h,i)perylene**	**21**	**42**
62-53-3	Aniline	21	< 21 U
90-12-0	1-Methylnaphthalene	21	< 21 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.4%	2-Fluorobiphenyl	56.0%
d14-p-Terphenyl	52.8%	d4-1,2-Dichlorobenzene	48.4%
d5-Phenol	56.8%	2-Fluorophenol	53.9%
2,4,6-Tribromophenol	66.7%	d4-2-Chlorophenol	56.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-009-010
SAMPLE

Lab Sample ID: PE07C
LIMS ID: 09-14571
Matrix: Sediment
Data Release Authorized: VFS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 19:38
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**82 M**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**86**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**32**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**31**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**49**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**43**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-009-010
SAMPLE

Lab Sample ID: PE07C
LIMS ID: 09-14571
Matrix: Sediment
Date Analyzed: 07/04/09 19:38

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**69**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**390**
86-74-8	**Carbazole**	**20**	**95**
120-12-7	**Anthracene**	**20**	**160**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**1,600 E**
129-00-0	**Pyrene**	**20**	**730**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**170**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**440**
218-01-9	**Chrysene**	**20**	**170**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**420**
207-08-9	**Benzo(k)fluoranthene**	**20**	**420**
50-32-8	**Benzo(a)pyrene**	**20**	**440**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**130**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**41**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**110**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**17 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.6%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	57.2%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	97.1%	2-Fluorophenol	54.1%
2,4,6-Tribromophenol	111%	d4-2-Chlorophenol	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-009-010
DILUTION

Lab Sample ID: PE07C
LIMS ID: 09-14571
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/07/09 21:33
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 5.00
Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	98	< 98 U
111-44-4	Bis-(2-Chloroethyl) Ether	98	< 98 U
95-57-8	2-Chlorophenol	98	< 98 U
541-73-1	1,3-Dichlorobenzene	98	< 98 U
106-46-7	1,4-Dichlorobenzene	98	< 98 U
100-51-6	Benzyl Alcohol	98	< 98 U
95-50-1	1,2-Dichlorobenzene	98	< 98 U
95-48-7	2-Methylphenol	98	< 98 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	98	< 98 U
106-44-5	4-Methylphenol	98	< 98 U
621-64-7	N-Nitroso-Di-N-Propylamine	490	< 490 U
67-72-1	Hexachloroethane	98	< 98 U
98-95-3	Nitrobenzene	98	< 98 U
78-59-1	Isophorone	98	< 98 U
88-75-5	2-Nitrophenol	490	< 490 U
105-67-9	2,4-Dimethylphenol	98	< 98 U
65-85-0	Benzoic Acid	980	< 980 U
111-91-1	bis(2-Chloroethoxy) Methane	98	< 98 U
120-83-2	2,4-Dichlorophenol	490	< 490 U
120-82-1	1,2,4-Trichlorobenzene	98	< 98 U
91-20-3	Naphthalene	98	< 98 U
106-47-8	4-Chloroaniline	490	< 490 U
87-68-3	Hexachlorobutadiene	98	< 98 U
59-50-7	4-Chloro-3-methylphenol	490	< 490 U
91-57-6	2-Methylnaphthalene	98	< 98 U
77-47-4	Hexachlorocyclopentadiene	490	< 490 U
88-06-2	2,4,6-Trichlorophenol	490	< 490 U
95-95-4	2,4,5-Trichlorophenol	490	< 490 U
91-58-7	2-Chloronaphthalene	98	< 98 U
88-74-4	2-Nitroaniline	490	< 490 U
131-11-3	Dimethylphthalate	98	< 98 U
208-96-8	Acenaphthylene	98	< 98 U
99-09-2	3-Nitroaniline	490	< 490 U
83-32-9	Acenaphthene	98	< 98 U
51-28-5	2,4-Dinitrophenol	980	< 980 U
100-02-7	4-Nitrophenol	490	< 490 U
132-64-9	Dibenzofuran	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-009-010
DILUTION

Lab Sample ID: PE07C
LIMS ID: 09-14571
Matrix: Sediment
Date Analyzed: 07/07/09 21:33

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	490	< 490 U
121-14-2	2,4-Dinitrotoluene	490	< 490 U
84-66-2	Diethylphthalate	98	< 98 U
7005-72-3	4-Chlorophenyl-phenylether	98	< 98 U
86-73-7	Fluorene	98	< 98 U
100-01-6	4-Nitroaniline	490	< 490 U
534-52-1	4,6-Dinitro-2-Methylphenol	980	< 980 U
86-30-6	N-Nitrosodiphenylamine	98	< 98 U
101-55-3	4-Bromophenyl-phenylether	98	< 98 U
118-74-1	Hexachlorobenzene	98	< 98 U
87-86-5	Pentachlorophenol	490	< 490 U
85-01-8	**Phenanthrene**	**98**	**370**
86-74-8	Carbazole	98	< 98 U
120-12-7	**Anthracene**	**98**	**140**
84-74-2	Di-n-Butylphthalate	98	< 98 U
206-44-0	**Fluoranthene**	**98**	**1,100**
129-00-0	**Pyrene**	**98**	**850**
85-68-7	Butylbenzylphthalate	98	< 98 U
91-94-1	3,3'-Dichlorobenzidine	490	< 490 U
56-55-3	**Benzo(a)anthracene**	**98**	**300**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**98**	**430**
218-01-9	**Chrysene**	**98**	**640**
117-84-0	Di-n-Octyl phthalate	98	< 98 U
205-99-2	**Benzo(b)fluoranthene**	**98**	**680**
207-08-9	**Benzo(k)fluoranthene**	**98**	**420**
50-32-8	**Benzo(a)pyrene**	**98**	**360**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**98**	**110**
53-70-3	Dibenz(a,h)anthracene	98	< 98 U
191-24-2	Benzo(g,h,i)perylene	98	< 98 U
62-53-3	Aniline	98	< 98 U
90-12-0	1-Methylnaphthalene	98	< 98 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.8%	2-Fluorobiphenyl	81.2%
d14-p-Terphenyl	67.6%	d4-1,2-Dichlorobenzene	54.2%
d5-Phenol	66.4%	2-Fluorophenol	58.5%
2,4,6-Tribromophenol	73.7%	d4-2-Chlorophenol	61.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PE40F
LIMS ID: 09-14882
Matrix: Sediment
Data Release Authorized:
Reported: 07/21/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/08/09 20:24
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**210**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**27**
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**20**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**20**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PE40F
LIMS ID: 09-14882
Matrix: Sediment
Date Analyzed: 07/08/09 20:24

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**200**
86-74-8	**Carbazole**	**19**	**53**
120-12-7	**Anthracene**	**19**	**120**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**540**
129-00-0	**Pyrene**	**19**	**460**
85-68-7	**Butylbenzylphthalate**	**19**	**44**
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**240**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**590**
218-01-9	**Chrysene**	**19**	**410**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**400**
207-08-9	**Benzo(k)fluoranthene**	**19**	**400**
50-32-8	**Benzo(a)pyrene**	**19**	**360**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**110**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**33**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**120**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	65.2%	d4-1,2-Dichlorobenzene	54.4%
d5-Phenol	66.1%	2-Fluorophenol	60.3%
2,4,6-Tribromophenol	77.3%	d4-2-Chlorophenol	63.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PH68F
LIMS ID: 09-17277
Matrix: Sediment
Data Release Authorized:
Reported: 07/23/09

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 07/18/09
Date Analyzed: 07/20/09 22:33
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**320**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**13 J**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	**Dimethylphthalate**	**20**	**39**
208-96-8	**Acenaphthylene**	**20**	**24**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**14 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**13 J**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**23**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PH68F
LIMS ID: 09-17277
Matrix: Sediment
Date Analyzed: 07/20/09 22:33

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**200**
86-74-8	**Carbazole**	**20**	**58**
120-12-7	**Anthracene**	**20**	**100**
84-74-2	**Di-n-Butylphthalate**	**20**	**8,900 ES**
206-44-0	**Fluoranthene**	**20**	**430**
129-00-0	**Pyrene**	**20**	**490**
85-68-7	**Butylbenzylphthalate**	**20**	**76**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**200**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**520**
218-01-9	**Chrysene**	**20**	**420**
117-84-0	**Di-n-Octyl phthalate**	**20**	**24**
205-99-2	**Benzo(b)fluoranthene**	**20**	**440**
207-08-9	**Benzo(k)fluoranthene**	**20**	**440**
50-32-8	**Benzo(a)pyrene**	**20**	**370**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**100**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**49**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**100**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.6%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	50.8%
d5-Phenol	57.1%	2-Fluorophenol	52.8%
2,4,6-Tribromophenol	66.9%	d4-2-Chlorophenol	57.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-010-010
DILUTION

Lab Sample ID: PH68F
LIMS ID: 09-17277
Matrix: Sediment
Data Release Authorized:
Reported: 07/23/09

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 07/18/09
Date Analyzed: 07/22/09 19:24
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 50.0
Percent Moisture: 29.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	980	< 980 U
111-44-4	Bis-(2-Chloroethyl) Ether	980	< 980 U
95-57-8	2-Chlorophenol	980	< 980 U
541-73-1	1,3-Dichlorobenzene	980	< 980 U
106-46-7	1,4-Dichlorobenzene	980	< 980 U
100-51-6	Benzyl Alcohol	980	< 980 U
95-50-1	1,2-Dichlorobenzene	980	< 980 U
95-48-7	2-Methylphenol	980	< 980 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	980	< 980 U
106-44-5	4-Methylphenol	980	< 980 U
621-64-7	N-Nitroso-Di-N-Propylamine	4,900	< 4,900 U
67-72-1	Hexachloroethane	980	< 980 U
98-95-3	Nitrobenzene	980	< 980 U
78-59-1	Isophorone	980	< 980 U
88-75-5	2-Nitrophenol	4,900	< 4,900 U
105-67-9	2,4-Dimethylphenol	980	< 980 U
65-85-0	Benzoic Acid	9,800	< 9,800 U
111-91-1	bis(2-Chloroethoxy) Methane	980	< 980 U
120-83-2	2,4-Dichlorophenol	4,900	< 4,900 U
120-82-1	1,2,4-Trichlorobenzene	980	< 980 U
91-20-3	Naphthalene	980	< 980 U
106-47-8	4-Chloroaniline	4,900	< 4,900 U
87-68-3	Hexachlorobutadiene	980	< 980 U
59-50-7	4-Chloro-3-methylphenol	4,900	< 4,900 U
91-57-6	2-Methylnaphthalene	980	< 980 U
77-47-4	Hexachlorocyclopentadiene	4,900	< 4,900 U
88-06-2	2,4,6-Trichlorophenol	4,900	< 4,900 U
95-95-4	2,4,5-Trichlorophenol	4,900	< 4,900 U
91-58-7	2-Chloronaphthalene	980	< 980 U
88-74-4	2-Nitroaniline	4,900	< 4,900 U
131-11-3	Dimethylphthalate	980	< 980 U
208-96-8	Acenaphthylene	980	< 980 U
99-09-2	3-Nitroaniline	4,900	< 4,900 U
83-32-9	Acenaphthene	980	< 980 U
51-28-5	2,4-Dinitrophenol	9,800	< 9,800 U
100-02-7	4-Nitrophenol	4,900	< 4,900 U
132-64-9	Dibenzofuran	980	< 980 U
606-20-2	2,6-Dinitrotoluene	4,900	< 4,900 U
121-14-2	2,4-Dinitrotoluene	4,900	< 4,900 U
84-66-2	Diethylphthalate	980	< 980 U
7005-72-3	4-Chlorophenyl-phenylether	980	< 980 U
86-73-7	Fluorene	980	< 980 U
100-01-6	4-Nitroaniline	4,900	< 4,900 U
534-52-1	4,6-Dinitro-2-Methylphenol	9,800	< 9,800 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-010-010
DILUTION

Lab Sample ID: PH68F
LIMS ID: 09-17277
Matrix: Sediment
Date Analyzed: 07/22/09 19:24

QC Report No: PH68-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	980	< 980 U
101-55-3	4-Bromophenyl-phenylether	980	< 980 U
118-74-1	Hexachlorobenzene	980	< 980 U
87-86-5	Pentachlorophenol	4,900	< 4,900 U
85-01-8	Phenanthrene	980	< 980 U
86-74-8	Carbazole	980	< 980 U
120-12-7	Anthracene	980	< 980 U
84-74-2	**Di-n-Butylphthalate**	**980**	**48,000**
206-44-0	**Fluoranthene**	**980**	**550 J**
129-00-0	**Pyrene**	**980**	**710 J**
85-68-7	Butylbenzylphthalate	980	< 980 U
91-94-1	3,3'-Dichlorobenzidine	4,900	< 4,900 U
56-55-3	Benzo(a)anthracene	980	< 980 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**980**	**630 J**
218-01-9	Chrysene	980	< 980 U
117-84-0	Di-n-Octyl phthalate	980	< 980 U
205-99-2	**Benzo(b)fluoranthene**	**980**	**580 J**
207-08-9	**Benzo(k)fluoranthene**	**980**	**580 J**
50-32-8	Benzo(a)pyrene	980	< 980 U
193-39-5	Indeno(1,2,3-cd)pyrene	980	< 980 U
53-70-3	Dibenz(a,h)anthracene	980	< 980 U
191-24-2	Benzo(g,h,i)perylene	980	< 980 U
62-53-3	Aniline	980	< 980 U
90-12-0	1-Methylnaphthalene	980	< 980 U

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-012-010
SAMPLE

Lab Sample ID: PE07D
LIMS ID: 09-14572
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 20:12
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 21.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**18 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	**Dibenzofuran**	**20**	**14 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-012-010
SAMPLE

Lab Sample ID: PE07D
LIMS ID: 09-14572
Matrix: Sediment
Date Analyzed: 07/04/09 20:12

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**20 J**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**210**
86-74-8	**Carbazole**	**20**	**15 J**
120-12-7	**Anthracene**	**20**	**110**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**780**
129-00-0	**Pyrene**	**20**	**470**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**290**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**36**
218-01-9	**Chrysene**	**20**	**320**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**200**
207-08-9	**Benzo(k)fluoranthene**	**20**	**200**
50-32-8	**Benzo(a)pyrene**	**20**	**230**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**86**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**33**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**74**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	61.2%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	84.3%	2-Fluorophenol	52.5%
2,4,6-Tribromophenol	96.3%	d4-2-Chlorophenol	60.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-015-010
SAMPLE

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 20:46
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 37.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**210**
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	**2-Methylnaphthalene**	**20**	**120**
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**70**
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	**Acenaphthene**	**20**	**230**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	**Dibenzofuran**	**20**	**330**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-015-010
SAMPLE

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Date Analyzed: 07/04/09 20:46

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**290**
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**20**	**3,400 E**
86-74-8	**Carbazole**	**20**	**260**
120-12-7	**Anthracene**	**20**	**290**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**3,800 E**
129-00-0	**Pyrene**	**20**	**1,500**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**20**	**200**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**230**
218-01-9	**Chrysene**	**20**	**1,500**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**580**
207-08-9	**Benzo(k)fluoranthene**	**20**	**580**
50-32-8	**Benzo(a)pyrene**	**20**	**700**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**170**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**58**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**130**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**90**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	72.8%
d14-p-Terphenyl	56.8%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	100%	2-Fluorophenol	57.9%
2,4,6-Tribromophenol	118%	d4-2-Chlorophenol	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-015-010
DILUTION

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/07/09 22:08
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 5.00
Percent Moisture: 37.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	100	< 100 U
111-44-4	Bis-(2-Chloroethyl) Ether	100	< 100 U
95-57-8	2-Chlorophenol	100	< 100 U
541-73-1	1,3-Dichlorobenzene	100	< 100 U
106-46-7	1,4-Dichlorobenzene	100	< 100 U
100-51-6	Benzyl Alcohol	100	< 100 U
95-50-1	1,2-Dichlorobenzene	100	< 100 U
95-48-7	2-Methylphenol	100	< 100 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	100	< 100 U
106-44-5	4-Methylphenol	100	< 100 U
621-64-7	N-Nitroso-Di-N-Propylamine	500	< 500 U
67-72-1	Hexachloroethane	100	< 100 U
98-95-3	Nitrobenzene	100	< 100 U
78-59-1	Isophorone	100	< 100 U
88-75-5	2-Nitrophenol	500	< 500 U
105-67-9	2,4-Dimethylphenol	100	< 100 U
65-85-0	Benzoic Acid	1,000	< 1,000 U
111-91-1	bis(2-Chloroethoxy) Methane	100	< 100 U
120-83-2	2,4-Dichlorophenol	500	< 500 U
120-82-1	1,2,4-Trichlorobenzene	100	< 100 U
91-20-3	**Naphthalene**	**100**	**180**
106-47-8	4-Chloroaniline	500	< 500 U
87-68-3	Hexachlorobutadiene	100	< 100 U
59-50-7	4-Chloro-3-methylphenol	500	< 500 U
91-57-6	**2-Methylnaphthalene**	**100**	**140**
77-47-4	Hexachlorocyclopentadiene	500	< 500 U
88-06-2	2,4,6-Trichlorophenol	500	< 500 U
95-95-4	2,4,5-Trichlorophenol	500	< 500 U
91-58-7	2-Chloronaphthalene	100	< 100 U
88-74-4	2-Nitroaniline	500	< 500 U
131-11-3	Dimethylphthalate	100	< 100 U
208-96-8	Acenaphthylene	100	< 100 U
99-09-2	3-Nitroaniline	500	< 500 U
83-32-9	**Acenaphthene**	**100**	**240**
51-28-5	2,4-Dinitrophenol	1,000	< 1,000 U
100-02-7	4-Nitrophenol	500	< 500 U
132-64-9	**Dibenzofuran**	**100**	**340**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-015-010
DILUTION

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Date Analyzed: 07/07/09 22:08

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	500	< 500 U
121-14-2	2,4-Dinitrotoluene	500	< 500 U
84-66-2	Diethylphthalate	100	< 100 U
7005-72-3	4-Chlorophenyl-phenylether	100	< 100 U
86-73-7	**Fluorene**	**100**	**290**
100-01-6	4-Nitroaniline	500	< 500 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,000	< 1,000 U
86-30-6	N-Nitrosodiphenylamine	100	< 100 U
101-55-3	4-Bromophenyl-phenylether	100	< 100 U
118-74-1	Hexachlorobenzene	100	< 100 U
87-86-5	Pentachlorophenol	500	< 500 U
85-01-8	**Phenanthrene**	**100**	**3,400**
86-74-8	**Carbazole**	**100**	**220**
120-12-7	**Anthracene**	**100**	**260**
84-74-2	Di-n-Butylphthalate	100	< 100 U
206-44-0	**Fluoranthene**	**100**	**2,900**
129-00-0	**Pyrene**	**100**	**1,600**
85-68-7	Butylbenzylphthalate	100	< 100 U
91-94-1	3,3'-Dichlorobenzidine	500	< 500 U
56-55-3	**Benzo(a)anthracene**	**100**	**430**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**100**	**220**
218-01-9	**Chrysene**	**100**	**1,200**
117-84-0	Di-n-Octyl phthalate	100	< 100 U
205-99-2	**Benzo(b)fluoranthene**	**100**	**870**
207-08-9	**Benzo(k)fluoranthene**	**100**	**520**
50-32-8	**Benzo(a)pyrene**	**100**	**480**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**100**	**150**
53-70-3	Dibenz(a,h)anthracene	100	< 100 U
191-24-2	**Benzo(g,h,i)perylene**	**100**	**140**
62-53-3	Aniline	100	< 100 U
90-12-0	**1-Methylnaphthalene**	**100**	**110**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.4%	2-Fluorobiphenyl	81.0%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	56.2%
d5-Phenol	67.3%	2-Fluorophenol	61.9%
2,4,6-Tribromophenol	73.7%	d4-2-Chlorophenol	63.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-016-010
SAMPLE

Lab Sample ID: PD97K
LIMS ID: 09-14507
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 23:16
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 28.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**89**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**32**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**26**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**65**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-016-010
SAMPLE

Lab Sample ID: PD97K
LIMS ID: 09-14507
Matrix: Sediment
Date Analyzed: 07/08/09 23:16

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**310**
86-74-8	**Carbazole**	**20**	**66**
120-12-7	**Anthracene**	**20**	**290**
84-74-2	**Di-n-Butylphthalate**	**20**	**55**
206-44-0	**Fluoranthene**	**20**	**830**
129-00-0	**Pyrene**	**20**	**820**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**410**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**200**
218-01-9	**Chrysene**	**20**	**590**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**420**
207-08-9	**Benzo(k)fluoranthene**	**20**	**420**
50-32-8	**Benzo(a)pyrene**	**20**	**440**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**110**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**27**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**100**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	72.8%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	53.6%
d5-Phenol	65.6%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	83.5%	d4-2-Chlorophenol	64.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-017-010
SAMPLE

Lab Sample ID: PD95A
LIMS ID: 09-14478
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 17:47
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 50.9%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**68**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**21**
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**25**
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**29**
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-017-010
SAMPLE

Lab Sample ID: PD95A
LIMS ID: 09-14478
Matrix: Sediment
Date Analyzed: 07/08/09 17:47

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**20**	**220**
86-74-8	**Carbazole**	**20**	**42**
120-12-7	**Anthracene**	**20**	**120**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**540**
129-00-0	**Pyrene**	**20**	**520**
85-68-7	**Butylbenzylphthalate**	**20**	**21**
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**20**	**270**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**410**
218-01-9	**Chrysene**	**20**	**460**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**330**
207-08-9	**Benzo(k)fluoranthene**	**20**	**330**
50-32-8	**Benzo(a)pyrene**	**20**	**300**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**110**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**49**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**110**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	47.2%	2-Fluorobiphenyl	74.0%
d14-p-Terphenyl	72.8%	d4-1,2-Dichlorobenzene	41.6%
d5-Phenol	55.5%	2-Fluorophenol	44.5%
2,4,6-Tribromophenol	85.3%	d4-2-Chlorophenol	46.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-018-010
SAMPLE

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/07/09 20:52
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**59**	**140**
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	**4-Methylphenol**	**59**	**76**
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	**Naphthalene**	**59**	**3,000**
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	**2-Methylnaphthalene**	**59**	**2,800**
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	**Acenaphthylene**	**59**	**350**
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	**Acenaphthene**	**59**	**3,000**
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	**Dibenzofuran**	**59**	**1,100**
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	**Fluorene**	**59**	**3,800**
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-018-010
SAMPLE

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Date Analyzed: 07/07/09 20:52

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	140	< 140 Y
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**59**	**13,000 E**
86-74-8	**Carbazole**	**59**	**2,200**
120-12-7	**Anthracene**	**59**	**4,800 E**
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**11,000 E**
129-00-0	**Pyrene**	**59**	**8,700 E**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**59**	**6,500 E**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**300**
218-01-9	**Chrysene**	**59**	**6,500 E**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**4,800 E**
207-08-9	**Benzo(k)fluoranthene**	**59**	**4,800 E**
50-32-8	**Benzo(a)pyrene**	**59**	**6,000 E**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**1,800**
53-70-3	**Dibenz(a,h)anthracene**	**59**	**690**
191-24-2	**Benzo(g,h,i)perylene**	**59**	**1,800**
62-53-3	Aniline	59	< 59 U
90-12-0	**1-Methylnaphthalene**	**59**	**2,700**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.8%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	59.2%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	69.1%	2-Fluorophenol	67.6%
2,4,6-Tribromophenol	74.9%	d4-2-Chlorophenol	69.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-018-010
DILUTION

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/10/09 22:42
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	390	< 390 U
111-44-4	Bis-(2-Chloroethyl) Ether	390	< 390 U
95-57-8	2-Chlorophenol	390	< 390 U
541-73-1	1,3-Dichlorobenzene	390	< 390 U
106-46-7	1,4-Dichlorobenzene	390	< 390 U
100-51-6	Benzyl Alcohol	390	< 390 U
95-50-1	1,2-Dichlorobenzene	390	< 390 U
95-48-7	2-Methylphenol	390	< 390 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	390	< 390 U
106-44-5	4-Methylphenol	390	< 390 U
621-64-7	N-Nitroso-Di-N-Propylamine	2,000	< 2,000 U
67-72-1	Hexachloroethane	390	< 390 U
98-95-3	Nitrobenzene	390	< 390 U
78-59-1	Isophorone	390	< 390 U
88-75-5	2-Nitrophenol	2,000	< 2,000 U
105-67-9	2,4-Dimethylphenol	390	< 390 U
65-85-0	Benzoic Acid	3,900	< 3,900 U
111-91-1	bis(2-Chloroethoxy) Methane	390	< 390 U
120-83-2	2,4-Dichlorophenol	2,000	< 2,000 U
120-82-1	1,2,4-Trichlorobenzene	390	< 390 U
91-20-3	**Naphthalene**	**390**	**3,400**
106-47-8	4-Chloroaniline	2,000	< 2,000 U
87-68-3	Hexachlorobutadiene	390	< 390 U
59-50-7	4-Chloro-3-methylphenol	2,000	< 2,000 U
91-57-6	**2-Methylnaphthalene**	**390**	**3,100**
77-47-4	Hexachlorocyclopentadiene	2,000	< 2,000 U
88-06-2	2,4,6-Trichlorophenol	2,000	< 2,000 U
95-95-4	2,4,5-Trichlorophenol	2,000	< 2,000 U
91-58-7	2-Chloronaphthalene	390	< 390 U
88-74-4	2-Nitroaniline	2,000	< 2,000 U
131-11-3	Dimethylphthalate	390	< 390 U
208-96-8	Acenaphthylene	390	< 390 U
99-09-2	3-Nitroaniline	2,000	< 2,000 U
83-32-9	**Acenaphthene**	**390**	**3,000**
51-28-5	2,4-Dinitrophenol	3,900	< 3,900 U
100-02-7	4-Nitrophenol	2,000	< 2,000 U
132-64-9	**Dibenzofuran**	**390**	**1,100**
606-20-2	2,6-Dinitrotoluene	2,000	< 2,000 U
121-14-2	2,4-Dinitrotoluene	2,000	< 2,000 U
84-66-2	Diethylphthalate	390	< 390 U
7005-72-3	4-Chlorophenyl-phenylether	390	< 390 U
86-73-7	**Fluorene**	**390**	**4,100**
100-01-6	4-Nitroaniline	2,000	< 2,000 U
534-52-1	4,6-Dinitro-2-Methylphenol	3,900	< 3,900 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-018-010
DILUTION

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Date Analyzed: 07/10/09 22:42

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	390	< 390 U
101-55-3	4-Bromophenyl-phenylether	390	< 390 U
118-74-1	Hexachlorobenzene	390	< 390 U
87-86-5	Pentachlorophenol	2,000	< 2,000 U
85-01-8	**Phenanthrene**	**390**	**24,000**
86-74-8	**Carbazole**	**390**	**2,300**
120-12-7	**Anthracene**	**390**	**6,500**
84-74-2	Di-n-Butylphthalate	390	< 390 U
206-44-0	**Fluoranthene**	**390**	**20,000**
129-00-0	**Pyrene**	**390**	**20,000**
85-68-7	Butylbenzylphthalate	390	< 390 U
91-94-1	3,3'-Dichlorobenzidine	2,000	< 2,000 U
56-55-3	**Benzo(a)anthracene**	**390**	**9,000**
117-81-7	bis(2-Ethylhexyl)phthalate	390	< 390 U
218-01-9	**Chrysene**	**390**	**11,000**
117-84-0	Di-n-Octyl phthalate	390	< 390 U
205-99-2	**Benzo(b)fluoranthene**	**390**	**5,400**
207-08-9	**Benzo(k)fluoranthene**	**390**	**5,400**
50-32-8	**Benzo(a)pyrene**	**390**	**7,800**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**390**	**3,500**
53-70-3	**Dibenz(a,h)anthracene**	**390**	**720**
191-24-2	**Benzo(g,h,i)perylene**	**390**	**4,100**
62-53-3	Aniline	390	< 390 U
90-12-0	**1-Methylnaphthalene**	**390**	**3,000**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	69.9%	2-Fluorophenol	67.7%
2,4,6-Tribromophenol	66.7%	d4-2-Chlorophenol	70.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-022-010
SAMPLE

Lab Sample ID: PD97L
LIMS ID: 09-14508
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/07/09 22:01
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**29**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**32**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**27**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-022-010
SAMPLE

Lab Sample ID: PD97L
LIMS ID: 09-14508
Matrix: Sediment
Date Analyzed: 07/07/09 22:01

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**130**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**22**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**180**
129-00-0	**Pyrene**	**20**	**110**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**38**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**140**
218-01-9	**Chrysene**	**20**	**62**
117-84-0	**Di-n-Octyl phthalate**	**20**	**83**
205-99-2	**Benzo(b)fluoranthene**	**20**	**77**
207-08-9	**Benzo(k)fluoranthene**	**20**	**49**
50-32-8	**Benzo(a)pyrene**	**20**	**50**
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.6%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	61.3%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	75.7%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-026-010
SAMPLE

Lab Sample ID: PD95B
LIMS ID: 09-14479
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 18:22
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 39.3%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**31**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**23**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-026-010
SAMPLE

Lab Sample ID: PD95B
LIMS ID: 09-14479
Matrix: Sediment
Date Analyzed: 07/08/09 18:22

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**120**
86-74-8	**Carbazole**	**20**	**20**
120-12-7	**Anthracene**	**20**	**74**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**230**
129-00-0	**Pyrene**	**20**	**220**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**140**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**150**
218-01-9	**Chrysene**	**20**	**270**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**210**
207-08-9	**Benzo(k)fluoranthene**	**20**	**210**
50-32-8	**Benzo(a)pyrene**	**20**	**190**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**82**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**28**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**75**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.2%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	64.0%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	61.6%	2-Fluorophenol	56.8%
2,4,6-Tribromophenol	75.5%	d4-2-Chlorophenol	57.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-028-010
SAMPLE

Lab Sample ID: PD97M
LIMS ID: 09-14509
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/07/09 22:36
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**26**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**21**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**22**
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**37**
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**29**
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-028-010
SAMPLE

Lab Sample ID: PD97M
LIMS ID: 09-14509
Matrix: Sediment
Date Analyzed: 07/07/09 22:36

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**20**	**180**
86-74-8	**Carbazole**	**20**	**37**
120-12-7	**Anthracene**	**20**	**150**
84-74-2	**Di-n-Butylphthalate**	**20**	**27**
206-44-0	**Fluoranthene**	**20**	**670**
129-00-0	**Pyrene**	**20**	**370**
85-68-7	**Butylbenzylphthalate**	**20**	**21**
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**20**	**310**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**280**
218-01-9	**Chrysene**	**20**	**560**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**480**
207-08-9	**Benzo(k)fluoranthene**	**20**	**370**
50-32-8	**Benzo(a)pyrene**	**20**	**340**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**81**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**23**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**71**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	52.8%	d4-1,2-Dichlorobenzene	56.0%
d5-Phenol	63.5%	2-Fluorophenol	61.9%
2,4,6-Tribromophenol	76.3%	d4-2-Chlorophenol	65.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-037-010
SAMPLE

Lab Sample ID: PD95D
LIMS ID: 09-14481
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 20:41
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	21	< 21 Y
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**220**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**22**
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	**2-Methylnaphthalene**	**20**	**22**
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**25**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	**Diethylphthalate**	**20**	**20**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**36**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-037-010
SAMPLE

Lab Sample ID: PD95D
LIMS ID: 09-14481
Matrix: Sediment
Date Analyzed: 07/08/09 20:41

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**200**
86-74-8	**Carbazole**	**20**	**36**
120-12-7	**Anthracene**	**20**	**110**
84-74-2	**Di-n-Butylphthalate**	**20**	**67**
206-44-0	**Fluoranthene**	**20**	**350**
129-00-0	**Pyrene**	**20**	**380**
85-68-7	**Butylbenzylphthalate**	**20**	**22**
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**240**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**480**
218-01-9	**Chrysene**	**20**	**400**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**320**
207-08-9	**Benzo(k)fluoranthene**	**20**	**320**
50-32-8	**Benzo(a)pyrene**	**20**	**280**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**90**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**38**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**88**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.6%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	71.2%	d4-1,2-Dichlorobenzene	52.0%
d5-Phenol	56.8%	2-Fluorophenol	51.7%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	54.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-039-010
SAMPLE

Lab Sample ID: PD97O
LIMS ID: 09-14511
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/09/09 00:25
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 31.5%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**53**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**23**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-039-010
SAMPLE

Lab Sample ID: PD97O
LIMS ID: 09-14511
Matrix: Sediment
Date Analyzed: 07/09/09 00:25

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**140**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**67**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**450**
129-00-0	**Pyrene**	**20**	**250**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**140**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**250**
218-01-9	**Chrysene**	**20**	**250**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**180**
207-08-9	**Benzo(k)fluoranthene**	**20**	**180**
50-32-8	**Benzo(a)pyrene**	**20**	**140**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**38**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**37**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	68.0%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	65.6%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	77.6%	d4-2-Chlorophenol	63.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-040-010
SAMPLE

Lab Sample ID: PD95C
LIMS ID: 09-14480
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 18:56
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 58.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	23	< 23 Y
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**47**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**22**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**23**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**32**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**23**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**21**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**38**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-040-010
SAMPLE

Lab Sample ID: PD95C
LIMS ID: 09-14480
Matrix: Sediment
Date Analyzed: 07/08/09 18:56

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**220**
86-74-8	**Carbazole**	**20**	**41**
120-12-7	**Anthracene**	**20**	**150**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**400**
129-00-0	**Pyrene**	**20**	**440**
85-68-7	**Butylbenzylphthalate**	**20**	**23**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**280**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**440**
218-01-9	**Chrysene**	**20**	**550**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**390**
207-08-9	**Benzo(k)fluoranthene**	**20**	**390**
50-32-8	**Benzo(a)pyrene**	**20**	**350**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**130**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**46**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**120**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	76.8%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	67.2%	2-Fluorophenol	57.6%
2,4,6-Tribromophenol	86.4%	d4-2-Chlorophenol	61.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-103-010
SAMPLE

Lab Sample ID: PD95E
LIMS ID: 09-14482
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 21:16
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 51.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**260**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**31**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**24**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**24**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**26**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**36**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-103-010
SAMPLE

Lab Sample ID: PD95E
LIMS ID: 09-14482
Matrix: Sediment
Date Analyzed: 07/08/09 21:16

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**280**
86-74-8	**Carbazole**	**20**	**35**
120-12-7	**Anthracene**	**20**	**110**
84-74-2	**Di-n-Butylphthalate**	**20**	**20**
206-44-0	**Fluoranthene**	**20**	**480**
129-00-0	**Pyrene**	**20**	**500**
85-68-7	**Butylbenzylphthalate**	**20**	**46**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**260**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**490**
218-01-9	**Chrysene**	**20**	**500**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**360**
207-08-9	**Benzo(k)fluoranthene**	**20**	**360**
50-32-8	**Benzo(a)pyrene**	**20**	**300**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**97**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**30**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**91**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.0%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	70.0%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	58.4%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	81.3%	d4-2-Chlorophenol	56.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-105-010
SAMPLE

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 21:51
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 54.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	24	< 24 Y
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**23**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**29**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**26**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**41**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**32**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**28**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**34**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-105-010
SAMPLE

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Date Analyzed: 07/08/09 21:51

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**270**
86-74-8	**Carbazole**	**20**	**49**
120-12-7	**Anthracene**	**20**	**140**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**560**
129-00-0	**Pyrene**	**20**	**800**
85-68-7	**Butylbenzylphthalate**	**20**	**20**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**250**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**420**
218-01-9	**Chrysene**	**20**	**550**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**530**
207-08-9	**Benzo(k)fluoranthene**	**20**	**530**
50-32-8	**Benzo(a)pyrene**	**20**	**440**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**170**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**64**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**160**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.2%	2-Fluorobiphenyl	75.2%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	58.7%	2-Fluorophenol	54.4%
2,4,6-Tribromophenol	87.7%	d4-2-Chlorophenol	58.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-105-010
DILUTION

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/10/09 20:40
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 54.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-105-010
DILUTION

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Date Analyzed: 07/10/09 20:40

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**59**	**220**
86-74-8	Carbazole	59	< 59 U
120-12-7	**Anthracene**	**59**	**110**
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**480**
129-00-0	**Pyrene**	**59**	**1,100**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**59**	**240**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**460**
218-01-9	**Chrysene**	**59**	**440**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**580**
207-08-9	**Benzo(k)fluoranthene**	**59**	**360**
50-32-8	**Benzo(a)pyrene**	**59**	**360**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**160**
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	**Benzo(g,h,i)perylene**	**59**	**170**
62-53-3	Aniline	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.5%	2-Fluorobiphenyl	63.5%
d14-p-Terphenyl	112%	d4-1,2-Dichlorobenzene	48.6%
d5-Phenol	51.7%	2-Fluorophenol	44.6%
2,4,6-Tribromophenol	83.2%	d4-2-Chlorophenol	53.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-106-010
SAMPLE

Lab Sample ID: PE07G
LIMS ID: 09-14575
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/07/09 23:18
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**36**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**36**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**16 J**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**110**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**77**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**69**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-106-010
SAMPLE

Lab Sample ID: PE07G
LIMS ID: 09-14575
Matrix: Sediment
Date Analyzed: 07/07/09 23:18

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**220**
86-74-8	**Carbazole**	**20**	**20**
120-12-7	**Anthracene**	**20**	**110**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**470**
129-00-0	**Pyrene**	**20**	**400**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**180**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**59**
218-01-9	**Chrysene**	**20**	**240**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**230**
207-08-9	**Benzo(k)fluoranthene**	**20**	**190**
50-32-8	**Benzo(a)pyrene**	**20**	**160**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**44**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**12 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**40**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**35**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.4%	2-Fluorobiphenyl	80.8%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	70.1%	2-Fluorophenol	65.9%
2,4,6-Tribromophenol	81.6%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-107-010
SAMPLE

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 21:19
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**76 M**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**16 J**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**100**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**42**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**44**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**50**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**54**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-107-010
SAMPLE

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Date Analyzed: 07/04/09 21:19

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**68**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**340**
86-74-8	**Carbazole**	**20**	**160**
120-12-7	**Anthracene**	**20**	**380**
84-74-2	**Di-n-Butylphthalate**	**20**	**180**
206-44-0	**Fluoranthene**	**20**	**2,100 E**
129-00-0	**Pyrene**	**20**	**1,700 E**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**630**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**440**
218-01-9	**Chrysene**	**20**	**740**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**710**
207-08-9	**Benzo(k)fluoranthene**	**20**	**710**
50-32-8	**Benzo(a)pyrene**	**20**	**1,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**120**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**40**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**100**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**21**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	60.0%	d4-1,2-Dichlorobenzene	56.0%
d5-Phenol	85.9%	2-Fluorophenol	55.2%
2,4,6-Tribromophenol	119%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-107-010
DILUTION

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/07/09 22:43
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 5.00
Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	98	< 98 U
111-44-4	Bis-(2-Chloroethyl) Ether	98	< 98 U
95-57-8	2-Chlorophenol	98	< 98 U
541-73-1	1,3-Dichlorobenzene	98	< 98 U
106-46-7	1,4-Dichlorobenzene	98	< 98 U
100-51-6	Benzyl Alcohol	98	< 98 U
95-50-1	1,2-Dichlorobenzene	98	< 98 U
95-48-7	2-Methylphenol	98	< 98 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	98	< 98 U
106-44-5	4-Methylphenol	98	< 98 U
621-64-7	N-Nitroso-Di-N-Propylamine	490	< 490 U
67-72-1	Hexachloroethane	98	< 98 U
98-95-3	Nitrobenzene	98	< 98 U
78-59-1	Isophorone	98	< 98 U
88-75-5	2-Nitrophenol	490	< 490 U
105-67-9	2,4-Dimethylphenol	98	< 98 U
65-85-0	Benzoic Acid	980	< 980 U
111-91-1	bis(2-Chloroethoxy) Methane	98	< 98 U
120-83-2	2,4-Dichlorophenol	490	< 490 U
120-82-1	1,2,4-Trichlorobenzene	98	< 98 U
91-20-3	Naphthalene	98	< 98 U
106-47-8	4-Chloroaniline	490	< 490 U
87-68-3	Hexachlorobutadiene	98	< 98 U
59-50-7	4-Chloro-3-methylphenol	490	< 490 U
91-57-6	2-Methylnaphthalene	98	< 98 U
77-47-4	Hexachlorocyclopentadiene	490	< 490 U
88-06-2	2,4,6-Trichlorophenol	490	< 490 U
95-95-4	2,4,5-Trichlorophenol	490	< 490 U
91-58-7	2-Chloronaphthalene	98	< 98 U
88-74-4	2-Nitroaniline	490	< 490 U
131-11-3	Dimethylphthalate	98	< 98 U
208-96-8	Acenaphthylene	98	< 98 U
99-09-2	3-Nitroaniline	490	< 490 U
83-32-9	Acenaphthene	98	< 98 U
51-28-5	2,4-Dinitrophenol	980	< 980 U
100-02-7	4-Nitrophenol	490	< 490 U
132-64-9	Dibenzofuran	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-107-010
DILUTION

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Date Analyzed: 07/07/09 22:43

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	490	< 490 U
121-14-2	2,4-Dinitrotoluene	490	< 490 U
84-66-2	Diethylphthalate	98	< 98 U
7005-72-3	4-Chlorophenyl-phenylether	98	< 98 U
86-73-7	Fluorene	98	< 98 U
100-01-6	4-Nitroaniline	490	< 490 U
534-52-1	4,6-Dinitro-2-Methylphenol	980	< 980 U
86-30-6	N-Nitrosodiphenylamine	98	< 98 U
101-55-3	4-Bromophenyl-phenylether	98	< 98 U
118-74-1	Hexachlorobenzene	98	< 98 U
87-86-5	Pentachlorophenol	490	< 490 U
85-01-8	**Phenanthrene**	**98**	**510**
86-74-8	**Carbazole**	**98**	**130**
120-12-7	**Anthracene**	**98**	**200**
84-74-2	**Di-n-Butylphthalate**	**98**	**190**
206-44-0	**Fluoranthene**	**98**	**1,700**
129-00-0	**Pyrene**	**98**	**1,900**
85-68-7	Butylbenzylphthalate	98	< 98 U
91-94-1	3,3'-Dichlorobenzidine	490	< 490 U
56-55-3	**Benzo(a)anthracene**	**98**	**450**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**98**	**460**
218-01-9	**Chrysene**	**98**	**840**
117-84-0	Di-n-Octyl phthalate	98	< 98 U
205-99-2	**Benzo(b)fluoranthene**	**98**	**840**
207-08-9	**Benzo(k)fluoranthene**	**98**	**730**
50-32-8	**Benzo(a)pyrene**	**98**	**520**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**98**	**140**
53-70-3	Dibenz(a,h)anthracene	98	< 98 U
191-24-2	**Benzo(g,h,i)perylene**	**98**	**140**
62-53-3	Aniline	98	< 98 U
90-12-0	1-Methylnaphthalene	98	< 98 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.0%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	63.8%	d4-1,2-Dichlorobenzene	58.6%
d5-Phenol	63.9%	2-Fluorophenol	58.0%
2,4,6-Tribromophenol	66.8%	d4-2-Chlorophenol	61.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-108-010
SAMPLE

Lab Sample ID: PD95K
LIMS ID: 09-14488
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/09/09 00:45
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-108-010
SAMPLE

Lab Sample ID: PD95K
LIMS ID: 09-14488
Matrix: Sediment
Date Analyzed: 07/09/09 00:45

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**60**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**33**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**53**
129-00-0	**Pyrene**	**20**	**65**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**20**	**36**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**260**
218-01-9	**Chrysene**	**20**	**86**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**50**
207-08-9	**Benzo(k)fluoranthene**	**20**	**50**
50-32-8	**Benzo(a)pyrene**	**20**	**37**
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.4%	2-Fluorobiphenyl	68.0%
d14-p-Terphenyl	70.0%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	50.7%	2-Fluorophenol	51.7%
2,4,6-Tribromophenol	91.5%	d4-2-Chlorophenol	55.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-112-010
SAMPLE

Lab Sample ID: PD95G
LIMS ID: 09-14484
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 22:26
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 51.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	27	< 27 Y
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**29**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**25**
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	**2-Methylnaphthalene**	**20**	**25**
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**30**
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**24**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	**Dibenzofuran**	**20**	**27**
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**55**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-112-010
SAMPLE

Lab Sample ID: PD95G
LIMS ID: 09-14484
Matrix: Sediment
Date Analyzed: 07/08/09 22:26

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**260**
86-74-8	**Carbazole**	**20**	**88**
120-12-7	**Anthracene**	**20**	**240**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**460**
129-00-0	**Pyrene**	**20**	**590**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**260**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**380**
218-01-9	**Chrysene**	**20**	**530**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**410**
207-08-9	**Benzo(k)fluoranthene**	**20**	**410**
50-32-8	**Benzo(a)pyrene**	**20**	**350**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**120**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**45**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**110**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.8%	2-Fluorobiphenyl	73.6%
d14-p-Terphenyl	79.6%	d4-1,2-Dichlorobenzene	56.8%
d5-Phenol	56.3%	2-Fluorophenol	52.5%
2,4,6-Tribromophenol	89.1%	d4-2-Chlorophenol	56.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-115-010
SAMPLE

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 23:35
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**22**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**31**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**29**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**31**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**27**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**28**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	**Diethylphthalate**	**20**	**43**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**41**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-115-010
SAMPLE

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Date Analyzed: 07/08/09 23:35

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**230**
86-74-8	**Carbazole**	**20**	**39**
120-12-7	**Anthracene**	**20**	**120**
84-74-2	**Di-n-Butylphthalate**	**20**	**20**
206-44-0	**Fluoranthene**	**20**	**420**
129-00-0	**Pyrene**	**20**	**960**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**160**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**660**
218-01-9	**Chrysene**	**20**	**360**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**430**
207-08-9	**Benzo(k)fluoranthene**	**20**	**430**
50-32-8	**Benzo(a)pyrene**	**20**	**390**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**160**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**60**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**160**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	74.8%
d14-p-Terphenyl	96.8%	d4-1,2-Dichlorobenzene	58.4%
d5-Phenol	57.6%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	100%	d4-2-Chlorophenol	58.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-115-010
DILUTION

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/10/09 21:51
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 47.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-115-010
DILUTION

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Date Analyzed: 07/10/09 21:51

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	**Phenanthrene**	**59**	**200**
86-74-8	Carbazole	59	< 59 U
120-12-7	**Anthracene**	**59**	**86**
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**360**
129-00-0	**Pyrene**	**59**	**1,300**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	**Benzo(a)anthracene**	**59**	**170**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**870**
218-01-9	**Chrysene**	**59**	**270**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**500**
207-08-9	**Benzo(k)fluoranthene**	**59**	**290**
50-32-8	**Benzo(a)pyrene**	**59**	**320**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**140**
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	**Benzo(g,h,i)perylene**	**59**	**160**
62-53-3	Aniline	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	51.1%	2-Fluorobiphenyl	64.6%
d14-p-Terphenyl	126%	d4-1,2-Dichlorobenzene	51.1%
d5-Phenol	53.3%	2-Fluorophenol	46.7%
2,4,6-Tribromophenol	82.4%	d4-2-Chlorophenol	55.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-118-010
SAMPLE

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/09/09 01:20
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**44**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**22**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-118-010
SAMPLE

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Date Analyzed: 07/09/09 01:20

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**70**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**41**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**170**
129-00-0	**Pyrene**	**19**	**190**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**70**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**45**
218-01-9	**Chrysene**	**19**	**92**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**85**
207-08-9	**Benzo(k)fluoranthene**	**19**	**85**
50-32-8	**Benzo(a)pyrene**	**19**	**74**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**24**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**27**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.2%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	67.6%	d4-1,2-Dichlorobenzene	51.6%
d5-Phenol	50.7%	2-Fluorophenol	48.3%
2,4,6-Tribromophenol	85.6%	d4-2-Chlorophenol	53.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-118-010
DILUTION

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/10/09 22:26
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
111-44-4	Bis-(2-Chloroethyl) Ether	58	< 58 U
95-57-8	2-Chlorophenol	58	< 58 U
541-73-1	1,3-Dichlorobenzene	58	< 58 U
106-46-7	1,4-Dichlorobenzene	58	< 58 U
100-51-6	Benzyl Alcohol	58	< 58 U
95-50-1	1,2-Dichlorobenzene	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	58	< 58 U
98-95-3	Nitrobenzene	58	< 58 U
78-59-1	Isophorone	58	< 58 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
65-85-0	Benzoic Acid	580	< 580 U
111-91-1	bis(2-Chloroethoxy) Methane	58	< 58 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	58	< 58 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	58	< 58 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	58	< 58 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	58	< 58 U
51-28-5	2,4-Dinitrophenol	580	< 580 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	58	< 58 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	58	< 58 U
7005-72-3	4-Chlorophenyl-phenylether	58	< 58 U
86-73-7	Fluorene	58	< 58 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	580	< 580 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-118-010
DILUTION

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Date Analyzed: 07/10/09 22:26

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	58	< 58 U
101-55-3	4-Bromophenyl-phenylether	58	< 58 U
118-74-1	Hexachlorobenzene	58	< 58 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**58**	**61**
86-74-8	Carbazole	58	< 58 U
120-12-7	Anthracene	58	< 58 U
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	**Fluoranthene**	**58**	**130**
129-00-0	**Pyrene**	**58**	**260**
85-68-7	Butylbenzylphthalate	58	< 58 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	Benzo(a)anthracene	58	< 58 U
117-81-7	bis(2-Ethylhexyl)phthalate	58	< 58 U
218-01-9	**Chrysene**	**58**	**77**
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	**Benzo(b)fluoranthene**	**58**	**74**
207-08-9	**Benzo(k)fluoranthene**	**58**	**67**
50-32-8	**Benzo(a)pyrene**	**58**	**61**
193-39-5	Indeno(1,2,3-cd)pyrene	58	< 58 U
53-70-3	Dibenz(a,h)anthracene	58	< 58 U
191-24-2	Benzo(g,h,i)perylene	58	< 58 U
62-53-3	Aniline	58	< 58 U
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	48.7%	2-Fluorobiphenyl	56.2%
d14-p-Terphenyl	98.6%	d4-1,2-Dichlorobenzene	46.1%
d5-Phenol	46.5%	2-Fluorophenol	42.6%
2,4,6-Tribromophenol	69.2%	d4-2-Chlorophenol	48.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-121-010
SAMPLE

Lab Sample ID: PD95M
LIMS ID: 09-14490
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/09/09 01:55
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 45.2%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**58**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**20**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**28**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**33**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**26**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**24**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**24**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**35**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-121-010
SAMPLE

Lab Sample ID: PD95M
LIMS ID: 09-14490
Matrix: Sediment
Date Analyzed: 07/09/09 01:55

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**160**
86-74-8	**Carbazole**	**20**	**27**
120-12-7	**Anthracene**	**20**	**86**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**260**
129-00-0	**Pyrene**	**20**	**630**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**140**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**520**
218-01-9	**Chrysene**	**20**	**220**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**320**
207-08-9	**Benzo(k)fluoranthene**	**20**	**320**
50-32-8	**Benzo(a)pyrene**	**20**	**280**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**120**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**34**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**120**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.8%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	90.4%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	53.9%	2-Fluorophenol	48.3%
2,4,6-Tribromophenol	92.5%	d4-2-Chlorophenol	54.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-121-010
DILUTION

Lab Sample ID: PD95M
LIMS ID: 09-14490
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/10/09 23:02
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 45.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-121-010
DILUTION

Lab Sample ID: PD95M
LIMS ID: 09-14490
Matrix: Sediment
Date Analyzed: 07/10/09 23:02

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	**Phenanthrene**	**59**	**150**
86-74-8	Carbazole	59	< 59 U
120-12-7	**Anthracene**	**59**	**71**
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**240**
129-00-0	**Pyrene**	**59**	**800**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	**Benzo(a)anthracene**	**59**	**130**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**690**
218-01-9	**Chrysene**	**59**	**200**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**290**
207-08-9	**Benzo(k)fluoranthene**	**59**	**290**
50-32-8	**Benzo(a)pyrene**	**59**	**260**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**110**
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	**Benzo(g,h,i)perylene**	**59**	**120**
62-53-3	Aniline	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.9%	2-Fluorobiphenyl	66.1%
d14-p-Terphenyl	112%	d4-1,2-Dichlorobenzene	50.0%
d5-Phenol	52.6%	2-Fluorophenol	45.4%
2,4,6-Tribromophenol	80.0%	d4-2-Chlorophenol	52.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-123-010
SAMPLE

Lab Sample ID: PE14M
LIMS ID: 09-14624
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/10/09 01:07
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 41.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**25**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**25**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**24**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-123-010
SAMPLE

Lab Sample ID: PE14M
LIMS ID: 09-14624
Matrix: Sediment
Date Analyzed: 07/10/09 01:07

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**150**
86-74-8	**Carbazole**	**20**	**27**
120-12-7	**Anthracene**	**20**	**79**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**290**
129-00-0	**Pyrene**	**20**	**300 Q**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**150 Q**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**190**
218-01-9	**Chrysene**	**20**	**240**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**570**
207-08-9	**Benzo(k)fluoranthene**	**20**	**550**
50-32-8	**Benzo(a)pyrene**	**20**	**250**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**70**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**20**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**68**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.6%	2-Fluorobiphenyl	75.6%
d14-p-Terphenyl	69.6%	d4-1,2-Dichlorobenzene	56.0%
d5-Phenol	58.9%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	92.3%	d4-2-Chlorophenol	59.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-124-010
SAMPLE

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/10/09 00:32
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 37.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**20**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**21**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**23**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-124-010
SAMPLE

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Date Analyzed: 07/10/09 00:32

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**130**
86-74-8	**Carbazole**	**19**	**23**
120-12-7	**Anthracene**	**19**	**65**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**230**
129-00-0	**Pyrene**	**19**	**260 Q**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**110**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**250**
218-01-9	**Chrysene**	**19**	**180**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**450**
207-08-9	**Benzo(k)fluoranthene**	**19**	**440**
50-32-8	**Benzo(a)pyrene**	**19**	**190**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**53**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**48**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	61.6%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	58.4%	2-Fluorophenol	57.3%
2,4,6-Tribromophenol	86.4%	d4-2-Chlorophenol	59.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-125-010
SAMPLE

Lab Sample ID: PE14K
LIMS ID: 09-14622
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 23:56
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	**Benzyl Alcohol**	**20**	**38**
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**52**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**200**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-125-010
SAMPLE

Lab Sample ID: PE14K
LIMS ID: 09-14622
Matrix: Sediment
Date Analyzed: 07/09/09 23:56

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**82**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**44**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**240**
129-00-0	**Pyrene**	**20**	**220 Q**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**82**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**89**
218-01-9	**Chrysene**	**20**	**160**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**270**
207-08-9	**Benzo(k)fluoranthene**	**20**	**190**
50-32-8	**Benzo(a)pyrene**	**20**	**160**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**40**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**35**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**120**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.4%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	58.8%	d4-1,2-Dichlorobenzene	60.0%
d5-Phenol	56.8%	2-Fluorophenol	56.5%
2,4,6-Tribromophenol	85.1%	d4-2-Chlorophenol	58.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-128-010
SAMPLE

Lab Sample ID: PE14J
LIMS ID: 09-14621
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 23:21
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**22**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**24**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-128-010
SAMPLE

Lab Sample ID: PE14J
LIMS ID: 09-14621
Matrix: Sediment
Date Analyzed: 07/09/09 23:21

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**120**
86-74-8	**Carbazole**	**19**	**20**
120-12-7	**Anthracene**	**19**	**74**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**230**
129-00-0	**Pyrene**	**19**	**220 Q**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**130**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**120**
218-01-9	**Chrysene**	**19**	**220**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**420**
207-08-9	**Benzo(k)fluoranthene**	**19**	**410**
50-32-8	**Benzo(a)pyrene**	**19**	**190**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**61**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**55**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%	2-Fluorobiphenyl	74.0%
d14-p-Terphenyl	62.0%	d4-1,2-Dichlorobenzene	58.4%
d5-Phenol	58.7%	2-Fluorophenol	57.1%
2,4,6-Tribromophenol	88.5%	d4-2-Chlorophenol	59.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-131-010
SAMPLE

Lab Sample ID: PE14I
LIMS ID: 09-14620
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 22:46
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 42.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**30**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-131-010
SAMPLE

Lab Sample ID: PE14I
LIMS ID: 09-14620
Matrix: Sediment
Date Analyzed: 07/09/09 22:46

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**84**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**54**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**150**
129-00-0	**Pyrene**	**20**	**200 Q**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**20**	**84**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**110**
218-01-9	**Chrysene**	**20**	**140**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**200**
207-08-9	**Benzo(k)fluoranthene**	**20**	**190**
50-32-8	**Benzo(a)pyrene**	**20**	**160**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**41**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**40**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	58.4%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	56.3%	2-Fluorophenol	54.9%
2,4,6-Tribromophenol	83.2%	d4-2-Chlorophenol	57.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-133-010
SAMPLE

Lab Sample ID: PD95J
LIMS ID: 09-14487
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/09/09 00:11
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**67**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	**Diethylphthalate**	**19**	**21**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-133-010
SAMPLE

Lab Sample ID: PD95J
LIMS ID: 09-14487
Matrix: Sediment
Date Analyzed: 07/09/09 00:11

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**91**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**63**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**190**
129-00-0	**Pyrene**	**19**	**240**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**110**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**210**
218-01-9	**Chrysene**	**19**	**200**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**200**
207-08-9	**Benzo(k)fluoranthene**	**19**	**200**
50-32-8	**Benzo(a)pyrene**	**19**	**160**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**49**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**49**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.8%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	69.6%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	53.1%	2-Fluorophenol	50.4%
2,4,6-Tribromophenol	91.7%	d4-2-Chlorophenol	56.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-134-010
SAMPLE

Lab Sample ID: PE14H
LIMS ID: 09-14619
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 22:11
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 38.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-134-010
SAMPLE

Lab Sample ID: PE14H
LIMS ID: 09-14619
Matrix: Sediment
Date Analyzed: 07/09/09 22:11

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**110**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**62**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**210**
129-00-0	**Pyrene**	**20**	**180 Q**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**110**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**110**
218-01-9	**Chrysene**	**20**	**180**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**230**
207-08-9	**Benzo(k)fluoranthene**	**20**	**190**
50-32-8	**Benzo(a)pyrene**	**20**	**170**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**52**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**47**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	56.8%	d4-1,2-Dichlorobenzene	56.4%
d5-Phenol	55.2%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	79.5%	d4-2-Chlorophenol	55.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-201-010
SAMPLE

Lab Sample ID: PE14G
LIMS ID: 09-14618
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 21:36
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**33**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-201-010
SAMPLE

Lab Sample ID: PE14G
LIMS ID: 09-14618
Matrix: Sediment
Date Analyzed: 07/09/09 21:36

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**91**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**52**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**170**
129-00-0	**Pyrene**	**19**	**200 Q**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**90**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**110**
218-01-9	**Chrysene**	**19**	**140**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**230**
207-08-9	**Benzo(k)fluoranthene**	**19**	**280**
50-32-8	**Benzo(a)pyrene**	**19**	**190**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**55**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**48**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	76.4%
d14-p-Terphenyl	62.4%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	60.3%	2-Fluorophenol	58.1%
2,4,6-Tribromophenol	87.5%	d4-2-Chlorophenol	60.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-203-010
SAMPLE

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 19:52
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 31.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-203-010
SAMPLE

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Date Analyzed: 07/09/09 19:52

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**63**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**80**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**93**
129-00-0	**Pyrene**	**19**	**270 Q**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**97**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**59**
218-01-9	**Chrysene**	**19**	**250**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**180**
207-08-9	**Benzo(k)fluoranthene**	**19**	**130**
50-32-8	**Benzo(a)pyrene**	**19**	**130**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**42**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**34**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	80.8%
d14-p-Terphenyl	63.2%	d4-1,2-Dichlorobenzene	68.8%
d5-Phenol	65.6%	2-Fluorophenol	63.7%
2,4,6-Tribromophenol	89.3%	d4-2-Chlorophenol	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-205-010
SAMPLE

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 19:16
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**19**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-205-010
SAMPLE

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Date Analyzed: 07/09/09 19:16

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**36**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**24**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**83**
129-00-0	**Pyrene**	**19**	**66 Q**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**54**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**35**
218-01-9	**Chrysene**	**19**	**73**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**82**
207-08-9	**Benzo(k)fluoranthene**	**19**	**55**
50-32-8	**Benzo(a)pyrene**	**19**	**61**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**24**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**22**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.2%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	53.6%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	53.6%	2-Fluorophenol	53.6%
2,4,6-Tribromophenol	77.1%	d4-2-Chlorophenol	55.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-206-010
SAMPLE

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Data Release Authorized: WTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 23:34
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**74 M**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**240**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**170**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**130**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**2,200 E**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**1,000**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-206-010
SAMPLE

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Date Analyzed: 07/04/09 23:34

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**1,700 E**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**5,900 E**
86-74-8	**Carbazole**	**20**	**410**
120-12-7	**Anthracene**	**20**	**2,400 E**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**9,500 E**
129-00-0	**Pyrene**	**20**	**5,400 E**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**2,400 E**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**420**
218-01-9	**Chrysene**	**20**	**3,500 E**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**2,000 E**
207-08-9	**Benzo(k)fluoranthene**	**20**	**2,000 E**
50-32-8	**Benzo(a)pyrene**	**20**	**1,700 E**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**430**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**100**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**350**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**190**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	56.4%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	91.2%	2-Fluorophenol	61.1%
2,4,6-Tribromophenol	112%	d4-2-Chlorophenol	69.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-206-010
DILUTION

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/08/09 01:03
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	390	< 390 U
111-44-4	Bis-(2-Chloroethyl) Ether	390	< 390 U
95-57-8	2-Chlorophenol	390	< 390 U
541-73-1	1,3-Dichlorobenzene	390	< 390 U
106-46-7	1,4-Dichlorobenzene	390	< 390 U
100-51-6	Benzyl Alcohol	390	< 390 U
95-50-1	1,2-Dichlorobenzene	390	< 390 U
95-48-7	2-Methylphenol	390	< 390 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	390	< 390 U
106-44-5	4-Methylphenol	390	< 390 U
621-64-7	N-Nitroso-Di-N-Propylamine	2,000	< 2,000 U
67-72-1	Hexachloroethane	390	< 390 U
98-95-3	Nitrobenzene	390	< 390 U
78-59-1	Isophorone	390	< 390 U
88-75-5	2-Nitrophenol	2,000	< 2,000 U
105-67-9	2,4-Dimethylphenol	390	< 390 U
65-85-0	Benzoic Acid	3,900	< 3,900 U
111-91-1	bis(2-Chloroethoxy) Methane	390	< 390 U
120-83-2	2,4-Dichlorophenol	2,000	< 2,000 U
120-82-1	1,2,4-Trichlorobenzene	390	< 390 U
91-20-3	Naphthalene	390	< 390 U
106-47-8	4-Chloroaniline	2,000	< 2,000 U
87-68-3	Hexachlorobutadiene	390	< 390 U
59-50-7	4-Chloro-3-methylphenol	2,000	< 2,000 U
91-57-6	2-Methylnaphthalene	390	< 390 U
77-47-4	Hexachlorocyclopentadiene	2,000	< 2,000 U
88-06-2	2,4,6-Trichlorophenol	2,000	< 2,000 U
95-95-4	2,4,5-Trichlorophenol	2,000	< 2,000 U
91-58-7	2-Chloronaphthalene	390	< 390 U
88-74-4	2-Nitroaniline	2,000	< 2,000 U
131-11-3	Dimethylphthalate	390	< 390 U
208-96-8	Acenaphthylene	390	< 390 U
99-09-2	3-Nitroaniline	2,000	< 2,000 U
83-32-9	**Acenaphthene**	**390**	**1,900**
51-28-5	2,4-Dinitrophenol	3,900	< 3,900 U
100-02-7	4-Nitrophenol	2,000	< 2,000 U
132-64-9	**Dibenzofuran**	**390**	**840**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-206-010
DILUTION

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Date Analyzed: 07/08/09 01:03

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	2,000	< 2,000 U
121-14-2	2,4-Dinitrotoluene	2,000	< 2,000 U
84-66-2	Diethylphthalate	390	< 390 U
7005-72-3	4-Chlorophenyl-phenylether	390	< 390 U
86-73-7	**Fluorene**	**390**	**1,400**
100-01-6	4-Nitroaniline	2,000	< 2,000 U
534-52-1	4,6-Dinitro-2-Methylphenol	3,900	< 3,900 U
86-30-6	N-Nitrosodiphenylamine	390	< 390 U
101-55-3	4-Bromophenyl-phenylether	390	< 390 U
118-74-1	Hexachlorobenzene	390	< 390 U
87-86-5	Pentachlorophenol	2,000	< 2,000 U
85-01-8	**Phenanthrene**	**390**	**7,500**
86-74-8	**Carbazole**	**390**	**440**
120-12-7	**Anthracene**	**390**	**2,300**
84-74-2	Di-n-Butylphthalate	390	< 390 U
206-44-0	**Fluoranthene**	**390**	**9,100**
129-00-0	**Pyrene**	**390**	**6,500**
85-68-7	Butylbenzylphthalate	390	< 390 U
91-94-1	3,3'-Dichlorobenzidine	2,000	< 2,000 U
56-55-3	**Benzo(a)anthracene**	**390**	**2,900**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**390**	**400**
218-01-9	**Chrysene**	**390**	**3,600**
117-84-0	Di-n-Octyl phthalate	390	< 390 U
205-99-2	**Benzo(b)fluoranthene**	**390**	**2,600**
207-08-9	**Benzo(k)fluoranthene**	**390**	**2,400**
50-32-8	**Benzo(a)pyrene**	**390**	**2,300**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**390**	**490**
53-70-3	Dibenz(a,h)anthracene	390	< 390 U
191-24-2	**Benzo(g,h,i)perylene**	**390**	**460**
62-53-3	Aniline	390	< 390 U
90-12-0	1-Methylnaphthalene	390	< 390 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	73.6%	2-Fluorobiphenyl	83.2%
d14-p-Terphenyl	72.0%	d4-1,2-Dichlorobenzene	63.2%
d5-Phenol	65.6%	2-Fluorophenol	67.2%
2,4,6-Tribromophenol	67.7%	d4-2-Chlorophenol	71.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-208-010
SAMPLE

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 22:27
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**75**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**15 J**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**15 J**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**200**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**70**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**130**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**450**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**260**

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-208-010
SAMPLE

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Date Analyzed: 07/04/09 22:27

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**670**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**3,700 E**
86-74-8	**Carbazole**	**20**	**600**
120-12-7	**Anthracene**	**20**	**2,200 E**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**7,600 E**
129-00-0	**Pyrene**	**20**	**4,000 E**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**3,100 E**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**260**
218-01-9	**Chrysene**	**20**	**4,600 E**
117-84-0	**Di-n-Octyl phthalate**	**20**	**58**
205-99-2	**Benzo(b)fluoranthene**	**20**	**2,900 E**
207-08-9	**Benzo(k)fluoranthene**	**20**	**2,900 E**
50-32-8	**Benzo(a)pyrene**	**20**	**3,100 E**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**570**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**140**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**380**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**39**

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.0%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	55.6%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	77.1%	2-Fluorophenol	55.5%
2,4,6-Tribromophenol	119%	d4-2-Chlorophenol	62.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-208-010
DILUTION

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/07/09 23:53
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	200	< 200 U
111-44-4	Bis-(2-Chloroethyl) Ether	200	< 200 U
95-57-8	2-Chlorophenol	200	< 200 U
541-73-1	1,3-Dichlorobenzene	200	< 200 U
106-46-7	1,4-Dichlorobenzene	200	< 200 U
100-51-6	Benzyl Alcohol	200	< 200 U
95-50-1	1,2-Dichlorobenzene	200	< 200 U
95-48-7	2-Methylphenol	200	< 200 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	200	< 200 U
106-44-5	4-Methylphenol	200	< 200 U
621-64-7	N-Nitroso-Di-N-Propylamine	980	< 980 U
67-72-1	Hexachloroethane	200	< 200 U
98-95-3	Nitrobenzene	200	< 200 U
78-59-1	Isophorone	200	< 200 U
88-75-5	2-Nitrophenol	980	< 980 U
105-67-9	2,4-Dimethylphenol	200	< 200 U
65-85-0	Benzoic Acid	2,000	< 2,000 U
111-91-1	bis(2-Chloroethoxy) Methane	200	< 200 U
120-83-2	2,4-Dichlorophenol	980	< 980 U
120-82-1	1,2,4-Trichlorobenzene	200	< 200 U
91-20-3	Naphthalene	200	< 200 U
106-47-8	4-Chloroaniline	980	< 980 U
87-68-3	Hexachlorobutadiene	200	< 200 U
59-50-7	4-Chloro-3-methylphenol	980	< 980 U
91-57-6	2-Methylnaphthalene	200	< 200 U
77-47-4	Hexachlorocyclopentadiene	980	< 980 U
88-06-2	2,4,6-Trichlorophenol	980	< 980 U
95-95-4	2,4,5-Trichlorophenol	980	< 980 U
91-58-7	2-Chloronaphthalene	200	< 200 U
88-74-4	2-Nitroaniline	980	< 980 U
131-11-3	Dimethylphthalate	200	< 200 U
208-96-8	Acenaphthylene	200	< 200 U
99-09-2	3-Nitroaniline	980	< 980 U
83-32-9	**Acenaphthene**	**200**	**480**
51-28-5	2,4-Dinitrophenol	2,000	< 2,000 U
100-02-7	4-Nitrophenol	980	< 980 U
132-64-9	**Dibenzofuran**	**200**	**260**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-208-010
DILUTION

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Date Analyzed: 07/07/09 23:53

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	980	< 980 U
121-14-2	2,4-Dinitrotoluene	980	< 980 U
84-66-2	Diethylphthalate	200	< 200 U
7005-72-3	4-Chlorophenyl-phenylether	200	< 200 U
86-73-7	**Fluorene**	**200**	**620**
100-01-6	4-Nitroaniline	980	< 980 U
534-52-1	4,6-Dinitro-2-Methylphenol	2,000	< 2,000 U
86-30-6	N-Nitrosodiphenylamine	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	200	< 200 U
118-74-1	Hexachlorobenzene	200	< 200 U
87-86-5	Pentachlorophenol	980	< 980 U
85-01-8	**Phenanthrene**	**200**	**4,100**
86-74-8	**Carbazole**	**200**	**540**
120-12-7	**Anthracene**	**200**	**2,100**
84-74-2	Di-n-Butylphthalate	200	< 200 U
206-44-0	**Fluoranthene**	**200**	**7,500**
129-00-0	**Pyrene**	**200**	**5,600**
85-68-7	Butylbenzylphthalate	200	< 200 U
91-94-1	3,3'-Dichlorobenzidine	980	< 980 U
56-55-3	**Benzo(a)anthracene**	**200**	**3,600**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**200**	**270**
218-01-9	**Chrysene**	**200**	**4,500**
117-84-0	Di-n-Octyl phthalate	200	< 200 U
205-99-2	**Benzo(b)fluoranthene**	**200**	**3,800**
207-08-9	**Benzo(k)fluoranthene**	**200**	**2,800**
50-32-8	**Benzo(a)pyrene**	**200**	**2,800**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**200**	**730**
53-70-3	**Dibenz(a,h)anthracene**	**200**	**240**
191-24-2	**Benzo(g,h,i)perylene**	**200**	**620**
62-53-3	Aniline	200	< 200 U
90-12-0	1-Methylnaphthalene	200	< 200 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.4%	2-Fluorobiphenyl	84.0%
d14-p-Terphenyl	70.0%	d4-1,2-Dichlorobenzene	60.4%
d5-Phenol	64.3%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	69.1%	d4-2-Chlorophenol	65.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-209-010
SAMPLE

Lab Sample ID: PE14F
LIMS ID: 09-14617
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 21:01
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**26**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	**Dimethylphthalate**	**19**	**22**
208-96-8	**Acenaphthylene**	**19**	**26**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**59**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**30**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**57**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-209-010
SAMPLE

Lab Sample ID: PE14F
LIMS ID: 09-14617
Matrix: Sediment
Date Analyzed: 07/09/09 21:01

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**370**
86-74-8	**Carbazole**	**19**	**51**
120-12-7	**Anthracene**	**19**	**160**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**610**
129-00-0	**Pyrene**	**19**	**490 Q**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**320**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**110**
218-01-9	**Chrysene**	**19**	**470**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**450**
207-08-9	**Benzo(k)fluoranthene**	**19**	**320**
50-32-8	**Benzo(a)pyrene**	**19**	**370**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**120**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**36**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**100**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	58.8%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	58.7%	2-Fluorophenol	58.1%
2,4,6-Tribromophenol	81.3%	d4-2-Chlorophenol	60.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-210-010
SAMPLE

Lab Sample ID: PE14B
LIMS ID: 09-14613
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 17:31
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	**2,2'-Oxybis(1-Chloropropane)**	**20**	**38 Q**
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-210-010
SAMPLE

Lab Sample ID: PE14B
LIMS ID: 09-14613
Matrix: Sediment
Date Analyzed: 07/09/09 17:31

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**80**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**40**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**160**
129-00-0	**Pyrene**	**20**	**110 Q**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**75**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**75**
218-01-9	**Chrysene**	**20**	**120**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**120**
207-08-9	**Benzo(k)fluoranthene**	**20**	**99**
50-32-8	**Benzo(a)pyrene**	**20**	**95**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**43**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**41**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	58.0%	d4-1,2-Dichlorobenzene	62.0%
d5-Phenol	62.7%	2-Fluorophenol	59.2%
2,4,6-Tribromophenol	81.9%	d4-2-Chlorophenol	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-212-010
SAMPLE

Lab Sample ID: PE14E
LIMS ID: 09-14616
Matrix: Sediment
Data Release Authorized:
Reported: 07/14/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/09/09 20:27
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-212-010
SAMPLE

Lab Sample ID: PE14E
LIMS ID: 09-14616
Matrix: Sediment
Date Analyzed: 07/09/09 20:27

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**140**
86-74-8	**Carbazole**	**19**	**20**
120-12-7	**Anthracene**	**19**	**46**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**300**
129-00-0	**Pyrene**	**19**	**190 Q**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**86**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**62**
218-01-9	**Chrysene**	**19**	**160**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**130**
207-08-9	**Benzo(k)fluoranthene**	**19**	**120**
50-32-8	**Benzo(a)pyrene**	**19**	**110**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**44**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**40**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	58.8%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	61.3%	2-Fluorophenol	60.3%
2,4,6-Tribromophenol	85.1%	d4-2-Chlorophenol	62.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-213-010
SAMPLE

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/07/09 19:42
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 36.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**100**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**30**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**60**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**200**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**72**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**140**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-213-010
SAMPLE

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Date Analyzed: 07/07/09 19:42

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**800**
86-74-8	**Carbazole**	**19**	**120**
120-12-7	**Anthracene**	**19**	**410**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**1,200**
129-00-0	**Pyrene**	**19**	**1,600 E**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**670**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**100**
218-01-9	**Chrysene**	**19**	**930**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**780**
207-08-9	**Benzo(k)fluoranthene**	**19**	**780**
50-32-8	**Benzo(a)pyrene**	**19**	**930**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**290**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**100**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**240**
62-53-3	Aniline	19	< 19 U
90-12-0	**1-Methylnaphthalene**	**19**	**23**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	58.4%	d4-1,2-Dichlorobenzene	52.4%
d5-Phenol	61.3%	2-Fluorophenol	59.5%
2,4,6-Tribromophenol	74.1%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-213-010
DILUTION

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 21:33
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 36.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
111-44-4	Bis-(2-Chloroethyl) Ether	58	< 58 U
95-57-8	2-Chlorophenol	58	< 58 U
541-73-1	1,3-Dichlorobenzene	58	< 58 U
106-46-7	1,4-Dichlorobenzene	58	< 58 U
100-51-6	Benzyl Alcohol	58	< 58 U
95-50-1	1,2-Dichlorobenzene	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	58	< 58 U
98-95-3	Nitrobenzene	58	< 58 U
78-59-1	Isophorone	58	< 58 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
65-85-0	Benzoic Acid	580	< 580 U
111-91-1	bis(2-Chloroethoxy) Methane	58	< 58 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	58	< 58 U
91-20-3	**Naphthalene**	**58**	**96**
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	58	< 58 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	58	< 58 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	58	< 58 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	**Acenaphthene**	**58**	**190**
51-28-5	2,4-Dinitrophenol	580	< 580 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	**Dibenzofuran**	**58**	**68**
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	58	< 58 U
7005-72-3	4-Chlorophenyl-phenylether	58	< 58 U
86-73-7	**Fluorene**	**58**	**120**
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	580	< 580 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-213-010
DILUTION

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Date Analyzed: 07/08/09 21:33

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	58	< 58 U
101-55-3	4-Bromophenyl-phenylether	58	< 58 U
118-74-1	Hexachlorobenzene	58	< 58 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**58**	**770**
86-74-8	**Carbazole**	**58**	**100**
120-12-7	**Anthracene**	**58**	**360**
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	**Fluoranthene**	**58**	**1,200**
129-00-0	**Pyrene**	**58**	**2,300**
85-68-7	Butylbenzylphthalate	58	< 58 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**58**	**690**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**58**	**92**
218-01-9	**Chrysene**	**58**	**1,000**
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	**Benzo(b)fluoranthene**	**58**	**1,100**
207-08-9	**Benzo(k)fluoranthene**	**58**	**880**
50-32-8	**Benzo(a)pyrene**	**58**	**980**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**58**	**220**
53-70-3	**Dibenz(a,h)anthracene**	**58**	**75**
191-24-2	**Benzo(g,h,i)perylene**	**58**	**200**
62-53-3	Aniline	58	< 58 U
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.0%	2-Fluorobiphenyl	66.1%
d14-p-Terphenyl	53.0%	d4-1,2-Dichlorobenzene	48.6%
d5-Phenol	56.6%	2-Fluorophenol	53.4%
2,4,6-Tribromophenol	58.9%	d4-2-Chlorophenol	55.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-214-010
SAMPLE

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/07/09 19:08
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.0%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**200**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	**1,4-Dichlorobenzene**	**19**	**30**
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**120**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**27**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**67**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**95**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**62**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	**Diethylphthalate**	**19**	**57**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**84**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-214-010
SAMPLE

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Date Analyzed: 07/07/09 19:08

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**370**
86-74-8	**Carbazole**	**19**	**84**
120-12-7	**Anthracene**	**19**	**270**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**780**
129-00-0	**Pyrene**	**19**	**1,700 E**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**430**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**130**
218-01-9	**Chrysene**	**19**	**670**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**650**
207-08-9	**Benzo(k)fluoranthene**	**19**	**650**
50-32-8	**Benzo(a)pyrene**	**19**	**720**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**200**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**77**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**180**
62-53-3	Aniline	19	< 19 U
90-12-0	**1-Methylnaphthalene**	**19**	**21**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	75.6%
d14-p-Terphenyl	67.6%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	66.4%	2-Fluorophenol	62.7%
2,4,6-Tribromophenol	85.3%	d4-2-Chlorophenol	66.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-214-010
DILUTION

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 20:58
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 33.0%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**58**	**210**
111-44-4	Bis-(2-Chloroethyl) Ether	58	< 58 U
95-57-8	2-Chlorophenol	58	< 58 U
541-73-1	1,3-Dichlorobenzene	58	< 58 U
106-46-7	1,4-Dichlorobenzene	58	< 58 U
100-51-6	Benzyl Alcohol	58	< 58 U
95-50-1	1,2-Dichlorobenzene	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	58	< 58 U
98-95-3	Nitrobenzene	58	< 58 U
78-59-1	Isophorone	58	< 58 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
65-85-0	Benzoic Acid	580	< 580 U
111-91-1	bis(2-Chloroethoxy) Methane	58	< 58 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	58	< 58 U
91-20-3	**Naphthalene**	**58**	**120**
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	58	< 58 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	58	< 58 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	58	< 58 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	**Acenaphthene**	**58**	**91**
51-28-5	2,4-Dinitrophenol	580	< 580 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	**Dibenzofuran**	**58**	**60**
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	**Diethylphthalate**	**58**	**60**
7005-72-3	4-Chlorophenyl-phenylether	58	< 58 U
86-73-7	**Fluorene**	**58**	**85**
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	580	< 580 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-214-010
DILUTION

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Date Analyzed: 07/08/09 20:58

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	58	< 58 U
101-55-3	4-Bromophenyl-phenylether	58	< 58 U
118-74-1	Hexachlorobenzene	58	< 58 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**58**	**390**
86-74-8	**Carbazole**	**58**	**74**
120-12-7	**Anthracene**	**58**	**250**
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	**Fluoranthene**	**58**	**850**
129-00-0	**Pyrene**	**58**	**2,700**
85-68-7	Butylbenzylphthalate	58	< 58 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**58**	**450**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**58**	**130**
218-01-9	**Chrysene**	**58**	**750**
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	**Benzo(b)fluoranthene**	**58**	**820**
207-08-9	**Benzo(k)fluoranthene**	**58**	**820**
50-32-8	**Benzo(a)pyrene**	**58**	**800**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**58**	**160**
53-70-3	**Dibenz(a,h)anthracene**	**58**	**68**
191-24-2	**Benzo(g,h,i)perylene**	**58**	**140**
62-53-3	Aniline	58	< 58 U
90-12-0	1-Methylnaphthalene	58	< 58 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.2%	2-Fluorobiphenyl	76.9%
d14-p-Terphenyl	64.1%	d4-1,2-Dichlorobenzene	60.0%
d5-Phenol	69.4%	2-Fluorophenol	64.8%
2,4,6-Tribromophenol	71.0%	d4-2-Chlorophenol	67.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-215-010
SAMPLE

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/07/09 20:17
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 54.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	**Naphthalene**	**59**	**86**
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	**Acenaphthylene**	**59**	**260**
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	**Acenaphthene**	**59**	**490**
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	**Dibenzofuran**	**59**	**150**
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	**Fluorene**	**59**	**340**
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-215-010
SAMPLE

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Date Analyzed: 07/07/09 20:17

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	**Phenanthrene**	**59**	**2,400**
86-74-8	**Carbazole**	**59**	**370**
120-12-7	**Anthracene**	**59**	**1,400**
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**4,300**
129-00-0	**Pyrene**	**59**	**3,000**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**59**	**2,200**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**690**
218-01-9	**Chrysene**	**59**	**3,200**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**2,500**
207-08-9	**Benzo(k)fluoranthene**	**59**	**2,500**
50-32-8	**Benzo(a)pyrene**	**59**	**2,800**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**820**
53-70-3	**Dibenz(a,h)anthracene**	**59**	**340**
191-24-2	**Benzo(g,h,i)perylene**	**59**	**700**
62-53-3	Aniline	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.4%	2-Fluorobiphenyl	68.2%
d14-p-Terphenyl	49.1%	d4-1,2-Dichlorobenzene	53.4%
d5-Phenol	62.8%	2-Fluorophenol	61.8%
2,4,6-Tribromophenol	68.6%	d4-2-Chlorophenol	62.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-215-010
DILUTION

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 22:07
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 15.0
Percent Moisture: 54.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	290	< 290 U
111-44-4	Bis-(2-Chloroethyl) Ether	290	< 290 U
95-57-8	2-Chlorophenol	290	< 290 U
541-73-1	1,3-Dichlorobenzene	290	< 290 U
106-46-7	1,4-Dichlorobenzene	290	< 290 U
100-51-6	Benzyl Alcohol	290	< 290 U
95-50-1	1,2-Dichlorobenzene	290	< 290 U
95-48-7	2-Methylphenol	290	< 290 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	290	< 290 U
106-44-5	4-Methylphenol	290	< 290 U
621-64-7	N-Nitroso-Di-N-Propylamine	1,500	< 1,500 U
67-72-1	Hexachloroethane	290	< 290 U
98-95-3	Nitrobenzene	290	< 290 U
78-59-1	Isophorone	290	< 290 U
88-75-5	2-Nitrophenol	1,500	< 1,500 U
105-67-9	2,4-Dimethylphenol	290	< 290 U
65-85-0	Benzoic Acid	2,900	< 2,900 U
111-91-1	bis(2-Chloroethoxy) Methane	290	< 290 U
120-83-2	2,4-Dichlorophenol	1,500	< 1,500 U
120-82-1	1,2,4-Trichlorobenzene	290	< 290 U
91-20-3	Naphthalene	290	< 290 U
106-47-8	4-Chloroaniline	1,500	< 1,500 U
87-68-3	Hexachlorobutadiene	290	< 290 U
59-50-7	4-Chloro-3-methylphenol	1,500	< 1,500 U
91-57-6	2-Methylnaphthalene	290	< 290 U
77-47-4	Hexachlorocyclopentadiene	1,500	< 1,500 U
88-06-2	2,4,6-Trichlorophenol	1,500	< 1,500 U
95-95-4	2,4,5-Trichlorophenol	1,500	< 1,500 U
91-58-7	2-Chloronaphthalene	290	< 290 U
88-74-4	2-Nitroaniline	1,500	< 1,500 U
131-11-3	Dimethylphthalate	290	< 290 U
208-96-8	Acenaphthylene	290	< 290 U
99-09-2	3-Nitroaniline	1,500	< 1,500 U
83-32-9	**Acenaphthene**	**290**	**480**
51-28-5	2,4-Dinitrophenol	2,900	< 2,900 U
100-02-7	4-Nitrophenol	1,500	< 1,500 U
132-64-9	Dibenzofuran	290	< 290 U
606-20-2	2,6-Dinitrotoluene	1,500	< 1,500 U
121-14-2	2,4-Dinitrotoluene	1,500	< 1,500 U
84-66-2	Diethylphthalate	290	< 290 U
7005-72-3	4-Chlorophenyl-phenylether	290	< 290 U
86-73-7	**Fluorene**	**290**	**330**
100-01-6	4-Nitroaniline	1,500	< 1,500 U
534-52-1	4,6-Dinitro-2-Methylphenol	2,900	< 2,900 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-215-010
DILUTION

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Date Analyzed: 07/08/09 22:07

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	290	< 290 U
101-55-3	4-Bromophenyl-phenylether	290	< 290 U
118-74-1	Hexachlorobenzene	290	< 290 U
87-86-5	Pentachlorophenol	1,500	< 1,500 U
85-01-8	**Phenanthrene**	**290**	**2,400**
86-74-8	**Carbazole**	**290**	**310**
120-12-7	**Anthracene**	**290**	**1,200**
84-74-2	Di-n-Butylphthalate	290	< 290 U
206-44-0	**Fluoranthene**	**290**	**4,300**
129-00-0	**Pyrene**	**290**	**4,400**
85-68-7	Butylbenzylphthalate	290	< 290 U
91-94-1	3,3'-Dichlorobenzidine	1,500	< 1,500 U
56-55-3	**Benzo(a)anthracene**	**290**	**2,400**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**290**	**640**
218-01-9	**Chrysene**	**290**	**3,800**
117-84-0	Di-n-Octyl phthalate	290	< 290 U
205-99-2	**Benzo(b)fluoranthene**	**290**	**3,600**
207-08-9	**Benzo(k)fluoranthene**	**290**	**2,600**
50-32-8	**Benzo(a)pyrene**	**290**	**3,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**290**	**730**
53-70-3	Dibenz(a,h)anthracene	290	< 290 U
191-24-2	**Benzo(g,h,i)perylene**	**290**	**690**
62-53-3	Aniline	290	< 290 U
90-12-0	1-Methylnaphthalene	290	< 290 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.2%	2-Fluorobiphenyl	66.6%
d14-p-Terphenyl	47.4%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	57.6%	2-Fluorophenol	59.2%
2,4,6-Tribromophenol	55.6%	d4-2-Chlorophenol	59.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-221-010
SAMPLE

Lab Sample ID: PE07B
LIMS ID: 09-14570
Matrix: Sediment
Data Release Authorized: VIS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 19:05
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.0%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**42 M**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**16 J**
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-221-010
SAMPLE

Lab Sample ID: PE07B
LIMS ID: 09-14570
Matrix: Sediment
Date Analyzed: 07/04/09 19:05

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**53**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**25**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**78**
129-00-0	**Pyrene**	**19**	**77**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**44**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**26**
218-01-9	**Chrysene**	**19**	**63**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**59**
207-08-9	**Benzo(k)fluoranthene**	**19**	**59**
50-32-8	**Benzo(a)pyrene**	**19**	**61**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**33**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**12 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**34**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	64.8%	d4-1,2-Dichlorobenzene	62.0%
d5-Phenol	94.1%	2-Fluorophenol	56.3%
2,4,6-Tribromophenol	87.5%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-222-010
SAMPLE

Lab Sample ID: PE07A
LIMS ID: 09-14569
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 18:31
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 22.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**93**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**16 J**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**14 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**16 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-222-010
SAMPLE

Lab Sample ID: PE07A
LIMS ID: 09-14569
Matrix: Sediment
Date Analyzed: 07/04/09 18:31

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**15 J**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**58**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**24**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**88**
129-00-0	**Pyrene**	**19**	**79**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**36**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**24**
218-01-9	**Chrysene**	**19**	**58**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**40**
207-08-9	**Benzo(k)fluoranthene**	**19**	**40**
50-32-8	**Benzo(a)pyrene**	**19**	**39**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**17 J**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**22**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.2%	2-Fluorobiphenyl	62.0%
d14-p-Terphenyl	57.6%	d4-1,2-Dichlorobenzene	51.2%
d5-Phenol	75.2%	2-Fluorophenol	48.3%
2,4,6-Tribromophenol	75.2%	d4-2-Chlorophenol	53.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-223-010
SAMPLE

Lab Sample ID: PD97A
LIMS ID: 09-14497
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/07/09 18:33
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 28.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	**Diethylphthalate**	**20**	**23**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-223-010
SAMPLE

Lab Sample ID: PD97A
LIMS ID: 09-14497
Matrix: Sediment
Date Analyzed: 07/07/09 18:33

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	**Pyrene**	**20**	**23**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	55.7%	2-Fluorophenol	57.9%
2,4,6-Tribromophenol	64.5%	d4-2-Chlorophenol	59.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-303-010
SAMPLE

Lab Sample ID: PD97N
LIMS ID: 09-14510
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 23:50
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 57.1%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**49**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**23**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**27**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**41**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**21**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**24**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**59**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-303-010
SAMPLE

Lab Sample ID: PD97N
LIMS ID: 09-14510
Matrix: Sediment
Date Analyzed: 07/08/09 23:50

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**320**
86-74-8	**Carbazole**	**20**	**78**
120-12-7	**Anthracene**	**20**	**290**
84-74-2	**Di-n-Butylphthalate**	**20**	**26**
206-44-0	**Fluoranthene**	**20**	**780**
129-00-0	**Pyrene**	**20**	**570**
85-68-7	**Butylbenzylphthalate**	**20**	**22**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**390**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**390**
218-01-9	**Chrysene**	**20**	**660**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**510**
207-08-9	**Benzo(k)fluoranthene**	**20**	**510**
50-32-8	**Benzo(a)pyrene**	**20**	**450**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**130**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**41**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**110**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	54.4%
d5-Phenol	66.1%	2-Fluorophenol	61.1%
2,4,6-Tribromophenol	80.8%	d4-2-Chlorophenol	65.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-304-010
SAMPLE

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/08/09 23:00
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 56.0%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**100**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**24**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**33**
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	**2-Methylnaphthalene**	**20**	**29**
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**50**
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**35**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	**Dibenzofuran**	**20**	**32**
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**47**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-304-010
SAMPLE

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Date Analyzed: 07/08/09 23:00

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**260**
86-74-8	**Carbazole**	**20**	**54**
120-12-7	**Anthracene**	**20**	**180**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**480**
129-00-0	**Pyrene**	**20**	**890**
85-68-7	**Butylbenzylphthalate**	**20**	**24**
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**300**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**460**
218-01-9	**Chrysene**	**20**	**620**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**620**
207-08-9	**Benzo(k)fluoranthene**	**20**	**620**
50-32-8	**Benzo(a)pyrene**	**20**	**530**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**220**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**80**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**210**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**20**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.2%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	87.6%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	55.5%	2-Fluorophenol	51.2%
2,4,6-Tribromophenol	88.5%	d4-2-Chlorophenol	55.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-304-010
DILUTION

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized:
Reported: 07/13/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/10/09 21:15
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 56.0%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**59**	**99**
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-304-010
DILUTION

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Date Analyzed: 07/10/09 21:15

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	**Phenanthrene**	**59**	**230**
86-74-8	Carbazole	59	< 59 U
120-12-7	**Anthracene**	**59**	**140**
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**430**
129-00-0	**Pyrene**	**59**	**1,200**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	**Benzo(a)anthracene**	**59**	**290**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**580**
218-01-9	**Chrysene**	**59**	**520**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**680**
207-08-9	**Benzo(k)fluoranthene**	**59**	**460**
50-32-8	**Benzo(a)pyrene**	**59**	**450**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**200**
53-70-3	**Dibenz(a,h)anthracene**	**59**	**64**
191-24-2	**Benzo(g,h,i)perylene**	**59**	**210**
62-53-3	Aniline	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	49.8%	2-Fluorobiphenyl	62.6%
d14-p-Terphenyl	111%	d4-1,2-Dichlorobenzene	49.4%
d5-Phenol	51.9%	2-Fluorophenol	45.1%
2,4,6-Tribromophenol	76.2%	d4-2-Chlorophenol	53.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-305-010
SAMPLE

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/04/09 23:00
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 43.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**10 J**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**16 J**
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**110**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**20**	**57**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**120**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**20**	**290**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**20**	**180**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-305-010
SAMPLE

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Date Analyzed: 07/04/09 23:00

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**430**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**2,000 E**
86-74-8	**Carbazole**	**20**	**320**
120-12-7	**Anthracene**	**20**	**1,500**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**5,100 E**
129-00-0	**Pyrene**	**20**	**3,200 E**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**20**	**2,100 E**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**430**
218-01-9	**Chrysene**	**20**	**2,600 E**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**1,900 E**
207-08-9	**Benzo(k)fluoranthene**	**20**	**1,900 E**
50-32-8	**Benzo(a)pyrene**	**20**	**2,900 E**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**350**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**85**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**250**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**32**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	60.0%
d5-Phenol	76.3%	2-Fluorophenol	56.3%
2,4,6-Tribromophenol	121%	d4-2-Chlorophenol	64.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-305-010
DILUTION

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Data Release Authorized: VTD
Reported: 07/11/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/08/09 00:28
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 43.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	200	< 200 U
111-44-4	Bis-(2-Chloroethyl) Ether	200	< 200 U
95-57-8	2-Chlorophenol	200	< 200 U
541-73-1	1,3-Dichlorobenzene	200	< 200 U
106-46-7	1,4-Dichlorobenzene	200	< 200 U
100-51-6	Benzyl Alcohol	200	< 200 U
95-50-1	1,2-Dichlorobenzene	200	< 200 U
95-48-7	2-Methylphenol	200	< 200 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	200	< 200 U
106-44-5	4-Methylphenol	200	< 200 U
621-64-7	N-Nitroso-Di-N-Propylamine	970	< 970 U
67-72-1	Hexachloroethane	200	< 200 U
98-95-3	Nitrobenzene	200	< 200 U
78-59-1	Isophorone	200	< 200 U
88-75-5	2-Nitrophenol	970	< 970 U
105-67-9	2,4-Dimethylphenol	200	< 200 U
65-85-0	Benzoic Acid	2,000	< 2,000 U
111-91-1	bis(2-Chloroethoxy) Methane	200	< 200 U
120-83-2	2,4-Dichlorophenol	970	< 970 U
120-82-1	1,2,4-Trichlorobenzene	200	< 200 U
91-20-3	Naphthalene	200	< 200 U
106-47-8	4-Chloroaniline	970	< 970 U
87-68-3	Hexachlorobutadiene	200	< 200 U
59-50-7	4-Chloro-3-methylphenol	970	< 970 U
91-57-6	2-Methylnaphthalene	200	< 200 U
77-47-4	Hexachlorocyclopentadiene	970	< 970 U
88-06-2	2,4,6-Trichlorophenol	970	< 970 U
95-95-4	2,4,5-Trichlorophenol	970	< 970 U
91-58-7	2-Chloronaphthalene	200	< 200 U
88-74-4	2-Nitroaniline	970	< 970 U
131-11-3	Dimethylphthalate	200	< 200 U
208-96-8	Acenaphthylene	200	< 200 U
99-09-2	3-Nitroaniline	970	< 970 U
83-32-9	**Acenaphthene**	**200**	**320**
51-28-5	2,4-Dinitrophenol	2,000	< 2,000 U
100-02-7	4-Nitrophenol	970	< 970 U
132-64-9	Dibenzofuran	200	< 200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-305-010
DILUTION

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Date Analyzed: 07/08/09 00:28

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	970	< 970 U
121-14-2	2,4-Dinitrotoluene	970	< 970 U
84-66-2	Diethylphthalate	200	< 200 U
7005-72-3	4-Chlorophenyl-phenylether	200	< 200 U
86-73-7	**Fluorene**	**200**	**430**
100-01-6	4-Nitroaniline	970	< 970 U
534-52-1	4,6-Dinitro-2-Methylphenol	2,000	< 2,000 U
86-30-6	N-Nitrosodiphenylamine	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	200	< 200 U
118-74-1	Hexachlorobenzene	200	< 200 U
87-86-5	Pentachlorophenol	970	< 970 U
85-01-8	**Phenanthrene**	**200**	**2,300**
86-74-8	**Carbazole**	**200**	**270**
120-12-7	**Anthracene**	**200**	**1,300**
84-74-2	Di-n-Butylphthalate	200	< 200 U
206-44-0	**Fluoranthene**	**200**	**4,300**
129-00-0	**Pyrene**	**200**	**3,900**
85-68-7	Butylbenzylphthalate	200	< 200 U
91-94-1	3,3'-Dichlorobenzidine	970	< 970 U
56-55-3	**Benzo(a)anthracene**	**200**	**2,000**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**200**	**430**
218-01-9	**Chrysene**	**200**	**2,800**
117-84-0	Di-n-Octyl phthalate	200	< 200 U
205-99-2	**Benzo(b)fluoranthene**	**200**	**2,400**
207-08-9	**Benzo(k)fluoranthene**	**200**	**2,000**
50-32-8	**Benzo(a)pyrene**	**200**	**1,800**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**200**	**420**
53-70-3	Dibenz(a,h)anthracene	200	< 200 U
191-24-2	**Benzo(g,h,i)perylene**	**200**	**360**
62-53-3	Aniline	200	< 200 U
90-12-0	1-Methylnaphthalene	200	< 200 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.8%	2-Fluorobiphenyl	87.6%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	68.0%	2-Fluorophenol	63.7%
2,4,6-Tribromophenol	71.2%	d4-2-Chlorophenol	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LSO-01SE-080723
SAMPLE

Lab Sample ID: PE25A
LIMS ID: 09-14715
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
NA
Date Sampled: 07/23/08
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/08/09 16:23
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 11.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.1%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**44**	**46**
111-44-4	Bis-(2-Chloroethyl) Ether	44	< 44 U
95-57-8	2-Chlorophenol	44	< 44 U
541-73-1	1,3-Dichlorobenzene	44	< 44 U
106-46-7	1,4-Dichlorobenzene	44	< 44 U
100-51-6	Benzyl Alcohol	44	< 44 U
95-50-1	1,2-Dichlorobenzene	44	< 44 U
95-48-7	2-Methylphenol	44	< 44 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	44	< 44 U
106-44-5	4-Methylphenol	44	< 44 U
621-64-7	N-Nitroso-Di-N-Propylamine	220	< 220 U
67-72-1	Hexachloroethane	44	< 44 U
98-95-3	Nitrobenzene	44	< 44 U
78-59-1	Isophorone	44	< 44 U
88-75-5	2-Nitrophenol	220	< 220 U
105-67-9	2,4-Dimethylphenol	44	< 44 U
65-85-0	**Benzoic Acid**	**440**	**1,100**
111-91-1	bis(2-Chloroethoxy) Methane	44	< 44 U
120-83-2	2,4-Dichlorophenol	220	< 220 U
120-82-1	1,2,4-Trichlorobenzene	44	< 44 U
91-20-3	Naphthalene	44	< 44 U
106-47-8	4-Chloroaniline	220	< 220 U
87-68-3	Hexachlorobutadiene	44	< 44 U
59-50-7	4-Chloro-3-methylphenol	220	< 220 U
91-57-6	2-Methylnaphthalene	44	< 44 U
77-47-4	Hexachlorocyclopentadiene	220	< 220 U
88-06-2	2,4,6-Trichlorophenol	220	< 220 U
95-95-4	2,4,5-Trichlorophenol	220	< 220 U
91-58-7	2-Chloronaphthalene	44	< 44 U
88-74-4	2-Nitroaniline	220	< 220 U
131-11-3	Dimethylphthalate	44	< 44 U
208-96-8	Acenaphthylene	44	< 44 U
99-09-2	3-Nitroaniline	220	< 220 U
83-32-9	Acenaphthene	44	< 44 U
51-28-5	2,4-Dinitrophenol	440	< 440 U
100-02-7	4-Nitrophenol	220	< 220 U
132-64-9	Dibenzofuran	44	< 44 U
606-20-2	2,6-Dinitrotoluene	220	< 220 U
121-14-2	2,4-Dinitrotoluene	220	< 220 U
84-66-2	Diethylphthalate	44	< 44 U
7005-72-3	4-Chlorophenyl-phenylether	44	< 44 U
86-73-7	Fluorene	44	< 44 U
100-01-6	4-Nitroaniline	220	< 220 U
534-52-1	4,6-Dinitro-2-Methylphenol	440	< 440 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LSO-01SE-080723
SAMPLE

Lab Sample ID: PE25A
LIMS ID: 09-14715
Matrix: Sediment
Date Analyzed: 07/08/09 16:23

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	44	< 44 U
101-55-3	4-Bromophenyl-phenylether	44	< 44 U
118-74-1	Hexachlorobenzene	44	< 44 U
87-86-5	Pentachlorophenol	220	< 220 U
85-01-8	**Phenanthrene**	**44**	**360**
86-74-8	**Carbazole**	**44**	**61**
120-12-7	**Anthracene**	**44**	**83**
84-74-2	**Di-n-Butylphthalate**	**44**	**66**
206-44-0	**Fluoranthene**	**44**	**900**
129-00-0	**Pyrene**	**44**	**580**
85-68-7	**Butylbenzylphthalate**	**44**	**100**
91-94-1	3,3'-Dichlorobenzidine	220	< 220 U
56-55-3	**Benzo(a)anthracene**	**44**	**300**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**44**	**12,000 ES**
218-01-9	**Chrysene**	**44**	**490**
117-84-0	Di-n-Octyl phthalate	44	< 44 U
205-99-2	**Benzo(b)fluoranthene**	**44**	**360**
207-08-9	**Benzo(k)fluoranthene**	**44**	**360**
50-32-8	**Benzo(a)pyrene**	**44**	**330**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**44**	**140**
53-70-3	Dibenz(a,h)anthracene	44	< 44 U
191-24-2	**Benzo(g,h,i)perylene**	**44**	**150**
62-53-3	Aniline	44	< 44 U
90-12-0	1-Methylnaphthalene	44	< 44 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	72.8%
d14-p-Terphenyl	59.6%	d4-1,2-Dichlorobenzene	50.8%
d5-Phenol	69.1%	2-Fluorophenol	59.7%
2,4,6-Tribromophenol	78.7%	d4-2-Chlorophenol	64.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LSO-01SE-080723
DILUTION

Lab Sample ID: PE25A
LIMS ID: 09-14715
Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
NA
Date Sampled: 07/23/08
Date Received: 06/24/09

Date Extracted: 06/30/09
Date Analyzed: 07/14/09 23:02
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 11.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 15.0
Percent Moisture: 34.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	650	< 650 U
111-44-4	Bis-(2-Chloroethyl) Ether	650	< 650 U
95-57-8	2-Chlorophenol	650	< 650 U
541-73-1	1,3-Dichlorobenzene	650	< 650 U
106-46-7	1,4-Dichlorobenzene	650	< 650 U
100-51-6	Benzyl Alcohol	650	< 650 U
95-50-1	1,2-Dichlorobenzene	650	< 650 U
95-48-7	2-Methylphenol	650	< 650 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	650	< 650 U
106-44-5	4-Methylphenol	650	< 650 U
621-64-7	N-Nitroso-Di-N-Propylamine	3,300	< 3,300 U
67-72-1	Hexachloroethane	650	< 650 U
98-95-3	Nitrobenzene	650	< 650 U
78-59-1	Isophorone	650	< 650 U
88-75-5	2-Nitrophenol	3,300	< 3,300 U
105-67-9	2,4-Dimethylphenol	650	< 650 U
65-85-0	Benzoic Acid	6,500	< 6,500 U
111-91-1	bis(2-Chloroethoxy) Methane	650	< 650 U
120-83-2	2,4-Dichlorophenol	3,300	< 3,300 U
120-82-1	1,2,4-Trichlorobenzene	650	< 650 U
91-20-3	Naphthalene	650	< 650 U
106-47-8	4-Chloroaniline	3,300	< 3,300 U
87-68-3	Hexachlorobutadiene	650	< 650 U
59-50-7	4-Chloro-3-methylphenol	3,300	< 3,300 U
91-57-6	2-Methylnaphthalene	650	< 650 U
77-47-4	Hexachlorocyclopentadiene	3,300	< 3,300 U
88-06-2	2,4,6-Trichlorophenol	3,300	< 3,300 U
95-95-4	2,4,5-Trichlorophenol	3,300	< 3,300 U
91-58-7	2-Chloronaphthalene	650	< 650 U
88-74-4	2-Nitroaniline	3,300	< 3,300 U
131-11-3	Dimethylphthalate	650	< 650 U
208-96-8	Acenaphthylene	650	< 650 U
99-09-2	3-Nitroaniline	3,300	< 3,300 U
83-32-9	Acenaphthene	650	< 650 U
51-28-5	2,4-Dinitrophenol	6,500	< 6,500 U
100-02-7	4-Nitrophenol	3,300	< 3,300 U
132-64-9	Dibenzofuran	650	< 650 U
606-20-2	2,6-Dinitrotoluene	3,300	< 3,300 U
121-14-2	2,4-Dinitrotoluene	3,300	< 3,300 U
84-66-2	Diethylphthalate	650	< 650 U
7005-72-3	4-Chlorophenyl-phenylether	650	< 650 U
86-73-7	Fluorene	650	< 650 U
100-01-6	4-Nitroaniline	3,300	< 3,300 U
534-52-1	4,6-Dinitro-2-Methylphenol	6,500	< 6,500 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LSO-01SE-080723
DILUTION

Lab Sample ID: PE25A
LIMS ID: 09-14715
Matrix: Sediment
Date Analyzed: 07/14/09 23:02

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	650	< 650 U
101-55-3	4-Bromophenyl-phenylether	650	< 650 U
118-74-1	Hexachlorobenzene	650	< 650 U
87-86-5	Pentachlorophenol	3,300	< 3,300 U
85-01-8	Phenanthrene	650	< 650 U
86-74-8	Carbazole	650	< 650 U
120-12-7	Anthracene	650	< 650 U
84-74-2	Di-n-Butylphthalate	650	< 650 U
206-44-0	**Fluoranthene**	**650**	**810**
129-00-0	Pyrene	650	< 650 U
85-68-7	Butylbenzylphthalate	650	< 650 U
91-94-1	3,3'-Dichlorobenzidine	3,300	< 3,300 U
56-55-3	Benzo(a)anthracene	650	< 650 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**650**	**37,000**
218-01-9	Chrysene	650	< 650 U
117-84-0	Di-n-Octyl phthalate	650	< 650 U
205-99-2	Benzo(b)fluoranthene	650	< 650 U
207-08-9	Benzo(k)fluoranthene	650	< 650 U
50-32-8	Benzo(a)pyrene	650	< 650 U
193-39-5	Indeno(1,2,3-cd)pyrene	650	< 650 U
53-70-3	Dibenz(a,h)anthracene	650	< 650 U
191-24-2	Benzo(g,h,i)perylene	650	< 650 U
62-53-3	Aniline	650	< 650 U
90-12-0	1-Methylnaphthalene	650	< 650 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.0%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	54.6%	d4-1,2-Dichlorobenzene	45.6%
d5-Phenol	56.0%	2-Fluorophenol	56.0%
2,4,6-Tribromophenol	55.6%	d4-2-Chlorophenol	56.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LSO-01SE-080723
SAMPLE

Lab Sample ID: PH67A
LIMS ID: 09-17271
Matrix: Sediment
Data Release Authorized:
Reported: 07/23/09

QC Report No: PH67-Windward Environmental, LLC
Project: EW Surface Sediment
NA
Date Sampled: 07/23/08
Date Received: 06/24/09

Date Extracted: 07/18/09
Date Analyzed: 07/20/09 18:26
Instrument/Analyst: NT4/LJR
GPC Cleanup: Yes

Sample Amount: 11.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.1%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**44**	**72**
111-44-4	Bis-(2-Chloroethyl) Ether	44	< 44 U
95-57-8	2-Chlorophenol	44	< 44 U
541-73-1	1,3-Dichlorobenzene	44	< 44 U
106-46-7	1,4-Dichlorobenzene	44	< 44 U
100-51-6	Benzyl Alcohol	44	< 44 U
95-50-1	1,2-Dichlorobenzene	44	< 44 U
95-48-7	2-Methylphenol	44	< 44 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	44	< 44 U
106-44-5	**4-Methylphenol**	**44**	**59**
621-64-7	N-Nitroso-Di-N-Propylamine	220	< 220 U
67-72-1	Hexachloroethane	44	< 44 U
98-95-3	Nitrobenzene	44	< 44 U
78-59-1	Isophorone	44	< 44 U
88-75-5	2-Nitrophenol	220	< 220 U
105-67-9	2,4-Dimethylphenol	44	< 44 U
65-85-0	**Benzoic Acid**	**440**	**340 J**
111-91-1	bis(2-Chloroethoxy) Methane	44	< 44 U
120-83-2	2,4-Dichlorophenol	220	< 220 U
120-82-1	1,2,4-Trichlorobenzene	44	< 44 U
91-20-3	Naphthalene	44	< 44 U
106-47-8	4-Chloroaniline	220	< 220 U
87-68-3	Hexachlorobutadiene	44	< 44 U
59-50-7	4-Chloro-3-methylphenol	220	< 220 U
91-57-6	2-Methylnaphthalene	44	< 44 U
77-47-4	Hexachlorocyclopentadiene	220	< 220 U
88-06-2	2,4,6-Trichlorophenol	220	< 220 U
95-95-4	2,4,5-Trichlorophenol	220	< 220 U
91-58-7	2-Chloronaphthalene	44	< 44 U
88-74-4	2-Nitroaniline	220	< 220 U
131-11-3	Dimethylphthalate	44	< 44 U
208-96-8	Acenaphthylene	44	< 44 U
99-09-2	3-Nitroaniline	220	< 220 U
83-32-9	**Acenaphthene**	**44**	**67**
51-28-5	2,4-Dinitrophenol	440	< 440 U
100-02-7	4-Nitrophenol	220	< 220 U
132-64-9	**Dibenzofuran**	**44**	**37 J**
606-20-2	2,6-Dinitrotoluene	220	< 220 U
121-14-2	2,4-Dinitrotoluene	220	< 220 U
84-66-2	**Diethylphthalate**	**44**	**41 J**
7005-72-3	4-Chlorophenyl-phenylether	44	< 44 U
86-73-7	**Fluorene**	**44**	**74**
100-01-6	4-Nitroaniline	220	< 220 U
534-52-1	4,6-Dinitro-2-Methylphenol	440	< 440 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LSO-01SE-080723
SAMPLE

Lab Sample ID: PH67A
LIMS ID: 09-17271
Matrix: Sediment
Date Analyzed: 07/20/09 18:26

QC Report No: PH67-Windward Environmental, LLC
Project: EW Surface Sediment
NA

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	44	< 44 U
101-55-3	4-Bromophenyl-phenylether	44	< 44 U
118-74-1	Hexachlorobenzene	44	< 44 U
87-86-5	Pentachlorophenol	220	< 220 U
85-01-8	**Phenanthrene**	**44**	**650**
86-74-8	**Carbazole**	**44**	**74**
120-12-7	**Anthracene**	**44**	**140**
84-74-2	Di-n-Butylphthalate	44	< 44 U
206-44-0	**Fluoranthene**	**44**	**880**
129-00-0	**Pyrene**	**44**	**840**
85-68-7	Butylbenzylphthalate	44	< 44 U
91-94-1	3,3'-Dichlorobenzidine	220	< 220 U
56-55-3	**Benzo(a)anthracene**	**44**	**300**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**44**	**1,300**
218-01-9	**Chrysene**	**44**	**480**
117-84-0	**Di-n-Octyl phthalate**	**44**	**44**
205-99-2	**Benzo(b)fluoranthene**	**44**	**340**
207-08-9	**Benzo(k)fluoranthene**	**44**	**340**
50-32-8	**Benzo(a)pyrene**	**44**	**380**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**44**	**140**
53-70-3	**Dibenz(a,h)anthracene**	**44**	**65**
191-24-2	**Benzo(g,h,i)perylene**	**44**	**140**
62-53-3	Aniline	44	< 44 U
90-12-0	1-Methylnaphthalene	44	< 44 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.8%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	72.0%	d4-1,2-Dichlorobenzene	53.2%
d5-Phenol	60.5%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	71.7%	d4-2-Chlorophenol	60.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-002-010-RB
SAMPLE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Data Release Authorized:
Reported: 07/21/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 00:43
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: EW09-SS-002-010-RB
SAMPLE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Date Analyzed: 07/01/09 00:43

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
62-53-3	Aniline	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in μg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	80.0%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	67.7%	2-Fluorophenol	57.3%
2,4,6-Tribromophenol	86.9%	d4-2-Chlorophenol	66.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-210-RB
SAMPLE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 02:58
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-210-RB
SAMPLE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Date Analyzed: 07/01/09 02:58

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
62-53-3	Aniline	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in μg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	60.0%
d14-p-Terphenyl	77.2%	d4-1,2-Dichlorobenzene	52.0%
d5-Phenol	64.3%	2-Fluorophenol	56.5%
2,4,6-Tribromophenol	79.5%	d4-2-Chlorophenol	64.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-222-RB
SAMPLE

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 07/01/09 02:24
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: EW09-SS-222-RB
SAMPLE

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Date Analyzed: 07/01/09 02:24

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
62-53-3	Aniline	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	73.2%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	72.3%	2-Fluorophenol	62.9%
2,4,6-Tribromophenol	81.1%	d4-2-Chlorophenol	70.4%

T30 SVOCs

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-01
SAMPLE

Lab Sample ID: ON35A
LIMS ID: 09-4935
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 16:51
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 32.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
91-20-3	**Naphthalene**	**20**	**60**
106-47-8	4-Chloroaniline	98	< 98 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**33**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**150**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**120**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**200**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**640**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-01
SAMPLE

Lab Sample ID: ON35A
LIMS ID: 09-4935
Matrix: Sediment
Date Analyzed: 03/04/09 16:51

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	20	120
84-74-2	Di-n-Butylphthalate	20	48
206-44-0	Fluoranthene	20	460
129-00-0	Pyrene	20	310
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	68
117-81-7	bis(2-Ethylhexyl)phthalate	20	200 B
218-01-9	Chrysene	20	90
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	69
207-08-9	Benzo(k)fluoranthene	20	43
50-32-8	Benzo(a)pyrene	20	44
193-39-5	Indeno(1,2,3-cd)pyrene	20	19 J
191-24-2	Benzo(g,h,i)perylene	20	22
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	39

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%	2-Fluorobiphenyl	73.6%
d14-p-Terphenyl	82.0%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	68.8%	2-Fluorophenol	65.6%
2,4,6-Tribromophenol	93.3%	d4-2-Chlorophenol	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-03
SAMPLE

Lab Sample ID: ON35C
LIMS ID: 09-4937
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 17:25
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
91-20-3	**Naphthalene**	**20**	**15 J**
106-47-8	4-Chloroaniline	97	< 97 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**20**	**14 J**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**20**	**51**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**20**	**31**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**35**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**130**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-03
SAMPLE

Lab Sample ID: ON35C
LIMS ID: 09-4937
Matrix: Sediment
Date Analyzed: 03/04/09 17:25

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	20	45
84-74-2	Di-n-Butylphthalate	20	41
206-44-0	Fluoranthene	20	180
129-00-0	Pyrene	20	250
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	20	87
117-81-7	bis(2-Ethylhexyl)phthalate	20	210 B
218-01-9	Chrysene	20	130
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	140
207-08-9	Benzo(k)fluoranthene	20	98
50-32-8	Benzo(a)pyrene	20	92
193-39-5	Indeno(1,2,3-cd)pyrene	20	35
191-24-2	Benzo(g,h,i)perylene	20	39
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	12 J

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.6%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	72.0%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	61.3%	2-Fluorophenol	57.9%
2,4,6-Tribromophenol	83.5%	d4-2-Chlorophenol	61.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-101
SAMPLE

Lab Sample ID: ON35D
LIMS ID: 09-4938
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 18:00
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
91-20-3	**Naphthalene**	**19**	**13 J**
106-47-8	4-Chloroaniline	97	< 97 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**19**	**17 J**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**63**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**42**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**60**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**200**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-101
SAMPLE

Lab Sample ID: ON35D
LIMS ID: 09-4938
Matrix: Sediment
Date Analyzed: 03/04/09 18:00

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	19	60
84-74-2	Di-n-Butylphthalate	19	41
206-44-0	Fluoranthene	19	220
129-00-0	Pyrene	19	240
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	90
117-81-7	bis(2-Ethylhexyl)phthalate	19	140 B
218-01-9	Chrysene	19	120
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	120
207-08-9	Benzo(k)fluoranthene	19	110
50-32-8	Benzo(a)pyrene	19	86
193-39-5	Indeno(1,2,3-cd)pyrene	19	30
191-24-2	Benzo(g,h,i)perylene	19	32
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	12 J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	69.2%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	60.3%	2-Fluorophenol	57.3%
2,4,6-Tribromophenol	78.9%	d4-2-Chlorophenol	61.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-04
SAMPLE

Lab Sample ID: QF22A
LIMS ID: 10-726
Matrix: Sediment
Data Release Authorized:
Reported: 01/21/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/18/10
Date Analyzed: 01/19/10 16:17
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-04
SAMPLE

Lab Sample ID: QF22A
LIMS ID: 10-726
Matrix: Sediment
Date Analyzed: 01/19/10 16:17

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**22**
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**26**
129-00-0	**Pyrene**	**19**	**26**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**190 B**
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	74.0%
d14-p-Terphenyl	85.2%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	85.6%	2-Fluorophenol	69.1%
2,4,6-Tribromophenol	100%	d4-2-Chlorophenol	68.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-06
SAMPLE

Lab Sample ID: QF22B
LIMS ID: 10-727
Matrix: Sediment
Data Release Authorized:
Reported: 01/21/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/18/10
Date Analyzed: 01/19/10 16:51
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**46**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**44**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**34**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**35**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**210**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**98**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-06
SAMPLE

Lab Sample ID: QF22B
LIMS ID: 10-727
Matrix: Sediment
Date Analyzed: 01/19/10 16:51

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**160**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**390**
86-74-8	**Carbazole**	**20**	**65**
120-12-7	**Anthracene**	**20**	**120**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**740**
129-00-0	**Pyrene**	**20**	**570**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**160**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**360 B**
218-01-9	**Chrysene**	**20**	**270**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**160**
207-08-9	**Benzo(k)fluoranthene**	**20**	**160**
50-32-8	**Benzo(a)pyrene**	**20**	**120**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**52**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**26**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**51**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**31**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	75.6%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	82.7%	2-Fluorophenol	63.5%
2,4,6-Tribromophenol	104%	d4-2-Chlorophenol	65.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-07
SAMPLE

Lab Sample ID: ON35H
LIMS ID: 09-4943
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 18:35
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 43.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**29**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**21**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**28**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**90**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-07
SAMPLE

Lab Sample ID: ON35H
LIMS ID: 09-4943
Matrix: Sediment
Date Analyzed: 03/04/09 18:35

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	**Anthracene**	**20**	**28**
84-74-2	**Di-n-Butylphthalate**	**20**	**44**
206-44-0	**Fluoranthene**	**20**	**130**
129-00-0	**Pyrene**	**20**	**110**
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**44**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**34 B**
218-01-9	**Chrysene**	**20**	**67**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**48**
207-08-9	**Benzo(k)fluoranthene**	**20**	**39**
50-32-8	**Benzo(a)pyrene**	**20**	**34**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**13 J**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**14 J**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.8%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	84.4%	d4-1,2-Dichlorobenzene	64.0%
d5-Phenol	68.3%	2-Fluorophenol	65.6%
2,4,6-Tribromophenol	88.5%	d4-2-Chlorophenol	69.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-09
SAMPLE

Lab Sample ID: ON35J
LIMS ID: 09-4945
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 19:09
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 21.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
91-20-3	**Naphthalene**	**19**	**36**
106-47-8	4-Chloroaniline	96	< 96 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	**2-Methylnaphthalene**	**19**	**13 J**
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**45**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	**Dibenzofuran**	**19**	**26**
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**36**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**160**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-09
SAMPLE

Lab Sample ID: ON35J
LIMS ID: 09-4945
Matrix: Sediment
Date Analyzed: 03/04/09 19:09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	19	28
84-74-2	Di-n-Butylphthalate	19	44
206-44-0	Fluoranthene	19	180
129-00-0	Pyrene	19	230
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	Benzo(a)anthracene	19	54
117-81-7	bis(2-Ethylhexyl)phthalate	19	35 B
218-01-9	Chrysene	19	76
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	63
207-08-9	Benzo(k)fluoranthene	19	42
50-32-8	Benzo(a)pyrene	19	45
193-39-5	Indeno(1,2,3-cd)pyrene	19	16 J
191-24-2	Benzo(g,h,i)perylene	19	16 J
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	12 J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.0%	2-Fluorobiphenyl	61.6%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	60.0%	2-Fluorophenol	56.8%
2,4,6-Tribromophenol	80.3%	d4-2-Chlorophenol	60.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-13
SAMPLE

Lab Sample ID: QF22C
LIMS ID: 10-728
Matrix: Sediment
Data Release Authorized:
Reported: 01/21/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/18/10
Date Analyzed: 01/19/10 17:25
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	**4-Methylphenol**	**19**	**20**
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**11 J**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**18 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**12 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-13
SAMPLE

Lab Sample ID: QF22C
LIMS ID: 10-728
Matrix: Sediment
Date Analyzed: 01/19/10 17:25

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**19**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**75**
86-74-8	Carbazole	19	< 19 U
120-12-7	**Anthracene**	**19**	**21**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**120**
129-00-0	**Pyrene**	**19**	**100**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**36**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**1,400 B**
218-01-9	**Chrysene**	**19**	**45**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**32**
207-08-9	**Benzo(k)fluoranthene**	**19**	**32**
50-32-8	**Benzo(a)pyrene**	**19**	**32**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**15 J**
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	**Benzo(g,h,i)perylene**	**19**	**16 J**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	73.3%	2-Fluorophenol	59.7%
2,4,6-Tribromophenol	88.8%	d4-2-Chlorophenol	59.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-14
SAMPLE

Lab Sample ID: ON35O
LIMS ID: 09-4950
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 19:43
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**10 J**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**47**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-14
SAMPLE

Lab Sample ID: ON35O
LIMS ID: 09-4950
Matrix: Sediment
Date Analyzed: 03/04/09 19:43

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	19	< 19 U
84-74-2	**Di-n-Butylphthalate**	**19**	**34**
206-44-0	**Fluoranthene**	**19**	**45**
129-00-0	**Pyrene**	**19**	**39**
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**11 J**
117-81-7	bis(2-Ethylhexyl)phthalate	19	< 19 U
218-01-9	**Chrysene**	**19**	**13 J**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%	2-Fluorobiphenyl	65.2%
d14-p-Terphenyl	76.4%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	63.7%	2-Fluorophenol	61.6%
2,4,6-Tribromophenol	78.4%	d4-2-Chlorophenol	65.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-20
SAMPLE

Lab Sample ID: ON35U
LIMS ID: 09-4956
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 20:52
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**17 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**11 J**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**12 J**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**48**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-20
SAMPLE

Lab Sample ID: ON35U
LIMS ID: 09-4956
Matrix: Sediment
Date Analyzed: 03/04/09 20:52

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	20	22
84-74-2	Di-n-Butylphthalate	20	44
206-44-0	Fluoranthene	20	94
129-00-0	Pyrene	20	200
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	45
117-81-7	bis(2-Ethylhexyl)phthalate	20	50 B
218-01-9	Chrysene	20	59
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	74
207-08-9	Benzo(k)fluoranthene	20	68
50-32-8	Benzo(a)pyrene	20	59
193-39-5	Indeno(1,2,3-cd)pyrene	20	22
191-24-2	Benzo(g,h,i)perylene	20	24
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	78.8%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	62.9%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	85.9%	d4-2-Chlorophenol	63.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-21
SAMPLE

Lab Sample ID: ON35V
LIMS ID: 09-4957
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 21:26
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
91-20-3	**Naphthalene**	**19**	**10 J**
106-47-8	4-Chloroaniline	97	< 97 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**19**	**22**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**19**	**17 J**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**20**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**19**	**74**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-21
SAMPLE

Lab Sample ID: ON35V
LIMS ID: 09-4957
Matrix: Sediment
Date Analyzed: 03/04/09 21:26

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	**Anthracene**	**19**	**21**
84-74-2	**Di-n-Butylphthalate**	**19**	**40**
206-44-0	**Fluoranthene**	**19**	**97**
129-00-0	**Pyrene**	**19**	**110**
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**19**	**38**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**36 B**
218-01-9	**Chrysene**	**19**	**54**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**53**
207-08-9	**Benzo(k)fluoranthene**	**19**	**41**
50-32-8	**Benzo(a)pyrene**	**19**	**36**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**14 J**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**16 J**
62-53-3	Aniline	19	< 19 U
90-12-0	1-Methylnaphthalene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.4%	2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	63.2%	d4-1,2-Dichlorobenzene	50.8%
d5-Phenol	53.3%	2-Fluorophenol	52.0%
2,4,6-Tribromophenol	64.5%	d4-2-Chlorophenol	54.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-24
SAMPLE

Lab Sample ID: QF22D
LIMS ID: 10-729
Matrix: Sediment
Data Release Authorized:
Reported: 01/21/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/19/10 19:06
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**55**
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	**Acenaphthene**	**20**	**16 J**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	**Dibenzofuran**	**20**	**14 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-24
SAMPLE

Lab Sample ID: QF22D
LIMS ID: 10-729
Matrix: Sediment
Date Analyzed: 01/19/10 19:06

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	100	< 100 U
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**17 J**
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	**Phenanthrene**	**20**	**61**
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**24**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**130**
129-00-0	**Pyrene**	**20**	**97**
85-68-7	**Butylbenzylphthalate**	**20**	**48**
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	**Benzo(a)anthracene**	**20**	**41**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**210 B**
218-01-9	**Chrysene**	**20**	**55**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**39**
207-08-9	**Benzo(k)fluoranthene**	**20**	**39**
50-32-8	**Benzo(a)pyrene**	**20**	**39**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**20**
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	**Benzo(g,h,i)perylene**	**20**	**21**
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	84.4%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	79.2%	2-Fluorophenol	66.1%
2,4,6-Tribromophenol	103%	d4-2-Chlorophenol	65.3%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-26
SAMPLE

Lab Sample ID: ON50E
LIMS ID: 09-5073
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 22:01
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 43.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
91-20-3	**Naphthalene**	**20**	**22**
106-47-8	4-Chloroaniline	98	< 98 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**13 J**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**17 J**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**56**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**35**
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**39**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**150**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-26
SAMPLE

Lab Sample ID: ON50E
LIMS ID: 09-5073
Matrix: Sediment
Date Analyzed: 03/04/09 22:01

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	20	54
84-74-2	Di-n-Butylphthalate	20	34
206-44-0	Fluoranthene	20	250
129-00-0	Pyrene	20	250
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	110
117-81-7	bis(2-Ethylhexyl)phthalate	20	87 B
218-01-9	Chrysene	20	180
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	140
207-08-9	Benzo(k)fluoranthene	20	110
50-32-8	Benzo(a)pyrene	20	97
193-39-5	Indeno(1,2,3-cd)pyrene	20	34
191-24-2	Benzo(g,h,i)perylene	20	34
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	14 J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.0%	2-Fluorobiphenyl	75.6%
d14-p-Terphenyl	77.2%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	66.9%	2-Fluorophenol	64.8%
2,4,6-Tribromophenol	84.3%	d4-2-Chlorophenol	67.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-27
SAMPLE

Lab Sample ID: QF22E
LIMS ID: 10-730
Matrix: Sediment
Data Release Authorized:
Reported: 01/21/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/19/10 19:40
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**50**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**120**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**81**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**27**
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**390**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**300**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-27
SAMPLE

Lab Sample ID: QF22E
LIMS ID: 10-730
Matrix: Sediment
Date Analyzed: 01/19/10 19:40

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**440**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**1,200**
86-74-8	**Carbazole**	**20**	**110**
120-12-7	**Anthracene**	**20**	**210**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**940**
129-00-0	**Pyrene**	**20**	**600**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**190**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**250 B**
218-01-9	**Chrysene**	**20**	**220**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**120**
207-08-9	**Benzo(k)fluoranthene**	**20**	**120**
50-32-8	**Benzo(a)pyrene**	**20**	**110**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**43**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**22**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**43**
62-53-3	Aniline	20	< 20 U
90-12-0	**1-Methylnaphthalene**	**20**	**110**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.6%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	80.4%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	81.1%	2-Fluorophenol	67.2%
2,4,6-Tribromophenol	99.2%	d4-2-Chlorophenol	66.7%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-28
SAMPLE

Lab Sample ID: QF22F
LIMS ID: 10-731
Matrix: Sediment
Data Release Authorized:
Reported: 01/21/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/19/10 20:14
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 34.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	**4-Methylphenol**	**19**	**180**
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**21**
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	**2-Methylnaphthalene**	**19**	**21**
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	**Acenaphthylene**	**19**	**30**
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**87**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	**Dibenzofuran**	**19**	**78**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-28
SAMPLE

Lab Sample ID: QF22F
LIMS ID: 10-731
Matrix: Sediment
Date Analyzed: 01/19/10 20:14

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**110**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**320**
86-74-8	**Carbazole**	**19**	**69**
120-12-7	**Anthracene**	**19**	**160**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**560**
129-00-0	**Pyrene**	**19**	**470**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**160**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**310 B**
218-01-9	**Chrysene**	**19**	**240**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**190**
207-08-9	**Benzo(k)fluoranthene**	**19**	**190**
50-32-8	**Benzo(a)pyrene**	**19**	**180**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**89**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**45**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**89**
62-53-3	Aniline	19	< 19 U
90-12-0	**1-Methylnaphthalene**	**19**	**10 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	75.2%
d14-p-Terphenyl	81.6%	d4-1,2-Dichlorobenzene	56.0%
d5-Phenol	79.5%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	106%	d4-2-Chlorophenol	63.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-29
SAMPLE

Lab Sample ID: ON50H
LIMS ID: 09-5076
Matrix: Sediment
Data Release Authorized:
Reported: 03/05/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 02/25/09
Date Analyzed: 03/04/09 22:35
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**18 J**
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
91-20-3	**Naphthalene**	**20**	**53**
106-47-8	4-Chloroaniline	97	< 97 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**20**	**21**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**15 J**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**20**	**180**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**20**	**84**
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**150**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**430**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-29
SAMPLE

Lab Sample ID: ON50H
LIMS ID: 09-5076
Matrix: Sediment
Date Analyzed: 03/04/09 22:35

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
120-12-7	Anthracene	20	68
84-74-2	Di-n-Butylphthalate	20	66
206-44-0	Fluoranthene	20	390
129-00-0	Pyrene	20	260
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	20	88
117-81-7	bis(2-Ethylhexyl)phthalate	20	51 B
218-01-9	Chrysene	20	130
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	83
207-08-9	Benzo(k)fluoranthene	20	64
50-32-8	Benzo(a)pyrene	20	65
193-39-5	Indeno(1,2,3-cd)pyrene	20	23
191-24-2	Benzo(g,h,i)perylene	20	24
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	16 J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.0%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	65.6%	2-Fluorophenol	62.7%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	64.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-31
SAMPLE

Lab Sample ID: QF22G
LIMS ID: 10-732
Matrix: Sediment
Data Release Authorized:
Reported: 01/21/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/19/10 20:48
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 33.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-31
SAMPLE

Lab Sample ID: QF22G
LIMS ID: 10-732
Matrix: Sediment
Date Analyzed: 01/19/10 20:48

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**120 B**
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U
62-53-3	Aniline	20	< 20 U
90-12-0	1-Methylnaphthalene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	50.8%	2-Fluorobiphenyl	59.2%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	51.2%
d5-Phenol	66.4%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	86.4%	d4-2-Chlorophenol	54.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-11-RB
SAMPLE

Lab Sample ID: ON35W
LIMS ID: 09-5006
Matrix: Water
Data Release Authorized:
Reported: 02/26/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/25/09 21:25
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: T30-09-11-RB
SAMPLE

Lab Sample ID: ON35W
LIMS ID: 09-5006
Matrix: Water
Date Analyzed: 02/25/09 21:25

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38

CAS Number	Analyte	RL	Result
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
62-53-3	Aniline	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in μg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	72.8%
d5-Phenol	28.8%	2-Fluorophenol	52.8%
2,4,6-Tribromophenol	80.3%	d4-2-Chlorophenol	74.1%

Composite SVOCs

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-01
SAMPLE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Data Release Authorized:
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 18:09
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.5%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**210**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**28**
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	**2-Methylnaphthalene**	**20**	**35**
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**62**
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	**Acenaphthene**	**20**	**44**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	**Dibenzofuran**	**20**	**27**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-01
SAMPLE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Date Analyzed: 01/06/10 18:09

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	97	< 97 U
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**74**
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	**Phenanthrene**	**20**	**560**
86-74-8	**Carbazole**	**20**	**84**
120-12-7	**Anthracene**	**20**	**240**
84-74-2	**Di-n-Butylphthalate**	**20**	**17 J**
206-44-0	**Fluoranthene**	**20**	**790**
129-00-0	**Pyrene**	**20**	**690**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	**Benzo(a)anthracene**	**20**	**480**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**410 B**
218-01-9	**Chrysene**	**20**	**740**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**550**
207-08-9	**Benzo(k)fluoranthene**	**20**	**550**
50-32-8	**Benzo(a)pyrene**	**20**	**550**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**200**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**110**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**170**
62-53-3	Aniline	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	80.8%
d14-p-Terphenyl	60.8%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	81.3%	2-Fluorophenol	64.5%
2,4,6-Tribromophenol	77.6%	d4-2-Chlorophenol	62.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-02
SAMPLE

Lab Sample ID: QC54O
LIMS ID: 09-31457
Matrix: Sediment
Data Release Authorized: VT
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 18:40
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**110**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	**4-Methylphenol**	**19**	**11 J**
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	**Naphthalene**	**19**	**85**
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	**2-Methylnaphthalene**	**19**	**61**
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	**Dimethylphthalate**	**19**	**11 J**
208-96-8	**Acenaphthylene**	**19**	**40**
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	**Acenaphthene**	**19**	**74**
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	**Dibenzofuran**	**19**	**44**

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-02
SAMPLE

Lab Sample ID: QC540
LIMS ID: 09-31457
Matrix: Sediment
Date Analyzed: 01/06/10 18:40

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	96	< 96 U
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	**Fluorene**	**19**	**100**
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**800**
86-74-8	**Carbazole**	**19**	**110**
120-12-7	**Anthracene**	**19**	**170**
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**850**
129-00-0	**Pyrene**	**19**	**720**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**320**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**280 B**
218-01-9	**Chrysene**	**19**	**450**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**300**
207-08-9	**Benzo(k)fluoranthene**	**19**	**300**
50-32-8	**Benzo(a)pyrene**	**19**	**320**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**19**	**120**
53-70-3	**Dibenz(a,h)anthracene**	**19**	**60**
191-24-2	**Benzo(g,h,i)perylene**	**19**	**110**
62-53-3	Aniline	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	60.4%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	72.5%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	68.3%	d4-2-Chlorophenol	59.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-03
SAMPLE

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Data Release Authorized: VTB
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 20:15
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**140**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	**4-Methylphenol**	**20**	**24**
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**850**
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**20**	**740**
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	**Acenaphthene**	**20**	**820**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	**Dibenzofuran**	**20**	**340**

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-03
SAMPLE

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Date Analyzed: 01/06/10 20:15

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	98	< 98 U
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	**Diethylphthalate**	**20**	**12 J**
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**940**
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**3,400 ES**
86-74-8	**Carbazole**	**20**	**980**
120-12-7	**Anthracene**	**20**	**1,100**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**3,000 ES**
129-00-0	**Pyrene**	**20**	**2,300 ES**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**1,500**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**330 B**
218-01-9	**Chrysene**	**20**	**1,500**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**1,000**
207-08-9	**Benzo(k)fluoranthene**	**20**	**1,000**
50-32-8	**Benzo(a)pyrene**	**20**	**1,400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**480**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**260**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**440**
62-53-3	Aniline	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.6%	2-Fluorobiphenyl	81.6%
d14-p-Terphenyl	64.4%	d4-1,2-Dichlorobenzene	48.8%
d5-Phenol	72.8%	2-Fluorophenol	51.5%
2,4,6-Tribromophenol	78.4%	d4-2-Chlorophenol	57.3%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-03
DILUTION

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Data Release Authorized: VTS
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/07/10 13:06
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 4.00
Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**78**	**160**
111-44-4	Bis-(2-Chloroethyl) Ether	78	< 78 U
95-57-8	2-Chlorophenol	78	< 78 U
541-73-1	1,3-Dichlorobenzene	78	< 78 U
106-46-7	1,4-Dichlorobenzene	78	< 78 U
100-51-6	Benzyl Alcohol	78	< 78 U
95-50-1	1,2-Dichlorobenzene	78	< 78 U
95-48-7	2-Methylphenol	78	< 78 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	78	< 78 U
106-44-5	4-Methylphenol	78	< 78 U
621-64-7	N-Nitroso-Di-N-Propylamine	390	< 390 U
67-72-1	Hexachloroethane	78	< 78 U
98-95-3	Nitrobenzene	78	< 78 U
78-59-1	Isophorone	78	< 78 U
88-75-5	2-Nitrophenol	390	< 390 U
105-67-9	2,4-Dimethylphenol	78	< 78 U
65-85-0	Benzoic Acid	780	< 780 U
111-91-1	bis(2-Chloroethoxy) Methane	78	< 78 U
120-83-2	2,4-Dichlorophenol	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	78	< 78 U
91-20-3	**Naphthalene**	**78**	**950**
106-47-8	4-Chloroaniline	390	< 390 U
87-68-3	Hexachlorobutadiene	78	< 78 U
59-50-7	4-Chloro-3-methylphenol	390	< 390 U
91-57-6	**2-Methylnaphthalene**	**78**	**760**
77-47-4	Hexachlorocyclopentadiene	390	< 390 U
88-06-2	2,4,6-Trichlorophenol	390	< 390 U
95-95-4	2,4,5-Trichlorophenol	390	< 390 U
91-58-7	2-Chloronaphthalene	78	< 78 U
88-74-4	2-Nitroaniline	390	< 390 U
131-11-3	Dimethylphthalate	78	< 78 U
208-96-8	Acenaphthylene	78	< 78 U
99-09-2	3-Nitroaniline	390	< 390 U
83-32-9	**Acenaphthene**	**78**	**820**
51-28-5	2,4-Dinitrophenol	780	< 780 U
100-02-7	4-Nitrophenol	390	< 390 U
132-64-9	**Dibenzofuran**	**78**	**320**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-AWMIS-03
DILUTION

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Date Analyzed: 01/07/10 13:06

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	390	< 390 U
121-14-2	2,4-Dinitrotoluene	390	< 390 U
84-66-2	Diethylphthalate	78	< 78 U
7005-72-3	4-Chlorophenyl-phenylether	78	< 78 U
86-73-7	**Fluorene**	**78**	**980**
100-01-6	4-Nitroaniline	390	< 390 U
534-52-1	4,6-Dinitro-2-Methylphenol	780	< 780 U
86-30-6	N-Nitrosodiphenylamine	78	< 78 U
101-55-3	4-Bromophenyl-phenylether	78	< 78 U
118-74-1	Hexachlorobenzene	78	< 78 U
87-86-5	Pentachlorophenol	390	< 390 U
85-01-8	**Phenanthrene**	**78**	**5,100**
86-74-8	**Carbazole**	**78**	**660**
120-12-7	**Anthracene**	**78**	**1,200**
84-74-2	Di-n-Butylphthalate	78	< 78 U
206-44-0	**Fluoranthene**	**78**	**3,700**
129-00-0	**Pyrene**	**78**	**3,900**
85-68-7	Butylbenzylphthalate	78	< 78 U
91-94-1	3,3'-Dichlorobenzidine	390	< 390 U
56-55-3	**Benzo(a)anthracene**	**78**	**1,700**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**78**	**290 B**
218-01-9	**Chrysene**	**78**	**1,900**
117-84-0	Di-n-Octyl phthalate	78	< 78 U
205-99-2	**Benzo(b)fluoranthene**	**78**	**1,200**
207-08-9	**Benzo(k)fluoranthene**	**78**	**1,200**
50-32-8	**Benzo(a)pyrene**	**78**	**1,500**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**78**	**770**
53-70-3	**Dibenz(a,h)anthracene**	**78**	**380**
191-24-2	**Benzo(g,h,i)perylene**	**78**	**840**
62-53-3	Aniline	78	< 78 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.4%	2-Fluorobiphenyl	71.5%
d14-p-Terphenyl	64.5%	d4-1,2-Dichlorobenzene	44.3%
d5-Phenol	76.2%	2-Fluorophenol	47.4%
2,4,6-Tribromophenol	67.4%	d4-2-Chlorophenol	56.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-PAMIS-01
SAMPLE

Lab Sample ID: QC54Q
LIMS ID: 09-31459
Matrix: Sediment
Data Release Authorized: VTB
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 20:47
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**20**	**98**
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	**1,4-Dichlorobenzene**	**20**	**13 J**
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	**Naphthalene**	**20**	**14 J**
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	**2-Methylnaphthalene**	**20**	**11 J**
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	**Acenaphthylene**	**20**	**19 J**
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	**Acenaphthene**	**20**	**29**
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	**Dibenzofuran**	**20**	**10 J**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: EW09-ITSED-PAMIS-01
SAMPLE

Lab Sample ID: QC54Q
LIMS ID: 09-31459
Matrix: Sediment
Date Analyzed: 01/06/10 20:47

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments
NA

CAS Number	Analyte	RL	Result
606-20-2	2,6-Dinitrotoluene	99	< 99 U
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	**Fluorene**	**20**	**20**
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**180**
86-74-8	**Carbazole**	**20**	**82**
120-12-7	**Anthracene**	**20**	**140**
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**580**
129-00-0	**Pyrene**	**20**	**510**
85-68-7	**Butylbenzylphthalate**	**20**	**14 J**
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**290**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**330 B**
218-01-9	**Chrysene**	**20**	**440**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**310**
207-08-9	**Benzo(k)fluoranthene**	**20**	**310**
50-32-8	**Benzo(a)pyrene**	**20**	**270**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**71**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**45**
191-24-2	**Benzo(g,h,i)perylene**	**20**	**58**
62-53-3	Aniline	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	76.4%
d14-p-Terphenyl	59.2%	d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	72.0%	2-Fluorophenol	54.7%
2,4,6-Tribromophenol	72.0%	d4-2-Chlorophenol	58.9%

FORM I

Round 1 PCB Aroclors

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-001-010
SAMPLE

Lab Sample ID: OP35U
LIMS ID: 09-6000
Matrix: Sediment
Data Release Authorized:
Reported: 03/19/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/17/09 00:33
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 46.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	**Aroclor 1248**	**20**	**31**
11097-69-1	**Aroclor 1254**	**20**	**51**
11096-82-5	**Aroclor 1260**	**20**	**62**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	24	< 24 Y
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	81.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-003-010
SAMPLE

Lab Sample ID: OP35T
LIMS ID: 09-5999
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 19:23
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	87.0%
Tetrachlorometaxylene	76.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-005-010
SAMPLE

Lab Sample ID: OP35S
LIMS ID: 09-5998
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 19:06
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 46.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	97.0%
Tetrachlorometaxylene	84.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-008-010
SAMPLE

Lab Sample ID: OP35R
LIMS ID: 09-5997
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 18:49
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	70.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-011-010
SAMPLE

Lab Sample ID: OP35Q
LIMS ID: 09-5996
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 18:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	**Aroclor 1248**	**20**	**34**
11097-69-1	**Aroclor 1254**	**20**	**42**
11096-82-5	**Aroclor 1260**	**20**	**46**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.0%
Tetrachlorometaxylene	90.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-013-010
SAMPLE

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 18:14
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 31.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	**Aroclor 1248**	**19**	**35**
11097-69-1	**Aroclor 1254**	**19**	**57**
11096-82-5	**Aroclor 1260**	**19**	**87**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	97.4%
Tetrachlorometaxylene	84.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-014-010
SAMPLE

Lab Sample ID: OP65B
LIMS ID: 09-6149
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/11/09
Date Analyzed: 03/17/09 00:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 44.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	**Aroclor 1242**	**20**	**21**
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**84**
11096-82-5	**Aroclor 1260**	**20**	**130**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.8%
Tetrachlorometaxylene	76.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-019-010
SAMPLE

Lab Sample ID: OP65D
LIMS ID: 09-6151
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/11/09
Date Analyzed: 03/17/09 01:24
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 53.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	Aroclor 1254	200	< 200 U
11096-82-5	**Aroclor 1260**	**200**	**360**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	116%
Tetrachlorometaxylene	119%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-020-010
SAMPLE

Lab Sample ID: OP35O
LIMS ID: 09-5994
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 17:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 53.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	**Aroclor 1260**	**19**	**29**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	83.0%
Tetrachlorometaxylene	67.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-021-010
SAMPLE

Lab Sample ID: OP65E
LIMS ID: 09-6152
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/11/09
Date Analyzed: 03/17/09 01:41
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	**Aroclor 1254**	**19**	**35**
11096-82-5	**Aroclor 1260**	**19**	**57**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.2%
Tetrachlorometaxylene	75.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-023-010
SAMPLE

Lab Sample ID: OP35N
LIMS ID: 09-5993
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 17:40
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 57.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	**Aroclor 1260**	**20**	**24**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	81.8%
Tetrachlorometaxylene	70.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-024-010
SAMPLE

Lab Sample ID: OP35M
LIMS ID: 09-5992
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 17:22
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 46.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**21**
11096-82-5	**Aroclor 1260**	**20**	**34**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	80.2%
Tetrachlorometaxylene	64.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-025-010
SAMPLE

Lab Sample ID: OP35L
LIMS ID: 09-5991
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 13:22
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 45.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**28**
11096-82-5	**Aroclor 1260**	**20**	**42**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.8%
Tetrachlorometaxylene	74.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-027-010
SAMPLE

Lab Sample ID: OP35A
LIMS ID: 09-5980
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/02/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 15:04
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 53.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**32 P**
11096-82-5	**Aroclor 1260**	**20**	**130**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	88.5%
Tetrachlorometaxylene	74.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-029-010
SAMPLE

Lab Sample ID: OP35K
LIMS ID: 09-5990
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 13:05
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 50.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**45**
11096-82-5	**Aroclor 1260**	**20**	**75**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.0%
Tetrachlorometaxylene	76.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-030-010
SAMPLE

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 12:48
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 54.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**26**
11096-82-5	**Aroclor 1260**	**20**	**40**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	84.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-031-010
SAMPLE

Lab Sample ID: OP35I
LIMS ID: 09-5988
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 12:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 54.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**22**
11096-82-5	**Aroclor 1260**	**20**	**50**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	88.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-032-010
SAMPLE

Lab Sample ID: OP35H
LIMS ID: 09-5987
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 12:13
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 50.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**36**
11096-82-5	**Aroclor 1260**	**20**	**69**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	82.8%
Tetrachlorometaxylene	70.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-033-010
SAMPLE

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 11:56
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**52**
11096-82-5	**Aroclor 1260**	**20**	**83**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.2%
Tetrachlorometaxylene	79.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-034-010
SAMPLE

Lab Sample ID: OP35E
LIMS ID: 09-5984
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 11:22
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 51.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**51**
11096-82-5	**Aroclor 1260**	**20**	**86**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	30	< 30 Y
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	107%
Tetrachlorometaxylene	90.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-035-010
SAMPLE

Lab Sample ID: OP35F
LIMS ID: 09-5985
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 11:39
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 47.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	180	< 180 U
53469-21-9	Aroclor 1242	180	< 180 U
12672-29-6	Aroclor 1248	180	< 180 U
11097-69-1	Aroclor 1254	180	< 180 U
11096-82-5	**Aroclor 1260**	**180**	**200**
11104-28-2	Aroclor 1221	180	< 180 U
11141-16-5	Aroclor 1232	180	< 180 U
37324-23-5	Aroclor 1262	180	< 180 U
11100-14-4	Aroclor 1268	180	< 180 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	88.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-036-010
SAMPLE

Lab Sample ID: OP35D
LIMS ID: 09-5983
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 15:56
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 48.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**23**
11096-82-5	**Aroclor 1260**	**20**	**43**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	80.0%
Tetrachlorometaxylene	70.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-038-010
SAMPLE

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 21:24
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	**200**	**480**
11096-82-5	**Aroclor 1260**	**200**	**1,100**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	120%
Tetrachlorometaxylene	92.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-100-010
SAMPLE

Lab Sample ID: OP33B
LIMS ID: 09-5979
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 21:41
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 40.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	97	< 97 U
53469-21-9	Aroclor 1242	97	< 97 U
12672-29-6	Aroclor 1248	97	< 97 U
11097-69-1	Aroclor 1254	97	< 97 U
11096-82-5	**Aroclor 1260**	**97**	**160**
11104-28-2	Aroclor 1221	97	< 97 U
11141-16-5	Aroclor 1232	97	< 97 U
37324-23-5	Aroclor 1262	97	< 97 U
11100-14-4	Aroclor 1268	97	< 97 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	82.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-101-010
SAMPLE

Lab Sample ID: OP33C
LIMS ID: 09-6002
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 21:58
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 43.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	97	< 97 U
53469-21-9	Aroclor 1242	97	< 97 U
12672-29-6	Aroclor 1248	97	< 97 U
11097-69-1	**Aroclor 1254**	**97**	**120**
11096-82-5	**Aroclor 1260**	**97**	**190**
11104-28-2	Aroclor 1221	97	< 97 U
11141-16-5	Aroclor 1232	97	< 97 U
37324-23-5	Aroclor 1262	97	< 97 U
11100-14-4	Aroclor 1268	97	< 97 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	106%
Tetrachlorometaxylene	90.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-102-010
SAMPLE

Lab Sample ID: OP35B
LIMS ID: 09-5981
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 15:22
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 42.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**25**
11096-82-5	**Aroclor 1260**	**20**	**37**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	91.0%
Tetrachlorometaxylene	75.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-109-010
SAMPLE

Lab Sample ID: OP22E
LIMS ID: 09-5941
Matrix: Sediment
Data Release Authorized:
Reported: 03/11/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/06/09
Date Analyzed: 03/09/09 19:07
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 54.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	**200**	**260**
11096-82-5	**Aroclor 1260**	**200**	**450**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	133%
Tetrachlorometaxylene	88.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-110-010
SAMPLE

Lab Sample ID: OP33D
LIMS ID: 09-6003
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 22:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 53.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	98	< 98 U
53469-21-9	Aroclor 1242	98	< 98 U
12672-29-6	Aroclor 1248	98	< 98 U
11097-69-1	Aroclor 1254	98	< 98 U
11096-82-5	**Aroclor 1260**	**98**	**140**
11104-28-2	Aroclor 1221	98	< 98 U
11141-16-5	Aroclor 1232	98	< 98 U
37324-23-5	Aroclor 1262	98	< 98 U
11100-14-4	Aroclor 1268	98	< 98 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	112%
Tetrachlorometaxylene	87.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-111-010
SAMPLE

Lab Sample ID: OP22D
LIMS ID: 09-5940
Matrix: Sediment
Data Release Authorized:
Reported: 03/11/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/06/09
Date Analyzed: 03/10/09 08:01
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 17.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.5%
Tetrachlorometaxylene	83.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-113-010
SAMPLE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized:
Reported: 03/11/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/06/09
Date Analyzed: 03/09/09 17:59
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	330	< 330 U
53469-21-9	Aroclor 1242	330	< 330 U
12672-29-6	Aroclor 1248	330	< 330 U
11097-69-1	**Aroclor 1254**	**330**	**660**
11096-82-5	**Aroclor 1260**	**330**	**1,300**
11104-28-2	Aroclor 1221	330	< 330 U
11141-16-5	Aroclor 1232	330	< 330 U
37324-23-5	Aroclor 1262	330	< 330 U
11100-14-4	Aroclor 1268	330	< 330 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	123%
Tetrachlorometaxylene	85.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-114-010
SAMPLE

Lab Sample ID: OP33E
LIMS ID: 09-6004
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 22:32
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 44.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	**Aroclor 1248**	**20**	**26**
11097-69-1	**Aroclor 1254**	**20**	**73**
11096-82-5	**Aroclor 1260**	**20**	**120**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.2%
Tetrachlorometaxylene	76.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-116-010
SAMPLE

Lab Sample ID: OP22A
LIMS ID: 09-5937
Matrix: Sediment
Data Release Authorized:
Reported: 03/11/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/06/09
Date Analyzed: 03/10/09 07:44
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 44.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	59	< 59 U
53469-21-9	Aroclor 1242	59	< 59 U
12672-29-6	**Aroclor 1248**	**59**	**120**
11097-69-1	**Aroclor 1254**	**59**	**240**
11096-82-5	**Aroclor 1260**	**59**	**280**
11104-28-2	Aroclor 1221	59	< 59 U
11141-16-5	Aroclor 1232	59	< 59 U
37324-23-5	Aroclor 1262	59	< 59 U
11100-14-4	Aroclor 1268	59	< 59 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	79.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-119-010
SAMPLE

Lab Sample ID: 0097N
LIMS ID: 09-5799
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 15:07
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 46.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	**200**	**270**
11096-82-5	**Aroclor 1260**	**200**	**520**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	128%
Tetrachlorometaxylene	98.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-120-010
SAMPLE

Lab Sample ID: 0097O
LIMS ID: 09-5800
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 15:24
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 39.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	**200**	**310**
11096-82-5	**Aroclor 1260**	**200**	**290**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	128%
Tetrachlorometaxylene	87.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-122-010
SAMPLE

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 14:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	Aroclor 1254	200	< 200 U
11096-82-5	**Aroclor 1260**	**200**	**550**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	120%
Tetrachlorometaxylene	98.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-126-010
SAMPLE

Lab Sample ID: OP65C
LIMS ID: 09-6150
Matrix: Sediment
Data Release Authorized:
Reported: 03/19/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/11/09
Date Analyzed: 03/17/09 01:07
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 32.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	Aroclor 1254	200	< 200 U
11096-82-5	**Aroclor 1260**	**200**	**880**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	119%
Tetrachlorometaxylene	100%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-127-010
SAMPLE

Lab Sample ID: 0097L
LIMS ID: 09-5797
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 14:33
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	**200**	**230**
11096-82-5	**Aroclor 1260**	**200**	**520**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	120%
Tetrachlorometaxylene	88.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-129-010
SAMPLE

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/10/09 07:27
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	190	< 190 U
53469-21-9	Aroclor 1242	190	< 190 U
12672-29-6	Aroclor 1248	190	< 190 U
11097-69-1	Aroclor 1254	190	< 190 U
11096-82-5	**Aroclor 1260**	**190**	**470**
11104-28-2	Aroclor 1221	190	< 190 U
11141-16-5	Aroclor 1232	190	< 190 U
37324-23-5	Aroclor 1262	190	< 190 U
11100-14-4	Aroclor 1268	190	< 190 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	118%
Tetrachlorometaxylene	90.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-130-010
SAMPLE

Lab Sample ID: 0097J
LIMS ID: 09-5795
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 13:59
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	**200**	**230**
11096-82-5	**Aroclor 1260**	**200**	**730**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	116%
Tetrachlorometaxylene	93.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-132-010
SAMPLE

Lab Sample ID: 0097P
LIMS ID: 09-5801
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 15:41
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	**200**	**220**
11096-82-5	**Aroclor 1260**	**200**	**630**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	87.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-200-010
SAMPLE

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/10/09 07:10
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 9.00
Silica Gel: No

Percent Moisture: 42.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	180	< 180 U
53469-21-9	Aroclor 1242	180	< 180 U
12672-29-6	Aroclor 1248	180	< 180 U
11097-69-1	**Aroclor 1254**	**180**	**300**
11096-82-5	**Aroclor 1260**	**180**	**640**
11104-28-2	Aroclor 1221	180	< 180 U
11141-16-5	Aroclor 1232	180	< 180 U
37324-23-5	Aroclor 1262	180	< 180 U
11100-14-4	Aroclor 1268	180	< 180 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	144%
Tetrachlorometaxylene	110%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-202-010
SAMPLE

Lab Sample ID: 0097G
LIMS ID: 09-5792
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 13:07
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 9.83 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	100	< 100 U
53469-21-9	Aroclor 1242	100	< 100 U
12672-29-6	Aroclor 1248	100	< 100 U
11097-69-1	**Aroclor 1254**	**100**	**190**
11096-82-5	**Aroclor 1260**	**100**	**200**
11104-28-2	Aroclor 1221	100	< 100 U
11141-16-5	Aroclor 1232	100	< 100 U
37324-23-5	Aroclor 1262	100	< 100 U
11100-14-4	Aroclor 1268	100	< 100 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	117%
Tetrachlorometaxylene	94.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-204-010
SAMPLE

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 12:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	58	< 58 U
53469-21-9	Aroclor 1242	58	< 58 U
12672-29-6	Aroclor 1248	58	< 58 U
11097-69-1	**Aroclor 1254**	**58**	**130**
11096-82-5	**Aroclor 1260**	**58**	**400**
11104-28-2	Aroclor 1221	58	< 58 U
11141-16-5	Aroclor 1232	58	< 58 U
37324-23-5	Aroclor 1262	58	< 58 U
11100-14-4	Aroclor 1268	58	< 58 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	110%
Tetrachlorometaxylene	82.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-207-010
SAMPLE

Lab Sample ID: 0097E
LIMS ID: 09-5790
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/10/09 06:53
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 35.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	59	< 59 U
53469-21-9	Aroclor 1242	59	< 59 U
12672-29-6	Aroclor 1248	59	< 59 U
11097-69-1	**Aroclor 1254**	**59**	**100**
11096-82-5	**Aroclor 1260**	**59**	**280**
11104-28-2	Aroclor 1221	59	< 59 U
11141-16-5	Aroclor 1232	59	< 59 U
37324-23-5	Aroclor 1262	59	< 59 U
11100-14-4	Aroclor 1268	59	< 59 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	104%
Tetrachlorometaxylene	100%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-211-010
SAMPLE

Lab Sample ID: OP33G
LIMS ID: 09-6009
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 22:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 34.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	**Aroclor 1254**	**19**	**38**
11096-82-5	**Aroclor 1260**	**19**	**140**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	88.5%
Tetrachlorometaxylene	71.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-216-010
SAMPLE

Lab Sample ID: 0097D
LIMS ID: 09-5789
Matrix: Sediment
Data Release Authorized:
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 11:08
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 26.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	**Aroclor 1254**	**19**	**37**
11096-82-5	**Aroclor 1260**	**19**	**69**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	82.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-217-010
SAMPLE

Lab Sample ID: 0097C
LIMS ID: 09-5788
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 10:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 25.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**30**
11096-82-5	**Aroclor 1260**	**20**	**44**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	98.2%
Tetrachlorometaxylene	88.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-218-010
SAMPLE

Lab Sample ID: 0097B
LIMS ID: 09-5787
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 10:33
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 26.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	91.5%
Tetrachlorometaxylene	78.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-219-010
SAMPLE

Lab Sample ID: OP33H
LIMS ID: 09-6010
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/19/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/17/09 23:41
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 25.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.8%
Tetrachlorometaxylene	89.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-220-010
SAMPLE

Lab Sample ID: 0097A
LIMS ID: 09-5786
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 10:16
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 25.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.8%
Tetrachlorometaxylene	84.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-300-010
SAMPLE

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/13/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/09/09 13:42
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 43.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	200	< 200 U
53469-21-9	Aroclor 1242	200	< 200 U
12672-29-6	Aroclor 1248	200	< 200 U
11097-69-1	**Aroclor 1254**	200	**260**
11096-82-5	**Aroclor 1260**	**200**	**440**
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	200	< 200 U
37324-23-5	Aroclor 1262	200	< 200 U
11100-14-4	Aroclor 1268	200	< 200 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	136%
Tetrachlorometaxylene	86.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-301-010
SAMPLE

Lab Sample ID: OP22B
LIMS ID: 09-5938
Matrix: Sediment
Data Release Authorized:
Reported: 03/11/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/06/09
Date Analyzed: 03/09/09 17:41
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 45.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	190	< 190 U
53469-21-9	Aroclor 1242	190	< 190 U
12672-29-6	**Aroclor 1248**	**190**	**200**
11097-69-1	**Aroclor 1254**	**190**	**400**
11096-82-5	**Aroclor 1260**	**190**	**620**
11104-28-2	Aroclor 1221	190	< 190 U
11141-16-5	Aroclor 1232	190	< 190 U
37324-23-5	Aroclor 1262	190	< 190 U
11100-14-4	Aroclor 1268	190	< 190 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	147%
Tetrachlorometaxylene	85.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-302-010
SAMPLE

Lab Sample ID: OP35C
LIMS ID: 09-5982
Matrix: Sediment
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/11/09
Date Analyzed: 03/16/09 15:39
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 42.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**25**
11096-82-5	**Aroclor 1260**	**20**	**48**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	108%
Tetrachlorometaxylene	90.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: EW09-SS-014-RB
SAMPLE

Lab Sample ID: OP65A
LIMS ID: 09-6148
Matrix: Water
Data Release Authorized:
Reported: 03/12/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/11/09 10:36
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in μg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	90.8%
Tetrachlorometaxylene	64.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-038-RB
SAMPLE

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Data Release Authorized:
Reported: 03/10/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/09/09 08:16
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in μg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.8%
Tetrachlorometaxylene	74.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: EW09-SS-102-RB
SAMPLE

Lab Sample ID: OP35V
LIMS ID: 09-6001
Matrix: Water
Data Release Authorized:
Reported: 03/10/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/09/09 08:33
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in μg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	84.5%
Tetrachlorometaxylene	76.2%

Round 2 PCB Aroclors

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-002-010
SAMPLE

Lab Sample ID: PE40B
LIMS ID: 09-14878
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 09:59
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	**Aroclor 1254**	**4.0**	**11**
11096-82-5	**Aroclor 1260**	**4.0**	**16**
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	97.5%
Tetrachlorometaxylene	64.8%

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-004-010
SAMPLE

Lab Sample ID: PE40C
LIMS ID: 09-14879
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 10:16
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**7.2**
11096-82-5	**Aroclor 1260**	**3.9**	**11**
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	88.2%
Tetrachlorometaxylene	58.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-006-010
SAMPLE

Lab Sample ID: PE40D
LIMS ID: 09-14880
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 11:08
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 22.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**9.7**
11096-82-5	**Aroclor 1260**	**3.9**	**14**
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	91.5%
Tetrachlorometaxylene	62.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-007-010
SAMPLE

Lab Sample ID: PE40E
LIMS ID: 09-14881
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 11:25
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.58 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	76	< 76 U
53469-21-9	Aroclor 1242	76	< 76 U
12672-29-6	Aroclor 1248	76	< 76 U
11097-69-1	**Aroclor 1254**	**76**	**100**
11096-82-5	**Aroclor 1260**	**76**	**260**
11104-28-2	Aroclor 1221	76	< 76 U
11141-16-5	Aroclor 1232	76	< 76 U
37324-23-5	Aroclor 1262	76	< 76 U
11100-14-4	Aroclor 1268	76	< 76 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	90.6%
Tetrachlorometaxylene	64.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-009-010
SAMPLE

Lab Sample ID: PE07C
LIMS ID: 09-14571
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 16:49
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 3.62 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	28	< 28 U
53469-21-9	Aroclor 1242	28	< 28 U
12672-29-6	**Aroclor 1248**	**28**	**130**
11097-69-1	**Aroclor 1254**	**28**	**230**
11096-82-5	**Aroclor 1260**	**28**	**190**
11104-28-2	Aroclor 1221	28	< 28 U
11141-16-5	Aroclor 1232	28	< 28 U
37324-23-5	Aroclor 1262	28	< 28 U
11100-14-4	Aroclor 1268	28	< 28 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.4%
Tetrachlorometaxylene	64.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-010-010
SAMPLE

Lab Sample ID: PE40F
LIMS ID: 09-14882
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 11:42
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 4.39 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 29.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	110	< 110 U
53469-21-9	Aroclor 1242	110	< 110 U
12672-29-6	Aroclor 1248	110	< 110 U
11097-69-1	**Aroclor 1254**	**110**	**330**
11096-82-5	**Aroclor 1260**	**110**	**800**
11104-28-2	Aroclor 1221	110	< 110 U
11141-16-5	Aroclor 1232	110	< 110 U
37324-23-5	Aroclor 1262	110	< 110 U
11100-14-4	Aroclor 1268	110	< 110 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	89.4%
Tetrachlorometaxylene	66.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-012-010
SAMPLE

Lab Sample ID: PE07D
LIMS ID: 09-14572
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 17:06
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 21.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	**Aroclor 1248**	**4.0**	**15**
11097-69-1	**Aroclor 1254**	**4.0**	**32**
11096-82-5	**Aroclor 1260**	**4.0**	**31**
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.0%
Tetrachlorometaxylene	62.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-015-010
SAMPLE

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 17:23
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 37.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	13	< 13 U
53469-21-9	Aroclor 1242	13	< 13 U
12672-29-6	**Aroclor 1248**	**13**	**48**
11097-69-1	**Aroclor 1254**	**13**	**120**
11096-82-5	**Aroclor 1260**	**13**	**170**
11104-28-2	Aroclor 1221	13	< 13 U
11141-16-5	Aroclor 1232	13	< 13 U
37324-23-5	Aroclor 1262	13	< 13 U
11100-14-4	Aroclor 1268	13	< 13 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.6%
Tetrachlorometaxylene	64.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-016-010
SAMPLE

Lab Sample ID: PD97K
LIMS ID: 09-14507
Matrix: Sediment
Data Release Authorized: VIB
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 13:22
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 4.43 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 28.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	23	< 23 U
53469-21-9	**Aroclor 1242**	**23**	**51**
12672-29-6	Aroclor 1248	23	< 23 U
11097-69-1	**Aroclor 1254**	**23**	**370**
11096-82-5	**Aroclor 1260**	**23**	**420**
11104-28-2	Aroclor 1221	23	< 23 U
11141-16-5	Aroclor 1232	23	< 23 U
37324-23-5	Aroclor 1262	23	< 23 U
11100-14-4	Aroclor 1268	23	< 23 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	81.5%
Tetrachlorometaxylene	62.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-017-010
SAMPLE

Lab Sample ID: PD95A
LIMS ID: 09-14478
Matrix: Sediment
Data Release Authorized: VTB
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 14:01
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.16 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 50.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	16	< 16 U
53469-21-9	Aroclor 1242	16	< 16 U
12672-29-6	**Aroclor 1248**	**16**	**160**
11097-69-1	**Aroclor 1254**	**16**	**250**
11096-82-5	**Aroclor 1260**	**16**	**240**
11104-28-2	Aroclor 1221	16	< 16 U
11141-16-5	Aroclor 1232	16	< 16 U
37324-23-5	Aroclor 1262	16	< 16 U
11100-14-4	Aroclor 1268	16	< 16 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	59.5%

FORM I

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-018-010
SAMPLE

Lab Sample ID: PD97J
LIMS ID: 09-14506
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 12:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 9.54 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	10	< 10 U
53469-21-9	Aroclor 1242	10	< 10 U
12672-29-6	**Aroclor 1248**	**10**	**25**
11097-69-1	**Aroclor 1254**	**10**	**92**
11096-82-5	**Aroclor 1260**	**10**	**140**
11104-28-2	Aroclor 1221	10	< 10 U
11141-16-5	Aroclor 1232	10	< 10 U
37324-23-5	Aroclor 1262	10	< 10 U
11100-14-4	Aroclor 1268	10	< 10 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.2%
Tetrachlorometaxylene	63.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-022-010
SAMPLE

Lab Sample ID: PD97L
LIMS ID: 09-14508
Matrix: Sediment
Data Release Authorized: VB
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 13:40
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 9.23 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 26.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	11	< 11 U
53469-21-9	Aroclor 1242	11	< 11 U
12672-29-6	**Aroclor 1248**	**11**	**14**
11097-69-1	**Aroclor 1254**	**11**	**23**
11096-82-5	**Aroclor 1260**	**11**	**25**
11104-28-2	Aroclor 1221	11	< 11 U
11141-16-5	Aroclor 1232	11	< 11 U
37324-23-5	Aroclor 1262	11	< 11 U
11100-14-4	Aroclor 1268	11	< 11 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	86.8%
Tetrachlorometaxylene	78.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-026-010
SAMPLE

Lab Sample ID: PD95B
LIMS ID: 09-14479
Matrix: Sediment
Data Release Authorized: VJS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 14:18
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.59 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 39.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	13	< 13 U
53469-21-9	Aroclor 1242	13	< 13 U
12672-29-6	**Aroclor 1248**	**13**	**35**
11097-69-1	**Aroclor 1254**	**13**	**100**
11096-82-5	**Aroclor 1260**	**13**	**170**
11104-28-2	Aroclor 1221	13	< 13 U
11141-16-5	Aroclor 1232	13	< 13 U
37324-23-5	Aroclor 1262	13	< 13 U
11100-14-4	Aroclor 1268	13	< 13 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	63.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-028-010
SAMPLE

Lab Sample ID: PD97M
LIMS ID: 09-14509
Matrix: Sediment
Data Release Authorized: VTB
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 13:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.32 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	**Aroclor 1248**	**19**	**60**
11097-69-1	**Aroclor 1254**	**19**	**150**
11096-82-5	**Aroclor 1260**	**19**	**210**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	91.9%
Tetrachlorometaxylene	56.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-037-010
SAMPLE

Lab Sample ID: PD95D
LIMS ID: 09-14481
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 16:01
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 3.28 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 47.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	30	< 30 U
53469-21-9	**Aroclor 1242**	**30**	**57**
12672-29-6	Aroclor 1248	30	< 30 U
11097-69-1	**Aroclor 1254**	**30**	**280**
11096-82-5	**Aroclor 1260**	**30**	**380**
11104-28-2	Aroclor 1221	30	< 30 U
11141-16-5	Aroclor 1232	30	< 30 U
37324-23-5	Aroclor 1262	30	< 30 U
11100-14-4	Aroclor 1268	30	< 30 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.2%
Tetrachlorometaxylene	60.5%

FORM I

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-039-010
SAMPLE

Lab Sample ID: PD97O
LIMS ID: 09-14511
Matrix: Sediment
Data Release Authorized: VB
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 14:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 8.59 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 31.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	12	< 12 U
53469-21-9	Aroclor 1242	12	< 12 U
12672-29-6	**Aroclor 1248**	**12**	**24**
11097-69-1	**Aroclor 1254**	**12**	**37**
11096-82-5	**Aroclor 1260**	**12**	**36**
11104-28-2	Aroclor 1221	12	< 12 U
11141-16-5	Aroclor 1232	12	< 12 U
37324-23-5	Aroclor 1262	12	< 12 U
11100-14-4	Aroclor 1268	12	< 12 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	83.2%
Tetrachlorometaxylene	77.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-040-010
SAMPLE

Lab Sample ID: PD95C
LIMS ID: 09-14480
Matrix: Sediment
Data Release Authorized: VJS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 14:35
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.17 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 58.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	**Aroclor 1248**	**19**	**61**
11097-69-1	Aroclor 1254	190	< 190 Y
11096-82-5	**Aroclor 1260**	**19**	**380**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.2%
Tetrachlorometaxylene	60.1%

FORM I

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-103-010
SAMPLE

Lab Sample ID: PD95E
LIMS ID: 09-14482
Matrix: Sediment
Data Release Authorized: VJS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 16:19
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.10 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 51.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	16	< 16 U
53469-21-9	**Aroclor 1242**	**16**	**38**
12672-29-6	Aroclor 1248	16	< 16 U
11097-69-1	Aroclor 1254	250	< 250 Y
11096-82-5	**Aroclor 1260**	**16**	**710**
11104-28-2	Aroclor 1221	16	< 16 U
11141-16-5	Aroclor 1232	16	< 16 U
37324-23-5	Aroclor 1262	16	< 16 U
11100-14-4	Aroclor 1268	16	< 16 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	108%
Tetrachlorometaxylene	72.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-105-010
SAMPLE

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 16:36
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.65 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 54.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**100**
11097-69-1	**Aroclor 1254**	**18**	**260**
11096-82-5	**Aroclor 1260**	**18**	**360**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	108%
Tetrachlorometaxylene	59.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-106-010
SAMPLE

Lab Sample ID: PE07G
LIMS ID: 09-14575
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/02/09 13:08
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 25.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.8	< 3.8 U
53469-21-9	Aroclor 1242	3.8	< 3.8 U
12672-29-6	**Aroclor 1248**	**3.8**	**30**
11097-69-1	**Aroclor 1254**	**3.8**	**47**
11096-82-5	**Aroclor 1260**	**3.8**	**52**
11104-28-2	Aroclor 1221	3.8	< 3.8 U
11141-16-5	Aroclor 1232	3.8	< 3.8 U
37324-23-5	Aroclor 1262	3.8	< 3.8 U
11100-14-4	Aroclor 1268	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.6%
Tetrachlorometaxylene	65.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-107-010
SAMPLE

Lab Sample ID: PE07F
LIMS ID: 09-14574
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 18:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 4.92 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	**Aroclor 1248**	**20**	**330**
11097-69-1	**Aroclor 1254**	**20**	**480**
11096-82-5	**Aroclor 1260**	**20**	**470**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	117%
Tetrachlorometaxylene	67.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-108-010
SAMPLE

Lab Sample ID: PD95K
LIMS ID: 09-14488
Matrix: Sediment
Data Release Authorized: VJB
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 08:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 25.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	**Aroclor 1248**	**3.9**	**13**
11097-69-1	**Aroclor 1254**	**3.9**	**40**
11096-82-5	**Aroclor 1260**	**3.9**	**63**
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	110%
Tetrachlorometaxylene	63.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-112-010
SAMPLE

Lab Sample ID: PD95G
LIMS ID: 09-14484
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 16:53
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.04 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 51.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	17	< 17 U
53469-21-9	Aroclor 1242	17	< 17 U
12672-29-6	**Aroclor 1248**	**17**	**87**
11097-69-1	**Aroclor 1254**	**17**	**230**
11096-82-5	**Aroclor 1260**	**17**	**460**
11104-28-2	Aroclor 1221	17	< 17 U
11141-16-5	Aroclor 1232	17	< 17 U
37324-23-5	Aroclor 1262	17	< 17 U
11100-14-4	Aroclor 1268	17	< 17 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	116%
Tetrachlorometaxylene	59.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-115-010
SAMPLE

Lab Sample ID: PD95I
LIMS ID: 09-14486
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 07:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 3.28 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 47.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	30	< 30 U
53469-21-9	Aroclor 1242	30	< 30 U
12672-29-6	**Aroclor 1248**	**30**	**180**
11097-69-1	**Aroclor 1254**	**30**	**320**
11096-82-5	**Aroclor 1260**	**30**	**440**
11104-28-2	Aroclor 1221	30	< 30 U
11141-16-5	Aroclor 1232	30	< 30 U
37324-23-5	Aroclor 1262	30	< 30 U
11100-14-4	Aroclor 1268	30	< 30 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.6%
Tetrachlorometaxylene	53.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-118-010
SAMPLE

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized: VJB
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 08:48
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 3.67 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	27	< 27 U
53469-21-9	Aroclor 1242	27	< 27 U
12672-29-6	Aroclor 1248	27	< 27 U
11097-69-1	Aroclor 1254	140	< 140 Y
11096-82-5	**Aroclor 1260**	**27**	**220**
11104-28-2	Aroclor 1221	27	< 27 U
11141-16-5	Aroclor 1232	27	< 27 U
37324-23-5	Aroclor 1262	27	< 27 U
11100-14-4	Aroclor 1268	27	< 27 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.9%
Tetrachlorometaxylene	53.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-121-010
SAMPLE

Lab Sample ID: PD95M
LIMS ID: 09-14490
Matrix: Sediment
Data Release Authorized: VB
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 09:06
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 45.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	15	< 15 U
53469-21-9	Aroclor 1242	15	< 15 U
12672-29-6	**Aroclor 1248**	**15**	**210**
11097-69-1	**Aroclor 1254**	**15**	**330**
11096-82-5	**Aroclor 1260**	**15**	**380**
11104-28-2	Aroclor 1221	15	< 15 U
11141-16-5	Aroclor 1232	15	< 15 U
37324-23-5	Aroclor 1262	15	< 15 U
11100-14-4	Aroclor 1268	15	< 15 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	115%
Tetrachlorometaxylene	62.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-123-010
SAMPLE

Lab Sample ID: PE14M
LIMS ID: 09-14624
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 09:08
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 15.0
Silica Gel: No

Percent Moisture: 41.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	59	< 59 U
53469-21-9	Aroclor 1242	59	< 59 U
12672-29-6	Aroclor 1248	59	< 59 U
11097-69-1	Aroclor 1254	400	< 400 Y
11096-82-5	**Aroclor 1260**	**59**	**1,100**
11104-28-2	Aroclor 1221	59	< 59 U
11141-16-5	Aroclor 1232	59	< 59 U
37324-23-5	Aroclor 1262	59	< 59 U
11100-14-4	Aroclor 1268	59	< 59 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	107%
Tetrachlorometaxylene	79.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-124-010
SAMPLE

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 01:42
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 37.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	**Aroclor 1242**	**20**	**26**
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	200	< 200 Y
11096-82-5	**Aroclor 1260**	**20**	**570**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	90.2%
Tetrachlorometaxylene	70.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-125-010
SAMPLE

Lab Sample ID: PE14K
LIMS ID: 09-14622
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 01:25
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 33.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	170	< 170 Y
11096-82-5	**Aroclor 1260**	**20**	**480**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.2%
Tetrachlorometaxylene	77.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-128-010
SAMPLE

Lab Sample ID: PE14J
LIMS ID: 09-14621
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 08:51
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 15.0
Silica Gel: No

Percent Moisture: 40.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	58	< 58 U
53469-21-9	Aroclor 1242	58	< 58 U
12672-29-6	Aroclor 1248	58	< 58 U
11097-69-1	Aroclor 1254	340	< 340 Y
11096-82-5	**Aroclor 1260**	**58**	**1,100**
11104-28-2	Aroclor 1221	58	< 58 U
11141-16-5	Aroclor 1232	58	< 58 U
37324-23-5	Aroclor 1262	58	< 58 U
11100-14-4	Aroclor 1268	58	< 58 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	106%
Tetrachlorometaxylene	81.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-131-010
SAMPLE

Lab Sample ID: PE14I
LIMS ID: 09-14620
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 00:50
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 14.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 42.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	34	< 34 U
53469-21-9	Aroclor 1242	34	< 34 U
12672-29-6	Aroclor 1248	34	< 34 U
11097-69-1	Aroclor 1254	390	< 390 Y
11096-82-5	**Aroclor 1260**	**34**	**1,200**
11104-28-2	Aroclor 1221	34	< 34 U
11141-16-5	Aroclor 1232	34	< 34 U
37324-23-5	Aroclor 1262	34	< 34 U
11100-14-4	Aroclor 1268	34	< 34 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	74.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-133-010
SAMPLE

Lab Sample ID: PD95J
LIMS ID: 09-14487
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 08:14
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.43 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 40.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	14	< 14 U
53469-21-9	Aroclor 1242	14	< 14 U
12672-29-6	**Aroclor 1248**	**14**	**49**
11097-69-1	**Aroclor 1254**	**14**	**120**
11096-82-5	**Aroclor 1260**	**14**	**220**
11104-28-2	Aroclor 1221	14	< 14 U
11141-16-5	Aroclor 1232	14	< 14 U
37324-23-5	Aroclor 1262	14	< 14 U
11100-14-4	Aroclor 1268	14	< 14 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	109%
Tetrachlorometaxylene	65.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-134-010
SAMPLE

Lab Sample ID: PE14H
LIMS ID: 09-14619
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 08:34
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 15.0
Silica Gel: No

Percent Moisture: 38.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	59	< 59 U
53469-21-9	Aroclor 1242	59	< 59 U
12672-29-6	Aroclor 1248	59	< 59 U
11097-69-1	Aroclor 1254	410	< 410 Y
11096-82-5	**Aroclor 1260**	**59**	**1,200**
11104-28-2	Aroclor 1221	59	< 59 U
11141-16-5	Aroclor 1232	59	< 59 U
37324-23-5	Aroclor 1262	59	< 59 U
11100-14-4	Aroclor 1268	59	< 59 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	104%
Tetrachlorometaxylene	82.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-201-010
SAMPLE

Lab Sample ID: PE14G
LIMS ID: 09-14618
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 08:16
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 25.0
Silica Gel: No

Percent Moisture: 34.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	97	< 97 U
53469-21-9	Aroclor 1242	97	< 97 U
12672-29-6	Aroclor 1248	97	< 97 U
11097-69-1	Aroclor 1254	760	< 760 Y
11096-82-5	**Aroclor 1260**	**97**	**2,400**
11104-28-2	Aroclor 1221	97	< 97 U
11141-16-5	Aroclor 1232	97	< 97 U
37324-23-5	Aroclor 1262	97	< 97 U
11100-14-4	Aroclor 1268	97	< 97 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	129%
Tetrachlorometaxylene	93.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-203-010
SAMPLE

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 13:59
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 31.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	39	< 39 U
53469-21-9	Aroclor 1242	39	< 39 U
12672-29-6	Aroclor 1248	39	< 39 U
11097-69-1	Aroclor 1254	420	< 420 Y
11096-82-5	**Aroclor 1260**	**39**	**1,100**
11104-28-2	Aroclor 1221	39	< 39 U
11141-16-5	Aroclor 1232	39	< 39 U
37324-23-5	Aroclor 1262	39	< 39 U
11100-14-4	Aroclor 1268	39	< 39 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	110%
Tetrachlorometaxylene	81.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-203-010
REEXTRACT

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized: VJS
Reported: 07/10/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 07/07/09
Date Analyzed: 07/08/09 23:07
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 20.0
Silica Gel: No

Percent Moisture: 31.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	78	< 78 U
53469-21-9	Aroclor 1242	78	< 78 U
12672-29-6	Aroclor 1248	78	< 78 U
11097-69-1	**Aroclor 1254**	**78**	**210**
11096-82-5	**Aroclor 1260**	**78**	**280**
11104-28-2	Aroclor 1221	78	< 78 U
11141-16-5	Aroclor 1232	78	< 78 U
37324-23-5	Aroclor 1262	78	< 78 U
11100-14-4	Aroclor 1268	78	< 78 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	124%
Tetrachlorometaxylene	89.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-205-010
SAMPLE

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 21:59
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 1.70 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	290	< 290 U
53469-21-9	Aroclor 1242	290	< 290 U
12672-29-6	Aroclor 1248	290	< 290 U
11097-69-1	Aroclor 1254	290	< 290 U
11096-82-5	Aroclor 1260	290	< 290 U
11104-28-2	Aroclor 1221	290	< 290 U
11141-16-5	Aroclor 1232	290	< 290 U
37324-23-5	Aroclor 1262	290	< 290 U
11100-14-4	Aroclor 1268	290	< 290 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	90.5%
Tetrachlorometaxylene	76.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-205-010
REEXTRACT

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 07/07/09
Date Analyzed: 07/08/09 22:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 20.0
Silica Gel: No

Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	79	< 79 U
53469-21-9	Aroclor 1242	79	< 79 U
12672-29-6	Aroclor 1248	79	< 79 U
11097-69-1	**Aroclor 1254**	**79**	**1,100**
11096-82-5	**Aroclor 1260**	**79**	**400**
11104-28-2	Aroclor 1221	79	< 79 U
11141-16-5	Aroclor 1232	79	< 79 U
37324-23-5	Aroclor 1262	79	< 79 U
11100-14-4	Aroclor 1268	79	< 79 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	115%
Tetrachlorometaxylene	93.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-206-010
SAMPLE

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 19:24
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.34 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	14	< 14 U
53469-21-9	Aroclor 1242	14	< 14 U
12672-29-6	**Aroclor 1248**	**14**	**68**
11097-69-1	**Aroclor 1254**	**14**	**140**
11096-82-5	**Aroclor 1260**	**14**	**130**
11104-28-2	Aroclor 1221	14	< 14 U
11141-16-5	Aroclor 1232	14	< 14 U
37324-23-5	Aroclor 1262	14	< 14 U
11100-14-4	Aroclor 1268	14	< 14 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.5%
Tetrachlorometaxylene	63.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-208-010
SAMPLE

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 18:49
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.26 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	14	< 14 U
53469-21-9	Aroclor 1242	14	< 14 U
12672-29-6	**Aroclor 1248**	**14**	**41**
11097-69-1	**Aroclor 1254**	**14**	**100**
11096-82-5	**Aroclor 1260**	**14**	**120**
11104-28-2	Aroclor 1221	14	< 14 U
11141-16-5	Aroclor 1232	14	< 14 U
37324-23-5	Aroclor 1262	14	< 14 U
11100-14-4	Aroclor 1268	14	< 14 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.6%
Tetrachlorometaxylene	58.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-209-010
SAMPLE

Lab Sample ID: PE14F
LIMS ID: 09-14617
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 23:24
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 33.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	84	< 84 Y
11096-82-5	**Aroclor 1260**	**20**	**220**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	108%
Tetrachlorometaxylene	73.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-210-010
SAMPLE

Lab Sample ID: PE14B
LIMS ID: 09-14613
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 21:41
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	38	< 38 Y
11096-82-5	**Aroclor 1260**	**20**	**100**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.2%
Tetrachlorometaxylene	78.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-212-010
SAMPLE

Lab Sample ID: PE14E
LIMS ID: 09-14616
Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/29/09
Date Analyzed: 07/01/09 23:07
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 27.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**36**
11096-82-5	**Aroclor 1260**	**20**	**50**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.0%
Tetrachlorometaxylene	78.1%

FORM I

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-213-010
SAMPLE

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 11:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.94 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 36.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	13	< 13 U
53469-21-9	Aroclor 1242	13	< 13 U
12672-29-6	**Aroclor 1248**	**13**	**21**
11097-69-1	Aroclor 1254	13	< 13 U
11096-82-5	**Aroclor 1260**	**13**	**150**
11104-28-2	Aroclor 1221	13	< 13 U
11141-16-5	Aroclor 1232	13	< 13 U
37324-23-5	Aroclor 1262	13	< 13 U
11100-14-4	Aroclor 1268	13	< 13 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.9%
Tetrachlorometaxylene	62.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-214-010
SAMPLE

Lab Sample ID: PD97C
LIMS ID: 09-14499
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 11:40
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 8.41 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 33.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	12	< 12 U
53469-21-9	Aroclor 1242	12	< 12 U
12672-29-6	**Aroclor 1248**	**12**	**23**
11097-69-1	Aroclor 1254	150	< 150 Y
11096-82-5	**Aroclor 1260**	**12**	**270**
11104-28-2	Aroclor 1221	12	< 12 U
11141-16-5	Aroclor 1232	12	< 12 U
37324-23-5	Aroclor 1262	12	< 12 U
11100-14-4	Aroclor 1268	12	< 12 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	90.5%
Tetrachlorometaxylene	58.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-215-010
SAMPLE

Lab Sample ID: PD97I
LIMS ID: 09-14505
Matrix: Sediment
Data Release Authorized: VJS
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 12:14
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.68 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 54.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**34**
11097-69-1	**Aroclor 1254**	**18**	**110**
11096-82-5	**Aroclor 1260**	**18**	**200**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.9%
Tetrachlorometaxylene	56.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-221-010
SAMPLE

Lab Sample ID: PE07B
LIMS ID: 09-14570
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 16:32
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 27.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	**Aroclor 1248**	**3.9**	**5.2**
11097-69-1	**Aroclor 1254**	**3.9**	**12**
11096-82-5	**Aroclor 1260**	**3.9**	**35**
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	87.8%
Tetrachlorometaxylene	57.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-222-010
SAMPLE

Lab Sample ID: PE07A
LIMS ID: 09-14569
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 16:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 22.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.8	< 3.8 U
53469-21-9	Aroclor 1242	3.8	< 3.8 U
12672-29-6	**Aroclor 1248**	**3.8**	**5.7**
11097-69-1	**Aroclor 1254**	**3.8**	**9.8**
11096-82-5	**Aroclor 1260**	**3.8**	**8.3**
11104-28-2	Aroclor 1221	3.8	< 3.8 U
11141-16-5	Aroclor 1232	3.8	< 3.8 U
37324-23-5	Aroclor 1262	3.8	< 3.8 U
11100-14-4	Aroclor 1268	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	84.2%
Tetrachlorometaxylene	55.0%

FORM I

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

ANALYTICAL RESOURCES INCORPORATED

Sample ID: EW09-SS-223-010
SAMPLE

Lab Sample ID: PD97A
LIMS ID: 09-14497
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 11:23
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 28.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**6.0**
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	83.5%
Tetrachlorometaxylene	65.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-303-010
SAMPLE

Lab Sample ID: PD97N
LIMS ID: 09-14510
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/08/09 14:14
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.37 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 57.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	**Aroclor 1248**	**19**	**63**
11097-69-1	**Aroclor 1254**	**19**	**150**
11096-82-5	**Aroclor 1260**	**19**	**280**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.6%
Tetrachlorometaxylene	60.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-304-010
SAMPLE

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/09/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/02/09
Date Analyzed: 07/07/09 17:10
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.52 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 56.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**100**
11097-69-1	**Aroclor 1254**	**18**	**260**
11096-82-5	**Aroclor 1260**	**18**	**440**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	120%
Tetrachlorometaxylene	59.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-SS-305-010
SAMPLE

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/27/09
Date Analyzed: 07/01/09 19:07
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.07 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 43.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	14	< 14 U
53469-21-9	Aroclor 1242	14	< 14 U
12672-29-6	**Aroclor 1248**	**14**	**42**
11097-69-1	**Aroclor 1254**	**14**	**100**
11096-82-5	**Aroclor 1260**	**14**	**220**
11104-28-2	Aroclor 1221	14	< 14 U
11141-16-5	Aroclor 1232	14	< 14 U
37324-23-5	Aroclor 1262	14	< 14 U
11100-14-4	Aroclor 1268	14	< 14 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.2%
Tetrachlorometaxylene	59.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LSO-01SE-080723
SAMPLE

Lab Sample ID: PE25A
LIMS ID: 09-14715
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PE25-Windward Environmental, LLC
Project: EW SURFACE SEDIMENT

Date Sampled: 07/23/08
Date Received: 06/24/09

Date Extracted: 06/29/09
Date Analyzed: 07/02/09 03:59
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 34.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	40	< 40 U
53469-21-9	Aroclor 1242	40	< 40 U
12672-29-6	Aroclor 1248	40	< 40 U
11097-69-1	**Aroclor 1254**	**40**	**120**
11096-82-5	**Aroclor 1260**	**40**	**220**
11104-28-2	Aroclor 1221	40	< 40 U
11141-16-5	Aroclor 1232	40	< 40 U
37324-23-5	Aroclor 1262	40	< 40 U
11100-14-4	Aroclor 1268	40	< 40 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	131%
Tetrachlorometaxylene	68.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: EW09-SS-002-010-RB
SAMPLE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Data Release Authorized:
Reported: 07/01/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/26/09
Date Analyzed: 06/30/09 09:28
Instrument/Analyst: ECD5/PKC
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	70.8%
Tetrachlorometaxylene	64.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: EW09-SS-210-RB
SAMPLE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 06/30/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 10:37
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 435 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.2	< 1.2 U
53469-21-9	Aroclor 1242	1.2	< 1.2 U
12672-29-6	Aroclor 1248	1.2	< 1.2 U
11097-69-1	Aroclor 1254	1.2	< 1.2 U
11096-82-5	Aroclor 1260	1.2	< 1.2 U
11104-28-2	Aroclor 1221	1.2	< 1.2 U
11141-16-5	Aroclor 1232	1.2	< 1.2 U
37324-23-5	Aroclor 1262	1.2	< 1.2 U
11100-14-4	Aroclor 1268	1.2	< 1.2 U

Reported in μg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.2%
Tetrachlorometaxylene	70.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: EW09-SS-222-RB
SAMPLE

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 06/30/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/30/09 10:20
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in μg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	57.8%
Tetrachlorometaxylene	61.5%

FORM I

T30 PCB Aroclors

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-01
SAMPLE

Lab Sample ID: ON35A
LIMS ID: 09-4935
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 16:26
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 32.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**79**
11097-69-1	**Aroclor 1254**	**18**	**110**
11096-82-5	**Aroclor 1260**	**18**	**120**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	81.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-03
SAMPLE

Lab Sample ID: ON35C
LIMS ID: 09-4937
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 16:43
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 27.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**26**
11097-69-1	**Aroclor 1254**	**18**	**48**
11096-82-5	**Aroclor 1260**	**18**	**52**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.0%
Tetrachlorometaxylene	79.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-101
SAMPLE

Lab Sample ID: ON35D
LIMS ID: 09-4938
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 17:00
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 25.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**26**
11097-69-1	**Aroclor 1254**	**18**	**54**
11096-82-5	**Aroclor 1260**	**18**	**86**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.0%
Tetrachlorometaxylene	78.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-04
SAMPLE

Lab Sample ID: QF22A
LIMS ID: 10-726
Matrix: Sediment
Data Release Authorized:
Reported: 01/25/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/18/10
Date Analyzed: 01/23/10 03:02
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 29.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**6.8**
11096-82-5	**Aroclor 1260**	**3.9**	**7.3**
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	7.8	< 7.8 Y
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	70.8%
Tetrachlorometaxylene	66.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-06
SAMPLE

Lab Sample ID: QF22B
LIMS ID: 10-727
Matrix: Sediment
Data Release Authorized:
Reported: 01/25/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/18/10
Date Analyzed: 01/22/10 15:14
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 33.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	**Aroclor 1248**	**20**	**37**
11097-69-1	**Aroclor 1254**	**20**	**66**
11096-82-5	**Aroclor 1260**	**20**	**77**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	83.8%
Tetrachlorometaxylene	83.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-07
SAMPLE

Lab Sample ID: ON35H
LIMS ID: 09-4943
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 17:18
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 43.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	Aroclor 1248	59	< 59 Y
11097-69-1	**Aroclor 1254**	**18**	**140**
11096-82-5	**Aroclor 1260**	**18**	**130**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	120	< 120 Y
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	81.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-09
SAMPLE

Lab Sample ID: ON35J
LIMS ID: 09-4945
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 17:35
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 21.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	17	< 17 U
53469-21-9	Aroclor 1242	17	< 17 U
12672-29-6	Aroclor 1248	17	< 17 U
11097-69-1	**Aroclor 1254**	**17**	**30**
11096-82-5	**Aroclor 1260**	**17**	**35**
11104-28-2	Aroclor 1221	17	< 17 U
11141-16-5	Aroclor 1232	17	< 17 U
37324-23-5	Aroclor 1262	17	< 17 U
11100-14-4	Aroclor 1268	17	< 17 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	81.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: T30-09-13
SAMPLE

Lab Sample ID: QF22C
LIMS ID: 10-728
Matrix: Sediment
Data Release Authorized:
Reported: 01/25/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 01/18/10
Date Analyzed: 01/22/10 15:36
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	**Aroclor 1248**	**19**	**36**
11097-69-1	**Aroclor 1254**	**19**	**51**
11096-82-5	**Aroclor 1260**	**19**	**50**
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U
37324-23-5	Aroclor 1262	19	< 19 U
11100-14-4	Aroclor 1268	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	79.1%
Tetrachlorometaxylene	85.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-14
SAMPLE

Lab Sample ID: ON35O
LIMS ID: 09-4950
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 19:01
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	Aroclor 1248	18	< 18 U
11097-69-1	Aroclor 1254	18	< 18 U
11096-82-5	Aroclor 1260	18	< 18 U
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.0%
Tetrachlorometaxylene	81.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-20
SAMPLE

Lab Sample ID: ON35U
LIMS ID: 09-4956
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 19:53
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**31**
11097-69-1	**Aroclor 1254**	**18**	**94**
11096-82-5	**Aroclor 1260**	**18**	**140**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.0%
Tetrachlorometaxylene	73.3%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-21
SAMPLE

Lab Sample ID: ON35V
LIMS ID: 09-4957
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 20:10
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**23**
11097-69-1	**Aroclor 1254**	**18**	**73**
11096-82-5	**Aroclor 1260**	**18**	**110**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	107%
Tetrachlorometaxylene	84.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-24
SAMPLE

Lab Sample ID: QF22D
LIMS ID: 10-729
Matrix: Sediment
Data Release Authorized:
Reported: 01/25/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/22/10 16:40
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 34.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	**Aroclor 1254**	**20**	**51**
11096-82-5	**Aroclor 1260**	**20**	**130**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	81.9%
Tetrachlorometaxylene	88.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-26
SAMPLE

Lab Sample ID: ON50E
LIMS ID: 09-5073
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 20:27
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 43.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	**Aroclor 1248**	**18**	**30**
11097-69-1	**Aroclor 1254**	**18**	**89**
11096-82-5	**Aroclor 1260**	**18**	**220**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	97.5%
Tetrachlorometaxylene	71.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-27
SAMPLE

Lab Sample ID: QF22E
LIMS ID: 10-730
Matrix: Sediment
Data Release Authorized:
Reported: 01/25/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/23/10 08:35
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	**Aroclor 1248**	**3.9**	**4.3**
11097-69-1	**Aroclor 1254**	**3.9**	**17**
11096-82-5	**Aroclor 1260**	**3.9**	**22**
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	5.9	< 5.9 Y
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	67.5%
Tetrachlorometaxylene	63.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-28
SAMPLE

Lab Sample ID: QF22F
LIMS ID: 10-731
Matrix: Sediment
Data Release Authorized:
Reported: 01/25/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/22/10 17:02
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 16.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 34.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	30	< 30 U
53469-21-9	Aroclor 1242	30	< 30 U
12672-29-6	Aroclor 1248	30	< 30 U
11097-69-1	**Aroclor 1254**	**30**	**96**
11096-82-5	**Aroclor 1260**	**30**	**200**
11104-28-2	Aroclor 1221	30	< 30 U
11141-16-5	Aroclor 1232	30	< 30 U
37324-23-5	Aroclor 1262	30	< 30 U
11100-14-4	Aroclor 1268	30	< 30 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	80.8%
Tetrachlorometaxylene	85.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-29
SAMPLE

Lab Sample ID: ON50H
LIMS ID: 09-5076
Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

QC Report No: ON50-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 02/25/09
Date Analyzed: 02/28/09 20:45
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 3.00
Silica Gel: No

Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	Aroclor 1248	18	< 18 U
11097-69-1	**Aroclor 1254**	**18**	**37**
11096-82-5	**Aroclor 1260**	**18**	**120**
11104-28-2	Aroclor 1221	18	< 18 U
11141-16-5	Aroclor 1232	18	< 18 U
37324-23-5	Aroclor 1262	18	< 18 U
11100-14-4	Aroclor 1268	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	98.2%
Tetrachlorometaxylene	78.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: T30-09-31
SAMPLE

Lab Sample ID: QF22G
LIMS ID: 10-732
Matrix: Sediment
Data Release Authorized:
Reported: 01/25/10

QC Report No: QF22-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Date Extracted: 01/18/10
Date Analyzed: 01/23/10 08:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 33.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	72.2%
Tetrachlorometaxylene	70.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: T30-09-11-RB
SAMPLE

Lab Sample ID: ON35W
LIMS ID: 09-5006
Matrix: Water
Data Release Authorized: VTS
Reported: 02/28/09

QC Report No: ON35-Windward Environmental, LLC
Project: T30 PDM
07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Date Extracted: 02/24/09
Date Analyzed: 02/26/09 10:19
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	77.0%

Composite PCBs

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-001-010
SAMPLE

Lab Sample ID: QC54A
LIMS ID: 09-31443
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/12/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 21:41
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 16.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 35.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	30	< 30 U
53469-21-9	Aroclor 1242	30	< 30 U
12672-29-6	**Aroclor 1248**	**30**	**110**
11097-69-1	**Aroclor 1254**	**30**	**150**
11096-82-5	**Aroclor 1260**	**30**	**150**
11104-28-2	Aroclor 1221	30	< 30 U
11141-16-5	Aroclor 1232	30	< 30 U
37324-23-5	Aroclor 1262	30	< 30 U
11100-14-4	Aroclor 1268	30	< 30 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.5%
Tetrachlorometaxylene	87.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-002-010
SAMPLE

Lab Sample ID: QC54B
LIMS ID: 09-31444
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/12/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 22:04
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 46.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	37	< 37 U
53469-21-9	Aroclor 1242	37	< 37 U
12672-29-6	Aroclor 1248	190	< 190 Y
11097-69-1	**Aroclor 1254**	**37**	**270**
11096-82-5	**Aroclor 1260**	**37**	**400**
11104-28-2	Aroclor 1221	37	< 37 U
11141-16-5	Aroclor 1232	37	< 37 U
37324-23-5	Aroclor 1262	37	< 37 U
11100-14-4	Aroclor 1268	37	< 37 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	88.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-003-010
SAMPLE

Lab Sample ID: QC54C
LIMS ID: 09-31445
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/12/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 22:28
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 46.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	36	< 36 U
53469-21-9	Aroclor 1242	36	< 36 U
12672-29-6	Aroclor 1248	180	< 180 Y
11097-69-1	**Aroclor 1254**	**36**	**330**
11096-82-5	**Aroclor 1260**	**36**	**490**
11104-28-2	Aroclor 1221	36	< 36 U
11141-16-5	Aroclor 1232	36	< 36 U
37324-23-5	Aroclor 1262	36	< 36 U
11100-14-4	Aroclor 1268	36	< 36 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	98.2%
Tetrachlorometaxylene	85.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-004-010
SAMPLE

Lab Sample ID: QC54D
LIMS ID: 09-31446
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/12/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 14:02
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 36.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	7.8	< 7.8 U
53469-21-9	Aroclor 1242	7.8	< 7.8 U
12672-29-6	Aroclor 1248	39	< 39 Y
11097-69-1	**Aroclor 1254**	**7.8**	**110**
11096-82-5	**Aroclor 1260**	**7.8**	**180**
11104-28-2	Aroclor 1221	7.8	< 7.8 U
11141-16-5	Aroclor 1232	7.8	< 7.8 U
37324-23-5	Aroclor 1262	7.8	< 7.8 U
11100-14-4	Aroclor 1268	7.8	< 7.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	129%
Tetrachlorometaxylene	87.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-005-010
SAMPLE

Lab Sample ID: QC54E
LIMS ID: 09-31447
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/14/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 22:52
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 38.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	32	< 32 U
53469-21-9	Aroclor 1242	32	< 32 U
12672-29-6	Aroclor 1248	160	< 160 Y
11097-69-1	**Aroclor 1254**	**32**	**330**
11096-82-5	**Aroclor 1260**	**32**	**410**
11104-28-2	Aroclor 1221	32	< 32 U
11141-16-5	Aroclor 1232	32	< 32 U
37324-23-5	Aroclor 1262	32	< 32 U
11100-14-4	Aroclor 1268	32	< 32 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	86.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-006-010
SAMPLE

Lab Sample ID: QC54F
LIMS ID: 09-31448
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/14/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 23:15
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 48.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	38	< 38 U
53469-21-9	Aroclor 1242	38	< 38 U
12672-29-6	Aroclor 1248	190	< 190 Y
11097-69-1	**Aroclor 1254**	**38**	**340**
11096-82-5	**Aroclor 1260**	**38**	**740**
11104-28-2	Aroclor 1221	38	< 38 U
11141-16-5	Aroclor 1232	38	< 38 U
37324-23-5	Aroclor 1262	38	< 38 U
11100-14-4	Aroclor 1268	38	< 38 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	109%
Tetrachlorometaxylene	88.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-007-010
SAMPLE

Lab Sample ID: QC54G
LIMS ID: 09-31449
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/14/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 23:39
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 40.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	33	< 33 U
53469-21-9	Aroclor 1242	33	< 33 U
12672-29-6	Aroclor 1248	170	< 170 Y
11097-69-1	**Aroclor 1254**	**33**	**270**
11096-82-5	**Aroclor 1260**	**33**	**320**
11104-28-2	Aroclor 1221	33	< 33 U
11141-16-5	Aroclor 1232	33	< 33 U
37324-23-5	Aroclor 1262	33	< 33 U
11100-14-4	Aroclor 1268	33	< 33 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	81.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-008-010
SAMPLE

Lab Sample ID: QC54H
LIMS ID: 09-31450
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/16/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 00:03
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 14.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 42.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	34	< 34 U
53469-21-9	Aroclor 1242	34	< 34 U
12672-29-6	Aroclor 1248	140	< 140 Y
11097-69-1	**Aroclor 1254**	**34**	**260**
11096-82-5	**Aroclor 1260**	**34**	**370**
11104-28-2	Aroclor 1221	34	< 34 U
11141-16-5	Aroclor 1232	34	< 34 U
37324-23-5	Aroclor 1262	34	< 34 U
11100-14-4	Aroclor 1268	34	< 34 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.6%
Tetrachlorometaxylene	82.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-009-010
SAMPLE

Lab Sample ID: QC54I
LIMS ID: 09-31451
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/16/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 01:14
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 39.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	32	< 32 U
53469-21-9	Aroclor 1242	32	< 32 U
12672-29-6	Aroclor 1248	160	< 160 Y
11097-69-1	Aroclor 1254	410	< 410 Y
11096-82-5	**Aroclor 1260**	**32**	**910**
11104-28-2	Aroclor 1221	32	< 32 U
11141-16-5	Aroclor 1232	32	< 32 U
37324-23-5	Aroclor 1262	32	< 32 U
11100-14-4	Aroclor 1268	32	< 32 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	89.8%
Tetrachlorometaxylene	85.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-010-010
SAMPLE

Lab Sample ID: QC54J
LIMS ID: 09-31452
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/16/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 01:37
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 38.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	32	< 32 U
53469-21-9	Aroclor 1242	32	< 32 U
12672-29-6	Aroclor 1248	94	< 94 Y
11097-69-1	Aroclor 1254	250	< 250 Y
11096-82-5	**Aroclor 1260**	**32**	**380**
11104-28-2	Aroclor 1221	32	< 32 U
11141-16-5	Aroclor 1232	32	< 32 U
37324-23-5	Aroclor 1262	32	< 32 U
11100-14-4	Aroclor 1268	32	< 32 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.1%
Tetrachlorometaxylene	87.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-011-010
SAMPLE

Lab Sample ID: QC54K
LIMS ID: 09-31453
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/16/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 06:33
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 50.0
Silica Gel: Yes

Percent Moisture: 32.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	39	< 39 U
53469-21-9	Aroclor 1242	39	< 39 U
12672-29-6	Aroclor 1248	78	< 78 Y
11097-69-1	Aroclor 1254	290	< 290 Y
11096-82-5	**Aroclor 1260**	**39**	**640**
11104-28-2	Aroclor 1221	39	< 39 U
11141-16-5	Aroclor 1232	39	< 39 U
37324-23-5	Aroclor 1262	39	< 39 U
11100-14-4	Aroclor 1268	39	< 39 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-012-010
SAMPLE

Lab Sample ID: QC54L
LIMS ID: 09-31454
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/16/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 14:50
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 32.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	7.9	< 7.9 U
53469-21-9	Aroclor 1242	7.9	< 7.9 U
12672-29-6	Aroclor 1248	24	< 24 Y
11097-69-1	**Aroclor 1254**	**7.9**	**73**
11096-82-5	**Aroclor 1260**	**7.9**	**73**
11104-28-2	Aroclor 1221	7.9	< 7.9 U
11141-16-5	Aroclor 1232	7.9	< 7.9 U
37324-23-5	Aroclor 1262	7.9	< 7.9 U
11100-14-4	Aroclor 1268	7.9	< 7.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	120%
Tetrachlorometaxylene	83.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-CS-013-010
SAMPLE

Lab Sample ID: QC54M
LIMS ID: 09-31455
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/16/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/05/10 15:13
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 43.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	7.8	< 7.8 U
53469-21-9	Aroclor 1242	7.8	< 7.8 U
12672-29-6	Aroclor 1248	39	< 39 Y
11097-69-1	**Aroclor 1254**	**7.8**	**130**
11096-82-5	**Aroclor 1260**	**7.8**	**270**
11104-28-2	Aroclor 1221	7.8	< 7.8 U
11141-16-5	Aroclor 1232	7.8	< 7.8 U
37324-23-5	Aroclor 1262	7.8	< 7.8 U
11100-14-4	Aroclor 1268	7.8	< 7.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	140%
Tetrachlorometaxylene	84.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-ITSED-AWMIS-01
SAMPLE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 02:01
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 18.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 27.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	27	< 27 U
53469-21-9	**Aroclor 1242**	**27**	**96**
12672-29-6	Aroclor 1248	27	< 27 U
11097-69-1	**Aroclor 1254**	**27**	**220**
11096-82-5	**Aroclor 1260**	**27**	**220**
11104-28-2	Aroclor 1221	27	< 27 U
11141-16-5	Aroclor 1232	27	< 27 U
37324-23-5	Aroclor 1262	27	< 27 U
11100-14-4	Aroclor 1268	27	< 27 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	92.8%
Tetrachlorometaxylene	86.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-ITSED-AWMIS-02
SAMPLE

Lab Sample ID: QC54O
LIMS ID: 09-31457
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 02:24
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	36	< 36 U
53469-21-9	**Aroclor 1242**	**36**	**680**
12672-29-6	Aroclor 1248	36	< 36 U
11097-69-1	**Aroclor 1254**	**36**	**550**
11096-82-5	**Aroclor 1260**	**36**	**360**
11104-28-2	Aroclor 1221	36	< 36 U
11141-16-5	Aroclor 1232	36	< 36 U
37324-23-5	Aroclor 1262	36	< 36 U
11100-14-4	Aroclor 1268	36	< 36 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	91.2%
Tetrachlorometaxylene	89.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-ITSED-AWMIS-03
SAMPLE

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 02:48
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 18.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	27	< 27 U
53469-21-9	Aroclor 1242	27	< 27 U
12672-29-6	Aroclor 1248	27	140
11097-69-1	Aroclor 1254	27	320
11096-82-5	Aroclor 1260	27	310
11104-28-2	Aroclor 1221	27	< 27 U
11141-16-5	Aroclor 1232	27	< 27 U
37324-23-5	Aroclor 1262	27	< 27 U
11100-14-4	Aroclor 1268	27	< 27 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	90.1%
Tetrachlorometaxylene	86.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: EW09-ITSED-PAMIS-01
SAMPLE

Lab Sample ID: QC54Q
LIMS ID: 09-31459
Matrix: Sediment
Data Release Authorized:
Reported: 01/06/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/31/09
Date Analyzed: 01/06/10 03:12
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	**Aroclor 1248**	**20**	**71**
11097-69-1	**Aroclor 1254**	**20**	**150**
11096-82-5	**Aroclor 1260**	**20**	**150**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	83.4%
Tetrachlorometaxylene	84.9%

FORM I

Round 1 Pesticides

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-008-010
SAMPLE

Lab Sample ID: OP35R
LIMS ID: 09-5997
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 18:21
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.99	< 0.99 U
319-85-7	beta-BHC	0.99	< 0.99 U
319-86-8	delta-BHC	0.99	< 0.99 U
58-89-9	gamma-BHC (Lindane)	0.99	< 0.99 U
76-44-8	Heptachlor	0.99	< 0.99 U
309-00-2	Aldrin	0.99	< 0.99 U
1024-57-3	Heptachlor Epoxide	0.99	< 0.99 U
959-98-8	Endosulfan I	0.99	< 0.99 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.9	< 9.9 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.99	< 0.99 U
5103-71-9	alpha Chlordane	0.99	< 0.99 U
8001-35-2	Toxaphene	99	< 99 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	76.8%
Tetrachlorometaxylene	60.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-008-010
REANALYSIS

Lab Sample ID: OP35R
LIMS ID: 09-5997
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 11:01
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 57.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.99	< 0.99 U
319-85-7	beta-BHC	0.99	< 0.99 U
319-86-8	delta-BHC	0.99	< 0.99 U
58-89-9	gamma-BHC (Lindane)	0.99	< 0.99 U
76-44-8	Heptachlor	0.99	< 0.99 U
309-00-2	Aldrin	0.99	< 0.99 U
1024-57-3	Heptachlor Epoxide	0.99	< 0.99 U
959-98-8	Endosulfan I	0.99	< 0.99 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.9	< 9.9 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.99	< 0.99 U
5103-71-9	alpha Chlordane	0.99	< 0.99 U
8001-35-2	Toxaphene	99	< 99 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	90.2%
Tetrachlorometaxylene	61.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-011-010
SAMPLE

Lab Sample ID: OP35Q
LIMS ID: 09-5996
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 18:01
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	1.9	< 1.9 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	1.9	< 1.9 U
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	86.5%
Tetrachlorometaxylene	64.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-011-010
REANALYSIS

Lab Sample ID: OP35Q
LIMS ID: 09-5996
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 10:41
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	2.0	< 2.0 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	1.9	< 1.9 U
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	93.5%
Tetrachlorometaxylene	65.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-013-010
SAMPLE

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 17:40
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 31.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	140	< 140 Y
1024-57-3	Heptachlor Epoxide	1.9	< 1.9 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	1.9	< 1.9 U
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	**trans-Nonachlor**	**1.9**	**4.4**
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	117%
Tetrachlorometaxylene	79.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-013-010
REANALYSIS

Lab Sample ID: OP35P
LIMS ID: 09-5995
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 10:20
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 31.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	2.0	< 2.0 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	1.9	< 1.9 U
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	**trans-Nonachlor**	**1.9**	**4.4**
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	114%
Tetrachlorometaxylene	73.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-021-010
SAMPLE

Lab Sample ID: OP65E
LIMS ID: 09-6152
Matrix: Sediment
Data Release Authorized:
Reported: 03/25/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 18:41
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.96	< 0.96 U
319-85-7	beta-BHC	0.96	< 0.96 U
319-86-8	delta-BHC	0.96	< 0.96 U
58-89-9	gamma-BHC (Lindane)	0.96	< 0.96 U
76-44-8	Heptachlor	0.96	< 0.96 U
309-00-2	Aldrin	0.96	< 0.96 U
1024-57-3	Heptachlor Epoxide	0.96	< 0.96 U
959-98-8	Endosulfan I	0.96	< 0.96 U
60-57-1	Dieldrin	1.9	< 1.9 U
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.6	< 9.6 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.96	< 0.96 U
5103-71-9	alpha Chlordane	0.96	< 0.96 U
8001-35-2	Toxaphene	96	< 96 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	73.5%
Tetrachlorometaxylene	67.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-021-010
REANALYSIS

Lab Sample ID: OP65E
LIMS ID: 09-6152
Matrix: Sediment
Data Release Authorized:
Reported: 03/25/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 11:21
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.96	< 0.96 U
319-85-7	beta-BHC	0.96	< 0.96 U
319-86-8	delta-BHC	0.96	< 0.96 U
58-89-9	gamma-BHC (Lindane)	0.96	< 0.96 U
76-44-8	Heptachlor	0.96	< 0.96 U
309-00-2	Aldrin	0.96	< 0.96 U
1024-57-3	Heptachlor Epoxide	0.96	< 0.96 U
959-98-8	Endosulfan I	0.96	< 0.96 U
60-57-1	Dieldrin	1.9	< 1.9 U
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.6	< 9.6 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.96	< 0.96 U
5103-71-9	alpha Chlordane	0.96	< 0.96 U
8001-35-2	Toxaphene	96	< 96 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	75.8%
Tetrachlorometaxylene	66.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-023-010
SAMPLE

Lab Sample ID: OP35N
LIMS ID: 09-5993
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 17:20
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 57.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	0.98	< 0.98 U
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.98	< 0.98 U
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	77.0%
Tetrachlorometaxylene	67.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-023-010
REANALYSIS

Lab Sample ID: OP35N
LIMS ID: 09-5993
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 10:00
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 57.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	0.98	< 0.98 U
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.98	< 0.98 U
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	68.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-030-010
SAMPLE

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 16:59
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 54.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.99	< 0.99 U
319-85-7	beta-BHC	0.99	< 0.99 U
319-86-8	delta-BHC	0.99	< 0.99 U
58-89-9	gamma-BHC (Lindane)	0.99	< 0.99 U
76-44-8	Heptachlor	0.99	< 0.99 U
309-00-2	Aldrin	0.99	< 0.99 U
1024-57-3	Heptachlor Epoxide	1.2	< 1.2 Y
959-98-8	Endosulfan I	0.99	< 0.99 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.9	< 9.9 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.99	< 0.99 U
5103-71-9	alpha Chlordane	0.99	< 0.99 U
8001-35-2	Toxaphene	99	< 99 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	77.8%
Tetrachlorometaxylene	71.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-030-010
REANALYSIS

Lab Sample ID: OP35J
LIMS ID: 09-5989
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 09:40
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 54.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.99	< 0.99 U
319-85-7	beta-BHC	0.99	< 0.99 U
319-86-8	delta-BHC	0.99	< 0.99 U
58-89-9	gamma-BHC (Lindane)	0.99	< 0.99 U
76-44-8	Heptachlor	0.99	< 0.99 U
309-00-2	Aldrin	0.99	< 0.99 U
1024-57-3	Heptachlor Epoxide	1.3	< 1.3 Y
959-98-8	Endosulfan I	0.99	< 0.99 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.9	< 9.9 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.99	< 0.99 U
5103-71-9	alpha Chlordane	0.99	< 0.99 U
8001-35-2	Toxaphene	99	< 99 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.2%
Tetrachlorometaxylene	72.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-033-010
SAMPLE

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 16:39
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	2.0	< 2.0 Y
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.98	< 0.98 U
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.2%
Tetrachlorometaxylene	69.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-033-010
REANALYSIS

Lab Sample ID: OP35G
LIMS ID: 09-5986
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 09:19
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	2.1	< 2.1 Y
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.98	< 0.98 U
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.2%
Tetrachlorometaxylene	70.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-038-010
SAMPLE

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 13:16
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	2.0	< 2.0 Y
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.98	< 0.98 U
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	76.5%
Tetrachlorometaxylene	68.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-038-010
REANALYSIS

Lab Sample ID: OP33A
LIMS ID: 09-5969
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 05:56
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 47.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	2.3	< 2.3 Y
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.98	< 0.98 U
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	77.8%
Tetrachlorometaxylene	70.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-110-010
SAMPLE

Lab Sample ID: OP33D
LIMS ID: 09-6003
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/16/09 14:16
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 53.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	1.4	< 1.4 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	89.8%
Tetrachlorometaxylene	66.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-110-010
REANALYSIS

Lab Sample ID: OP33D
LIMS ID: 09-6003
Matrix: Sediment
Data Release Authorized: MW
Reported: 03/23/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/10/09
Date Analyzed: 03/19/09 06:57
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 53.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	1.5	< 1.5 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	91.2%
Tetrachlorometaxylene	67.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-113-010
SAMPLE

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/12/09 04:20
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.0	< 1.0 U
319-85-7	beta-BHC	1.0	< 1.0 U
319-86-8	delta-BHC	1.0	< 1.0 U
58-89-9	gamma-BHC (Lindane)	1.0	< 1.0 U
76-44-8	Heptachlor	1.0	< 1.0 U
309-00-2	Aldrin	1.0	< 1.0 U
1024-57-3	Heptachlor Epoxide	23	< 23 Y
959-98-8	Endosulfan I	1.0	< 1.0 U
60-57-1	Dieldrin	33	< 33 Y
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	39	< 39 Y
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	10	< 10 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	22	< 22 Y
5103-74-2	gamma Chlordane	14	< 14 Y
5103-71-9	alpha Chlordane	1.0	< 1.0 U
8001-35-2	Toxaphene	100	< 100 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	1.1	< 1.1 Y
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	55	< 55 Y
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	112%
Tetrachlorometaxylene	65.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-113-010
DILUTION

Lab Sample ID: OP22C
LIMS ID: 09-5939
Matrix: Sediment
Data Release Authorized:
Reported: 03/23/09

QC Report No: OP22-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENTS

Date Sampled: 03/02/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/13/09 04:38
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	5.0	< 5.0 U
319-85-7	beta-BHC	5.0	< 5.0 U
319-86-8	delta-BHC	5.0	< 5.0 U
58-89-9	gamma-BHC (Lindane)	5.0	< 5.0 U
76-44-8	Heptachlor	5.0	< 5.0 U
309-00-2	Aldrin	5.0	< 5.0 U
1024-57-3	Heptachlor Epoxide	26	< 26 Y
959-98-8	Endosulfan I	5.0	< 5.0 U
60-57-1	Dieldrin	50	< 50 Y
72-55-9	4,4'-DDE	10	< 10 U
72-20-8	Endrin	10	< 10 U
33213-65-9	Endosulfan II	10	< 10 U
72-54-8	4,4'-DDD	10	< 10 U
1031-07-8	Endosulfan Sulfate	10	< 10 U
50-29-3	4,4'-DDT	10	< 10 U
72-43-5	Methoxychlor	50	< 50 U
53494-70-5	Endrin Ketone	10	< 10 U
7421-93-4	Endrin Aldehyde	10	< 10 U
5103-74-2	gamma Chlordane	5.0	< 5.0 U
5103-71-9	alpha Chlordane	5.0	< 5.0 U
8001-35-2	Toxaphene	500	< 500 U
118-74-1	Hexachlorobenzene	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
789-02-6	2,4'-DDT	10	< 10 U
3424-82-6	2,4'-DDE	10	< 10 U
53-19-0	2,4'-DDD	10	< 10 U
27304-13-8	oxy Chlordane	10	< 10 U
5103-73-1	cis-Nonachlor	10	< 10 U
39765-80-5	trans-Nonachlor	10	< 10 U
2385-85-5	Mirex	10	< 10 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	136%
Tetrachlorometaxylene	81.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-122-010
SAMPLE

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/12/09 03:19
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.99	< 0.99 U
319-85-7	beta-BHC	0.99	< 0.99 U
319-86-8	delta-BHC	0.99	< 0.99 U
58-89-9	gamma-BHC (Lindane)	0.99	< 0.99 U
76-44-8	Heptachlor	0.99	< 0.99 U
309-00-2	Aldrin	0.99	< 0.99 U
1024-57-3	Heptachlor Epoxide	3.1	< 3.1 Y
959-98-8	Endosulfan I	0.99	< 0.99 U
60-57-1	Dieldrin	6.3	< 6.3 Y
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.9	< 9.9 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.99	< 0.99 U
5103-71-9	alpha Chlordane	0.99	< 0.99 U
8001-35-2	Toxaphene	99	< 99 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	116%
Tetrachlorometaxylene	59.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-122-010
REANALYSIS

Lab Sample ID: 0097M
LIMS ID: 09-5798
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/13/09 04:18
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 40.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.99	< 0.99 U
319-85-7	beta-BHC	0.99	< 0.99 U
319-86-8	delta-BHC	0.99	< 0.99 U
58-89-9	gamma-BHC (Lindane)	0.99	< 0.99 U
76-44-8	Heptachlor	0.99	< 0.99 U
309-00-2	Aldrin	0.99	< 0.99 U
1024-57-3	Heptachlor Epoxide	2.9	< 2.9 Y
959-98-8	Endosulfan I	0.99	< 0.99 U
60-57-1	Dieldrin	6.1	< 6.1 Y
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.9	< 9.9 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.99	< 0.99 U
5103-71-9	alpha Chlordane	0.99	< 0.99 U
8001-35-2	Toxaphene	99	< 99 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	64.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-129-010
SAMPLE

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/12/09 03:40
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	22	< 22 Y
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	41	< 41 Y
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	50	< 50 Y
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	7.3	< 7.3 Y
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	97.0%
Tetrachlorometaxylene	62.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-129-010
DILUTION

Lab Sample ID: 0097K
LIMS ID: 09-5796
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/13/09 03:38
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 34.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	4.9	< 4.9 U
319-85-7	beta-BHC	4.9	< 4.9 U
319-86-8	delta-BHC	4.9	< 4.9 U
58-89-9	gamma-BHC (Lindane)	4.9	< 4.9 U
76-44-8	Heptachlor	4.9	< 4.9 U
309-00-2	Aldrin	4.9	< 4.9 U
1024-57-3	Heptachlor Epoxide	22	< 22 Y
959-98-8	Endosulfan I	4.9	< 4.9 U
60-57-1	Dieldrin	54	< 54 Y
72-55-9	4,4'-DDE	9.8	< 9.8 U
72-20-8	Endrin	9.8	< 9.8 U
33213-65-9	Endosulfan II	9.8	< 9.8 U
72-54-8	4,4'-DDD	9.8	< 9.8 U
1031-07-8	Endosulfan Sulfate	9.8	< 9.8 U
50-29-3	4,4'-DDT	9.8	< 9.8 U
72-43-5	Methoxychlor	49	< 49 U
53494-70-5	Endrin Ketone	9.8	< 9.8 U
7421-93-4	Endrin Aldehyde	9.8	< 9.8 U
5103-74-2	gamma Chlordane	4.9	< 4.9 U
5103-71-9	alpha Chlordane	4.9	< 4.9 U
8001-35-2	Toxaphene	490	< 490 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
789-02-6	2,4'-DDT	9.8	< 9.8 U
3424-82-6	2,4'-DDE	9.8	< 9.8 U
53-19-0	2,4'-DDD	9.8	< 9.8 U
27304-13-8	oxy Chlordane	9.8	< 9.8 U
5103-73-1	cis-Nonachlor	9.8	< 9.8 U
39765-80-5	trans-Nonachlor	9.8	< 9.8 U
2385-85-5	Mirex	9.8	< 9.8 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	115%
Tetrachlorometaxylene	73.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-200-010
SAMPLE

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/12/09 02:39
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 42.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	4.0	< 4.0 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	9.1	< 9.1 Y
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	125%
Tetrachlorometaxylene	59.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-200-010
REANALYSIS

Lab Sample ID: 0097H
LIMS ID: 09-5793
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/13/09 02:57
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 42.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	3.8	< 3.8 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	8.7	< 8.7 Y
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	61.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-204-010
SAMPLE

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/12/09 02:19
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.96	< 0.96 U
319-85-7	beta-BHC	0.96	< 0.96 U
319-86-8	delta-BHC	0.96	< 0.96 U
58-89-9	gamma-BHC (Lindane)	0.96	< 0.96 U
76-44-8	Heptachlor	0.96	< 0.96 U
309-00-2	Aldrin	0.96	< 0.96 U
1024-57-3	Heptachlor Epoxide	3.4	< 3.4 Y
959-98-8	Endosulfan I	0.96	< 0.96 U
60-57-1	Dieldrin	6.2	< 6.2 Y
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.6	< 9.6 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.96	< 0.96 U
5103-71-9	alpha Chlordane	0.96	< 0.96 U
8001-35-2	Toxaphene	96	< 96 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	121%
Tetrachlorometaxylene	85.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-204-010
REANALYSIS

Lab Sample ID: 0097F
LIMS ID: 09-5791
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/13/09 02:37
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 37.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.96	< 0.96 U
319-85-7	beta-BHC	0.96	< 0.96 U
319-86-8	delta-BHC	0.96	< 0.96 U
58-89-9	gamma-BHC (Lindane)	0.96	< 0.96 U
76-44-8	Heptachlor	0.96	< 0.96 U
309-00-2	Aldrin	0.96	< 0.96 U
1024-57-3	Heptachlor Epoxide	3.3	< 3.3 Y
959-98-8	Endosulfan I	0.96	< 0.96 U
60-57-1	Dieldrin	6.0	< 6.0 Y
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.6	< 9.6 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.96	< 0.96 U
5103-71-9	alpha Chlordane	0.96	< 0.96 U
8001-35-2	Toxaphene	96	< 96 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	120%
Tetrachlorometaxylene	85.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-300-010
SAMPLE

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/12/09 02:59
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 43.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	3.5	< 3.5 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	6.7	< 6.7 Y
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	123%
Tetrachlorometaxylene	60.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-300-010
REANALYSIS

Lab Sample ID: 0097I
LIMS ID: 09-5794
Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

QC Report No: 0097-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/01/09
Date Received: 03/02/09

Date Extracted: 03/05/09
Date Analyzed: 03/13/09 03:17
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 43.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	3.5	< 3.5 Y
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	6.5	< 6.5 Y
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	115%
Tetrachlorometaxylene	59.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B

Sample ID: EW09-SS-014-RB
SAMPLE

Lab Sample ID: OP65A
LIMS ID: 09-6148
Matrix: Water
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP65-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/05/09
Date Received: 03/05/09

Date Extracted: 03/10/09
Date Analyzed: 03/13/09 00:14
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	gamma Chlordane	0.050	< 0.050 U
5103-71-9	alpha Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U
789-02-6	2,4'-DDT	0.10	< 0.10 U
3424-82-6	2,4'-DDE	0.10	< 0.10 U
53-19-0	2,4'-DDD	0.10	< 0.10 U
27304-13-8	oxy Chlordane	0.10	< 0.10 U
5103-73-1	cis-Nonachlor	0.10	< 0.10 U
39765-80-5	trans-Nonachlor	0.10	< 0.10 U
2385-85-5	Mirex	0.10	< 0.10 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	84.8%
Tetrachlorometaxylene	75.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD

Sample ID: EW09-SS-038-RB
SAMPLE

Lab Sample ID: OP33I
LIMS ID: 09-6011
Matrix: Water
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP33-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/12/09 22:33
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	gamma Chlordane	0.050	< 0.050 U
5103-71-9	alpha Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U
789-02-6	2,4'-DDT	0.10	< 0.10 U
3424-82-6	2,4'-DDE	0.10	< 0.10 U
53-19-0	2,4'-DDD	0.10	< 0.10 U
27304-13-8	oxy Chlordane	0.10	< 0.10 U
5103-73-1	cis-Nonachlor	0.10	< 0.10 U
39765-80-5	trans-Nonachlor	0.10	< 0.10 U
2385-85-5	Mirex	0.10	< 0.10 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	90.5%
Tetrachlorometaxylene	81.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B

Sample ID: EW09-SS-102-RB
SAMPLE

Lab Sample ID: OP35V
LIMS ID: 09-6001
Matrix: Water
Data Release Authorized:
Reported: 03/18/09

QC Report No: OP35-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT

Date Sampled: 03/04/09
Date Received: 03/04/09

Date Extracted: 03/06/09
Date Analyzed: 03/12/09 22:53
Instrument/Analyst: ECD3/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	gamma Chlordane	0.050	< 0.050 U
5103-71-9	alpha Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U
789-02-6	2,4'-DDT	0.10	< 0.10 U
3424-82-6	2,4'-DDE	0.10	< 0.10 U
53-19-0	2,4'-DDD	0.10	< 0.10 U
27304-13-8	oxy Chlordane	0.10	< 0.10 U
5103-73-1	cis-Nonachlor	0.10	< 0.10 U
39765-80-5	trans-Nonachlor	0.10	< 0.10 U
2385-85-5	Mirex	0.10	< 0.10 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	87.8%
Tetrachlorometaxylene	82.2%

FORM I

Round 2 Pesticides

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-015-010
SAMPLE

Lab Sample ID: PE07E
LIMS ID: 09-14573
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 00:02
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 37.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	5.0	< 5.0 U
319-85-7	beta-BHC	5.0	< 5.0 U
319-86-8	delta-BHC	5.0	< 5.0 U
58-89-9	gamma-BHC (Lindane)	5.0	< 5.0 U
76-44-8	Heptachlor	5.0	< 5.0 U
309-00-2	Aldrin	270	< 270 Y
1024-57-3	Heptachlor Epoxide	5.0	< 5.0 U
959-98-8	Endosulfan I	5.0	< 5.0 U
60-57-1	Dieldrin	10	< 10 U
72-55-9	4,4'-DDE	10	< 10 U
72-20-8	Endrin	10	< 10 U
33213-65-9	Endosulfan II	10	< 10 U
72-54-8	4,4'-DDD	10	< 10 U
1031-07-8	Endosulfan Sulfate	10	< 10 U
50-29-3	4,4'-DDT	10	< 10 U
72-43-5	Methoxychlor	50	< 50 U
53494-70-5	Endrin Ketone	10	< 10 U
7421-93-4	Endrin Aldehyde	10	< 10 U
5103-74-2	gamma Chlordane	5.0	< 5.0 U
5103-71-9	alpha Chlordane	5.0	< 5.0 U
8001-35-2	Toxaphene	500	< 500 U
118-74-1	Hexachlorobenzene	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	5.0	< 5.0 U
789-02-6	2,4'-DDT	10	< 10 U
3424-82-6	2,4'-DDE	10	< 10 U
53-19-0	2,4'-DDD	10	< 10 U
27304-13-8	oxy Chlordane	10	< 10 U
5103-73-1	cis-Nonachlor	10	< 10 U
39765-80-5	trans-Nonachlor	10	< 10 U
2385-85-5	Mirex	10	< 10 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	144%
Tetrachlorometaxylene	97.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-105-010
SAMPLE

Lab Sample ID: PD95F
LIMS ID: 09-14483
Matrix: Sediment
Data Release Authorized: VIS
Reported: 07/08/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/06/09 15:31
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 4.00
Silica Gel: Yes

Percent Moisture: 54.9%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	2.4	< 2.4 Y
309-00-2	Aldrin	2.9	< 2.9 Y
1024-57-3	Heptachlor Epoxide	10	< 10 Y
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	21	< 21 Y
72-55-9	4,4'-DDE	13	< 13 Y
72-20-8	Endrin	6.8	< 6.8 Y
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	7.9	< 7.9 Y
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	8.2	< 8.2 Y
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	390	< 390 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	5.4	< 5.4 Y
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	98.1%
Tetrachlorometaxylene	117%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-106-010
SAMPLE

Lab Sample ID: PE07G
LIMS ID: 09-14575
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 19:07
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 25.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	0.98	< 0.98 U
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	0.98	< 0.98 U
1024-57-3	Heptachlor Epoxide	0.98	< 0.98 U
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	2.0	< 2.0 U
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	0.98	< 0.98 U
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	2.0	< 2.0 U
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	112%
Tetrachlorometaxylene	62.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-118-010
SAMPLE

Lab Sample ID: PD95L
LIMS ID: 09-14489
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/06/09 15:10
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 15.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 39.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U
118-74-1	Hexachlorobenzene	1.6	< 1.6 U
87-68-3	Hexachlorobutadiene	1.6	< 1.6 U
789-02-6	2,4'-DDT	3.2	< 3.2 U
3424-82-6	2,4'-DDE	3.2	< 3.2 U
53-19-0	2,4'-DDD	3.2	< 3.2 U
27304-13-8	oxy Chlordane	3.2	< 3.2 U
5103-73-1	cis-Nonachlor	3.2	< 3.2 U
39765-80-5	trans-Nonachlor	3.2	< 3.2 U
2385-85-5	Mirex	3.2	< 3.2 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	81.2%
Tetrachlorometaxylene	72.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-123-010
SAMPLE

Lab Sample ID: PE14M
LIMS ID: 09-14624
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 05:33
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 14.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 41.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.7	< 1.7 U
319-85-7	beta-BHC	1.7	< 1.7 U
319-86-8	delta-BHC	1.7	< 1.7 U
58-89-9	gamma-BHC (Lindane)	1.7	< 1.7 U
76-44-8	Heptachlor	1.7	< 1.7 U
309-00-2	Aldrin	1.7	< 1.7 U
1024-57-3	Heptachlor Epoxide	1.7	< 1.7 U
959-98-8	Endosulfan I	1.7	< 1.7 U
60-57-1	Dieldrin	17	< 17 Y
72-55-9	4,4'-DDE	3.4	< 3.4 U
72-20-8	Endrin	3.4	< 3.4 U
33213-65-9	Endosulfan II	3.4	< 3.4 U
72-54-8	4,4'-DDD	3.4	< 3.4 U
1031-07-8	Endosulfan Sulfate	3.4	< 3.4 U
50-29-3	4,4'-DDT	3.4	< 3.4 U
72-43-5	Methoxychlor	17	< 17 U
53494-70-5	Endrin Ketone	3.4	< 3.4 U
7421-93-4	Endrin Aldehyde	3.4	< 3.4 U
5103-74-2	gamma Chlordane	1.7	< 1.7 U
5103-71-9	alpha Chlordane	1.7	< 1.7 U
8001-35-2	Toxaphene	170	< 170 U
118-74-1	Hexachlorobenzene	1.7	< 1.7 U
87-68-3	Hexachlorobutadiene	1.7	< 1.7 U
789-02-6	2,4'-DDT	3.4	< 3.4 U
3424-82-6	2,4'-DDE	3.4	< 3.4 U
53-19-0	2,4'-DDD	3.4	< 3.4 U
27304-13-8	oxy Chlordane	3.4	< 3.4 U
5103-73-1	cis-Nonachlor	3.4	< 3.4 U
39765-80-5	trans-Nonachlor	3.4	< 3.4 U
2385-85-5	Mirex	3.4	< 3.4 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	85.2%
Tetrachlorometaxylene	73.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-124-010
SAMPLE

Lab Sample ID: PE14L
LIMS ID: 09-14623
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 05:12
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 37.9%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	4.8	< 4.8 U
319-85-7	beta-BHC	4.8	< 4.8 U
319-86-8	delta-BHC	4.8	< 4.8 U
58-89-9	gamma-BHC (Lindane)	4.8	< 4.8 U
76-44-8	Heptachlor	4.8	< 4.8 U
309-00-2	Aldrin	4.8	< 4.8 U
1024-57-3	Heptachlor Epoxide	4.8	< 4.8 U
959-98-8	Endosulfan I	4.8	< 4.8 U
60-57-1	Dieldrin	9.7	< 9.7 U
72-55-9	4,4'-DDE	9.7	< 9.7 U
72-20-8	Endrin	9.7	< 9.7 U
33213-65-9	Endosulfan II	9.7	< 9.7 U
72-54-8	4,4'-DDD	9.7	< 9.7 U
1031-07-8	Endosulfan Sulfate	9.7	< 9.7 U
50-29-3	4,4'-DDT	9.7	< 9.7 U
72-43-5	Methoxychlor	48	< 48 U
53494-70-5	Endrin Ketone	9.7	< 9.7 U
7421-93-4	Endrin Aldehyde	9.7	< 9.7 U
5103-74-2	gamma Chlordane	4.8	< 4.8 U
5103-71-9	alpha Chlordane	4.8	< 4.8 U
8001-35-2	Toxaphene	480	< 480 U
118-74-1	Hexachlorobenzene	4.8	< 4.8 U
87-68-3	Hexachlorobutadiene	4.8	< 4.8 U
789-02-6	2,4'-DDT	9.7	< 9.7 U
3424-82-6	2,4'-DDE	9.7	< 9.7 U
53-19-0	2,4'-DDD	9.7	< 9.7 U
27304-13-8	oxy Chlordane	9.7	< 9.7 U
5103-73-1	cis-Nonachlor	9.7	< 9.7 U
39765-80-5	trans-Nonachlor	9.7	< 9.7 U
2385-85-5	Mirex	9.7	< 9.7 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	116%
Tetrachlorometaxylene	86.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-203-010
SAMPLE

Lab Sample ID: PE14D
LIMS ID: 09-14615
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 04:51
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 31.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.96	< 0.96 U
319-85-7	beta-BHC	0.96	< 0.96 U
319-86-8	delta-BHC	0.96	< 0.96 U
58-89-9	gamma-BHC (Lindane)	0.96	< 0.96 U
76-44-8	Heptachlor	0.96	< 0.96 U
309-00-2	Aldrin	0.96	< 0.96 U
1024-57-3	Heptachlor Epoxide	10	< 10 Y
959-98-8	Endosulfan I	0.96	< 0.96 U
60-57-1	Dieldrin	24	< 24 Y
72-55-9	4,4'-DDE	7.2	< 7.2 Y
72-20-8	Endrin	3.2	< 3.2 Y
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	**4,4'-DDD**	**1.9**	**2.3**
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.6	< 9.6 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.96	< 0.96 U
5103-71-9	alpha Chlordane	0.96	< 0.96 U
8001-35-2	Toxaphene	96	< 96 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	81.2%
Tetrachlorometaxylene	64.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-205-010
SAMPLE

Lab Sample ID: PE14C
LIMS ID: 09-14614
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 04:31
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 1.68 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 33.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	15	< 15 U
319-85-7	beta-BHC	15	< 15 U
319-86-8	delta-BHC	15	< 15 U
58-89-9	gamma-BHC (Lindane)	15	< 15 U
76-44-8	Heptachlor	15	< 15 U
309-00-2	Aldrin	15	< 15 U
1024-57-3	Heptachlor Epoxide	29	< 29 Y
959-98-8	Endosulfan I	15	< 15 U
60-57-1	Dieldrin	30	< 30 U
72-55-9	4,4'-DDE	30	< 30 U
72-20-8	Endrin	30	< 30 U
33213-65-9	Endosulfan II	30	< 30 U
72-54-8	4,4'-DDD	30	< 30 U
1031-07-8	Endosulfan Sulfate	30	< 30 U
50-29-3	4,4'-DDT	30	< 30 U
72-43-5	Methoxychlor	150	< 150 U
53494-70-5	Endrin Ketone	30	< 30 U
7421-93-4	Endrin Aldehyde	30	< 30 U
5103-74-2	gamma Chlordane	15	< 15 U
5103-71-9	alpha Chlordane	15	< 15 U
8001-35-2	Toxaphene	1,500	< 1,500 U
118-74-1	Hexachlorobenzene	15	< 15 U
87-68-3	Hexachlorobutadiene	15	< 15 U
789-02-6	2,4'-DDT	30	< 30 U
3424-82-6	2,4'-DDE	30	< 30 U
53-19-0	2,4'-DDD	30	< 30 U
27304-13-8	oxy Chlordane	30	< 30 U
5103-73-1	cis-Nonachlor	30	< 30 U
39765-80-5	trans-Nonachlor	30	< 30 U
2385-85-5	Mirex	30	< 30 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.5%
Tetrachlorometaxylene	63.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-206-010
SAMPLE

Lab Sample ID: PE07J
LIMS ID: 09-14578
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 01:25
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 41.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	4.9	< 4.9 U
319-85-7	beta-BHC	4.9	< 4.9 U
319-86-8	delta-BHC	4.9	< 4.9 U
58-89-9	gamma-BHC (Lindane)	4.9	< 4.9 U
76-44-8	Heptachlor	4.9	< 4.9 U
309-00-2	Aldrin	260	< 260 Y
1024-57-3	Heptachlor Epoxide	4.9	< 4.9 U
959-98-8	Endosulfan I	4.9	< 4.9 U
60-57-1	Dieldrin	9.7	< 9.7 U
72-55-9	4,4'-DDE	9.7	< 9.7 U
72-20-8	Endrin	23	< 23 Y
33213-65-9	Endosulfan II	9.7	< 9.7 U
72-54-8	4,4'-DDD	9.7	< 9.7 U
1031-07-8	Endosulfan Sulfate	9.7	< 9.7 U
50-29-3	4,4'-DDT	41	< 41 Y
72-43-5	Methoxychlor	49	< 49 U
53494-70-5	Endrin Ketone	16	< 16 Y
7421-93-4	Endrin Aldehyde	9.7	< 9.7 U
5103-74-2	gamma Chlordane	4.9	< 4.9 U
5103-71-9	alpha Chlordane	4.9	< 4.9 U
8001-35-2	Toxaphene	490	< 490 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
789-02-6	2,4'-DDT	9.7	< 9.7 U
3424-82-6	2,4'-DDE	9.7	< 9.7 U
53-19-0	2,4'-DDD	9.7	< 9.7 U
27304-13-8	oxy Chlordane	9.7	< 9.7 U
5103-73-1	cis-Nonachlor	9.7	< 9.7 U
39765-80-5	trans-Nonachlor	100	< 100 Y
2385-85-5	Mirex	85	< 85 Y

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	89.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-208-010
SAMPLE

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 19:28
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.98	< 0.98 U
319-85-7	beta-BHC	0.98	< 0.98 U
319-86-8	delta-BHC	0.98	< 0.98 U
58-89-9	gamma-BHC (Lindane)	1.4	< 1.4 Y
76-44-8	Heptachlor	0.98	< 0.98 U
309-00-2	Aldrin	17	< 17 Y
1024-57-3	Heptachlor Epoxide	6.4	< 6.4 Y
959-98-8	Endosulfan I	0.98	< 0.98 U
60-57-1	Dieldrin	6.4	< 6.4 Y
72-55-9	4,4'-DDE	6.3	< 6.3 Y
72-20-8	Endrin	2.0	< 2.0 U
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	**4,4'-DDD**	**2.0**	**8.6**
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.8	< 9.8 U
53494-70-5	Endrin Ketone	2.1	< 2.1 Y
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	3.4	< 3.4 Y
5103-71-9	alpha Chlordane	0.98	< 0.98 U
8001-35-2	Toxaphene	98	< 98 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	10	< 10 Y
2385-85-5	Mirex	6.7	< 6.7 Y

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	42.5%
Tetrachlorometaxylene	77.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-208-010
DILUTION

Lab Sample ID: PE07H
LIMS ID: 09-14576
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 00:43
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 41.9%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	4.9	< 4.9 U
319-85-7	beta-BHC	4.9	< 4.9 U
319-86-8	delta-BHC	4.9	< 4.9 U
58-89-9	gamma-BHC (Lindane)	4.9	< 4.9 U
76-44-8	Heptachlor	4.9	< 4.9 U
309-00-2	Aldrin	4.9	< 4.9 U
1024-57-3	Heptachlor Epoxide	4.9	< 4.9 U
959-98-8	Endosulfan I	4.9	< 4.9 U
60-57-1	Dieldrin	9.8	< 9.8 U
72-55-9	4,4'-DDE	9.8	< 9.8 U
72-20-8	Endrin	9.8	< 9.8 U
33213-65-9	Endosulfan II	9.8	< 9.8 U
72-54-8	**4,4'-DDD**	**9.8**	**11**
1031-07-8	Endosulfan Sulfate	9.8	< 9.8 U
50-29-3	4,4'-DDT	9.8	< 9.8 U
72-43-5	Methoxychlor	49	< 49 U
53494-70-5	Endrin Ketone	9.8	< 9.8 U
7421-93-4	Endrin Aldehyde	9.8	< 9.8 U
5103-74-2	gamma Chlordane	4.9	< 4.9 U
5103-71-9	alpha Chlordane	4.9	< 4.9 U
8001-35-2	Toxaphene	490	< 490 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
789-02-6	2,4'-DDT	9.8	< 9.8 U
3424-82-6	2,4'-DDE	9.8	< 9.8 U
53-19-0	2,4'-DDD	9.8	< 9.8 U
27304-13-8	oxy Chlordane	9.8	< 9.8 U
5103-73-1	cis-Nonachlor	9.8	< 9.8 U
39765-80-5	trans-Nonachlor	9.8	< 9.8 U
2385-85-5	Mirex	9.8	< 9.8 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	99.8%
Tetrachlorometaxylene	91.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-213-010
SAMPLE

Lab Sample ID: PD97E
LIMS ID: 09-14501
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PD97-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 18:46
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 36.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	0.97	< 0.97 U
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	5.6	< 5.6 Y
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	**4,4'-DDD**	**1.9**	**6.5**
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	0.97	< 0.97 U
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	1.9	< 1.9 U
2385-85-5	Mirex	1.9	< 1.9 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	53.8%
Tetrachlorometaxylene	69.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-304-010
SAMPLE

Lab Sample ID: PD95H
LIMS ID: 09-14485
Matrix: Sediment
Data Release Authorized: VTS
Reported: 07/08/09

QC Report No: PD95-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Date Extracted: 07/01/09
Date Analyzed: 07/06/09 16:33
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 4.00
Silica Gel: Yes

Percent Moisture: 56.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.99	< 0.99 U
319-85-7	beta-BHC	0.99	< 0.99 U
319-86-8	delta-BHC	0.99	< 0.99 U
58-89-9	gamma-BHC (Lindane)	0.99	< 0.99 U
76-44-8	Heptachlor	1.4	< 1.4 Y
309-00-2	Aldrin	2.8	< 2.8 Y
1024-57-3	Heptachlor Epoxide	9.6	< 9.6 Y
959-98-8	Endosulfan I	0.99	< 0.99 U
60-57-1	Dieldrin	19	< 19 Y
72-55-9	4,4'-DDE	12	< 12 Y
72-20-8	Endrin	6.0	< 6.0 Y
33213-65-9	Endosulfan II	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
1031-07-8	Endosulfan Sulfate	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
72-43-5	Methoxychlor	9.9	< 9.9 U
53494-70-5	Endrin Ketone	2.0	< 2.0 U
7421-93-4	Endrin Aldehyde	2.0	< 2.0 U
5103-74-2	gamma Chlordane	8.9	< 8.9 Y
5103-71-9	alpha Chlordane	6.8	< 6.8 Y
8001-35-2	Toxaphene	400	< 400 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U
789-02-6	2,4'-DDT	2.0	< 2.0 U
3424-82-6	2,4'-DDE	2.0	< 2.0 U
53-19-0	2,4'-DDD	2.0	< 2.0 U
27304-13-8	oxy Chlordane	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	6.3	< 6.3 Y
2385-85-5	Mirex	2.0	< 2.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	83.9%
Tetrachlorometaxylene	120%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-305-010
SAMPLE

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 19:48
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 43.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.97	< 0.97 U
319-85-7	beta-BHC	0.97	< 0.97 U
319-86-8	delta-BHC	0.97	< 0.97 U
58-89-9	gamma-BHC (Lindane)	0.97	< 0.97 U
76-44-8	Heptachlor	0.97	< 0.97 U
309-00-2	Aldrin	0.97	< 0.97 U
1024-57-3	Heptachlor Epoxide	0.97	< 0.97 U
959-98-8	Endosulfan I	0.97	< 0.97 U
60-57-1	Dieldrin	1.9	< 1.9 U
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-20-8	Endrin	1.9	< 1.9 U
33213-65-9	Endosulfan II	1.9	< 1.9 U
72-54-8	**4,4'-DDD**	**1.9**	**6.2 P**
1031-07-8	Endosulfan Sulfate	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
72-43-5	Methoxychlor	9.7	< 9.7 U
53494-70-5	Endrin Ketone	1.9	< 1.9 U
7421-93-4	Endrin Aldehyde	1.9	< 1.9 U
5103-74-2	gamma Chlordane	3.5	< 3.5 Y
5103-71-9	alpha Chlordane	0.97	< 0.97 U
8001-35-2	Toxaphene	97	< 97 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U
789-02-6	2,4'-DDT	1.9	< 1.9 U
3424-82-6	2,4'-DDE	1.9	< 1.9 U
53-19-0	2,4'-DDD	1.9	< 1.9 U
27304-13-8	oxy Chlordane	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	5.9	< 5.9 Y
2385-85-5	Mirex	2.9	< 2.9 Y

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	68.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-SS-305-010
DILUTION

Lab Sample ID: PE07I
LIMS ID: 09-14577
Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/26/09
Date Analyzed: 07/01/09 01:04
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 43.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	4.9	< 4.9 U
319-85-7	beta-BHC	4.9	< 4.9 U
319-86-8	delta-BHC	4.9	< 4.9 U
58-89-9	gamma-BHC (Lindane)	4.9	< 4.9 U
76-44-8	Heptachlor	4.9	< 4.9 U
309-00-2	Aldrin	4.9	< 4.9 U
1024-57-3	Heptachlor Epoxide	4.9	< 4.9 U
959-98-8	Endosulfan I	4.9	< 4.9 U
60-57-1	Dieldrin	9.7	< 9.7 U
72-55-9	4,4'-DDE	9.7	< 9.7 U
72-20-8	Endrin	9.7	< 9.7 U
33213-65-9	Endosulfan II	9.7	< 9.7 U
72-54-8	**4,4'-DDD**	**9.7**	**9.5 J**
1031-07-8	Endosulfan Sulfate	9.7	< 9.7 U
50-29-3	4,4'-DDT	9.7	< 9.7 U
72-43-5	Methoxychlor	49	< 49 U
53494-70-5	Endrin Ketone	9.7	< 9.7 U
7421-93-4	Endrin Aldehyde	9.7	< 9.7 U
5103-74-2	gamma Chlordane	4.9	< 4.9 U
5103-71-9	alpha Chlordane	4.9	< 4.9 U
8001-35-2	Toxaphene	490	< 490 U
118-74-1	Hexachlorobenzene	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	4.9	< 4.9 U
789-02-6	2,4'-DDT	9.7	< 9.7 U
3424-82-6	2,4'-DDE	9.7	< 9.7 U
53-19-0	2,4'-DDD	9.7	< 9.7 U
27304-13-8	oxy Chlordane	9.7	< 9.7 U
5103-73-1	cis-Nonachlor	9.7	< 9.7 U
39765-80-5	trans-Nonachlor	9.7	< 9.7 U
2385-85-5	Mirex	9.7	< 9.7 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	70.2%
Tetrachlorometaxylene	81.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B

Sample ID: EW09-SS-002-010-RB
SAMPLE

Lab Sample ID: PE40A
LIMS ID: 09-14877
Matrix: Water
Data Release Authorized:
Reported: 06/30/09

QC Report No: PE40-Windward Environmental, LLC
Project: EW RI/FS Surface Sediment
09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Date Extracted: 06/26/09
Date Analyzed: 06/29/09 18:00
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	gamma Chlordane	0.050	< 0.050 U
5103-71-9	alpha Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U
789-02-6	2,4'-DDT	0.10	< 0.10 U
3424-82-6	2,4'-DDE	0.10	< 0.10 U
53-19-0	2,4'-DDD	0.10	< 0.10 U
27304-13-8	oxy Chlordane	0.10	< 0.10 U
5103-73-1	cis-Nonachlor	0.10	< 0.10 U
39765-80-5	trans-Nonachlor	0.10	< 0.10 U
2385-85-5	Mirex	0.10	< 0.10 U

Reported in μg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	77.8%
Tetrachlorometaxylene	73.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B

Sample ID: EW09-SS-210-RB
SAMPLE

Lab Sample ID: PE14A
LIMS ID: 09-14612
Matrix: Water
Data Release Authorized:
Reported: 06/30/09

QC Report No: PE14-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/29/09 19:23
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	gamma Chlordane	0.050	< 0.050 U
5103-71-9	alpha Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U
789-02-6	2,4'-DDT	0.10	< 0.10 U
3424-82-6	2,4'-DDE	0.10	< 0.10 U
53-19-0	2,4'-DDD	0.10	< 0.10 U
27304-13-8	oxy Chlordane	0.10	< 0.10 U
5103-73-1	cis-Nonachlor	0.10	< 0.10 U
39765-80-5	trans-Nonachlor	0.10	< 0.10 U
2385-85-5	Mirex	0.10	< 0.10 U

Reported in μg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	61.5%
Tetrachlorometaxylene	70.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081B

Sample ID: EW09-SS-222-RB
SAMPLE

Lab Sample ID: PE07K
LIMS ID: 09-14579
Matrix: Water
Data Release Authorized:
Reported: 06/30/09

QC Report No: PE07-Windward Environmental, LLC
Project: EW RI/FS SURFACE SEDIMENT
09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Date Extracted: 06/25/09
Date Analyzed: 06/29/09 19:02
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.050	< 0.050 U
319-85-7	beta-BHC	0.050	< 0.050 U
319-86-8	delta-BHC	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.050	< 0.050 U
76-44-8	Heptachlor	0.050	< 0.050 U
309-00-2	Aldrin	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.050	< 0.050 U
959-98-8	Endosulfan I	0.050	< 0.050 U
60-57-1	Dieldrin	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-20-8	Endrin	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
72-43-5	Methoxychlor	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.10	< 0.10 U
5103-74-2	gamma Chlordane	0.050	< 0.050 U
5103-71-9	alpha Chlordane	0.050	< 0.050 U
8001-35-2	Toxaphene	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U
789-02-6	2,4'-DDT	0.10	< 0.10 U
3424-82-6	2,4'-DDE	0.10	< 0.10 U
53-19-0	2,4'-DDD	0.10	< 0.10 U
27304-13-8	oxy Chlordane	0.10	< 0.10 U
5103-73-1	cis-Nonachlor	0.10	< 0.10 U
39765-80-5	trans-Nonachlor	0.10	< 0.10 U
2385-85-5	Mirex	0.10	< 0.10 U

Reported in μg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	64.2%
Tetrachlorometaxylene	73.0%

FORM I

Composite Pesticides

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-ITSED-AWMIS-01
SAMPLE

Lab Sample ID: QC54N
LIMS ID: 09-31456
Matrix: Sediment
Data Release Authorized:
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 09:04
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 29.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 4.00
Silica Gel: Yes

Percent Moisture: 27.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	0.86	< 0.86 U
319-85-7	beta-BHC	0.86	< 0.86 U
319-86-8	delta-BHC	1.8	< 1.8 Y
58-89-9	gamma-BHC (Lindane)	0.86	< 0.86 U
76-44-8	Heptachlor	0.86	< 0.86 U
309-00-2	Aldrin	0.86	< 0.86 U
1024-57-3	Heptachlor Epoxide	5.3	< 5.3 Y
959-98-8	Endosulfan I	0.86	< 0.86 U
60-57-1	Dieldrin	1.7	< 1.7 U
72-55-9	4,4'-DDE	1.7	< 1.7 U
72-20-8	Endrin	1.7	< 1.7 U
33213-65-9	Endosulfan II	1.7	< 1.7 U
72-54-8	4,4'-DDD	3.2	< 3.2 Y
1031-07-8	Endosulfan Sulfate	1.7	< 1.7 U
50-29-3	4,4'-DDT	1.7	< 1.7 U
72-43-5	Methoxychlor	8.6	< 8.6 U
7421-93-4	Endrin Aldehyde	9.5	< 9.5 Y
5566-34-7	gamma Chlordane	0.86	< 0.86 U
5103-71-9	alpha Chlordane	0.86	< 0.86 U
8001-35-2	Toxaphene	340	< 340 U
118-74-1	Hexachlorobenzene	0.86	< 0.86 U
87-68-3	Hexachlorobutadiene	0.86	< 0.86 U
789-02-6	2,4'-DDT	1.7	< 1.7 U
3424-82-6	2,4'-DDE	1.7	< 1.7 U
53-19-0	2,4'-DDD	1.7	< 1.7 U
27304-13-8	oxy Chlordane	1.7	< 1.7 U
5103-73-1	cis-Nonachlor	1.7	< 1.7 U
39765-80-5	trans-Nonachlor	1.7	< 1.7 U
2385-85-5	Mirex	1.7	< 1.7 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	125%
Tetrachlorometaxylene	76.7%

The CAS RN for gamma Chlordane has been corrected from 5103-74-2 effective Aug 2, 2009.

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-ITSED-AWMIS-02
SAMPLE

Lab Sample ID: QC540
LIMS ID: 09-31457
Matrix: Sediment
Data Release Authorized:
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 09:24
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 11.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 4.00
Silica Gel: Yes

Percent Moisture: 30.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	2.1	< 2.1 U
319-85-7	beta-BHC	2.1	< 2.1 U
319-86-8	delta-BHC	20	< 20 Y
58-89-9	gamma-BHC (Lindane)	2.1	< 2.1 U
76-44-8	Heptachlor	3.4	< 3.4 Y
309-00-2	Aldrin	2.1	< 2.1 U
1024-57-3	Heptachlor Epoxide	21	< 21 Y
959-98-8	Endosulfan I	5.7	< 5.7 Y
60-57-1	Dieldrin	4.2	< 4.2 U
72-55-9	4,4'-DDE	4.2	< 4.2 U
72-20-8	Endrin	4.2	< 4.2 U
33213-65-9	Endosulfan II	4.2	< 4.2 U
72-54-8	4,4'-DDD	4.2	< 4.2 U
1031-07-8	Endosulfan Sulfate	4.2	< 4.2 U
50-29-3	4,4'-DDT	4.2	< 4.2 U
72-43-5	Methoxychlor	21	< 21 U
7421-93-4	Endrin Aldehyde	4.2	< 4.2 U
5566-34-7	gamma Chlordane	2.1	< 2.1 U
5103-71-9	alpha Chlordane	2.1	< 2.1 U
8001-35-2	Toxaphene	840	< 840 U
118-74-1	Hexachlorobenzene	2.1	< 2.1 U
87-68-3	Hexachlorobutadiene	2.1	< 2.1 U
789-02-6	2,4'-DDT	4.2	< 4.2 U
3424-82-6	2,4'-DDE	20	< 20 Y
53-19-0	2,4'-DDD	4.2	< 4.2 U
27304-13-8	oxy Chlordane	4.2	< 4.2 U
5103-73-1	cis-Nonachlor	4.2	< 4.2 U
39765-80-5	trans-Nonachlor	4.2	< 4.2 U
2385-85-5	Mirex	4.2	< 4.2 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	148%
Tetrachlorometaxylene	77.2%

The CAS RN for gamma Chlordane has been corrected from 5103-74-2 effective Aug 2, 2009.

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-ITSED-AWMIS-03
SAMPLE

Lab Sample ID: QC54P
LIMS ID: 09-31458
Matrix: Sediment
Data Release Authorized:
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 10:25
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 18.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 4.00
Silica Gel: Yes

Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.4	< 1.4 U
319-85-7	beta-BHC	1.4	< 1.4 U
319-86-8	delta-BHC	1.4	< 1.4 U
58-89-9	gamma-BHC (Lindane)	1.4	< 1.4 U
76-44-8	Heptachlor	1.4	< 1.4 U
309-00-2	Aldrin	1.4	< 1.4 U
1024-57-3	Heptachlor Epoxide	1.4	< 1.4 U
959-98-8	Endosulfan I	1.4	< 1.4 U
60-57-1	Dieldrin	2.7	< 2.7 U
72-55-9	4,4'-DDE	2.7	< 2.7 U
72-20-8	Endrin	2.7	< 2.7 U
33213-65-9	Endosulfan II	2.7	< 2.7 U
72-54-8	4,4'-DDD	2.7	< 2.7 U
1031-07-8	Endosulfan Sulfate	8.2	< 8.2 Y
50-29-3	4,4'-DDT	29	< 29 Y
72-43-5	Methoxychlor	14	< 14 U
7421-93-4	Endrin Aldehyde	2.7	< 2.7 U
5566-34-7	gamma Chlordane	1.4	< 1.4 U
5103-71-9	alpha Chlordane	1.4	< 1.4 U
8001-35-2	Toxaphene	540	< 540 U
118-74-1	Hexachlorobenzene	1.4	< 1.4 U
87-68-3	Hexachlorobutadiene	1.4	< 1.4 U
789-02-6	2,4'-DDT	2.7	< 2.7 U
3424-82-6	2,4'-DDE	9.7	< 9.7 Y
53-19-0	2,4'-DDD	2.7	< 2.7 U
27304-13-8	oxy Chlordane	2.7	< 2.7 U
5103-73-1	cis-Nonachlor	2.7	< 2.7 U
39765-80-5	trans-Nonachlor	2.7	< 2.7 U
2385-85-5	Mirex	2.7	< 2.7 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	150%
Tetrachlorometaxylene	83.9%

The CAS RN for gamma Chlordane has been corrected from 5103-74-2 effective Aug 2, 2009.

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: EW09-ITSED-PAMIS-01
SAMPLE

Lab Sample ID: QC54Q
LIMS ID: 09-31459
Matrix: Sediment
Data Release Authorized:
Reported: 01/08/10

QC Report No: QC54-Windward Environmental, LLC
Project: EW RI/FS Surface Sediments

Date Sampled: 11/05/09
Date Received: 11/16/09

Date Extracted: 12/28/09
Date Analyzed: 01/06/10 10:45
Instrument/Analyst: ECD6/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 18.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 4.00
Silica Gel: Yes

Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.4	< 1.4 U
319-85-7	beta-BHC	1.4	< 1.4 U
319-86-8	delta-BHC	1.4	< 1.4 U
58-89-9	gamma-BHC (Lindane)	1.4	< 1.4 U
76-44-8	Heptachlor	1.4	< 1.4 U
309-00-2	Aldrin	1.4	< 1.4 U
1024-57-3	Heptachlor Epoxide	1.4	< 1.4 U
959-98-8	Endosulfan I	1.4	< 1.4 U
60-57-1	Dieldrin	2.7	< 2.7 U
72-55-9	4,4'-DDE	2.7	< 2.7 U
72-20-8	Endrin	2.7	< 2.7 U
33213-65-9	Endosulfan II	2.7	< 2.7 U
72-54-8	4,4'-DDD	2.7	< 2.7 U
1031-07-8	Endosulfan Sulfate	2.7	< 2.7 U
50-29-3	4,4'-DDT	2.7	< 2.7 U
72-43-5	Methoxychlor	14	< 14 U
7421-93-4	Endrin Aldehyde	2.7	< 2.7 U
5566-34-7	gamma Chlordane	1.4	< 1.4 U
5103-71-9	alpha Chlordane	1.4	< 1.4 U
8001-35-2	Toxaphene	540	< 540 U
118-74-1	Hexachlorobenzene	1.4	< 1.4 U
87-68-3	Hexachlorobutadiene	1.4	< 1.4 U
789-02-6	2,4'-DDT	2.7	< 2.7 U
3424-82-6	2,4'-DDE	2.7	< 2.7 U
53-19-0	2,4'-DDD	2.7	< 2.7 U
27304-13-8	oxy Chlordane	2.7	< 2.7 U
5103-73-1	cis-Nonachlor	2.7	< 2.7 U
39765-80-5	trans-Nonachlor	2.7	< 2.7 U
2385-85-5	Mirex	2.7	< 2.7 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	142%
Tetrachlorometaxylene	83.6%

The CAS RN for gamma Chlordane has been corrected from 5103-74-2 effective Aug 2, 2009.

FORM I

Round 1 Grain Size

Windward Environmental, LLC
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-036-010	0.1	0.1	0.3	0.8	5.0	11.6	16.8	14.6	13.6	11.5	7.4	7.1	11.1	82.1
	0.1	0.1	0.3	0.9	4.5	11.2	14.1	15.2	15.3	11.0	7.0	8.8	11.6	83.0
	0.0	0.1	0.4	1.0	4.7	11.1	15.9	15.4	13.0	11.4	8.6	6.6	11.9	82.8
EW09-SS-038-010	2.1	1.0	0.9	2.1	11.2	16.3	13.9	16.9	15.5	5.4	3.7	3.8	7.1	66.3
EW09-SS-100-010	7.4	1.6	2.4	9.5	19.0	13.7	10.3	6.1	7.4	6.2	5.1	4.1	7.2	46.4
EW09-SS-101-010	4.5	2.0	1.5	6.6	21.9	16.3	7.9	10.3	12.0	4.5	3.0	3.1	6.5	47.3
EW09-SS-110-010	5.0	1.9	1.3	1.4	3.4	7.7	9.5	10.3	13.9	12.8	9.6	8.7	14.4	79.2
EW09-SS-114-010	3.5	1.7	2.8	9.8	17.5	11.9	9.1	7.6	9.6	7.8	5.5	4.8	8.3	52.8
EW09-SS-211-010	3.4	1.7	1.1	5.2	24.8	27.6	9.4	4.7	3.7	4.6	4.0	3.2	6.6	36.2
EW09-SS-219-010	17.8	2.4	1.3	8.2	31.6	22.6	4.5	1.9	1.7	1.8	1.6	1.5	3.1	16.0

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

OP33 00093

Windward Environmental, LLC
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.5	31.5-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	< 1.0	<230 (<62)
EW09-SS-036-010	0.1	0.1	0.3	0.8	5.0	11.6	16.8	14.6	13.6	11.5	7.4	7.1	11.1	82.1
	0.1	0.1	0.3	0.9	4.5	11.2	14.1	15.2	15.3	11.0	7.0	8.6	11.6	83.0
	0.0	0.1	0.4	1.0	4.7	11.1	15.9	15.4	13.0	11.4	8.6	6.6	11.9	82.8
EW09-SS-027-010	11.6	2.5	1.9	2.4	3.4	5.2	6.3	14.8	15.0	11.0	8.0	7.1	10.7	73.0
EW09-SS-102-010	0.2	0.2	1.3	7.3	20.3	15.3	9.9	9.6	8.7	8.0	5.6	5.0	8.5	55.4
EW09-SS-302-010	0.2	0.5	1.6	7.8	20.9	16.1	10.3	8.2	7.5	7.4	5.8	5.0	8.6	52.9
EW09-SS-034-010	0.2	0.7	0.9	1.3	3.8	8.5	13.3	13.8	17.2	12.1	8.9	7.2	12.1	84.5
EW09-SS-035-010	0.6	0.6	0.7	1.6	6.5	10.9	12.2	15.3	14.3	11.0	7.3	7.0	12.0	79.0
EW09-SS-033-010	0.0	0.7	1.1	3.2	7.2	9.8	11.2	15.4	13.4	10.8	7.8	7.1	12.4	78.1
EW09-SS-032-010	0.0	0.5	0.7	0.7	3.1	10.0	15.0	13.3	13.0	14.7	8.8	7.3	12.9	85.2
EW09-SS-031-010	0.2	1.0	0.8	0.6	2.2	7.8	13.7	13.5	15.8	13.6	9.4	8.4	12.9	87.3
EW09-SS-030-010	0.1	0.4	0.6	0.6	1.9	7.4	11.8	14.9	18.3	13.8	9.3	7.7	13.1	88.9
EW09-SS-029-010	0.0	0.6	0.7	2.1	4.4	7.4	12.5	11.9	17.4	11.7	9.4	7.8	14.0	84.8
EW09-SS-025-010	0.0	0.3	2.0	14.0	11.3	6.5	10.9	11.2	4.5	16.4	7.0	5.8	10.1	65.9
EW09-SS-024-010	0.4	0.8	3.2	12.5	9.1	6.2	10.4	10.2	12.2	11.0	7.7	6.2	10.1	67.8
EW09-SS-023-010	0.0	0.8	1.0	0.8	1.5	4.0	8.7	12.2	19.7	16.9	11.0	8.3	15.2	92.0
EW09-SS-020-010	3.5	2.4	1.5	3.1	6.4	5.0	7.8	8.7	15.0	13.8	10.3	7.8	14.8	78.2
EW09-SS-013-010	16.9	6.8	10.8	31.2	13.6	1.8	2.6	1.6	2.9	3.5	2.6	2.1	3.6	18.9
EW09-SS-011-010	4.0	2.7	4.5	18.4	21.2	8.8	4.1	4.6	8.0	7.0	5.4	4.5	6.7	40.3
EW09-SS-008-010	0.7	0.8	0.8	1.0	1.8	5.3	7.6	13.4	16.5	18.5	10.8	8.8	13.9	89.6
EW09-SS-005-010	29.8	11.3	3.5	3.6	4.1	2.3	3.1	6.8	9.4	8.1	5.6	4.5	7.8	45.3
EW09-SS-003-010	12.6	6.8	6.2	15.2	11.9	4.1	6.3	3.9	8.5	7.7	5.5	4.3	7.1	43.2

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

OP33 : 00037

Windward Environmental, LLC
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-001-010	3.3	2.5	1.8	24.2	9.2	4.1	4.8	5.7	10.3	10.6	7.9	5.9	9.5	54.8

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

000235

Windward Environmental, LLC
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-036-010	0.1	0.1	0.3	0.8	5.0	11.6	16.8	14.6	13.6	11.5	7.4	7.1	11.1	82.1
	0.1	0.1	0.3	0.9	4.5	11.2	14.1	15.2	15.3	11.0	7.0	8.8	11.6	83.0
	0.0	0.1	0.4	1.0	4.7	11.1	15.9	15.4	13.0	11.4	8.6	6.6	11.9	82.8
EW09-SS-014-010	0.7	1.2	4.5	17.9	17.8	6.0	5.0	5.4	9.2	9.5	6.9	5.5	10.5	51.9
EW09-SS-126-010	15.1	4.8	4.4	12.6	19.7	9.8	7.3	4.2	4.8	4.4	3.9	3.2	5.9	33.7
EW09-SS-019-010	3.7	2.1	2.2	7.1	8.2	5.2	7.4	10.8	14.5	12.3	8.5	6.6	11.4	71.6
EW09-SS-021-010	5.8	6.7	20.2	34.7	10.3	1.4	2.7	1.3	3.3	3.8	3.1	2.2	4.4	20.9

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

OP55 : 00121

Windward Environmental, LLC
EW RI/FS Surface Sediments

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-113-010	27.0	2.2	3.0	5.8	5.8	4.2	5.5	7.6	10.9	9.2	6.9	5.7	6.2	52.0
	33.0	2.3	2.8	5.2	5.2	3.8	2.3	10.5	9.8	8.1	6.2	5.2	5.8	47.8
	45.6	2.1	2.2	4.2	4.4	3.0	4.2	5.5	8.3	6.4	5.3	4.1	4.6	38.5
EW09-SS-116-010	0.0	0.3	1.3	5.7	8.9	8.1	8.4	14.3	12.6	11.7	8.9	6.9	12.8	75.5
EW09-SS-301-010	0.4	0.2	1.3	6.3	9.1	8.2	8.7	13.3	12.5	11.3	9.4	6.8	12.4	74.5
EW09-SS-111-010	16.4	22.9	12.5	4.5	4.5	10.4	11.7	6.3	3.2	2.2	1.5	1.3	2.5	28.7
EW09-SS-109-010	0.9	0.6	0.6	1.0	3.2	10.1	13.0	16.0	14.9	12.6	8.6	6.8	11.7	83.7
EW09-SS-104-010	12.5	2.8	2.8	10.2	6.9	5.1	4.6	10.2	12.3	9.4	7.6	6.2	9.5	59.8

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

0022 0011 9

Windward Environmental
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-216-010	0.1	0.2	0.5	8.4	39.3	25.4	7.2	4.6	2.9	2.5	2.1	2.4	4.3	26.0
	0.0	0.2	0.5	8.7	38.7	25.9	7.5	4.2	2.9	2.6	2.2	2.5	4.2	26.0
	0.1	0.2	0.4	8.2	39.0	25.7	8.4	3.8	2.7	2.6	2.2	2.5	4.2	26.4
EW09-SS-220-010	5.9	1.8	4.5	20.6	30.1	12.8	8.0	4.9	3.4	2.1	1.5	1.5	2.8	24.3
EW09-SS-218-010	0.4	0.4	0.9	13.0	28.0	19.1	13.6	7.9	5.2	3.4	2.4	2.0	3.5	38.1
EW09-SS-217-010	0.3	0.2	0.6	14.0	39.5	23.6	7.2	3.2	1.9	2.1	2.0	2.0	3.3	21.7
EW09-SS-207-010	1.6	0.6	1.1	10.3	28.8	21.0	9.9	6.1	4.4	3.8	3.2	3.5	5.7	36.5
EW09-SS-204-010	0.1	0.4	0.5	3.1	22.9	25.7	12.0	7.4	6.4	5.4	4.5	4.2	7.3	47.3
EW09-SS-202-010	1.9	3.5	3.9	10.9	27.6	19.3	8.9	4.9	4.1	3.6	3.1	3.0	5.3	32.8
EW09-SS-200-010	0.3	0.6	0.7	3.2	14.8	16.8	12.1	10.5	10.0	8.1	7.2	5.5	10.2	63.5
EW09-SS-300-010	0.1	0.4	0.6	2.8	13.7	15.3	13.5	11.0	10.5	8.7	7.1	6.1	10.2	67.0
EW09-SS-130-010	0.2	0.3	0.8	10.0	27.2	17.5	10.2	5.5	5.9	5.7	4.8	4.4	7.6	44.0
EW09-SS-129-010	0.4	0.4	0.7	5.1	22.4	18.1	15.0	7.6	7.1	6.0	4.9	4.6	7.7	52.9
EW09-SS-127-010	0.2	0.8	1.3	10.6	22.5	13.5	9.5	7.0	8.0	6.8	5.9	5.2	8.6	51.1
EW09-SS-122-010	0.1	0.5	1.3	7.4	17.2	14.8	12.2	8.7	9.4	7.9	6.1	5.2	9.0	58.6
EW09-SS-119-010	0.2	0.4	1.1	3.8	10.0	12.0	12.7	11.3	12.0	10.2	8.2	6.6	11.5	72.4
EW09-SS-120-010	7.9	1.1	1.6	6.7	14.1	11.1	9.3	9.1	10.5	8.0	6.1	5.7	8.7	57.4
EW09-SS-132-010	0.8	0.6	1.0	9.2	24.4	17.4	10.9	6.6	6.5	6.0	4.8	4.5	7.3	46.6

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

0097 : 00198

Windward Environmental, LLC
EW RI/FS Surface Sediment 09-08-09-46

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
CI09-SS-020-010	0.0	0.2	2.0	19.9	54.8	17.5	1.1	0.8	0.5	0.4	0.6	0.4	1.6	5.5
	0.0	0.3	2.0	19.2	54.2	18.1	1.8	0.7	0.5	0.4	0.5	0.5	1.6	6.1
	0.0	0.4	2.2	20.2	54.9	17.3	1.2	0.7	0.5	0.3	0.5	0.4	1.5	5.2
CI09-SS-060-010	16.1	7.7	7.2	18.8	20.5	21.6	2.9	1.6	0.8	0.6	0.5	0.3	1.5	8.2
CI09-SS-080-010	0.1	0.2	1.7	16.6	55.1	22.0	1.5	0.6	0.3	0.3	0.2	0.2	1.2	4.2

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

0068 : 0000 19

Round 2 Grain Size

Windward Environmental, LLC
09-08-09-46
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-040-010	0.0	2.9	2.2	1.6	1.8	5.6	9.8	13.9	18.9	13.5	8.5	8.5	12.8	85.9
	0.0	1.6	3.2	2.8	2.1	5.4	9.1	15.8	16.8	13.3	8.3	7.8	13.9	85.0
	0.1	1.7	2.5	2.5	2.0	3.8	9.8	15.0	17.3	13.9	9.6	7.9	14.2	87.6
EW09-SS-017-010	11.7	2.0	6.2	13.9	8.4	3.7	2.9	7.7	9.1	10.2	7.0	5.8	11.4	54.1
EW09-SS-026-010	0.4	0.6	3.4	23.7	20.8	6.9	5.1	6.7	7.7	7.3	5.2	4.4	7.8	44.3
EW09-SS-037-010	0.5	1.3	4.1	9.6	14.4	13.5	9.0	10.2	9.1	8.4	5.7	4.4	9.7	56.5
EW09-SS-103-010	0.2	0.8	1.6	3.6	12.4	16.3	11.5	11.6	11.2	9.0	5.8	5.3	10.7	65.1
EW09-SS-105-010	0.5	1.0	2.0	3.6	3.4	6.4	9.4	14.1	17.5	13.0	7.8	7.2	13.9	82.9
EW09-SS-112-010	0.0	0.9	1.3	2.0	6.6	12.0	11.7	14.6	12.6	11.4	7.5	6.5	12.9	77.2
EW09-SS-304-010	1.3	1.3	1.9	3.5	3.6	6.8	8.5	14.2	16.1	13.6	8.5	7.1	13.6	81.6
EW09-SS-115-010	0.1	0.6	1.4	6.6	11.9	11.0	10.6	11.2	12.7	10.1	6.5	6.0	11.6	68.5
EW09-SS-133-010	0.3	0.6	3.4	14.3	26.4	14.5	7.6	6.9	6.1	5.6	3.8	3.7	6.9	40.5
EW09-SS-108-010	5.1	13.1	19.2	22.7	19.9	4.6	3.9	1.9	2.3	2.4	1.3	1.4	2.2	15.4
EW09-SS-118-010	0.1	0.4	0.8	2.1	3.6	3.7	10.4	14.6	17.2	13.9	10.2	7.9	15.2	89.3
EW09-SS-121-010	0.3	0.9	2.5	8.6	11.4	9.8	10.4	10.7	11.7	9.7	7.0	5.7	11.3	66.5

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

PD95-0011

Windward Environmental, LLC
09-08-09-46
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-039-010	1.6	2.4	11.7	35.3	20.7	3.6	4.0	1.8	4.5	3.6	3.0	2.9	4.9	24.7
	5.9	2.5	11.7	34.6	20.7	3.6	2.1	1.9	3.4	3.3	2.9	2.8	4.6	21.1
	13.4	2.3	10.3	31.2	18.5	3.2	2.6	2.5	3.0	3.2	2.7	2.5	4.4	21.0
EW09-SS-223-010	3.0	1.9	1.4	2.7	18.3	30.2	16.8	10.0	4.9	3.1	1.8	1.9	4.2	42.6
EW09-SS-214-010	0.2	0.4	0.8	10.7	25.7	21.1	14.3	9.4	4.9	3.4	2.3	1.9	4.9	41.1
EW09-SS-213-010	0.1	0.4	0.8	7.1	24.9	22.7	14.2	9.1	5.2	4.2	2.7	2.8	5.9	44.1
EW09-SS-215-010	1.7	2.4	1.4	2.7	5.3	10.6	12.3	15.7	16.1	8.3	5.9	6.1	11.6	76.0
EW09-SS-018-010	32.0	8.1	10.6	23.5	18.3	3.3	NA	NA	NA	NA	NA	NA	NA	4.3
EW09-SS-016-010	55.8	5.8	10.3	15.8	8.5	1.8	NA	NA	NA	NA	NA	NA	NA	1.9
EW09-SS-022-010	6.4	3.5	18.0	48.2	13.8	1.4	0.4	0.9	1.3	1.4	1.3	1.3	2.1	8.7
EW09-SS-028-010	0.4	1.7	1.4	1.9	3.6	7.3	10.3	16.3	16.1	12.3	9.0	7.1	12.5	83.6
EW09-SS-303-010	0.1	1.3	1.5	2.5	3.9	7.0	14.0	13.2	16.9	12.1	8.1	7.0	12.2	83.6

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

PD97 . 09409

Windward Environmental, LLC
09-08-09-46
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-206-010	36.0	5.5	2.9	4.8	11.1	10.9	8.7	4.7	3.9	2.6	2.3	2.5	4.1	28.9
	39.9	5.7	3.2	5.3	11.7	11.2	2.9	4.9	3.8	2.6	2.2	2.5	4.3	23.0
	50.4	4.5	2.4	3.8	8.8	8.6	6.0	3.2	2.9	2.2	2.0	2.0	3.4	21.5
EW09-SS-222-010	5.5	3.2	7.6	26.9	37.1	9.4	2.2	1.4	1.4	1.5	0.9	1.0	2.0	10.3
EW09-SS-221-010	0.1	0.3	1.5	22.5	49.7	12.9	2.6	1.7	1.8	2.0	1.2	1.3	2.3	12.9
EW09-SS-009-010	3.6	2.8	7.1	24.7	17.1	6.3	3.0	6.1	9.1	5.9	3.8	4.1	6.4	38.3
EW09-SS-012-010	32.5	9.7	12.0	32.2	7.9	0.8	0.5	0.6	0.9	1.0	0.6	0.4	0.9	4.9
EW09-SS-015-010	32.5	8.2	5.7	12.3	10.3	4.3	3.7	5.4	4.6	3.2	2.6	2.8	4.3	26.6
EW09-SS-107-010	31.3	14.4	9.9	15.2	9.7	5.2	2.4	3.1	3.1	1.5	1.0	1.2	2.0	14.3
EW09-SS-106-010	19.3	7.6	8.4	27.9	21.5	5.0	2.6	3.5	1.5	0.6	0.4	0.5	1.2	10.3
EW09-SS-208-010	0.9	1.2	1.0	4.0	23.3	28.0	11.6	7.4	8.1	3.7	2.2	2.8	5.8	41.6
EW09-SS-305-010	1.6	1.1	1.0	4.0	22.4	27.4	13.7	6.7	10.3	2.9	1.9	2.2	4.9	42.6

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

PE07 : 000005

Windward Environmental, LLC
09-08-09-46
EW RI/FS SURFACE SEDIMENT

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-209-010	0.1	0.4	0.7	4.9	29.4	28.2	10.5	6.0	4.5	3.8	3.2	3.3	5.2	36.3
	0.2	0.4	0.6	4.5	28.3	28.9	11.1	6.2	4.2	3.9	3.0	3.2	5.7	37.1
	0.2	0.3	0.7	5.0	29.7	28.1	9.6	6.3	4.3	3.7	3.0	3.2	5.9	36.0
EW09-SS-210-010	0.3	0.3	0.6	13.3	36.0	25.1	7.3	3.4	2.6	2.4	2.1	2.2	4.5	24.4
EW09-SS-205-010	14.8	0.6	1.0	7.5	18.8	20.8	9.5	7.9	5.0	3.7	2.8	2.5	5.2	36.5
EW09-SS-203-010	4.1	0.8	1.9	10.5	16.4	18.4	15.6	10.9	6.9	3.7	3.0	2.5	5.3	48.0
EW09-SS-212-010	0.1	0.2	0.5	8.8	42.1	25.4	6.9	3.9	3.0	2.5	1.7	1.9	2.9	22.9
EW09-SS-201-010	1.2	1.5	2.1	14.8	31.0	9.5	8.1	6.5	5.7	5.5	4.1	3.7	6.5	40.1
EW09-SS-134-010	0.1	0.6	0.9	7.7	25.2	18.0	9.2	8.2	6.7	6.4	4.7	4.3	7.9	47.5
EW09-SS-131-010	0.1	0.5	1.0	11.7	29.2	12.6	6.0	5.5	6.8	7.1	5.6	4.6	9.2	44.9
EW09-SS-128-010	0.3	0.6	1.5	7.6	24.0	17.6	9.9	6.9	6.3	6.4	5.5	4.9	8.5	48.4
EW09-SS-125-010	0.1	0.5	1.1	16.7	34.0	15.6	7.0	4.2	4.1	4.2	3.7	3.0	5.8	32.0
EW09-SS-124-010	0.6	0.9	1.2	12.0	29.6	15.9	6.7	8.4	5.9	5.2	3.7	3.5	6.4	39.8
EW09-SS-123-010	0.1	0.5	0.9	7.0	18.6	15.0	11.0	8.9	9.4	7.2	6.6	4.7	10.2	58.0

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

Windward Environmental, LLC
09-08-09-46
EW RI/FS Surface Sediment

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
EW09-SS-040-010	0.0	2.9	2.2	1.6	1.8	5.6	9.8	13.9	18.9	13.5	8.5	8.5	12.8	85.9
	0.0	1.6	3.2	2.8	2.1	5.4	9.1	15.8	16.8	13.3	8.3	7.8	13.9	85.0
	0.1	1.7	2.5	2.5	2.0	3.8	9.8	15.0	17.3	13.9	9.6	7.9	14.2	87.6
EW09-SS-002-010	23.3	8.0	9.6	21.4	16.2	3.4	1.3	2.6	2.8	3.1	2.8	2.5	3.0	18.0
EW09-SS-004-010	53.7	9.3	6.0	8.9	10.7	2.9	2.2	0.3	1.1	1.3	1.2	1.0	1.4	8.5
EW09-SS-006-010	68.1	8.6	6.1	5.6	2.9	0.9	0.5	1.1	1.2	1.4	1.1	1.1	1.4	7.7
EW09-SS-007-010	67.7	1.8	2.8	6.4	4.4	3.3	0.8	3.8	3.0	1.8	1.2	1.1	2.0	13.6
EW09-SS-010-010	36.7	6.2	7.1	15.5	10.2	7.7	4.2	2.8	2.0	2.1	1.8	1.5	2.2	16.6

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

PE40.09-09-46

Windward Environmental, LLC
09-08-09-46
EW RI/FS Surface Sediment (Round 2)

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
CI09-SS-180-010	7.1	0.6	1.1	3.9	4.0	2.0	2.7	5.2	4.3	10.7	16.9	14.4	27.1	81.3
	1.1	0.8	1.1	3.8	3.7	1.7	2.1	4.7	5.2	10.6	19.1	15.7	30.4	87.8
	1.3	0.6	1.1	4.2	4.0	1.8	2.2	5.1	4.4	11.0	18.8	15.2	30.3	87.0
CI09-SS-120-010	0.0	0.2	2.3	30.0	56.5	7.8	NA	NA	NA	NA	NA	NA	NA	3.2
CI09-SS-140-010	0.1	0.3	0.7	6.3	48.2	34.9	4.5	1.4	0.7	0.4	0.4	0.4	1.7	9.5

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

T30 Grain Size

Windward Environmental, LLC
07-08-09-38

Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10	<4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0	<230 (<62)
T30-09-14	0.0	0.0	0.2	5.0	32.0	32.8	12.9	7.0	2.1	2.5	1.1	1.5	2.9	30.0
	0.0	0.0	0.1	5.2	31.3	32.7	16.3	4.9	1.8	2.0	1.1	1.4	3.0	30.6
	0.0	0.1	0.2	5.2	32.3	32.9	13.9	4.9	2.9	2.0	1.1	1.5	2.9	29.2
T30-09-01	4.8	0.8	1.0	2.7	16.3	19.5	15.6	15.2	7.6	4.9	2.8	3.3	5.6	55.0
T30-09-03	2.6	1.2	4.3	15.3	33.7	10.8	7.6	4.5	2.2	2.2	1.4	1.8	3.3	23.9
T30-09-101	1.1	1.2	4.4	15.0	34.2	21.1	12.8	2.0	0.2	2.2	1.3	1.6	2.9	23.0
T30-09-07	0.6	1.8	3.1	12.2	8.2	4.1	4.7	10.0	8.6	11.9	9.4	10.3	15.2	70.0
T30-09-09	2.0	1.5	4.5	11.5	28.5	24.0	11.7	5.9	2.5	2.0	1.3	1.5	3.1	28.0
T30-09-20	0.4	0.8	3.0	14.9	16.7	13.7	10.4	12.5	7.0	5.6	3.7	4.4	6.8	50.6
T30-09-21	0.1	0.3	0.7	10.7	30.4	21.7	13.0	6.6	3.7	3.6	2.1	2.8	4.3	36.1

Notes to the Testing:
1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

ON35

ON35 : 90 1 6 1

Round 1 Conventional Parameters

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-001-010
ARI ID: 09-6000 OP35U

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	52.60
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	38.30
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	6.16
Sulfide	03/09/09 030909#2	EPA 376.2	mg/kg	2.54	5.39
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	1.63

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: OP35D Client ID: EW09-SS-036-010					
Total Solids	03/09/09	Percent	47.90	47.90 47.90	0.0%
Preserved Total Solids	03/05/09	Percent	43.90	44.50 44.30	0.7%
N-Ammonia	03/06/09	mg-N/kg	4.87	4.70	3.6%
Sulfide	03/09/09	mg/kg	257	243	5.6%
Total Organic Carbon	03/11/09	Percent	2.27	2.22 2.15	2.7%
ARI ID: OP35U Client ID: EW09-SS-001-010					
Total Solids	03/09/09	Percent	52.60	56.00 53.10	3.4%
Preserved Total Solids	03/05/09	Percent	38.30	38.30 38.10	0.3%
Sulfide	03/09/09	mg/kg	5.39	11.9	75.3%
Total Organic Carbon	03/11/09	Percent	1.63	1.86 1.57	9.1%

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-003-010
ARI ID: 09-5999 OP35T

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	55.20
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	44.80
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.17	7.79
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	10.9	92.0
Total Organic Carbon	03/16/09 031609#1	Plumb,1981	Percent	0.020	1.75

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-005-010
ARI ID: 09-5998 OP35S

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	49.30
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	42.20
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	9.11
Sulfide	03/09/09 030909#2	EPA 376.2	mg/kg	2.19	7.15
Total Organic Carbon	03/18/09 031809#1	Plumb,1981	Percent	0.020	1.86

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-008-010
ARI ID: 09-5997 OP35R

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	44.10
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	40.20
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.21	6.48
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	121	1,290
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.37

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-011-010
ARI ID: 09-5996 OP35Q

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	59.60
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	56.80
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.16	2.57
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	166	1,840
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	1.59

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-013-010
ARI ID: 09-5995 OP35P

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	63.00
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	61.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.14	11.7
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	8.47	23.5
Total Organic Carbon	03/16/09 031609#1	Plumb,1981	Percent	0.020	2.11

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP65-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Client ID: EW09-SS-014-010
ARI ID: 09-6149 OP65B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/09 031009#1	EPA 160.3	Percent	0.01	55.60
Preserved Total Solids	03/11/09 031109#1	EPA 160.3	Percent	0.01	53.40
N-Ammonia	03/12/09 031209#1	EPA 350.1M	mg-N/kg	0.34	18.0
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	86.7	922
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	1.96

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
OP65-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: OP65B Client ID: EW09-SS-014-010					
Total Solids	03/10/09	Percent	55.60	55.20 55.30	0.4%
Preserved Total Solids	03/11/09	Percent	53.40	53.80 53.80	0.4%
N-Ammonia	03/12/09	mg-N/kg	18.0	16.0 18.5	7.6%
Total Organic Carbon	03/12/09	Percent	1.96	2.40 2.37	11.0%

SAMPLE RESULTS-CONVENTIONALS
OP65-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Client ID: EW09-SS-019-010
ARI ID: 09-6151 OP65D

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/09 031009#1	EPA 160.3	Percent	0.01	45.50
Preserved Total Solids	03/11/09 031109#1	EPA 160.3	Percent	0.01	42.70
N-Ammonia	03/12/09 031209#1	EPA 350.1M	mg-N/kg	0.22	8.16
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	44.9	368
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	2.31

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-020-010
ARI ID: 09-5994 OP35O

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	47.20
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	44.60
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.20	18.8
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	106	1,030
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.58

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP65-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Client ID: EW09-SS-021-010
ARI ID: 09-6152 OP65E

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/09 031009#1	EPA 160.3	Percent	0.01	72.00
Preserved Total Solids	03/11/09 031109#1	EPA 160.3	Percent	0.01	75.10
N-Ammonia	03/12/09 031209#1	EPA 350.1M	mg-N/kg	0.13	5.45
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	12.4	50.1
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	1.55

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-023-010
ARI ID: 09-5993 OP35N

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	41.80
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	37.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.23	9.48
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	25.8	250
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.90

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-024-010
ARI ID: 09-5992 OP35M

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	51.70
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	42.00
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.17	3.88
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	11.7	65.6
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	1.85

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-025-010
ARI ID: 09-5991 OP35L

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	53.90
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	47.10
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	3.24
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	10.3	106
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.21

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/02/09
Date Received: 03/04/09

Client ID: EW09-SS-027-010
ARI ID: 09-5980 OP35A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	44.40
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	43.50
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.22	4.20
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	242	1,250
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	2.60

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-029-010
ARI ID: 09-5990 OP35K

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	48.40
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	44.30
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.20	3.69
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	43.2	280
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.03

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-030-010
ARI ID: 09-5989 OP35J

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	45.00
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	38.40
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.20	5.74
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	12.8	97.5
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.03

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-031-010
ARI ID: 09-5988 OP35I

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	43.10
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	39.40
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.21	10.3
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	12.2	86.9
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.04

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-032-010
ARI ID: 09-5987 OP35H

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	47.00
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	43.60
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.20	4.16
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	23.4	163
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	1.64

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-033-010
ARI ID: 09-5986 OP35G

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	50.30
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	46.80
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.19	2.86
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	19.4	219
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	1.86

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-034-010
ARI ID: 09-5984 OP35E

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	46.00
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	40.20
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.21	5.13
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	23.4	179
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.25

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-035-010
ARI ID: 09-5985 OP35F

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	51.40
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	49.70
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.19	3.86
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	38.1	696
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	1.81

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-036-010
ARI ID: 09-5983 OP35D

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	47.90
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	43.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.19	4.87
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	22.3	257
Total Organic Carbon	03/11/09 031109#1	Plumb,1981	Percent	0.020	2.27

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-038-010
ARI ID: 09-5969 OP33A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	53.90
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	53.20
N-Ammonia	03/12/09 031209#1	EPA 350.1M	mg-N/kg	0.18	14.5
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	173	2,050
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	2.83

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: OP33A Client ID: EW09-SS-038-010					
Total Solids	03/09/09	Percent	53.90	53.90 54.30	0.4%
Preserved Total Solids	03/05/09	Percent	53.20	52.80 53.40	0.6%
N-Ammonia	03/12/09	mg-N/kg	14.5	15.0	3.4%
Sulfide	03/10/09	mg/kg	2,050	1,570 1,930	13.5%
ARI ID: OP33G Client ID: EW09-SS-211-010					
Total Organic Carbon	03/12/09	Percent	0.928	0.995 0.878	6.3%

SAMPLE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-100-010
ARI ID: 09-5979 OP33B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	58.50
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	57.00
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.16	2.14
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	81.4	695
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	1.76

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-101-010
ARI ID: 09-6002 OP33C

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	58.70
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	55.60
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.17	13.6
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	177	3,030
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	1.37

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-102-010
ARI ID: 09-5981 OP35B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	54.50
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	44.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	3.70
Sulfide	03/09/09 030909#2	EPA 376.2	mg/kg	11.2	65.1
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.70

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Client ID: EW09-SS-104-010
ARI ID: 09-5942 OP22F

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	47.50
Preserved Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	48.30
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.20	13.0
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	97.7	1,040
Total Organic Carbon	03/09/09 030909#1	Plumb,1981	Percent	0.020	3.09

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Client ID: EW09-SS-109-010
ARI ID: 09-5941 OP22E

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	47.80
Preserved Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	44.00
N-Ammonia	03/06/09	EPA 350.1M	mg-N/kg	0.20	4.06
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	40.7	561
Total Organic Carbon	03/09/09 030909#1	Plumb,1981	Percent	0.020	1.85

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-110-010
ARI ID: 09-6003 OP33D

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	48.70
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	46.70
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.20	3.05
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	102	1,320
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	1.87

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Client ID: EW09-SS-111-010
ARI ID: 09-5940 OP22D

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	78.60
Preserved Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	82.80
N-Ammonia	03/06/09	EPA 350.1M	mg-N/kg	0.12	1.45
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	1.18	1.30
Total Organic Carbon	03/09/09 030909#1	Plumb,1981	Percent	0.020	0.560

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Client ID: EW09-SS-113-010
ARI ID: 09-5939 OP22C

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	63.10
Preserved Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	55.70
N-Ammonia	03/06/09	EPA 350.1M	mg-N/kg	0.15	3.39
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	17.7	256
Total Organic Carbon	03/09/09 030909#1	Plumb,1981	Percent	0.020	1.78

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
OP22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: OP22C Client ID: EW09-SS-113-010					
Total Solids	03/04/09	Percent	63.10	63.70 63.00	0.6%
Preserved Total Solids	03/04/09	Percent	55.70	56.10 56.40	0.6%
N-Ammonia	03/06/09	mg-N/kg	3.39	3.46	2.0%
Sulfide	03/09/09	mg/kg	256	239	6.9%
Total Organic Carbon	03/09/09	Percent	1.78	1.80 1.96	5.3%

SAMPLE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-114-010
ARI ID: 09-6004 OP33E

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	56.30
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	52.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	2.97
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	169	2,060
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	1.42

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Client ID: EW09-SS-116-010
ARI ID: 09-5937 OP22A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	54.70
Preserved Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	49.60
N-Ammonia	03/06/09	EPA 350.1M	mg-N/kg	0.19	6.03
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	35.0	606
Total Organic Carbon	03/09/09 030909#1	Plumb,1981	Percent	0.020	2.16

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-119-010
ARI ID: 09-5799 0097N

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	53.00
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	49.60
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	6.23
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	20.2	153
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.31

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-120-010
ARI ID: 09-5800 00970

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	61.00
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	58.20
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.16	2.54
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	17.1	136
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.43

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-122-010
ARI ID: 09-5798 0097M

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	58.30
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	55.80
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.17	2.82
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	90.5	784
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.65

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP65-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/16/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/05/09
Date Received: 03/05/09

Client ID: EW09-SS-126-010
ARI ID: 09-6150 OP65C

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/09 031009#1	EPA 160.3	Percent	0.01	66.00
Preserved Total Solids	03/11/09 031109#1	EPA 160.3	Percent	0.01	58.10
N-Ammonia	03/12/09 031209#1	EPA 350.1M	mg-N/kg	0.15	2.08
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	31.2	493
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	1.34

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-127-010
ARI ID: 09-5797 0097L

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	60.90
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	58.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.16	1.99
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	3.46	38.5
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.62

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-129-010
ARI ID: 09-5796 0097K

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	59.70
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	53.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.16	1.98
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	1.84	23.2
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.30

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-130-010
ARI ID: 09-5795 0097J

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	59.50
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	56.60
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.17	2.61
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	17.7	127
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.49

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-132-010
ARI ID: 09-5801 0097P

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	58.90
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	57.80
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.16	5.77
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	17.4	96.8
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.60

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-200-010
ARI ID: 09-5793 0097H

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	55.30
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	48.00
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.17	3.23
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	21.2	124
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.72

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-202-010
ARI ID: 09-5792 0097G

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	62.90
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	60.20
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.15	3.33
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	16.6	181
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.39

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-204-010
ARI ID: 09-5791 0097F

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	60.50
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	49.20
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.16	3.28
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	2.07	28.2
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.17

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-207-010
ARI ID: 09-5790 0097E

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	63.50
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	53.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.15	2.67
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	1.87	28.0
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.27

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-211-010
ARI ID: 09-6009 OP33G

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	62.70
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	61.10
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.15	2.12
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	31.2	355
Total Organic Carbon	03/12/09 031209#1	Plumb,1981	Percent	0.020	0.928

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-216-010
ARI ID: 09-5789 0097D

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	69.10
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	66.90
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.13	2.14
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	1.52	1.85
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	0.997

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: 0097D Client ID: EW09-SS-216-010					
Total Solids	03/09/09	Percent	69.10	69.10 69.40	0.3%
Preserved Total Solids	03/05/09	Percent	66.90	67.00 66.90	0.1%
N-Ammonia	03/06/09	mg-N/kg	2.14	2.08	2.8%
Sulfide	03/06/09	mg/kg	1.85	2.65	35.6%
Total Organic Carbon	03/10/09	Percent	0.997	0.863 0.902	7.5%

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-217-010
ARI ID: 09-5788 0097C

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	71.10
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	66.10
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.14	1.63
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	1.51	1.60
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	0.808

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-218-010
ARI ID: 09-5787 0097B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	69.70
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	67.70
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.14	1.58
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	1.48	3.97
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	0.798

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP33-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/17/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-219-010
ARI ID: 09-6010 OP33H

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	71.90
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	68.70
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.13	2.40
Sulfide	03/10/09 031009#1	EPA 376.2	mg/kg	25.7	299
Total Organic Carbon	03/16/09 031609#1	Plumb,1981	Percent	0.020	0.795

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-220-010
ARI ID: 09-5786 0097A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	75.00
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	68.20
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.13	1.53
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	1.48	19.6
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	0.872

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
0097-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/01/09
Date Received: 03/02/09

Client ID: EW09-SS-300-010
ARI ID: 09-5794 0097I

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	55.50
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	51.10
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	3.04
Sulfide	03/06/09 030609#1	EPA 376.2	mg/kg	39.8	249
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.18

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/12/09

Project: EW RI/FS SURFACE SEDIMENTS
Event: NA
Date Sampled: 03/02/09
Date Received: 03/02/09

Client ID: EW09-SS-301-010
ARI ID: 09-5938 OP22B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	54.90
Preserved Total Solids	03/04/09 030409#1	EPA 160.3	Percent	0.01	47.30
N-Ammonia	03/06/09	EPA 350.1M	mg-N/kg	0.18	5.74
Sulfide	03/09/09 030909#1	EPA 376.2	mg/kg	39.0	548
Total Organic Carbon	03/09/09 030909#1	Plumb,1981	Percent	0.020	1.87

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OP35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/20/09

Project: EW RI/FS SURFACE SEDIMENT
Event: NA
Date Sampled: 03/04/09
Date Received: 03/04/09

Client ID: EW09-SS-302-010
ARI ID: 09-5982 OP35C

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/09/09 030909#1	EPA 160.3	Percent	0.01	54.50
Preserved Total Solids	03/05/09 030509#1	EPA 160.3	Percent	0.01	46.40
N-Ammonia	03/06/09 030609#1	EPA 350.1M	mg-N/kg	0.18	3.66
Sulfide	03/09/09 030909#2	EPA 376.2	mg/kg	10.1	91.6
Total Organic Carbon	03/10/09 031009#1	Plumb,1981	Percent	0.020	1.91

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OQ68-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 03/12/09
Date Received: 03/13/09

Client ID: CI09-SS-020-010
ARI ID: 09-6624 OQ68A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/16/09 031609#1	EPA 160.3	Percent	0.01	71.60
Preserved Total Solids	03/16/09 031609#1	EPA 160.3	Percent	0.01	74.90
N-Ammonia	03/18/09 031809#1	EPA 350.1M	mg-N/kg	0.14	2.01
Sulfide	03/17/09 031709#1	EPA 376.2	mg/kg	1.18	< 1.18 U
Total Organic Carbon	03/23/09 032309#1	Plumb,1981	Percent	0.020	0.659

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
OQ68-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 03/12/09
Date Received: 03/13/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: OQ68A Client ID: CI09-SS-020-010					
Total Solids	03/16/09	Percent	71.60	72.40 72.80	0.8%
Preserved Total Solids	03/16/09	Percent	74.90	74.80 75.00	0.1%
N-Ammonia	03/18/09	mg-N/kg	2.01	2.08 2.25	5.8%
Sulfide	03/17/09	mg/kg	< 1.18	< 1.15	NA
Total Organic Carbon	03/23/09	Percent	0.659	0.728 0.428	26.0%

SAMPLE RESULTS-CONVENTIONALS
OQ68-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 03/12/09
Date Received: 03/13/09

Client ID: CI09-SS-060-010
ARI ID: 09-6625 OQ68B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/16/09 031609#1	EPA 160.3	Percent	0.01	71.70
Preserved Total Solids	03/16/09 031609#1	EPA 160.3	Percent	0.01	72.10
N-Ammonia	03/18/09 031809#1	EPA 350.1M	mg-N/kg	0.13	12.8
Sulfide	03/17/09 031709#1	EPA 376.2	mg/kg	6.52	54.5
Total Organic Carbon	03/23/09 032309#1	Plumb,1981	Percent	0.020	0.367

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
OQ68-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/24/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 03/12/09
Date Received: 03/13/09

Client ID: CI09-SS-080-010
ARI ID: 09-6626 OQ68C

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/16/09 031609#1	EPA 160.3	Percent	0.01	73.00
Preserved Total Solids	03/16/09 031609#1	EPA 160.3	Percent	0.01	73.10
N-Ammonia	03/18/09 031809#1	EPA 350.1M	mg-N/kg	0.13	3.84
Sulfide	03/17/09 031709#1	EPA 376.2	mg/kg	1.36	< 1.36 U
Total Organic Carbon	03/23/09 032309#1	Plumb,1981	Percent	0.020	0.210

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

Round 2 Conventional Parameters

SAMPLE RESULTS-CONVENTIONALS
PE40-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/07/09

Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Client ID: EW09-SS-002-010
ARI ID: 09-14878 PE40B

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	70.00
Preserved Total Solids	06/29/09 062909#1	EPA 160.3	Percent	0.01	62.90
N-Ammonia	06/30/09 063009#1	EPA 350.1M	mg-N/kg	0.13	2.07
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	1.54	28.2
Total Organic Carbon	07/02/09 070209#1	Plumb,1981	Percent	0.020	1.68

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
PE40-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/07/09

Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: PE40B Client ID: EW09-SS-002-010					
Preserved Total Solids	06/29/09	Percent	62.90	62.20 62.40	0.6%
N-Ammonia	06/30/09	mg-N/kg	2.07	2.79 2.04	18.5%

SAMPLE RESULTS-CONVENTIONALS
PE40-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/07/09

Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Client ID: EW09-SS-004-010
ARI ID: 09-14879 PE40C

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	72.10
Preserved Total Solids	06/29/09 062909#1	EPA 160.3	Percent	0.01	71.80
N-Ammonia	06/30/09 063009#1	EPA 350.1M	mg-N/kg	0.13	5.51
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	1.37	6.16
Total Organic Carbon	07/06/09 070609#1	Plumb,1981	Percent	0.020	1.19

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE40-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/07/09

Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Client ID: EW09-SS-006-010
ARI ID: 09-14880 PE40D

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	70.00
Preserved Total Solids	06/29/09 062909#1	EPA 160.3	Percent	0.01	66.80
N-Ammonia	06/30/09 063009#1	EPA 350.1M	mg-N/kg	0.14	3.06
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	7.35	22.8
Total Organic Carbon	07/02/09 070209#1	Plumb,1981	Percent	0.020	0.716

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE40-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/07/09

Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Client ID: EW09-SS-007-010
ARI ID: 09-14881 PE40E

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	61.00
Preserved Total Solids	06/29/09 062909#1	EPA 160.3	Percent	0.01	62.40
N-Ammonia	06/30/09 063009#1	EPA 350.1M	mg-N/kg	0.16	15.6
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	15.9	313
Total Organic Carbon	07/02/09 070209#1	Plumb,1981	Percent	0.020	2.91

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-009-010
ARI ID: 09-14571 PE07C

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	60.10
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	59.80
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	4.64
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	85.8	656
Total Organic Carbon	07/09/09 070909#1	Plumb,1981	Percent	0.020	2.57

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE40-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/07/09

Project: EW RI/FS Surface Sediment
Event: 09-08-09-46
Date Sampled: 06/24/09
Date Received: 06/24/09

Client ID: EW09-SS-010-010
ARI ID: 09-14882 PE40F

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	70.00
Preserved Total Solids	06/29/09 062909#1	EPA 160.3	Percent	0.01	74.60
N-Ammonia	06/30/09 063009#1	EPA 350.1M	mg-N/kg	0.13	4.73
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	6.66	14.8
Total Organic Carbon	07/02/09 070209#1	Plumb,1981	Percent	0.020	1.83

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-012-010
ARI ID: 09-14572 PE07D

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	72.70
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	65.80
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	0.23
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	15.3	260
Total Organic Carbon	07/09/09 070909#1	Plumb,1981	Percent	0.020	1.73

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-015-010
ARI ID: 09-14573 PE07E

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	60.50
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	60.80
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	7.57
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	16.3	156
Total Organic Carbon	07/09/09 070909#1	Plumb,1981	Percent	0.020	3.15

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-016-010
ARI ID: 09-14507 PD97K

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	66.40
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	76.00
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.15	3.68
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	65.3	745
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	1.47

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-017-010
ARI ID: 09-14478 PD95A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	57.00
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	47.00
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.17	10.3
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	42.5	285
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.71

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-018-010
ARI ID: 09-14506 PD97J

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	69.90
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	73.00
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.13	3.71
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	137	1,790
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	3.28

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-022-010
ARI ID: 09-14508 PD97L

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	66.40
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	67.30
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	8.72
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	14.5	204
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	1.44

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-026-010
ARI ID: 09-14479 PD95B

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	61.20
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	50.60
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	1.83
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	3.81	69.2
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	1.91

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-028-010
ARI ID: 09-14509 PD97M

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	40.60
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	35.50
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.25	21.6
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	27.8	466
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	2.37

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-037-010
ARI ID: 09-14481 PD95D

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	53.40
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	41.50
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.17	5.23
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	23.7	295
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.43

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-039-010
ARI ID: 09-14511 PD97O

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	69.00
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	68.20
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.27	13.9
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	2.90	49.2
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	2.57

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: PD97O Client ID: EW09-SS-039-010					
Total Solids	06/23/09	Percent	69.00	66.10 66.20	2.5%
Preserved Total Solids	06/24/09	Percent	68.20	68.20 68.20	0.0%
N-Ammonia	06/25/09	mg-N/kg	13.9	13.1 13.7	3.1%
Sulfide	06/25/09	mg/kg	49.2	33.7	37.4%
Total Organic Carbon	06/29/09	Percent	2.57	2.46 2.99	10.5%

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-040-010
ARI ID: 09-14480 PD95C

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	42.90
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	31.50
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.22	15.1
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	63.2	290
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.88

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: PD95C Client ID: EW09-SS-040-010					
Total Solids	06/23/09	Percent	42.90	42.90 43.00	0.1%
Preserved Total Solids	06/24/09	Percent	31.50	31.60 31.60	0.2%
N-Ammonia	06/25/09	mg-N/kg	15.1	14.7 15.0	1.4%
Sulfide	06/24/09	mg/kg	290	316	8.6%
Total Organic Carbon	06/26/09	Percent	2.88	2.93 3.30	7.6%

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-103-010
ARI ID: 09-14482 PD95E

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	47.90
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	37.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.20	11.0
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	52.1	879
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.52

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-105-010
ARI ID: 09-14483 PD95F

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	44.90
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	39.30
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.40	29.6
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	25.2	450
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.07

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-106-010
ARI ID: 09-14575 PE07G

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	73.70
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	72.90
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.13	7.00
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	59.1	752
Total Organic Carbon	07/02/09 070209#1	Plumb,1981	Percent	0.020	3.31

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-107-010
ARI ID: 09-14574 PE07F

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	69.70
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	62.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	8.34
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	15.6	232
Total Organic Carbon	07/09/09 070909#1	Plumb,1981	Percent	0.020	2.32

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-108-010
ARI ID: 09-14488 PD95K

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	73.40
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	62.60
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.13	4.09
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	1.59	17.3
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	0.924

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-112-010
ARI ID: 09-14484 PD95G

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	48.80
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	39.80
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.20	15.1
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	4.98	78.2
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.37

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-115-010
ARI ID: 09-14486 PD95I

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	49.50
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	46.00
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.19	5.28
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	21.6	241
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	1.28

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-118-010
ARI ID: 09-14489 PD95L

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	56.50
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	52.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	5.52
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	95.6	537
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	1.69

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-121-010
ARI ID: 09-14490 PD95M

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	55.30
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	50.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.17	5.39
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	96.9	448
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.04

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-123-010
ARI ID: 09-14624 PE14M

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	56.40
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	54.10
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.18	7.69
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	17.4	239
Total Organic Carbon	06/30/09 063009#1	Plumb,1981	Percent	0.020	1.47

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-124-010
ARI ID: 09-14623 PE14L

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	60.40
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	61.60
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	7.52
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	31.8	341
Total Organic Carbon	06/30/09 063009#1	Plumb,1981	Percent	0.020	1.08

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-125-010
ARI ID: 09-14622 PE14K

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	63.80
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	61.80
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	2.44
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	1.57	10.7
Total Organic Carbon	06/30/09 063009#1	Plumb,1981	Percent	0.020	1.48

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-128-010
ARI ID: 09-14621 PE14J

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	58.10
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	49.20
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	2.46
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	9.92	89.3
Total Organic Carbon	06/30/09 063009#1	Plumb,1981	Percent	0.020	1.35

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: PE14B Client ID: EW09-SS-210-010					
Total Solids	06/25/09	Percent	67.50	67.20 67.70	0.4%
Preserved Total Solids	06/24/09	Percent	55.10	54.90 55.10	0.2%
N-Ammonia	06/25/09	mg-N/kg	2.52	2.14 2.38	8.2%
Total Organic Carbon	06/29/09	Percent	0.755	0.849 0.788	6.0%
ARI ID: PE14J Client ID: EW09-SS-128-010					
Sulfide	06/26/09	mg/kg	89.3	72.3	21.0%

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-131-010
ARI ID: 09-14620 PE14I

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	57.80
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	56.90
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.17	2.66
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	17.9	126
Total Organic Carbon	06/30/09 063009#1	Plumb,1981	Percent	0.020	1.62

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-133-010
ARI ID: 09-14487 PD95J

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	61.30
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	59.50
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	9.10
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	33.3	399
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	1.51

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-134-010
ARI ID: 09-14619 PE14H

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	58.50
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	44.10
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.17	3.69
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	2.30	4.74
Total Organic Carbon	06/30/09 063009#1	Plumb,1981	Percent	0.020	1.26

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-201-010
ARI ID: 09-14618 PE14G

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	65.90
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	57.80
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.15	2.26
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	8.25	50.2
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	1.77

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-203-010
ARI ID: 09-14615 PE14D

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	66.60
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	64.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	13.2
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	14.5	108
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	0.829

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-205-010
ARI ID: 09-14614 PE14C

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	62.20
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	58.90
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.15	2.85
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	8.07	60.4
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	0.942

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-206-010
ARI ID: 09-14578 PE07J

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	60.10
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	62.00
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	7.51
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	87.1	604
Total Organic Carbon	07/09/09 070909#1	Plumb,1981	Percent	0.020	1.73

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: PE07J Client ID: EW09-SS-206-010					
Total Solids	06/25/09	Percent	60.10	62.50 60.40	2.1%
Preserved Total Solids	06/24/09	Percent	62.00	64.20 62.30	1.9%
N-Ammonia	06/25/09	mg-N/kg	7.51	6.57 8.43	12.4%
Sulfide	06/26/09	mg/kg	604	457	27.7%
Total Organic Carbon	07/09/09	Percent	1.73	1.55 1.16	19.7%

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-208-010
ARI ID: 09-14576 PE07H

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	56.80
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	53.20
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.81	27.7
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	190	1,990
Total Organic Carbon	07/02/09 070209#1	Plumb,1981	Percent	0.020	2.11

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-209-010
ARI ID: 09-14617 PE14F

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	64.30
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	58.40
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	3.34
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	8.41	< 8.41 U
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	0.715

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

PE07:00354

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-210-010
ARI ID: 09-14613 PE14B

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	67.50
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	55.10
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	2.52
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	1.87	4.90
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	0.755

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE14-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/06/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-212-010
ARI ID: 09-14616 PE14E

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	66.70
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	59.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.15	2.51
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	1.65	7.88
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	0.807

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-213-010
ARI ID: 09-14501 PD97E

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	60.60
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	56.10
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.16	9.11
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	84.9	440
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	1.74

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-214-010
ARI ID: 09-14499 PD97C

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	63.70
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	56.40
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.15	2.58
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	8.78	133
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	1.09

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-215-010
ARI ID: 09-14505 PD97I

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	44.50
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	46.10
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.43	26.2
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	100	1,500
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	3.37

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-221-010
ARI ID: 09-14570 PE07B

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	68.80
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	65.10
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.13	1.96
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	1.49	< 1.49 U
Total Organic Carbon	07/09/09 070909#1	Plumb,1981	Percent	0.020	1.96

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-222-010
ARI ID: 09-14569 PE07A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	72.20
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	72.40
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.13	3.23
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	1.42	4.95
Total Organic Carbon	07/09/09 070909#1	Plumb,1981	Percent	0.020	0.776

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-223-010
ARI ID: 09-14497 PD97A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	65.90
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	63.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.14	3.57
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	3.07	25.7
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	0.192

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD97-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-303-010
ARI ID: 09-14510 PD97N

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	42.90
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	37.80
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.23	18.6
Sulfide	06/25/09 062509#1	EPA 376.2	mg/kg	52.1	552
Total Organic Carbon	06/29/09 062909#1	Plumb,1981	Percent	0.020	1.73

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PD95-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/30/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/22/09
Date Received: 06/22/09

Client ID: EW09-SS-304-010
ARI ID: 09-14485 PD95H

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/23/09 062309#1	EPA 160.3	Percent	0.01	44.00
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	38.70
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.43	36.0
Sulfide	06/24/09 062409#1	EPA 376.2	mg/kg	269	3,250
Total Organic Carbon	06/26/09 062609#1	Plumb,1981	Percent	0.020	2.59

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE07-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/09

Project: EW RI/FS SURFACE SEDIMENT
Event: 09-08-09-46
Date Sampled: 06/23/09
Date Received: 06/23/09

Client ID: EW09-SS-305-010
ARI ID: 09-14577 PE07I

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09 062509#1	EPA 160.3	Percent	0.01	56.30
Preserved Total Solids	06/24/09 062409#1	EPA 160.3	Percent	0.01	54.00
N-Ammonia	06/25/09 062509#1	EPA 350.1M	mg-N/kg	0.35	29.7
Sulfide	06/26/09 062609#1	EPA 376.2	mg/kg	190	2,770
Total Organic Carbon	07/02/09 070209#1	Plumb,1981	Percent	0.020	1.79

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PE25-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/02/09

Project: EW SURFACE SEDIMENT
Event: NA
Date Sampled: 07/23/08
Date Received: 06/24/09

Client ID: LSO-01SE-080723
ARI ID: 09-14715 PE25A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/09	EPA 160.3	Percent	0.01	65.90
Total Organic Carbon	06/30/09 063009#1	Plumb,1981	Percent	0.020	1.94

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
PG13-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

Project: EW RI/FS Surface Sediment (R
Event: 09-08-09-46
Date Sampled: 07/07/09
Date Received: 07/08/09

Client ID: CI09-SS-120-010
ARI ID: 09-16270 PG13A

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/08/09 070809#1	EPA 160.3	Percent	0.01	74.50
Preserved Total Solids	07/09/09 070909#1	EPA 160.3	Percent	0.01	76.70
N-Ammonia	07/09/09 070909#1	EPA 350.1M	mg-N/kg	0.13	3.04
Sulfide	07/13/09 071309#1	EPA 376.2	mg/kg	2.68	26.6
Total Organic Carbon	07/16/09 071609#1	Plumb,1981	Percent	0.020	0.455

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PG13-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/17/09

Project: EW RI/FS Surface Sediment (R
Event: 09-08-09-46
Date Sampled: 07/07/09
Date Received: 07/08/09

Client ID: CI09-SS-140-010
ARI ID: 09-16271 PG13B

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/08/09 070809#1	EPA 160.3	Percent	0.01	70.70
Preserved Total Solids	07/09/09 070909#1	EPA 160.3	Percent	0.01	70.30
N-Ammonia	07/09/09 070909#1	EPA 350.1M	mg-N/kg	0.13	2.58
Sulfide	07/13/09 071309#1	EPA 376.2	mg/kg	1.51	14.9
Total Organic Carbon	07/16/09 071609#1	Plumb,1981	Percent	0.020	0.378

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

SAMPLE RESULTS-CONVENTIONALS
PG13-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/17/09

Project: EW RI/FS Surface Sediment (R
Event: 09-08-09-46
Date Sampled: 07/07/09
Date Received: 07/08/09

Client ID: CI09-SS-180-010
ARI ID: 09-16272 PG13C

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/08/09 070809#1	EPA 160.3	Percent	0.01	63.10
Preserved Total Solids	07/09/09 070909#1	EPA 160.3	Percent	0.01	69.80
N-Ammonia	07/09/09 070909#1	EPA 350.1M	mg-N/kg	0.15	0.39
Sulfide	07/13/09 071309#1	EPA 376.2	mg/kg	1.43	4.38
Total Organic Carbon	07/16/09 071609#1	Plumb,1981	Percent	0.020	0.438

RL Analytical reporting limit
U Undetected at reported detection limit

Ammonia determined on 2N KCl extracts.

REPLICATE RESULTS-CONVENTIONALS
PG13-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 07/17/09

Project: EW RI/FS Surface Sediment (R
Event: 09-08-09-46
Date Sampled: 07/07/09
Date Received: 07/08/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: PG13A Client ID: CI09-SS-120-010					
Total Solids	07/08/09	Percent	74.50	74.90 75.10	0.4%
Preserved Total Solids	07/09/09	Percent	76.70	77.90 77.40	0.8%
N-Ammonia	07/09/09	mg-N/kg	3.04	3.03 3.12	1.6%
Sulfide	07/13/09	mg/kg	26.6	33.8 23.4	19.1%
Total Organic Carbon	07/16/09	Percent	0.455	0.536 0.368	18.5%

T30 Conventional Parameters

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-01
ARI ID: 09-4935 ON35A

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	61.90
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	1.15

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-03
ARI ID: 09-4937 ON35C

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	68.40
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	0.736

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-101
ARI ID: 09-4938 ON35D

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	69.00
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	0.697

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-04
ARI ID: 10-726 QF22A

Analyte	Date	Method	Units	RL	Sample
Total Solids	01/13/10 011310#1	EPA 160.3	Percent	0.01	69.30
Total Organic Carbon	01/14/10 011410#1	Plumb,1981	Percent	0.020	0.551

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: QF22A Client ID: T30-09-04					
Total Solids	01/13/10	Percent	69.30	69.20 69.20	0.1%
Total Organic Carbon	01/14/10	Percent	0.551	0.534 0.538	1.6%

SAMPLE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-06
ARI ID: 10-727 QF22B

Analyte	Date	Method	Units	RL	Sample
Total Solids	01/13/10 011310#1	EPA 160.3	Percent	0.01	64.80
Total Organic Carbon	01/14/10 011410#1	Plumb,1981	Percent	0.020	0.986

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-07
ARI ID: 09-4943 ON35H

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	55.10
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	3.40

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-09
ARI ID: 09-4945 ON35J

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	75.40
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	0.665

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-13
ARI ID: 10-728 QF22C

Analyte	Date	Method	Units	RL	Sample
Total Solids	01/13/10 011310#1	EPA 160.3	Percent	0.01	70.20
Total Organic Carbon	01/14/10 011410#1	Plumb,1981	Percent	0.020	1.04

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-14
ARI ID: 09-4950 ON35O

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	70.90
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	0.415

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: ON350 Client ID: T30-09-14					
Total Solids	02/23/09	Percent	70.90	71.20 71.50	0.4%
Total Organic Carbon	02/27/09	Percent	0.415	0.369 0.495	15.0%

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-20
ARI ID: 09-4956 ON35U

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	61.80
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	1.60

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON35-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 03/02/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/18/09
Date Received: 02/18/09

Client ID: T30-09-21
ARI ID: 09-4957 ON35V

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	64.70
Total Organic Carbon	02/27/09 022709#1	Plumb,1981	Percent	0.020	1.77

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Client ID: T30-09-24
ARI ID: 10-729 QF22D

Analyte	Date	Method	Units	RL	Sample
Total Solids	01/13/10 011310#1	EPA 160.3	Percent	0.01	70.00
Total Organic Carbon	01/14/10 011410#1	Plumb,1981	Percent	0.020	1.16

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON50-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 02/25/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Client ID: T30-09-26
ARI ID: 09-5073 ON50E

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	59.00
Total Organic Carbon	02/23/09 022309#1	Plumb,1981	Percent	0.020	1.23

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
ON50-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 02/25/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: ON50E Client ID: T30-09-26					
Total Solids	02/23/09	Percent	59.00	57.60 59.80	1.9%
Total Organic Carbon	02/23/09	Percent	1.23	1.22 1.47	10.8%

SAMPLE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Client ID: T30-09-27
ARI ID: 10-730 QF22E

Analyte	Date	Method	Units	RL	Sample
Total Solids	01/13/10 011310#1	EPA 160.3	Percent	0.01	67.40
Total Organic Carbon	01/14/10 011410#1	Plumb,1981	Percent	0.020	0.858

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Client ID: T30-09-28
ARI ID: 10-731 QF22F

Analyte	Date	Method	Units	RL	Sample
Total Solids	01/13/10 011310#1	EPA 160.3	Percent	0.01	64.10
Total Organic Carbon	01/14/10 011410#1	Plumb,1981	Percent	0.020	1.52

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ON50-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 02/25/09

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Client ID: T30-09-29
ARI ID: 09-5076 ON50H

Analyte	Date	Method	Units	RL	Sample
Total Solids	02/23/09 022309#1	EPA 160.3	Percent	0.01	60.20
Total Organic Carbon	02/23/09 022309#1	Plumb,1981	Percent	0.020	0.910

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QF22-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/18/10

Project: T30 PDM
Event: 07-08-09-38
Date Sampled: 02/19/09
Date Received: 02/19/09

Client ID: T30-09-31
ARI ID: 10-732 QF22G

Analyte	Date	Method	Units	RL	Sample
Total Solids	01/13/10 011310#1	EPA 160.3	Percent	0.01	67.80
Total Organic Carbon	01/14/10 011410#1	Plumb,1981	Percent	0.020	0.764

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/12/09
Date Received: 11/16/09

Client ID: EW09-CS-001-010
ARI ID: 09-31443 QC54A

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	64.60
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	2.55

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/12/09
Date Received: 11/16/09

Client ID: EW09-CS-002-010
ARI ID: 09-31444 QC54B

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	56.10
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	2.02

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/12/09
Date Received: 11/16/09

Client ID: EW09-CS-003-010
ARI ID: 09-31445 QC54C

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	54.90
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.97

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/12/09
Date Received: 11/16/09

Client ID: EW09-CS-004-010
ARI ID: 09-31446 QC54D

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	66.10
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.50

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/14/09
Date Received: 11/16/09

Client ID: EW09-CS-005-010
ARI ID: 09-31447 QC54E

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	61.60
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.69

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/14/09
Date Received: 11/16/09

Client ID: EW09-CS-006-010
ARI ID: 09-31448 QC54F

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	52.30
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	2.15

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/14/09
Date Received: 11/16/09

Client ID: EW09-CS-007-010
ARI ID: 09-31449 QC54G

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	59.30
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.40

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/16/09
Date Received: 11/16/09

Client ID: EW09-CS-008-010
ARI ID: 09-31450 QC54H

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	64.40
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.56

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/16/09
Date Received: 11/16/09

Client ID: EW09-CS-009-010
ARI ID: 09-31451 QC54I

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	64.20
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.49

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/16/09
Date Received: 11/16/09

Client ID: EW09-CS-010-010
ARI ID: 09-31452 QC54J

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	64.20
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.42

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/16/09
Date Received: 11/16/09

Client ID: EW09-CS-011-010
ARI ID: 09-31453 QC54K

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	70.30
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.05

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/16/09
Date Received: 11/16/09

Client ID: EW09-CS-012-010
ARI ID: 09-31454 QC54L

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	70.00
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.11

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/16/09
Date Received: 11/16/09

Client ID: EW09-CS-013-010
ARI ID: 09-31455 QC54M

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	61.20
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.68

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Client ID: EW09-ITSED-AWMIS-01
ARI ID: 09-31456 QC54N

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	73.80
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	2.29

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: QC54N Client ID: EW09-ITSED-AWMIS-01					
Total Solids	12/23/09	Percent	73.80	73.90 72.50	1.1%
Total Organic Carbon	01/08/10	Percent	2.29	2.65 2.83	10.6%

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Client ID: EW09-ITSED-AWMIS-02
ARI ID: 09-31457 QC54O

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	72.10
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	2.22

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Client ID: EW09-ITSED-AWMIS-03
ARI ID: 09-31458 QC54P

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	75.40
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	2.03

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QC54-Windward Environmental, LLC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 01/11/10

Project: EW RI/FS Surface Sediments
Event: NA
Date Sampled: 11/05/09
Date Received: 11/16/09

Client ID: EW09-ITSED-PAMIS-01
ARI ID: 09-31459 QC54Q

Analyte	Date	Method	Units	RL	Sample
Total Solids	12/23/09 122309#1	EPA 160.3	Percent	0.01	72.50
Total Organic Carbon	01/08/10 010810#1	Plumb,1981	Percent	0.020	1.38

RL Analytical reporting limit
U Undetected at reported detection limit

D-2. BIOASSAY REPORTS AND RESULTS

Report

of

Test No. 783-1

Eohaustorius estuarius 10-Day Toxicity
Test of Marine Sediments

Submitted to

Windward Environmental LLC
200 West Mercer St., Suite 401
Seattle, WA 98119

Submitted by

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

June 10, 2009

TOXICITY TEST REPORT

TEST IDENTIFICATION

Test No.: 783-1

Title: *Eohaustorius estuarius* 10-day sediment toxicity test of marine sediments.

Protocol: NAS-XXX-EE4, February 20, 1992. Rev.3 (March 1, 2005). Based on: Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments (PSEP 1995), with modifications as specified by the Dredged Material Management Program (DMMP, formerly Puget Sound Dredged Disposal Analysis Program or PSDDA) and Washington State Sediment Management Standards (SMS).

STUDY MANAGEMENT

Study Sponsor: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Sponsor's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences, P.O. Box 1437, Newport, Oregon 97365.

Test Location: Newport Laboratory.

Laboratory's Study Personnel: M.S. Redmond, M.S., Proj. Mngr./ Study Dir.; L.K. Nemeth, B.A., M.B.A., QA Officer; R.S. Caldwell, Ph.D., Sr. Aq. Toxicol.; G.J. Irissarri, B.S., Aq. Toxicol.; G.A. Buhler, B.S., Aq. Toxicol.; S.J. Gage, B.A., Sr. Tech.; L.P. Sandoval, B.S., Tech.

Study Schedule:

Test Beginning: 4-21-09, 1245 hrs.

Test Ending: 5-1-09, 1200 hrs.

Disposition of Study Records: All specimens, raw data, reports and other study records are stored according to Good Laboratory Practice regulations at Northwestern Aquatic Sciences, 3814 Yaquina Bay Rd., Newport, OR 97365.

Good Laboratory Practices: The test was conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

Statement of Quality Assurance: The test data were reviewed by the Quality Assurance Unit to assure that the study was performed in accordance with the protocol and standard operating procedures. This report is an accurate reflection of the raw data.

TEST MATERIAL

Control Sediment: Control sediment (NAS Sample #2541G) was collected from the *Eohaustorius estuarius* amphipod collection site, Yaquina Bay, Oregon, on 4-15-09. Interstitial salinity was 17.0 ‰. The sediment was sieved through a 0.5-mm stainless steel screen and stored at 4°C in the dark.

Test Sediments: Nine test sediments and three reference sediments were tested. Details follow:

NAS Sample No.	2471G	2472G	2473G
Sample Description	EW09-SS-220-010	EW09-SS-218-010	EW09-SS-217-010
Collection Date	3-1-09	3-1-09	3-1-09
Receipt Date	3-3-09	3-3-09	3-3-09
Interstitial Salinity (‰)	29.0	29.0	30.0

NAS Sample No.	2493G	2494G	2495G
Sample Description	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-033-010
Collection Date	3-4-09	3-4-09	3-4-09
Receipt Date	3-6-09	3-6-09	3-6-09
Interstitial Salinity (‰)	29.5	29.5	30.0

NAS Sample No.	2496G	2498G	2507G
Sample Description	EW09-SS-032-010	EW09-SS-030-010	EW09-SS-005-010
Collection Date	3-4-09	3-4-09	3-4-09
Receipt Date	3-6-09	3-6-09	3-6-09
Interstitial Salinity (‰)	30.0	30.0	29.5

NAS Sample No.	2520G	2521G	2522G
Sample Description	CI09-SS-020-010	CI09-SS-060-010	CI09-SS-080-010
Collection Date	3-12-09	3-12-09	3-12-09
Receipt Date	3-14-09	3-14-09	3-14-09
Interstitial Salinity (‰)	30.0	30.0	30.0

Sample Storage: Samples were stored at 4°C in the dark.
Treatments: The samples were minimally homogenized by mixing with stainless steel implements.

TEST WATER

Source: Yaquina Bay, Oregon
Date of Collection: 4-20-09
Water Quality: Salinity 28.0 ‰, pH 8.0
Pretreatment: Filtered to ≤0.40 µm, salinity-adjusted with MilliQ deionized water, aerated.

TEST ORGANISMS

Species: *Eohaustorius estuarius*, amphipod
Age: adult
Source: Yaquina Bay, Oregon
Acclimation: Amphipods were collected on 4-15-09 at interstitial water conditions of 10.5 °C and 15.0 ‰. They were acclimated to test temperature and salinity over six days before addition to the test. Average holding conditions during this time were: temperature, 14.2 ± 0.2 °C; pH, 8.0 ± 0.1; salinity, 25.9 ± 4.2 ‰; and dissolved oxygen 8.8 ± 0.4 mg/L. The photoperiod was constant light.

TEST PROCEDURES AND CONDITIONS

The following is an abbreviated statement of the test procedures and a statement of the test conditions actually employed. See the test protocol (Appendix I) for a more detailed description of the test procedures used in this study.

Test Chambers: 1 L covered borosilicate glass beakers
Test Volumes: 175 ml of test, reference, or control sediment; 950 ml total volume.
Replicates/Treatment: 5 (plus one water quality replicate, also used to measure interstitial water ammonia-N on day 10)
Salinity adjustment: none
Organisms/Treatment: 100 (20/replicate)
Water Volume Changes per 24 hr: None.
Aeration: Provided through a 1-mL glass pipette placed not closer than 2 cm from sediment, bubbled at a minimal rate (about 100 bubbles/minute) that did not disturb the sediment surface.
Feeding: None.
Acceptance Criteria: Results are valid if mean control mortality does not exceed 10%, and does not exceed 20% in any one control replicate.
Performance Criteria: For DMMP testing, mean percent mortality in the reference sediment should not be more than 20% greater than that in the control sediment. For SMS testing, mean percent mortality in the reference sediment should be <25%.
Effects Criteria: 1) mortality after 10 days, 2) daily emergence of amphipods from the test sediments, and 3) failure of surviving amphipods to rebury at the end of the exposure period. Death is defined as no visible appendage movement or response to tactile stimulation. Unrecovered animals at the end of the exposure period were considered dead.
Water Quality and Other Test Conditions: The temperature, pH, salinity, and dissolved oxygen were measured in the water quality replicate test chamber daily. Total soluble sulfide and total ammonia-N were measured in the overlying water of the water quality replicate test chamber on days 0 and 10. Interstitial total ammonia-N, pH, and salinity were measured in bulk sediments and from the water quality beaker on test day 10. Interstitial water samples were obtained by centrifugation or by settling. Total soluble sulfide and total ammonia-N were measured using Hach reagents based on the methylene blue (EPA Method 376.2) and salicylate (Clin. Chim.

Acta 14:403, 1996) colorimetric methods, respectively; samples were not distilled prior to analysis. Un-ionized ammonia-N was computed using "Un-ionized Ammonia Calculator", v1.0 (Dr. Landon Ross, Florida Department of Environmental Protection). The photoperiod was constant light.

DATA ANALYSIS METHODS

The percent amphipod mortality, percent of surviving amphipods failing to rebury at the end of the test, and percent total effective mortality were determined from the final observations according to the formulas:

Percent Mortality = 100 x ([initial amphipods - surviving amphipods]/initial amphipods)
Percent Survivors not Reburied = 100 x ([surviving amphipods - number survivors reburied]/surviving amphipods)
Percent Total Effective Mortality = 100 x ([initial amphipods - surviving amphipods]+ [surviving amphipods - number survivors reburied])/initial amphipods

Another endpoint was the sum of observed daily sediment emergence events in a test beaker throughout the test. Control and treatment means and standard deviations for the biological endpoints described above and for water quality data were computed using Microsoft EXCEL 2000.

PROTOCOL DEVIATIONS

1. Several overlying water salinity measurements were slightly above the protocol-specified range of 28.0 ± 1.0‰ (maximum 31.0‰).
2. One dissolved oxygen measurement was inadvertently omitted on day zero.

REFERENCE TOXICANT TEST

The reference toxicant test is a standard multi-concentration toxicity test using ammonia expressed as NH_3-N and administered as NH_3Cl, to evaluate the performance of the test organisms used in the sediment toxicity test. The performance is evaluated by comparing the results of this test with historical results obtained at the laboratory. A summary of the reference toxicant test result is given below. The reference toxicant test raw data are found in Appendix II.

Test No.: 999-2550
Reference Toxicant and Source: Ammonia as ammonium chloride, 9.76 mg ammonia as N/ml stock prepared 3-18-08
Test Date: 4-21-09
Dilution Water Used: Yaquina Bay, Oregon, seawater; 28.0 ‰, pH 8.0
Result: The 96-hr LC50 was 183 mg NH_3-N/L. This result is within the laboratory's control chart warning limits (13.5–310 mg NH_3-N/L).

RESULTS AND DISCUSSION

Observations of overlying water quality parameters during the test are summarized in Table 1. Interstitial water quality measurements during the test are summarized in Table 2. Individual water quality measurements are located in the raw data (Appendix II).

Except as noted above, all measurements of standard water quality parameters were within protocol-specified ranges. Dissolved sulfide was not detected in the overlying water (detection limit 0.02 mg/L). Total ammonia-N concentrations in the overlying water ranged from <0.1 mg/L to 5.6 mg/L (maximum 0.148 mg/L un-ionized ammonia).

In the bulk sediment samples, interstitial total ammonia-N concentrations ranged from 0.6 to 68.9 mg/L. In samples taken on day 10 of the bioassay, interstitial total ammonia-N concentrations ranged from <0.5 mg/L to 7.5 mg/L, with a maximum un-ionized ammonia concentration of 0.096 mg/L (Table 2).

Table 3 shows the effects of test sediment exposures on emergence, mortality, and reburial. The test met the acceptability criterion (≤10%) for mean control mortality; mean mortality in the control was 0.0%. In addition, control mortality was 0.0% in each replicate; therefore, the control replicate acceptability criterion was met (≤20%

in any one replicate). Reference sediment responses met the SMS criterion (<25% mortality); mean mortality in reference sediments CI09-SS-020-010, CI09-SS-060-010, and CI09-SS-080-010 was 2.0%, 6.0%, and 2.0%, respectively. The reference toxicant test result was within the laboratory's control chart warning limits. It is concluded, therefore, that the test has developed fully acceptable data for use in making management decisions.

Because no statistical comparisons were performed between the test sample and the control or reference sediment, no conclusions are given regarding the toxicity of test sediments.

STUDY APPROVAL

Michele S. Redmond 6-10-09
Project Manager/ Study Director Date

Julie R. Fiore 6-10-09
Quality Assurance Unit Date

Linda K. Hemath 6/10/09
Assistant Laboratory Director Date

Table 1. Summary of overlying water quality conditions during exposure of amphipods, *Eohaustorius estuarius*, to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Temperature (°C)	15.7 ± 0.2	15.0	16.0	143
pH	8.1 ± 0.2	7.8	8.7	143
Salinity (‰)	28.9 ± 1.0	27.0	31.0	143
Dissolved oxygen (mg/L)	7.8 ± 0.4	6.6	9.2	142
Total soluble sulfide (mg/L)	---	<0.02	<0.02	26
Total ammonia-N (mg/L)	---	<0.1	5.6	26
Un-ionized ammonia (mg/L)	---	<0.003	0.148	26

Table 2. Summary of interstitial water quality conditions on day 10 of exposure of amphipods, *Eohaustorius estuarius*, to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Salinity (‰)	28.7 ± 1.2	26.5	30.5	13
pH	7.3 ± 0.3	7.0	7.8	13
Total ammonia-N (mg/L)	---	<0.5	7.5	13
Un-ionized ammonia (mg/L)	---	<0.007	0.096	13

Table 3. Means and standard deviations (n=5) of sediment emergence, percent mortality, percent of survivors failing to rebury, and percent total effective mortality of *Eohaustorius estuarius* exposed to marine sediments.

Sample description	Emergence[1] (no./replicate)	Percent mortality	Percent Survivors Failing to Rebury	Percent Total Effective Mortality
Control (NAS #2541G)	0.6 ± 1.3	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
CI09-SS-020-010 (NAS #2520G)	0.4 ± 0.9	2.0 ± 2.7	0.0 ± 0.0	2.0 ± 2.7
CI09-SS-060-010 (NAS #2521G)	5.0 ± 2.4	6.0 ± 4.2	0.0 ± 0.0	6.0 ± 4.2
CI09-SS-080-010 (NAS #2522G)	0.8 ± 1.1	2.0 ± 2.7	0.0 ± 0.0	2.0 ± 2.7
EW09-SS-005-010 (NAS #2507G)	19.4 ± 6.8	10.0 ± 6.1	0.0 ± 0.0	10.0 ± 6.1
EW09-SS-030-010 (NAS #2498G)	12.0 ± 2.9	26.0 ± 8.2	3.1 ± 4.2	28.0 ± 11.0
EW09-SS-032-010 (NAS #2496G)	12.2 ± 5.3	14.0 ± 5.5	0.0 ± 0.0	14.0 ± 5.5
EW09-SS-033-010 (NAS #2495G)	13.2 ± 10.1	35.0 ± 5.0	0.0 ± 0.0	35.0 ± 5.0
EW09-SS-034-010 (NAS #2493G)	10.6 ± 5.7	18.0 ± 11.0	0.0 ± 0.0	18.0 ± 11.0
EW09-SS-035-010 (NAS #2494G)	12.6 ± 5.7	33.0 ± 16.8	0.0 ± 0.0	33.0 ± 16.8
EW09-SS-217-010 (NAS #2473G)	1.6 ± 1.1	2.0 ± 2.7	1.1 ± 2.4	3.0 ± 4.5
EW09-SS-218-010 (NAS #2472G)	1.4 ± 1.5	3.0 ± 2.7	0.0 ± 0.0	3.0 ± 2.7
EW09-SS-220-010 (NAS #2471G)	0.6 ± 0.9	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0

[1] Daily emergence counts include all amphipods observed on or above the sediment surface, whether living or dead.

APPENDIX I

PROTOCOL

TEST PROTOCOL

AMPHIPOD, *EOHAUSTORIUS ESTUARIUS*, 10-DAY SOLID PHASE SEDIMENT BIOASSAY

1. INTRODUCTION

1.1 Purpose of Study: The purpose of this study is to identify marine test sediments that are toxic to an estuarine amphipod.

1.2 Summary of Method: The 10-day static test is performed using adult amphipods obtained from a wild population. Test sediments are placed in the bottom of 1-liter glass beakers used as test vessels that are then filled with clean seawater. Five replicate containers for each test sediment, reference site sediment, and the collection site control sediment, each containing 20 test organisms, are employed. Survival, emergence from the sediment during exposure, and failure to rebury in clean sediment after the test are the response criteria used. The mean and standard deviation for each treatment and test endpoint are given in the final report. Between-treatment statistical comparisons may be made, where each treatment is compared to the control and/or reference sediment. This protocol is based on PSEP (1995) guidelines, PSDDA (PSDDA 1989, U.S. ACOE et al. 2000) modifications, SMS (WDOE 2003) and ASTM E-1367 (ASTM 2004).

2. STUDY MANAGEMENT

2.1 Sponsor's Name and Address:

_____
_____
_____

2.2 Sponsor's Study Monitor:

_____

2.3 Name of Testing Laboratory:
Northwestern Aquatic Sciences
3814 Yaquina Bay Road, P.O. Box 1437
Newport, OR 97365

2.4 Test Location: Newport Laboratory

2.5 Laboratory's Personnel to be Assigned to the Study:
Project Manager/Technical Director: _____
Quality Assurance Officer: _____
Aquatic Toxicologist: _____
Aquatic Toxicologist: _____

2.6 Proposed Testing Schedule: Tests should begin within 2 weeks (8 weeks with samples under nitrogen for PSDDA or SMS) of sample collection. A reference toxicant test is run concurrently.

2.7 Good Laboratory Practices: The test is conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

3. TEST MATERIAL

The test materials are marine or estuarine sediments. *E. estuarius* is a desirable test species for sediments with interstitial water salinity of 2-28 ppt, and the use of the *E. estuarius* bioassay is preferred for sediments with salinities <25 ppt. The collected sediments are placed in a suitable container for shipping and storage. The preferred container is a solvent and acid cleaned 1 L glass jar fitted with a TFE-lined screw cap. The jars are filled completely so that there is no air space. At the laboratory, the samples may be stored at 4°C in the dark in the original sealed containers for up to 2 weeks (8 weeks with no headspace or with samples under nitrogen for PSDDA

or SMS) prior to testing. The negative control sediment is from a clean site, normally the amphipod collection site. In addition, one or more reference sediments, clean sediments with physical characteristics similar to the test sediments, may also be employed.

4. TEST WATER

Test water is filtered Yaquina Bay seawater adjusted to the selected test salinity. The water is pumped from Yaquina Bay into a 6000 gal seasoned fiberglass reservoir from which it is supplied under pump pressure to the laboratory. Filtration is accomplished using a sand filter followed by 5 µm, 1 µm, and 0.40 µm cartridge filters. An alternative seawater supply of similar quality may be used. Seawater should be held at ≤15°C for ≤2 days prior to test initiation.

5. TEST ORGANISMS

5.1 Species: Estuarine amphipod, *Eohaustorius estuarius*.

5.2 Source: Field collected from the lower portion of Beaver Creek, OR, or Yaquina Bay, OR in the intertidal zone. Interstitial water salinity and temperature are measured at the collection site. The sediments are sieved in the field using a 1.0 mm screen and the recovered amphipods, along with miscellaneous debris, are washed into plastic pails of collection site sediment and returned promptly to the laboratory.

5.3 Laboratory Handling: Pails containing the amphipods are placed in a laboratory water bath or controlled temperature room for temperature control and supplied with gentle aeration. As soon as possible after collection, the amphipods are sieved from the pails of sediment and are removed from the holding vessel using a fine mesh aquarium dip net and placed into Pyrex glass sorting trays. The test organisms are picked from the detritus using a large bore eye dropper and 100 amphipods each are placed into small plastic freezer containers (9 cm x 9 cm x 6 cm) holding a 1 cm layer of clean sediment from the collection area. Freezer containers are immersed in a seawater tray provided with seawater and aeration, and held under constant illumination for at least 2 days, but no longer than 10 days prior to the beginning of the test. It may be necessary to acclimate the amphipods to the test salinity, depending upon the collection site salinity and the test water salinity. Although moderate rates of salinity change are preferred, this species is tolerant of rapid salinity changes (DeWitt, et al., 1989).

5.4 Age at Study Initiation: Adult

6. DESCRIPTION OF TEST SYSTEM

6.1 Test Chambers and Environmental Control: Test chambers used in the toxicity test are 1000 ml glass beakers. The beakers are covered to minimize contamination and evaporation of seawater or loss of volatile compounds. Test chambers are maintained at constant temperature by partial immersion in a temperature-controlled water bath or by placement in a temperature-controlled room. Minimal aeration (approx. 100 bubbles/min.) is supplied through a glass pipet with the tip placed at least 2 cm above the sediment surface. The test is performed under continuous illumination, using ambient laboratory lighting. SMS may require UV light for PAH-contaminated intertidal sediments.

6.2 Cleaning: All laboratory glassware, including test chambers, is cleaned as described in EPA/600/4-90/027F. New glassware and test systems are soaked 15 minutes in tap water and scrubbed with detergent (or cleaned in an automatic dishwasher); rinsed twice with tap water; carefully rinsed once with fresh, dilute (10%, V:V) hydrochloric or nitric acid to remove scale, metals, and bases; rinsed twice with deionized water; rinsed once with acetone to remove organic compounds (using a fume hood or canopy); and rinsed three times more with deionized water. Test systems and chambers are rinsed again with dilution water just before use.

7. EXPERIMENTAL DESIGN AND TEST PROCEDURES

7.1 Experimental Design: An experimental design is used consisting of exposure of test organisms to a number of test sediments, one or more reference sediments, and to the collection site control sediment. Each treatment consists of five replicate test chambers each containing 20 animals. An additional replicate containing 20 test organisms is used for daily water quality measurements. More replicates, with or without

test organisms as appropriate, may be employed for periodic interstitial water quality measurements. Blind, random testing is used.

7.2 Preparation of Test Sediments: The interstitial salinity of the test, reference, and control sediments is measured. Adjustment of interstitial salinities is not recommended for *Eohaustorius estuarius* under standard guidelines, as *E. estuarius* tolerates a broad salinity range and any adjustments disturb the test sediments. However, if client project specifications require interstitial salinity adjustment, the PSEP (1995) procedure described for *Rhepoxynius abronius* and *Neanthes arenaceodentata* testing may be used.

Certain projects may require purging of excess ammonia from sediment interstitial water. PSDDA and SMS allow purging to be considered when interstitial total ammonia concentrations are 60 mg/L or above (at pH = 7.7; un-ionized >0.8 mg/L). However, purging is allowed only by agency permission, so the decision to purge should be made by the client. Testing of purged sediments may require concurrent testing of the same sediments unpurged.

If no salinity adjustment or purging is done, sediments are used without further treatment. Each test sediment is mixed thoroughly using a non-contaminating implement, then an aliquot (175 ml) sufficient to make a 2-cm-deep layer is added to each test beaker, and the surface is smoothed. Bubbles are removed from the sediment by gently tapping each beaker against the palm of the hand. Seawater at the test temperature and salinity is carefully added into the beaker to the 750 ml mark utilizing a water dispersal technique to avoid suspending the sediment. The beakers are then placed into the water bath or constant-temperature room and covered with watchglasses. An air delivery pipet is inserted into each beaker under the watchglass. Overhead lights provide constant illumination. Water in the test beakers is aerated without disturbing the sediments. The test system is then allowed to temperature equilibrate overnight.

7.3 Beginning the Test: Amphipods are wet sieved, using a 1.0 mm sieve, from the holding sediment and impartially distributed to a series of seawater-filled containers each holding 10 amphipods. Two containers of 10 animals each are randomly added to each replicate. Once amphipods are added to a replicate, the number of animals that do not burrow into the test sediment within 15 minutes is recorded. Amphipods not burrowed are removed and replaced with healthy amphipods, unless they are actively swimming or burrowing and re-emerging, as this may be a response to toxic material. Following addition of amphipods to the test chambers, additional water is added to achieve a final volume of 950 ml.

7.4 Effects Criteria: Effects criteria are 1) survival after 10 days, 2) daily emergence of amphipods from the test sediments, and 3) failure of amphipods to rebury in sediment at the end of the exposure period. Death is defined as no visible appendage movement or response to tactile stimulation.

7.5 Test Conditions: Test containers are maintained at a constant 15 ± 1°C. The selected test salinity is kept within ± 1 ppt. Frequently, a test salinity of 28 ppt is used to be consistent with *Rhepoxynius* and *Ampelisca* tests. The dissolved oxygen concentration in each test container must be greater than 60% saturation throughout the 10-day test. Each beaker is supplied with oil-free compressed air provided at a rate of approximately 100 bubbles per minute through disposable glass pipettes positioned with their tips at least 2 cm above the sediment surface. Each beaker is covered by a watchglass to minimize evaporation and the possibility of cross contamination between beakers. The test is conducted under constant illumination.

7.6 Feeding: Animals are not fed at any time before or during the test.

7.7 Test Duration, Type and Frequency of Observations, and Methods: The duration of the sediment toxicity test is 10 days. The type and frequency of observations to be made are summarized as follows:

TYPE OF OBSERVATION	TIMES OF OBSERVATION
Biological Data	
Emergence from sediment	daily
Survival	end of test
Reburial	end of test
Physical and Chemical Data	
Sediment interstitial salinity	at test beginning (bulk sediments) & end
Salinity, dissolved oxygen, pH, &temperature of overlying water (1 replicate only)	daily
Ammonia and sulfides in overlying water (1 replicate)	at test beginning & end
Ammonia, sulfide, pH, & salinity in interstitial water (optional)	for PSDDA and SMS, ammonia, pH, & salinity in bulk sediments and at test beginning and end; sulfide as requested by client
Check air and lights	daily

The presence of amphipods that have emerged from the sediments is recorded daily. Any other unusual observations are recorded. No amphipods are removed at any time until the termination of the test. The bioassay is terminated after 10 days of sediment exposure. The sediment is wet sieved through a 0.5 mm screen to recover buried amphipods. The number of surviving amphipods is recorded. For the reburial endpoint, surviving amphipods from each beaker are transferred to containers with a layer of control sediment and observed under constant illumination. The numbers of amphipods able to bury within a 1-hour exposure period are then recorded.

Dissolved oxygen is measured directly in test beakers using an air-calibrated polarographic oxygen probe. The pH is measured using a properly calibrated pH meter with scale divisions of 0.1 pH units. Temperature is measured using a calibrated mercury thermometer or a telethermometer. Salinity is measured using a refractometer. The method used for the measurement of total ammonia-N in the overlying water and sediment porewater from sediment bioassays is based on the salicylate colorimetric method of Hach Chemical Co. and was adapted from Clin. Chim. Acta., 14: 403 (1966). The method used for the measurement of dissolved sulfide in the overlying water and sediment porewater in marine sediment bioassays is the methylene blue colorimetric method based on SM 4500-S^{2-} (Standard Methods 1995 (19th edition). Any observed changes in sediment color or the formation of a sediment discontinuity layer is also recorded.

7.8 Criteria of Test Acceptance: For the test to be considered acceptable, the minimum mean survival of organisms in the control treatment at the end of the test must be 90%, and survival in each control replicate must be at least 80%.

7.9 Performance Criterion: For PSDDA, mean percent mortality in the reference sediments must be ≤20% over the negative control. For SMS, mean percent mortality in the reference sediments must be <25%.

7.10 Reference Toxicant Test: A routine reference toxicant test is run concurrently with each sediment test. This may be a 48-hr test with sodium dodecyl sulfate (preferred), or a 96-hr test with cadmium chloride (frequently required by client). PSDDA and SMS also require a water-only ammonia test when any test sediment interstitial ammonia is > 30 mg/L total ammonia (at pH=7.7; un-ionized >0.4 mg/L).

8. DATA ANALYSIS

The mean and standard deviation are calculated for each endpoint employed (e.g. mortality) and for each treatment (i.e. test sediment). Between-treatment comparisons may be made using a t-test (Student's t-test, approximate t-test, one-sample t-test), Wilcoxon Two-Sample test, Mann-Whitney test, or Rankit Analysis, where each treatment is compared to the control or the reference sediment. An arcsine-square root transformation of proportional data, and tests for normality and heterogeneity of variances, are performed prior to statistical comparisons. An estimate of

total effective mortality (optional) may also be calculated by summing percent mortality and percent failure to rebury.

9. REPORTING

A report of the test results must include the following information: name and identification of the test; the investigator and laboratory; sediment holding temperature data; information on the test sediment including the interstitial salinity for control, reference and test sediments; information on the source of seawater used; detailed information about the test organisms including acclimation conditions; a description of the experimental design and test chambers and other test conditions including water quality; information about any aeration that may have been required; definition of the effects criteria and other observations; unusual responses, if any, in the control treatment: daily emergence for each beaker and the 10-day mean and S.D. for each treatment; 10-day mortality for each beaker and the mean and S.D. for each treatment; failure to rebury and total effective mortality (optional) in each beaker and the mean and S.D. for each treatment; 96-hr LC50 with reference toxicant; a description of data analysis methods employed and documentation of statistical test results; any unusual information about the test or deviations from procedures.

10. STUDY DESIGN ALTERATION

Amendments made to the protocol must be approved by the sponsor and study director and should include a description of the change, the reason for the change, the date the change took effect, and the dated signatures of the study director and sponsor. Any deviations in the protocol must be described and recorded in the study raw data.

11. REFERENCES FOR PROCEDURES

ASTM. 2004. Standard test method for measuring the toxicity of sediment-associated contaminants with estuarine and marine invertebrates. ASTM Standard Method No. E1367-03e1. In: 2004 Annual Book of ASTM Standards, volume 11.05, Biological effects and environmental fate; biotechnology; pesticides. ASTM International, West Conshohocken, PA.

DeWitt, T.H., R.C. Swartz and J.O. Lamberson. 1989. Measuring the acute toxicity of estuarine sediments. Environ. Toxicol. Chem. 8: 1035-1048.

Puget Sound Dredged Disposal Analysis (PSDDA). 1989. Management plan report - unconfined open-water disposal of dredged material, Phase II - (north and south Puget Sound). Puget Sound Dredged Disposal Analysis, Army Corps of Engineers, Seattle, WA. (and other modifications made through the PSDDA process and Sediment Management Annual Review Meetings).

Puget Sound Estuary Program. 1995. Recommended guidelines for conducting laboratory bioassays on Puget Sound sediments. Prepared for U.S. Env. Prot. Agency, Region 10, Office of Puget Sound, Seattle, WA and Puget Sound Water Quality Authority. P.O. Box 40900, Olympia, WA.

U.S. Army Corps of Engineers, Seattle District; U.S. EPA, Region 10; Washington Department of Natural Resources; Washington Department of Ecology. 2000. Dredged material evaluation and disposal procedures: a user's manual for the dredged disposal analysis (PSDDA) program.

Washington State Deparument of Ecology. 2003. Sediment sampling and analysis plan appendix. Publication no. 03-09-043, WDOE, Olympia, WA.

Weber, C.I. (Ed.) 1993. Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms (Fourth Edition). EPA/600/4-90/027F.

12. APPROVALS

.... for .....
Name Date

.... for **NORTHWESTERN AQUATIC SCIENCES**
Name Date

APPENDIX II

RAW DATA

TEST DESCRIPTION, MONITORING, AND RESULTS BENCHSHEETS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

reviewed p. 1-77

Test No. 783-1 Client Windward Investigator MSR 6-5-09

STUDY MANAGEMENT

Client: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Client's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. M.S. Redmond MSR

QA Officer L.K. Nemeth

1. Lidia P. Sandoval LPS
2. G.J. IRISSARRI GJI
3. Susan Gage SG
4. G.A.S. Mahmud
5. R.S. Caldwell
6.
7.
8.

Study Schedule:

Test Beginning: 4-21-09 12:45 Test Ending: 5-1-09 12:00

TEST MATERIAL

General description (see sample logbook/chain-of-custody for details):

NAS Sample No.:	2471G	2472G	2473G	2493G	2494G
Description:	EW09-SS-220-010	EW09-SS-218-010	EW09-SS-217-010	EW09-SS-034-010	EW09-SS-035-010
Collection Date:	3/1/09	3/1/09	3/1/09	3/4/09	3/4/09
Receipt Date:	3/3/09	3/3/09	3/3/09	3/6/09	3/6/09
Inters.Salinity (ppt):	29.0	29.0	30.0	29.5	29.5
:					

NAS Sample No.:	2495G	2496G	2498G	2507G	2520G
Description:	EW09-SS-033-010	EW09-SS-032-010	EW09-SS-030-010	EW09-SS-005-010	CI09-SS-020-010
Collection Date:	3/4/09	3/4/09	3/4/09	3/4/09	3/12/09
Receipt Date:	3/6/09	3/6/09	3/6/09	3/6/09	3/14/09
Inters.Salinity (ppt):	30.0	30.0	30.0	29.5	30.0
:					

NAS Sample No.:	2521G	2522G			
Description:	CI09-SS-060-010	CI09-SS-080-010			
Collection Date:	3/12/09	3/12/09			
Receipt Date:	3/14/09	3/14/09			
Inters.Salinity (ppt):	30.0	30.0			
:					

NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					

Error codes: 1) correction of handwriting error
2) written in wrong location; entry deleted
3) wrong date deleted, replaced with corrrect date
4) error found in measurement; measurement repeated

Test No. 783-1 Client Windward Investigator

SEDIMENT DESCRIPTIONS -- SUPPLEMENTAL NOTES

Sample No.	Description
2471G	brown gray sandy mud with shell fragments
2472G	dark gray muddy fine sand
2473G	dark gray muddy fine sand
2493G	dark gray fine mud
2494G	dark gray fine mud
2495G	dark gray/green fine mud
2496G	brown gray fine mud
2498G	dark gray/green fine mud
2507G	dark gray mud with shell fragments
2520G	gray sand
2521G	fine gray muddy sand with shells
2522G	brown gray fine sandy mud
2541G	brown sand

Test No. 783-1 Client Windward Investigator

TEST ORGANISMS

Species: *Eohaustorius estuarius* Date Collected: 4-15-09
Source: Yaquina Bay, Oregon

Field conditions when collected:
Interstitial temperature: 10.5 °C Interstitial salinity: 15.0 ‰

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
4-15-09	13.9	8.1	20.0	9.2				
4-16-09	14.0	7.9	20.5	9.1				
4-17-09	14.2	8.0	25.0	9.0				
4-18-09	14.2	8.1	27.5	9.1				
4-19-09	14.1	8.1	28.0	8.5				
4-20-09	14.2	8.0	30.0	8.3				
4-21-09	14.5	8.0	30.0	8.4				
Mean	14.2	8.0	25.9	8.8				
S.D.	0.2	0.1	4.2	0.4				
(N)	(7)	(7)	(7)	(7)				

Photoperioc during acclimation: constant light

TEST PROCEDURES AND CONDITIONS

Test chambers: 1 L glass beakers covered with watchglasses
Test volumes: 175 ml of test seciment; 950 ml total volume
Replicates/treatment: (5) 5 Organisms/treatment: (100) 100
Additional replicates includec for water quality purposes (indicate numbers of each that apply):

_____ Ammonia-purging sacrificial beakers (no test organisms)

_____ Day zero sacrificial beaker (no test organisms)

1 Day 10 sacrificial beaker (also water quality beaker; with test organisms)

_____ Day _____ sacrificial beaker(s) (with test organisms)

Test water changes: None
Feeding: None
Beaker placement: Total randomization

Aeration: Yes, at least 2 cm above the sediment surface
Photoperiod: Constant light
Test temperature (deg.C) 15.0 +/- 1.0
Salinity (ppt): 28.0 +/- 1.0

MISCELLANEOUS NOTES

Light intensity measurements:

Date	Location in room	foot-candles
4-25-09	beaker #22	137
	#68	161

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

Control Sediment:

Source: Yaquina Bay, Oregon

Date collected: 4-15-09 Interstitial salinity: 17.0 ‰

Sieved through 0.5-mm screen

Storage: 4°C (in the dark) NAS# 2541G

Test conducted in (circle one): room 1 room 2 trailer water bath other: room #4

Randomization chart:

top shelf

3	6							51	54
2	5							50	53
1	4							49	52

→ door

Randomization chart:

bottom shelf

				57	60			75	78
				56	59			74	77
				55	58			73	76

→ door

Randomization chart:

Randomization chart:

TEST WATER

Source: Yaquina Bay, Oregon, sea water

Date of Collection: 4-20-09 Salinity (ppt) 28.0 pH 8.0

Treatments: filtered to 0.4 µm, salinity-adjusted with MilliQ deionized water, aerated

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

overlying NH3 sampled (days 0,10)? yes

Day 0 (4/21/09) MLR

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. ** emerged	Air	Comments
* 1	15.4	7.9	27.5	7.6	<0.02	0	all	
2						0	OK	
3						1		
* 4	15.4	7.9	27.5	7.2	<0.02	0		
5						3		
6						0		
7						0		
8						0		
9						0		
10						0		
11						0		
12						0		
13						0		
14						1		
* 15	15.3	7.9	27.5	7.4	<0.02	0		
16						0		
17						0		
18						0		
19						0		
20						0		
21						0		
* 22	15.4	8.0	27.5	8.1	<0.02	0		
* 23	15.2	8.0	27.5			0		
24						0		
25						0		
* 26	15.2	7.9	28.0	7.7	<0.02	0		
27						1		
28						0		
29						6		
30						0		
31						1		
32						2		
33						0		
34						0		
35						0		
36						0		
37						0		
* 38	15.2	8.0	27.5	7.8	<0.02	0		
39						1		
40						0		

* Water Quality Beakers ** for day zero only, this is number not buried within 10-15 minutes ; all actively swimming & not replaced - MLR

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 0 (4/21/09) LB/MSR

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. ** emerged	Air	Comments
41						2	all OK	
42	15.1					0		
* 43	~~15.4~~	7.9	28.0	7.8	<0.02	0		
44	15.1					0		
* 45	~~15.4~~	7.9	28.0	7.7	<0.02	0		
46						0		
47						0		
48						0		
49						0		
50						0		
51						0		
* 52	15.0	7.9	27.5	7.7	<0.02	0		
53						0		
54						1		
55						0		
56						0		
57						0		
58						4		
59						0		
* 60	15.0	8.0	27.5	8.0	<0.02	0		
61						0		
62						0		
63						0		
64						0		
65						0		
66						0		
67						1		
68						0		
69						0		
70						0		
71						0		
* 72	15.0	7.9	28.0	8.0	<0.02	6		
73						0		
74						0		
* 75	15.0	7.9	28.0	7.6	<0.02	0		
76						1		
77						0		
78						7		

PS (4) 4-21-09

* Water Quality Beakers

** for day zero only, this is number not buried within 10-15 minutes; all actively swimming & not replaced - MSR

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 1 (4/22/09) 633

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	15.9	7.9	27.5	7.6	0	OK	
2					0		
3					1		
* 4	15.7	7.9	27.5	7.7	0		
5					1		
6					0		
7					1		
8					0		
9					0		
10					0		
11					0		
12					0		
13					1		
14					1		
* 15	15.7	7.9	27.5	7.7	0		
16					0		
17					0		
18					0		
19					0		
20					0		
21					1		
* 22	15.8	8.1	27.0	8.2	0		
* 23	15.6	7.9	27.5	7.8	0		
24					0		
25					0		
* 26	15.8	7.9	27.5	7.8	0		
27					0		
28					0		
29					0		
30					1		
31					2		
32					0		
33					0		
34					0		
35					0		
36					0		
37					0		
* 38	15.7	8.0	27.5	7.9	0		
39					0		
40					0		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 1 (4/22/09) GSL

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					1	OK	
42					0		
* 43	15.5	8.0	27.5	7.9	0		
44					0		
* 45	15.5	7.9	27.5	7.7	1		
46					2		
47					1		
48					0		
49					0		
50					0		
51					0		
* 52	15.4	7.9	27.5	7.5	0		
53					0		
54					0		
55					0		
56					0		
57					0		
58					1		
59					0		
* 60	15.6	7.9	27.5	7.5	0		
61					0		
62					1		
63					0		
64					0		
65					0		
66					0		
67					3		
68					0		
69					0		
70					0		
71					0		
* 72	15.6	8.0	27.0	7.5	0		
73					1		
74					0		
* 75	15.6	7.9	27.5	8.0	0		
76					0		
77					0		
78					2		
					0 GSL		
					0 4-22-09		

* Water Quality Beakers

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 2. (4/23/09) UPS

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	16.0	7.9	28.0	7.6	2	OK	
2					0		
3					3		
* 4	15.9	7.9	28.0	7.6	2		
5					2		
6					0		
7					0		
8					0		
9					1		
10					0		
11					2		
12					0		
13					1		
14					5		
* 15	15.9	7.9	28.5	7.8	1		
16					0		
17					0		
18					0		
19					1		
20					0		
21					0		
* 22	16.0	8.1	27.5	8.2	0		
* 23	15.7	7.9	28.5	7.7	1		
24					1		
25					0		
* 26	15.8	7.8	28.5	7.4	0		
27					2		
28					0		
29					0		
30					0		
31					3		
32					0		
33					1		
34					0		
35					3		
36					0		
37					0		
* 38	15.9	8.0	28.0	8.0	0		
39					2		
40					2		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 2 (4/23/09 ws

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					1	OK	
42					1		
* 43	15.8	8.0	28.0	8.0	0		
44					0		
PS (4) 4-23-09 * 45	15.8	7.9	~~28.0~~ 28.5	7.8	3		
46					2		
47					2		
48					0		
49					2		
50					3		
51					0		
* 52	15.5	7.8	28.5	7.6	0		
53					1		
PS (4) 4-23-09 54					~~0~~ 3		
55					0		
56					0		
57					0		
58					1		
59					0		
* 60	15.8	7.9	28.5	7.2	0		
61					0		
62					0		
63					0		
64					0		
65					0		
66					0		
67					1		
68					0		
69					0		
70					0		
71					0		
* 72	15.9	8.0	28.5	7.6	0		
73					2		
74					0		
* 75	15.9	7.9	28.0	7.8	0		
76					2		
77					0		
78					0		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 3 (4/24/09)

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	15.9	8.0	30.5	7.5	3	Aerated	
2					0		
3					4		
* 4	15.9	8.0	28.5	7.4	0		
5					2		
6					0		
7					0		
8					0		
9					0		
10					0		
11					1		
12					0		
13					2		
14					2		
* 15	15.9	8.0	29.0	7.6	2		
16					0		
17					0		
18					1		
19					1		
20					0		
21					2		
* 22	16.0	8.1	28.0	7.8	0		
* 23	15.8	7.9	28.5	7.4	0		
24					1		
25					0		
* 26	15.8	~~7.9~~ 8.0	29.0	7.7	0		
27					4		
28					0		
29					0		
30					0		
31					3		
32					1		
33					1		
34					0		
35					1		
36					0		
37					3		
* 38	15.9	8.1	29.0	7.8	0		
39					4		
40					4		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 3 (4/24/09 [illegible]

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					2	Air	
42					1		
* 43	15.8	8.0	28.5	7.8	0		
44					0		
* 45	15.7	7.9	29.0	7.3	1		
46					2		
47					3		
48					0		
49					0		
50					0		
51					0		
* 52	15.5	7.9	29.0	7.4	0		
53					0		
54					2		
55					0		
56					1		
57					1		
58					0		
59					0		
* 60	15.7	8.0	28.5	7.6	0		
61					0		
62					1		
63					0		
64					0		
65					0		
66					0		
67					4		
68					1		
69					0		
70					0		
71					0		
* 72	15.8	8.1	28.5	7.6	0		
73					2		
74					0		
* 75	15.8	8.0	29.0	7.7	0		
76					3		
77					0		
78					0		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 4 (4 12/5/09) MR

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	15.9	8.0	27.5	7.4	3	all	
2					0	OK	
3					3		
* 4	15.7	8.0	28.0	7.8	0		
5					1		
6					0		
7					0		
8					0		
9					0		
10					0		
11					1		
12					0		
13					0		
14					5		
* 15	15.9	8.0	28.0	7.9	2		
16					0		
17					0		
18					2		
19					1		
20					0		
21					1		
* 22	15.9	8.2	27.5	8.2	0		
* 23	15.5	8.0	28.0	7.8	2		
24					0		
25					0		
* 26	15.6	8.1	29.0	8.0	0		
27					5		
28					0		
29					0		
30					2		
31					4		
32					2		
33					1		
34					0		
35					1		
36					0		
37					3		
* 38	15.7	8.2	28.5	8.2	0		
39					1		
40					2		

* Water Quality Beakers

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 4 (4/25/09) MER

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					3	all	
42					2	OK	
* 43	15.7	8.0	29.0	8.0	0		
44					0		
* 45	15.7	8.0	29.0	7.7	0		
46					5		
47					2		
48					0		
49					0		
50					1		
51					0		
* 52	15.5	7.9	29.5	7.8	1		
53					1		
54					0		
55					0		
56					0		
57					1		
58					0		
59					0		
* 60	15.9	8.0	29.0	8.0	0		
61					0		
62					3		
63					0		
64					0		
65					0		
66					0		
67					3		
68					0		
69					0		
70					0		
71					0		
* 72	15.8	8.2	29.0	8.9	0		
73					2		
74					0		
* 75	15.9	8.0	29.0	8.2	0		
76					2		
77					1		
78					0	✓	

* Water Quality Beakers

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 5 (9/22/09) 631

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	15.9	8.0	28.0	7.5	4	ok	
2					0		
3					1		
* 4	15.8	8.0	29.0	7.3	2		
5					1		
6					0		
7					0		
8					0		
9					0		
10					0		
11					0		
12					6		
13					2		
14					4		
* 15	15.7	8.0	29.0	7.4	2		
16					0		
17					0		
18					1		
19					0		
20					0		
21					0		
* 22	15.9	8.1	28.0	7.8	0		
* 23	15.6	7.9	28.5	7.4	2		
24					1		
25					0		
* 26	15.6	8.0	29.0	7.8	0		
27					0		
28					0		
29					0		
30					1		
31					2		
32					3		
33					0		
34					0		
35					1		
36					0		
37					1		
* 38	15.7	8.2	29.0	7.9	0		
39					3		
40					0	✓	

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 5 (4/22/09) 6.01

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					0	ok	
42					2		
* 43	15.7	8.0	28.5	7.7	0		
44					0		
* 45	15.6	8.0	29.0	7.3	1		
46					3		
47					3		
48					0		
49					0		
50					1		
51					0		
* 52	15.4	8.0	29.0	7.8	1		
53					3		
54					0		
55					0		
56					0		
57					0		
58					0		
59					0		
* 60	15.8	7.9	28.5	7.6	0		
61					0		
62					1		
63					0		
64					0		
65					0		
66					1		
67					1		
68					0		
69					0		
70					0		
71					0		
* 72	15.9	8.3	28.0	8.2	0		
73					3		
74					0		
* 75	15.9	8.1	28.5	7.8	0		
76					0		
77					0		
78					0		

* Water Quality Beakers

Test No 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 6 (4/27 09:00)

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	15.9	8.0	29.0	7.6	4	aerate	
2					0		
3					1		
* 4	15.8	8.0	29.5	7.5	0		
5					3		
6					0		
7					2		
8					0		
9					0		
10					2		
11					0		
12					0		
13					1		
14					0		
* 15	15.8	8.1	29.5	7.6	2		
16					0		
17					0		
18					3		
19					1		
20					0		
21					0		
* 22	15.9	8.1	28.0	7.9	0		
* 23	15.6	8.0	30.0	7.5	0		
24					1		
25					0		
* 26	15.6	8.0	30.0	7.9	0		
27					2		
28					0		
29					1		
30					2		
31					4		
32					0		
33					1		
34					0		
35					1		
36					0		
37					0		
* 38	15.7	8.2	30.0	8.1	0		
39					0		
40					1		

* Water Quality Beakers

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 6 (4/27/09)

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No emerged	Air	Comments
41					Ø	ALL	
42					Ø		
* 43	15.7	8.0	29.0	7.9	Ø		
44					Ø		
* 45	15.6	8.0	29.5	7.4	3		
46					Ø		
47					1		
48					Ø		
49					Ø		
50					1		
51					Ø		
* 52	15.5	8.0	~~29.5~~ 31.0 (4/27/09)	7.9	1		
53					2		
54					Ø		
55					2		
56					1		
57					2		
58					Ø		
59					1		
* 60	15.7	7.9	~~28.0~~ 29.0 (4/27/09)	7.8	Ø		
61					Ø		
62					3		
63					Ø		
64					Ø		
65					Ø		
66					Ø		
67					2		
68					Ø		
69					Ø		
70					Ø		
71					Ø		
* 72	15.8	8.4	30.0	8.6	Ø		
73					2		
74					Ø		
* 75	15.9	8.1	30.0	8.1	Ø		
76					Ø		
77					Ø		
78					Ø		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 7 (4/28/09 AS

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	15.9	8.1	28.5	6.8	3	Aerok	
2					0		
3					0		
* 4	15.8	8.2	29.0	6.9	0		
5					4		
6					0		
7					2		
8					0		
9					1		
10					0		
11					4		
12					1		
13					1		
14					0		
* 15	15.7	8.2	29.0	6.9	0		
16					0		
17					0		
18					2		
19					2		
20					0		
21					0		
* 22	15.8	8.1	30.0	6.9	0		
* 23	15.6	8.1	29.5	6.6	1		
24					0		
25					0		
* 26	15.7	8.1	29.5	6.9	0		
27					0		
28					0		
29					1		
30					1		
31					1		
32					0		
33					2		
34					0		
35					1		
36					0		
37					0		
* 38	15.7	8.3	29.5	7.1	0		
39					1		
40					2		

* Water Quality Beakers

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 7 (4/28/09 [illegible]

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					0	Air	
42					0		
* 43	15.7	8.1	29.5	7.0	0		
44					0		
* 45	15.6	8.0	30.0	6.6	0		
46					0		
47					3		
48					0		
49					0		
50					2		
51					0		
* 52	15.4	8.0	31.0	6.9	1		
53					0		
54					2		
55					0		
56					0		
57					1		
58					0		
59					0		
* 60	15.6	7.9	29.5	7.8	0		
61					0		
62					2		
63					0		
64					0		
65					1		
66					0		
67					3		
68					0		
69					0		
70					0		
71					0		
* 72	15.6	8.5	29.5	8.8	0		
73					1		
74					0		
* 75	15.7	8.1	29.5	7.3	0		
76					0		
77					1		
78					0		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 8 (4/29/09)

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	16.0	8.0	29.0	7.6	1	OK	
2					0		
3					1		
* 4	16.0	8.2	29.5	7.6	0		
5					1		
6					0		
7					1		
8					0		
9					0		
10					0		
11					5		
12					1		
13					1		
14					2		
* 15	16.0	8.2	29.0	7.6	0		
16					0		
17					0		
18					3		
19					2		
20					1		
21					0		
* 22	15.9	8.0	28.5	7.7	0		
* 23	15.6	8.0	30.5	7.3	0		
24					0		
25					0		
* 26	15.7	8.1	30.0	7.8	0		
27					0		
28					0		
29					1		
30					2		
31					6		
32					0		
33					2		
34					0		
35					0		
36					0		
37					0		
* 38	15.7	8.4	29.5	8.4	0		
39					0		
40					1		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 8 (4/29/09)

Beaker No.	Temp. (deg C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					0	OK	
42					2		
* 43	15.7	8.1	30.5	~~7.6~~ 7.9	0		
44					0		
* 45	15.7	8.0	30.5	~~7.6~~ 7.2	0		
46					0		
47					4		
48					0		
49					0		
50					5		
51					0		
* 52	15.4	8.0	31.0	7.6	1		
53					1		
54					2		
55					0		
56					0		
57					1		
58					0		
59					1		
* 60	15.7	~~8.5~~ 8.0	30.0	7.7	0		
61					0		
62					2		
63					0		
64					0		
65					0		
66					0		
67					2		
68					1		
69					0		
70					0		
71					0		
* 72	15.7	8.5	29.5	8.7	0		
73					0		
74					0		
* 75	15.7	8.2	29.5	8.4	0		
76					1		
77					0		
78					1		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 9 (4/30/09 sf

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
* 1	15.9	8.1	28.5	7.6	1	OK	
2					0		
3					2		
* 4	15.8	8.3	30.0	7.8	0		
5					2		
6					0		
7					0		
8					0		
9					0		
10					0		
11					4		
12					1		
13					1		
14					1		
* 15	15.9	8.4	29.0	7.6	0		
16					0		
17					0		
18					0		
19					3		
20					0		
21					0		
* 22	15.9	8.0	28.5	7.7	0		
* 23	15.9	8.2	30.0	7.8	1		
24					0		
25					0		
* 26	15.7	8.1	30.5	8.0	1		
27					0		
28					0		
29					0		
30					0		
31					1		
32					0		
33					1		
34					0		
35					1		
36					0		
37					0		
* 38	15.7	8.5	30.0	8.9	0		
39					3		
40					0		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 9 (4/30/09)

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
41					0	ok	
42					0		
* 43	15.7	8.1	30.5	8.3	0		
44					0		
* 45	15.7	8.1	30.5	7.4	0		
46					1		
47					5		
48					0		
49					0		
50					0		
51					0		
* 52	15.5	8.0	31.0	7.9	1		
53					0		
54					1		
55					0		
56					0		
57					3		
58					0		
59					1		
* 60	15.7	8.0	30.0	8.0	1	air off	reestablished air
61					0	ok	
62					0		
63					3		
64					0		
65					0		
66					0		
67					1		
68					1		
69					0		
70					0		
71					0		
* 72	15.7	8.6	30.5	8.6	0		
73					0		
74					0		
* 75	15.8	8.4	29.5	9.2	0		
76					1		
77					0		
78					1		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

overlying NH3 sampled (days 0,10)? yes

Day 10 (5/1/09) [illegible]

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. emerged	Air	Comments
* 1	15.8	8.0	29.0	8.1	<0.02	1	OK	
2						0		
3						2		
* 4	15.8	8.3	30.0	8.0	<0.02	1		
5						3		
6						0		
7						0		
8						0		
9						1		
10						0		
11						3		
12						0		
13						2		
14						3		
* 15	15.8	8.3	29.5	7.9	<0.02	0		
16						0		
17						0		
18						1		
19						2		
20						0		
21						0		
* 22	15.8	8.0	29.0	8.0	<0.02	0		
* 23	15.8	8.1	30.0	7.8	<0.02	0		
24						1		
25						0		
* 26	15.7	8.0	30.0	7.7	<0.02	2		
27						1		
28						0		
29						0		
30						1		
31						1		
32						0		
33						1		
34						0		
35						0		
36						0		
37						0		
* 38	15.7	8.6	30.0	7.8	<0.02	0		
39						2		
40						2		

* Water Quality Beakers

Test No. 783-1 Client Windward Investigator

DAILY RECORD SHEET

Day 10 (5/1 log)u13

Beaker No.	Temp. (deg C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. ** emerged	Air	Comments
41						1	OK	
42						0		
* 43	15.7	8.2	31.0	7.9	<0.02	0		
44						0		
* 45	15.6	8.1	30.5	8.0	<0.02	2		
46						0		
47						6		
48						2		
49						0		
50						0		
51						0		
* 52	15.4	8.0	31.0	8.1	<0.02	1		
53						0		
54						0		
55						0		
56						0		
57						3		
58						0		
59						0		
* 60	15.7	8.0	31.0	8.0	<0.02	1		
61						0		
62						2		
63						0		
64						0		
65						0		
66						0		
67						2		
68						0		
69						0		
70						0		
71						0		
* 72	15.7	8.5	31.0	8.3	<0.02	0		
73						0		
74						0		
* 75	15.7	8.7	29.0	8.8	<0.02	0		
76						1		
77						0		
78						2		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-1 Client Windward Investigator

DAY 10 TEST TERMINATION SHEET

Beaker No.	No. of Survivors	Number reburied	Initial	Comment
1				
2	20	20	MSR	
3	15	15	GJL	1 DEAD
4				
5	18	18	MSR	
6	20	20	GJL	
7	16	16	GJL	
8	20	20	MSR	
9	17	17	GJL	
10	20	20	GJL	
11	17	17	GJL	
12	19	19	MSR	
13	9	9	GJL	
14	18	18	MSR	
15				
16	19	19	GJL	
17	20	20	GJL	
18	18	18	GJL	
19	16	16	GJL	1 DEAD
20	20	20	GJL	
21	13	13	GJL	
22				
23				
24	11	11	LPS	
25	20	20	GJL	
26				
27	20	20	MSR	
28	20	20	GJL	
29	18	18	GJL	
30	15	15	GJL	
31	17	17	GJL	
32	19	19	MSR	
33	16	16	LPS	
34	20	20	MSR	
35	18	18	GJL	
36	20	20	GJL	
37	14	14	GJL	
38				
39	14	14	LPS	+ 1 dead
40	13	12	LPS	

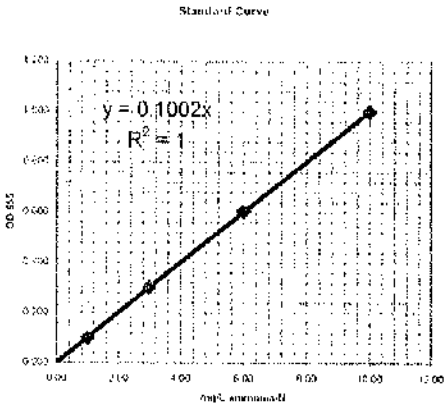
Beaker No.	No. of Survivors	Number reburied	Initial	Comment
41	19	19	MSR	
42	15	15	MSR	
43				
44	20	20	GJL	
45				
46	20	20	GJL	
47	12	12	MSR	+ 1 dead
48	19	19	LPS	
49	20	20	GJL	
50	16	16	GJL	
51	19	19	LPS	
52				
53	16	16	MSR	+ 1 dead
54	16	16	GJL	
55	20	20	GJL	
56	19	18	LPS	
57	12	12	MSR	
58	20	20	GJL	
59	20	20	GJL	
60				
61	19	19	GJL	
62	13	12	LPS	
63	19	19	GJL	
64	20	20	MSR	
65	20	20	GJL	
66	19	19	GJL	
67	18	18	LPS	+ 1 dead
68	20	20	GJL	
69	20	20	MSR	
70	20	20	GJL	
71	20	20	GJL	
72				
73	14	14	GJL	
74	19	19	GJL	
75				
76	17	17	MSR	+ 1 dead
77	20	20	GJL	
78	18	18	GJL	

water quality beakers

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	-----		
	1.0 mg/L NH_3-N Std.	-----	0.098	1.00		
	3.0 mg/L NH_3-N Std.	-----	0.301	3.00		
	6.0 mg/L NH_3-N Std.	-----	0.604	6.00		
	10.0 mg/L NH_3-N Std.	-----	1.000	10.00		
	3.0 mg/L spike	-----	0.301	3.00		
	3.0 mg/L spike dupl.	-----	0.309	3.08		
	5.0 mg/L 2nd source		0.482	4.81		
1.	Day 0 (4-21-09)	######				
2.	2471G	5	0.100	4.99		
3.	2472G	5	0.108	5.39		
4.	2473G	5	0.101	5.04		
5.	2493G	5	0.077	3.84		
6.	2494G	5	0.049	2.45		
7.	2495G	5	0.031	1.55		
8.	2496G	5	0.071	3.54		
9.	2498G	5	0.047	2.35		
10.	2507G	5	0.380	18.97		
11.	2520G	5	0.284	14.18		
12.	2521G	5	1.380	68.88		
13.	2522G	5	0.507	25.31		
14.	2541G	5	0.011	0.55		
15.						
16.						
17.						
18.						
19.						
20.						
21.						
22						
23.						
24.						
25						
26.						
27.						
28.						
29.						
30.						
31.						
32.						
33						
34						
35						
36						



Reporting limit (mg/L) = 0.5

Recovery (%) = 101.5
Precision (RPD) = -2.62
2nd source (%) = 96.2

Sample volume (ml): 0.10
Dilution factor 5

Sample Set Description:
Test No.: 783-1
Test Day: 0
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 4/29/2009

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	------		
	1.0 mg/L NH_3-N Std.	-----	.098	1.00		
	3.0 mg/L NH_3-N Std.	-----	.301	3.00		
	6.0 mg/L NH_3-N Std.	-----	.604	6.00		
	10.0 mg/L NH_3-N Std.	-----	1.00	10.00		
	3.0 mg/L spike	-----	.301			
	3.0 mg/L spike dupl.	-----	.309			
	5.0 mg/L 2nd source		.482			
1.	Day 0 (4-21-09)	######				
2.	2471G	5	.100		7.3	29.0
3.	2472G	5	.108		7.2	29.0
4.	2473G	5	.101		7.6	30.0
5.	2493G	5	.077		7.4	29.5
6.	2494G	5	.044		7.4	29.5
7.	2495G	5	.031		7.6	30.0
8.	2496G	5	.071		7.3	30.0
9.	2498G	5	.097		7.4	30.0
10.	2507G	5	.380		7.3	29.5
11.	2520G	5	.284		7.8	30.0
12.	2521G	5	.138		7.4	30.0
13.	2522G	5	.507		7.6	30.0
14.	2541G	5	.011		7.6	17.0
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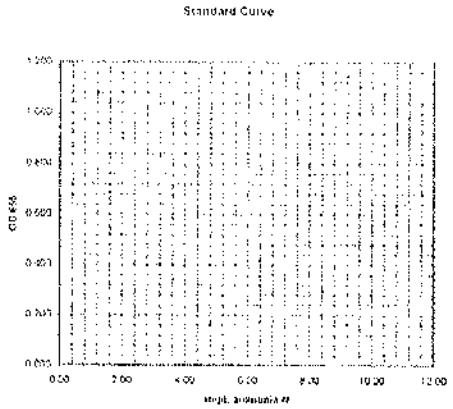

Reporting limit (mg/L) =	0.5
Recovery (%) =	#VALUE!
Precision (RPD) =	#VALUE!
2nd source (%) =	#VALUE!
Sample volume (ml)	0.10
Dilution factor	5

Sample Set Description:

Test No.: 783-1
Test Day: 0
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 4/29/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	0.098	1.00
	3.0 mg/L NH_3-N Std.	-----	0.301	3.00
	6.0 mg/L NH_3-N Std.	-----	0.604	6.00
	10.0 mg/L NH_3-N Std.	-----	1.000	10.00
	3.0 mg/L spike	-----	0.301	3.00
	3.0 mg/L spike dupl.	-----	0.309	3.08
	5.0 mg/L 2nd source	-----	0.482	4.81
1.	Day 0 (4-21-09)	######		
2.	1	1	0.227	2.27
3.	4	1	0.045	0.45
4.	15	1	0.020	0.20
5.	22	1	0.000	ND
6.	23	1	0.028	0.28
7.	26	1	0.014	0.14
8.	38	1	0.219	2.19
9.	43	1	0.057	0.57
10.	45	1	0.014	0.14
11.	52	1	0.032	0.32
12.	60	1	0.053	0.53
13.	72	1	0.562	5.61
14.	75	1	0.123	1.23
15.				
16.				
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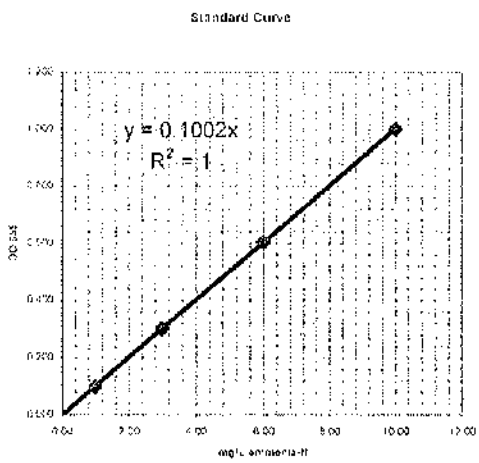

Reporting limit (mg/L) =	0.1
Recovery (%) =	101.5
Precision (RPD) =	-2.62
2nd source (%) =	96.2
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-1
Test Day: 0
Species: *Eohaustorius*

Overlying water

Analyst: RSC
Date analysed: 4/29/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	.098	1.00
	3.0 mg/L NH_3-N Std.	-----	.301	3.00
	6.0 mg/L NH_3-N Std.	-----	.604	6.00
	10.0 mg/L NH_3-N Std.	-----	1.00	10.00
	3.0 mg/L spike	-----	.301	
	3.0 mg/L spike dupl.	-----	.309	
	5.0 mg/L 2nd source	-----	.482	
1.	Day 0 (4-21-09)	######		
2.	1	1	.127	
3.	4	1	.045	
4.	15	1	.020	
5.	22	1	.000	
6.	23	1	.028	
7.	26	1	.014	
8.	38	1	.219	
9.	43	1	.057	
10.	45	1	.014	
11.	52	1	.032	
12.	60	1	.053	
13.	72	1	.562	
14.	75	1	.123	
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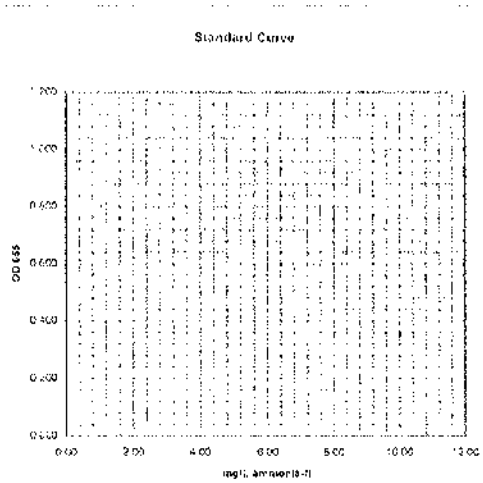

Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-1
Test Day: 0
Species: *Eohaustorius*

Overlying water

Analyst: RSC
Date analysed: 4/29/2009

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	-----		
	1.0 mg/L NH_3-N Std.	-----	0.111	1.00		
	3.0 mg/L NH_3-N Std.	-----	0.310	3.00		
	6.0 mg/L NH_3-N Std.	-----	0.620	6.00		
	10.0 mg/L NH_3-N Std.	-----	1.050	10.00		
	3.0 mg/L spike	-----	0.312	2.98		
	3.0 mg/L spike dupl.	-----	0.308	2.95		
	5.0 mg/L 2nd source		0.505	4.83		
1.	1	5	0.157	7.51		
2.	4	5	0.024	1.15		
3.	15	5	0.038	1.82		
4.	22	5	0.006	ND		
5.	23	5	0.027	1.29		
6.	26	5	0.023	1.10		
7.	38	5	0.024	1.15		
8.	43	5	0.022	1.05		
9.	45	5	0.025	1.20		
10.	52	5	0.031	1.48		
11.	60	5	0.024	1.15		
12.	72	5	0.148	7.08		
13.	75	5	0.020	0.96		
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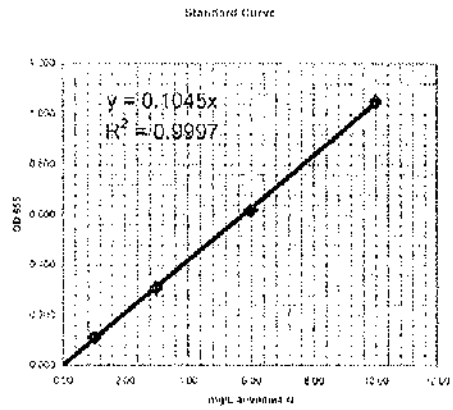

Reporting limit (mg/L) =	0.5
Recovery (%) =	98.8
Precision (RPD) =	1.29
2nd source (%) =	96.6
Sample volume (ml):	0.10
Dilution factor	5

Sample Set Description:

Proj.No.: 783-1
Test Day: 10
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 5/1/2009

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	-----		
	1.0 mg/L NH3-N Std.	-----	.111	1.00		
	3.0 mg/L NH3-N Std.	-----	.310	3.00		
	6.0 mg/L NH3-N Std.	-----	.620	6.00		
	10.0 mg/L NH3-N Std.	-----	1.05	10.00		
	3.0 mg/L spike	-----	.312			
	3.0 mg/L spike dupl.	-----	.308			
	5.0 mg/L 2nd source		.505			
1.	1	5	.157		7.0	26.5
2.	4	5	.024		7.0	28.5
3.	15	5	.038		7.0	28.0
4.	22	5	.006		7.7	27.5
5.	23	5	.027		7.1	30.0
6.	26	5	.023		7.2	29.0
7.	38	5	.024		7.8	29.0
8.	43	5	.022		7.4	30.0
9.	45	5	.025		7.1	29.5
10.	52	5	.021		7.2	30.5
11.	60	5	.024		7.2	28.0
12.	72	5	.148		7.7	27.5
13.	75	5	.020		7.6	28.5
14.						
15.						
16.						
17.						
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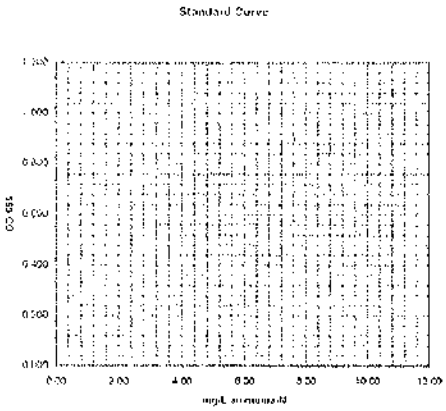

Reporting limit (mg/L) =	0.5
Recovery (%) =	#VALUE!
Precision (RPD) =	#VALUE!
2nd source (%) =	#VALUE!
Sample volume (ml):	0.10
Dilution factor	5

Sample Set Description:
Proj.No.: 783-1
Test Day: 10
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 5/1/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	0.111	1.00
	3.0 mg/L NH_3-N Std.	-----	0.310	3.00
	6.0 mg/L NH_3-N Std.	-----	0.620	6.00
	10.0 mg/L NH_3-N Std.	-----	1.050	10.00
	3.0 mg/L spike	-----	0.312	2.98
	3.0 mg/L spike dupl.	-----	0.308	2.95
	5.0 mg/L 2nd source	-----	0.505	4.83
1.	1	1	0.211	2.02
2.	4	1	0.002	ND
3.	15	1	0.009	ND
4.	22	1	0.001	ND
5.	23	1	0.000	ND
6.	26	1	0.001	ND
7.	38	1	0.000	ND
8.	43	1	0.000	ND
9.	45	1	0.010	ND
10.	52	1	0.000	ND
11.	60	1	0.000	ND
12.	72	1	0.187	1.79
13.	75	1	0.008	ND
14.				
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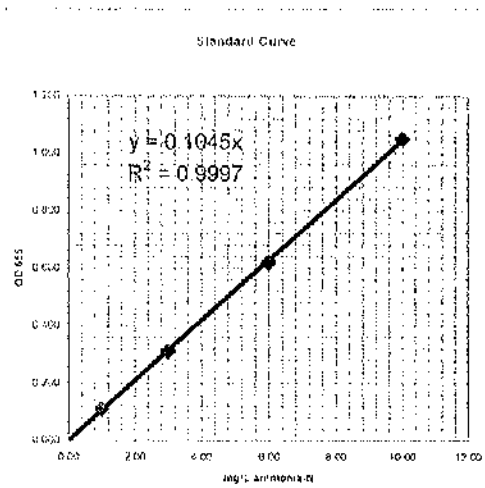

Reporting limit (mg/L) =	0.1
Recovery (%) =	98.8
Precision (RPD) =	1.29
2nd source (%) =	96.6
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-1
Test Day: 10
Species: Eohaustorius

Overlying water

Analyst: RSC
Date analysed: 5/1/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

Sample description	Dilution factor	OD655	NH_3-N (mg/L)
Blank	-----	-----	-----
1.0 mg/L NH_3-N Std.	-----	.111	1.00
3.0 mg/L NH_3-N Std.	-----	.310	3.00
6.0 mg/L NH_3-N Std.	-----	.620	6.00
10.0 mg/L NH_3-N Std.	-----	1.05	10.00
3.0 mg/L spike	-----	.712	
3.0 mg/L spike dupl.	-----	.708	
5.0 mg/L 2nd source	-----	.505	
1. 1	1	.211	
2. 4	1	.002	
3. 15	1	.009	
4. 22	1	.001	
5. 23	1	.000	
6. 26	1	.001	
7. 38	1	.000	
8. 43	1	.000	
9. 45	1	.010	
10. 52	1	.000	
11. 60	1	.000	
12. 72	1	.187	
13. 75	1	.008	
14.			
15.			
16.			
17.			
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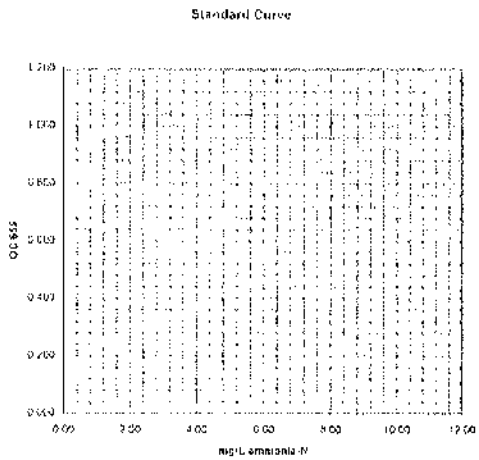

Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-1
Test Day: 10
Species: Eohaustorius

Overlying water

Analyst: RSC
Date analysed: 5/1/2009

TEST DATA ANALYSIS RECORDS

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
46	2507G	EW09-SS-005-010	1	
67	2507G	EW09-SS-005-010	2	
31	2507G	EW09-SS-005-010	3	
76	2507G	EW09-SS-005-010	4	
14	2507G	EW09-SS-005-010	5	
1	2507G	EW09-SS-005-010	6	wq repl
19	2498G	EW09-SS-030-010	1	
62	2498G	EW09-SS-030-010	2	
54	2498G	EW09-SS-030-010	3	
53	2498G	EW09-SS-030-010	4	
40	2498G	EW09-SS-030-010	5	
4	2498G	EW09-SS-030-010	6	wq repl
5	2496G	EW09-SS-032-010	1	
18	2496G	EW09-SS-032-010	2	
50	2496G	EW09-SS-032-010	3	
7	2496G	EW09-SS-032-010	4	
35	2496G	EW09-SS-032-010	5	
23	2496G	EW09-SS-032-010	6	wq repl
21	2495G	EW09-SS-033-010	1	
47	2495G	EW09-SS-033-010	2	
37	2495G	EW09-SS-033-010	3	
57	2495G	EW09-SS-033-010	4	
73	2495G	EW09-SS-033-010	5	
26	2495G	EW09-SS-033-010	6	wq repl
9	2493G	EW09-SS-034-010	1	
3	2493G	EW09-SS-034-010	2	
42	2493G	EW09-SS-034-010	3	
27	2493G	EW09-SS-034-010	4	
30	2493G	EW09-SS-034-010	5	
45	2493G	EW09-SS-034-010	6	wq repl
13	2494G	EW09-SS-035-010	1	
33	2494G	EW09-SS-035-010	2	
24	2494G	EW09-SS-035-010	3	
39	2494G	EW09-SS-035-010	4	
11	2494G	EW09-SS-035-010	5	
15	2494G	EW09-SS-035-010	6	wq repl
63	2473G	EW09-SS-217-010	1	
20	2473G	EW09-SS-217-010	2	
56	2473G	EW09-SS-217-010	3	
34	2473G	EW09-SS-217-010	4	
49	2473G	EW09-SS-217-010	5	
43	2473G	EW09-SS-217-010	6	wq repl
66	2472G	EW09-SS-218-010	1	
68	2472G	EW09-SS-218-010	2	
61	2472G	EW09-SS-218-010	3	
12	2472G	EW09-SS-218-010	4	
64	2472G	EW09-SS-218-010	5	
60	2472G	EW09-SS-218-010	6	wq repl

Randomization Key

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
65	2471G	EW09-SS-220-010	1	
8	2471G	EW09-SS-220-010	2	
70	2471G	EW09-SS-220-010	3	
44	2471G	EW09-SS-220-010	4	
55	2471G	EW09-SS-220-010	5	
52	2471G	EW09-SS-220-010	6	wq repl
10	2520G	CI09-SS-020-010	1	
74	2520G	CI09-SS-020-010	2	
69	2520G	CI09-SS-020-010	3	
28	2520G	CI09-SS-020-010	4	
16	2520G	CI09-SS-020-010	5	
75	2520G	CI09-SS-020-010	6	wq repl
29	2521G	CI09-SS-060-010	1	
41	2521G	CI09-SS-060-010	2	
58	2521G	CI09-SS-060-010	3	
78	2521G	CI09-SS-060-010	4	
32	2521G	CI09-SS-060-010	5	
72	2521G	CI09-SS-060-010	6	wq repl
77	2522G	CI09-SS-080-010	1	
71	2522G	CI09-SS-080-010	2	
25	2522G	CI09-SS-080-010	3	
51	2522G	CI09-SS-080-010	4	
48	2522G	CI09-SS-080-010	5	
38	2522G	CI09-SS-080-010	6	wq repl
36	2541G	control	1	
17	2541G	control	2	
6	2541G	control	3	
2	2541G	control	4	
59	2541G	control	5	
22	2541G	control	6	wq repl

Endpoints Data Entry and Calculations File

INIT=initial number
SURV=number survivors
REBUR=number survivors which reburied
MORT=number dead=INIT-SURV
NOBURY=number survivors not reburied=SURV-REBUR
TEM=total effective mortality=MORT+NOBURY

PSURV=%survival=100(SURV/INIT)
PMORT=%mortality=100(MORT/INIT)
PBURY=%reburial=100(REBUR/SURV)
PNOBURY=%survivors not reburied=100(NOBURY/SURV)
PTEM=%total effective mortality=100(TEM/INIT)

Data entry verified against laboratory bench sheets - MLP 5-18-09

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	INIT	SURV	REBUR	MORT	NOBURY	TEM	PSURV	PMORT	PBURY	PNOBURY	PTEM		SURV	MORT	NOBURY	PSURV	PMORT	PBURY	PNOBURY	PTEM
1	46	2507G	EW09-SS-005-010	1	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
2	67	2507G	EW09-SS-005-010	2	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	Mean	18.0	2.0	0.0	90.0	10.0	100.0	0.0	10.0
3	31	2507G	EW09-SS-005-010	3	20	17	17	3	0	3	85.0	15.0	100.0	0.0	15.0	SD	1.2	1.2	0.0	6.1	6.1	0.0	0.0	6.1
4	76	2507G	EW09-SS-005-010	4	20	17	17	3	0	3	85.0	15.0	100.0	0.0	15.0	n	5	5	5	5	5	5	5	5
5	14	2507G	EW09-SS-005-010	5	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
6	1	2507G	EW09-SS-005-010	6 wq repl	20																			
7	19	2498G	EW09-SS-030-010	1	20	16	16	4	0	4	80.0	20.0	100.0	0.0	20.0									
8	62	2498G	EW09-SS-030-010	2	20	13	12	7	1	8	65.0	35.0	92.3	7.7	40.0	Mean	14.8	5.2	0.4	74.0	26.0	95.9	3.1	28.0
9	54	2498G	EW09-SS-030-010	3	20	16	16	4	0	4	80.0	20.0	100.0	0.0	20.0	SD	1.6	1.6	0.5	8.2	8.2	4.2	4.2	11.0
10	53	2498G	EW09-SS-030-010	4	20	16	16	4	0	4	80.0	20.0	100.0	0.0	20.0	n	5	5	5	5	5	5	5	5
11	40	2498G	EW09-SS-030-010	5	20	13	12	7	1	8	65.0	35.0	92.3	7.7	40.0									
12	4	2498G	EW09-SS-030-010	6 wq repl	20																			
13	5	2496G	EW09-SS-032-010	1	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
14	18	2496G	EW09-SS-032-010	2	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	Mean	17.2	2.8	0.0	86.0	14.0	100.0	0.0	14.0
15	50	2496G	EW09-SS-032-010	3	20	16	16	4	0	4	80.0	20.0	100.0	0.0	20.0	SD	1.1	1.1	0.0	5.5	5.5	0.0	0.0	5.5
16	7	2496G	EW09-SS-032-010	4	20	16	16	4	0	4	80.0	20.0	100.0	0.0	20.0	n	5	5	5	5	5	5	5	5
17	35	2496G	EW09-SS-032-010	5	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
18	23	2496G	EW09-SS-032-010	6 wq repl	20																			
19	21	2495G	EW09-SS-033-010	1	20	13	13	7	0	7	65.0	35.0	100.0	0.0	35.0									
20	47	2495G	EW09-SS-033-010	2	20	12	12	8	0	8	60.0	40.0	100.0	0.0	40.0	Mean	13.0	7.0	0.0	65.0	35.0	100.0	0.0	35.0
21	37	2495G	EW09-SS-033-010	3	20	14	14	6	0	6	70.0	30.0	100.0	0.0	30.0	SD	1.0	1.0	0.0	5.0	5.0	0.0	0.0	5.0
22	57	2495G	EW09-SS-033-010	4	20	12	12	8	0	8	60.0	40.0	100.0	0.0	40.0	n	5	5	5	5	5	5	5	5
23	73	2495G	EW09-SS-033-010	5	20	14	14	6	0	6	70.0	30.0	100.0	0.0	30.0									
24	26	2495G	EW09-SS-033-010	6 wq repl	20																			
25	9	2493G	EW09-SS-034-010	1	20	17	17	3	0	3	85.0	15.0	100.0	0.0	15.0									
26	3	2493G	EW09-SS-034-010	2	20	15	15	5	0	5	75.0	25.0	100.0	0.0	25.0	Mean	16.4	3.6	0.0	82.0	18.0	100.0	0.0	18.0
27	42	2493G	EW09-SS-034-010	3	20	15	15	5	0	5	75.0	25.0	100.0	0.0	25.0	SD	2.2	2.2	0.0	11.0	11.0	0.0	0.0	11.0
28	27	2493G	EW09-SS-034-010	4	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	n	5	5	5	5	5	5	5	5
29	30	2493G	EW09-SS-034-010	5	20	15	15	5	0	5	75.0	25.0	100.0	0.0	25.0									
30	45	2493G	EW09-SS-034-010	6 wq repl	20																			
31	13	2494G	EW09-SS-035-010	1	20	9	9	11	0	11	45.0	55.0	100.0	0.0	55.0									
32	33	2494G	EW09-SS-035-010	2	20	16	16	4	0	4	80.0	20.0	100.0	0.0	20.0	Mean	13.4	6.6	0.0	67.0	33.0	100.0	0.0	33.0
33	24	2494G	EW09-SS-035-010	3	20	11	11	9	0	9	55.0	45.0	100.0	0.0	45.0	SD	3.4	3.4	0.0	16.8	16.8	0.0	0.0	16.8
34	39	2494G	EW09-SS-035-010	4	20	14	14	6	0	6	70.0	30.0	100.0	0.0	30.0	n	5	5	5	5	5	5	5	5
35	11	2494G	EW09-SS-035-010	5	20	17	17	3	0	3	85.0	15.0	100.0	0.0	15.0									
36	15	2494G	EW09-SS-035-010	6 wq repl	20																			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	INIT	SURV	RESUR	MORT	NO-BURY	TEM	PSURV	PMORT	PBURY	PNO-BURY	PTEM		SURV	MORT	NO-BURY	PSURV	PMORT	PBURY	PNO-BURY	PTEM
37	63	2473G	EW09-SS-217-010	1	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0									
38	20	2473G	EW09-SS-217-010	2	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	Mean	19.6	0.4	0.2	98.0	2.0	98.9	1.1	3.0
39	56	2473G	EW09-SS-217-010	3	20	19	18	1	1	2	95.0	5.0	94.7	5.3	10.0	SD	0.5	0.5	0.4	2.7	2.7	2.4	2.4	4.5
40	34	2473G	EW09-SS-217-010	4	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	n	5	5	5	5	5	5	5	5
41	49	2473G	EW09-SS-217-010	5	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
42	43	2473G	EW09-SS-217-010	6 wq repl	20																			
43	66	2472G	EW09-SS-218-010	1	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0									
44	66	2472G	EW09-SS-218-010	2	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	Mean	19.4	0.6	0.0	97.0	3.0	100.0	0.0	3.0
45	61	2472G	EW09-SS-218-010	3	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	SD	0.5	0.5	0.0	2.7	2.7	0.0	0.0	2.7
46	12	2472G	EW09-SS-218-010	4	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	n	5	5	5	5	5	5	5	5
47	64	2472G	EW09-SS-218-010	5	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
48	60	2472G	EW09-SS-218-010	6 wq rep.	20																			
49	65	2471G	EW09-SS-220-010	1	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
50	8	2471G	EW09-SS-220-010	2	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	Mean	20.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0
51	70	2471G	EW09-SS-220-010	3	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	SD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	44	2471G	EW09-SS-220-010	4	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	n	5	5	5	5	5	5	5	5
53	55	2471G	EW09-SS-220-010	5	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
54	52	2471G	EW09-SS-220-010	6 wq repl	20																			
55	10	2520G	CI09-SS-020-010	1	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
56	74	2520G	CI09-SS-020-010	2	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	Mean	19.6	0.4	0.0	98.0	2.0	100.0	0.0	2.0
57	69	2520G	CI09-SS-020-010	3	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	SD	0.5	0.5	0.0	2.7	2.7	0.0	0.0	2.7
58	28	2520G	CI09-SS-020-010	4	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	n	5	5	5	5	5	5	5	5
59	16	2520G	CI09-SS-020-010	5	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0									
60	75	2520G	CI09-SS-020-010	6 wq repl	20																			
61	29	2521G	CI09-SS-060-010	1	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
62	41	2521G	CI09-SS-060-010	2	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	Mean	18.8	1.2	0.0	94.0	6.0	100.0	0.0	6.0
63	58	2521G	CI09-SS-060-010	3	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	SD	0.8	0.8	0.0	4.2	4.2	0.0	0.0	4.2
64	78	2521G	CI09-SS-060-010	4	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	n	5	5	5	5	5	5	5	5
65	32	2521G	CI09-SS-060-010	5	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0									
66	72	2521G	CI09-SS-060-010	6 wq repl	20																			
67	77	2522G	CI09-SS-080-010	1	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
68	71	2522G	CI09-SS-080-010	2	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	Mean	19.6	0.4	0.0	98.0	2.0	100.0	0.0	2.0
69	25	2522G	CI09-SS-080-010	3	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	SD	0.5	0.5	0.0	2.7	2.7	0.0	0.0	2.7
70	51	2522G	CI09-SS-080-010	4	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	n	5	5	5	5	5	5	5	5
71	48	2522G	CI09-SS-080-010	5	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0									
72	38	2522G	CI09-SS-080-010	6 wq repl	20																			
73	36	2541G	control	1	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
74	17	2541G	control	2	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	Mean	20.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0
75	6	2541G	control	3	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	SD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76	2	2541G	control	4	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	n	5	5	5	5	5	5	5	5
77	59	2541G	control	5	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
78	22	2541G	control	6 wq repl	20																			

Emergence Data File

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
1	46	2507G	EW09-SS-005-010	1	1	2			
1	46	2507G	EW09-SS-005-010	1	2	2			
1	46	2507G	EW09-SS-005-010	1	3	2			
1	46	2507G	EW09-SS-005-010	1	4	5			
1	46	2507G	EW09-SS-005-010	1	5	3			
1	46	2507G	EW09-SS-005-010	1	6	0			
1	46	2507G	EW09-SS-005-010	1	7	0			
1	46	2507G	EW09-SS-005-010	1	8	0			
1	46	2507G	EW09-SS-005-010	1	9	1			
1	46	2507G	EW09-SS-005-010	1	10	0	15		
2	67	2507G	EW09-SS-005-010	2	1	3			
2	67	2507G	EW09-SS-005-010	2	2	1			
2	67	2507G	EW09-SS-005-010	2	3	4			
2	67	2507G	EW09-SS-005-010	2	4	3			
2	67	2507G	EW09-SS-005-010	2	5	1			
2	67	2507G	EW09-SS-005-010	2	6	2			
2	67	2507G	EW09-SS-005-010	2	7	3			
2	67	2507G	EW09-SS-005-010	2	8	2			
2	67	2507G	EW09-SS-005-010	2	9	1			
2	67	2507G	EW09-SS-005-010	2	10	2	22		
3	31	2507G	EW09-SS-005-010	3	1	2			
3	31	2507G	EW09-SS-005-010	3	2	3			
3	31	2507G	EW09-SS-005-010	3	3	3			
3	31	2507G	EW09-SS-005-010	3	4	4			
3	31	2507G	EW09-SS-005-010	3	5	2			
3	31	2507G	EW09-SS-005-010	3	6	4			
3	31	2507G	EW09-SS-005-010	3	7	1			
3	31	2507G	EW09-SS-005-010	3	8	6			
3	31	2507G	EW09-SS-005-010	3	9	1			
3	31	2507G	EW09-SS-005-010	3	10	1	27		
4	76	2507G	EW09-SS-005-010	4	1	0			
4	76	2507G	EW09-SS-005-010	4	2	2			
4	76	2507G	EW09-SS-005-010	4	3	3			
4	76	2507G	EW09-SS-005-010	4	4	2			
4	76	2507G	EW09-SS-005-010	4	5	0			
4	76	2507G	EW09-SS-005-010	4	6	0			
4	76	2507G	EW09-SS-005-010	4	7	0			
4	76	2507G	EW09-SS-005-010	4	8	1			
4	76	2507G	EW09-SS-005-010	4	9	1			
4	76	2507G	EW09-SS-005-010	4	10	1	10		
5	14	2507G	EW09-SS-005-010	5	1	1			
5	14	2507G	EW09-SS-005-010	5	2	5			
5	14	2507G	EW09-SS-005-010	5	3	2		Mean	19.4
5	14	2507G	EW09-SS-005-010	5	4	5		SD	6.8
5	14	2507G	EW09-SS-005-010	5	5	4		n	5
5	14	2507G	EW09-SS-005-010	5	6	0			
5	14	2507G	EW09-SS-005-010	5	7	0			
5	14	2507G	EW09-SS-005-010	5	8	2			

Data entry verified against laboratory bench sheets
MSR
5-29-09

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
5	14	2507G	EW09-SS-005-010	5	9	1			
5	14	2507G	EW09-SS-005-010	5	10	3	23		
7	19	2498G	EW09-SS-030-010	1	1	0			
7	19	2498G	EW09-SS-030-010	1	2	1			
7	19	2498G	EW09-SS-030-010	1	3	1			
7	19	2498G	EW09-SS-030-010	1	4	1			
7	19	2498G	EW09-SS-030-010	1	5	0			
7	19	2498G	EW09-SS-030-010	1	6	1			
7	19	2498G	EW09-SS-030-010	1	7	2			
7	19	2498G	EW09-SS-030-010	1	8	2			
7	19	2498G	EW09-SS-030-010	1	9	3			
7	19	2498G	EW09-SS-030-010	1	10	2	13		
8	62	2498G	EW09-SS-030-010	2	1	1			
8	62	2498G	EW09-SS-030-010	2	2	0			
8	62	2498G	EW09-SS-030-010	2	3	1			
8	62	2498G	EW09-SS-030-010	2	4	3			
8	62	2498G	EW09-SS-030-010	2	5	1			
8	62	2498G	EW09-SS-030-010	2	6	3			
8	62	2498G	EW09-SS-030-010	2	7	2			
8	62	2498G	EW09-SS-030-010	2	8	2			
8	62	2498G	EW09-SS-030-010	2	9	0			
8	62	2498G	EW09-SS-030-010	2	10	2	15		
9	54	2498G	EW09-SS-030-010	3	1	0			
9	54	2498G	EW09-SS-030-010	3	2	3			
9	54	2498G	EW09-SS-030-010	3	3	2			
9	54	2498G	EW09-SS-030-010	3	4	0			
9	54	2498G	EW09-SS-030-010	3	5	0			
9	54	2498G	EW09-SS-030-010	3	6	0			
9	54	2498G	EW09-SS-030-010	3	7	2			
9	54	2498G	EW09-SS-030-010	3	8	2			
9	54	2498G	EW09-SS-030-010	3	9	1			
9	54	2498G	EW09-SS-030-010	3	10	0	10		
10	53	2498G	EW09-SS-030-010	4	1	0			
10	53	2498G	EW09-SS-030-010	4	2	1			
10	53	2498G	EW09-SS-030-010	4	3	0			
10	53	2498G	EW09-SS-030-010	4	4	1			
10	53	2498G	EW09-SS-030-010	4	5	3			
10	53	2498G	EW09-SS-030-010	4	6	2			
10	53	2498G	EW09-SS-030-010	4	7	0			
10	53	2498G	EW09-SS-030-010	4	8	1			
10	53	2498G	EW09-SS-030-010	4	9	0			
10	53	2498G	EW09-SS-030-010	4	10	0	8		
11	40	2498G	EW09-SS-030-010	5	1	0			
11	40	2498G	EW09-SS-030-010	5	2	2			
11	40	2498G	EW09-SS-030-010	5	3	4		Mean	12.0
11	40	2498G	EW09-SS-030-010	5	4	2		SD	2.9
11	40	2498G	EW09-SS-030-010	5	5	0		n	5
11	40	2498G	EW09-SS-030-010	5	6	1			
11	40	2498G	EW09-SS-030-010	5	7	2			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
11	40	2498G	EW09-SS-030-010	5	8	1			
11	40	2498G	EW09-SS-030-010	5	9	0			
11	40	2498G	EW09-SS-030-010	5	10	2	14		
13	5	2496G	EW09-SS-032-010	1	1	1			
13	5	2496G	EW09-SS-032-010	1	2	2			
13	5	2496G	EW09-SS-032-010	1	3	2			
13	5	2496G	EW09-SS-032-010	1	4	1			
13	5	2496G	EW09-SS-032-010	1	5	1			
13	5	2496G	EW09-SS-032-010	1	6	3			
13	5	2496G	EW09-SS-032-010	1	7	4			
13	5	2496G	EW09-SS-032-010	1	8	1			
13	5	2496G	EW09-SS-032-010	1	9	2			
13	5	2496G	EW09-SS-032-010	1	10	3	20		
14	18	2496G	EW09-SS-032-010	2	1	0			
14	18	2496G	EW09-SS-032-010	2	2	0			
14	18	2496G	EW09-SS-032-010	2	3	1			
14	18	2496G	EW09-SS-032-010	2	4	2			
14	18	2496G	EW09-SS-032-010	2	5	1			
14	18	2496G	EW09-SS-032-010	2	6	3			
14	18	2496G	EW09-SS-032-010	2	7	2			
14	18	2496G	EW09-SS-032-010	2	8	3			
14	18	2496G	EW09-SS-032-010	2	9	0			
14	18	2496G	EW09-SS-032-010	2	10	1	13		
15	50	2496G	EW09-SS-032-010	3	1	0			
15	50	2496G	EW09-SS-032-010	3	2	3			
15	50	2496G	EW09-SS-032-010	3	3	0			
15	50	2496G	EW09-SS-032-010	3	4	1			
15	50	2496G	EW09-SS-032-010	3	5	1			
15	50	2496G	EW09-SS-032-010	3	6	1			
15	50	2496G	EW09-SS-032-010	3	7	2			
15	50	2496G	EW09-SS-032-010	3	8	5			
15	50	2496G	EW09-SS-032-010	3	9	0			
15	50	2496G	EW09-SS-032-010	3	10	0	13		
16	7	2496G	EW09-SS-032-010	4	1	1			
16	7	2496G	EW09-SS-032-010	4	2	0			
16	7	2496G	EW09-SS-032-010	4	3	0			
16	7	2496G	EW09-SS-032-010	4	4	0			
16	7	2496G	EW09-SS-032-010	4	5	0			
16	7	2496G	EW09-SS-032-010	4	6	2			
16	7	2496G	EW09-SS-032-010	4	7	2			
16	7	2496G	EW09-SS-032-010	4	8	1			
16	7	2496G	EW09-SS-032-010	4	9	0			
16	7	2496G	EW09-SS-032-010	4	10	0	6		
17	35	2496G	EW09-SS-032-010	5	1	0			
17	35	2496G	EW09-SS-032-010	5	2	3			
17	35	2496G	EW09-SS-032-010	5	3	1		Mean	12.2
17	35	2496G	EW09-SS-032-010	5	4	1		SD	5.3
17	35	2496G	EW09-SS-032-010	5	5	1		n	5
17	35	2496G	EW09-SS-032-010	5	6	1			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
17	35	2496G	EW09-SS-032-010	5	7	1			
17	35	2496G	EW09-SS-032-010	5	8	0			
17	35	2496G	EW09-SS-032-010	5	9	1			
17	35	2496G	EW09-SS-032-010	5	10	0	9		
19	21	2495G	EW09-SS-033-010	1	1	1			
19	21	2495G	EW09-SS-033-010	1	2	0			
19	21	2495G	EW09-SS-033-010	1	3	2			
19	21	2495G	EW09-SS-033-010	1	4	1			
19	21	2495G	EW09-SS-033-010	1	5	0			
19	21	2495G	EW09-SS-033-010	1	6	0			
19	21	2495G	EW09-SS-033-010	1	7	0			
19	21	2495G	EW09-SS-033-010	1	8	0			
19	21	2495G	EW09-SS-033-010	1	9	0			
19	21	2495G	EW09-SS-033-010	1	10	0	4		
20	47	2495G	EW09-SS-033-010	2	1	1			
20	47	2495G	EW09-SS-033-010	2	2	2			
20	47	2495G	EW09-SS-033-010	2	3	3			
20	47	2495G	EW09-SS-033-010	2	4	2			
20	47	2495G	EW09-SS-033-010	2	5	3			
20	47	2495G	EW09-SS-033-010	2	6	1			
20	47	2495G	EW09-SS-033-010	2	7	3			
20	47	2495G	EW09-SS-033-010	2	8	4			
20	47	2495G	EW09-SS-033-010	2	9	5			
20	47	2495G	EW09-SS-033-010	2	10	6	30		
21	37	2495G	EW09-SS-033-010	3	1	0			
21	37	2495G	EW09-SS-033-010	3	2	0			
21	37	2495G	EW09-SS-033-010	3	3	3			
21	37	2495G	EW09-SS-033-010	3	4	3			
21	37	2495G	EW09-SS-033-010	3	5	1			
21	37	2495G	EW09-SS-033-010	3	6	0			
21	37	2495G	EW09-SS-033-010	3	7	0			
21	37	2495G	EW09-SS-033-010	3	8	0			
21	37	2495G	EW09-SS-033-010	3	9	0			
21	37	2495G	EW09-SS-033-010	3	10	0	7		
22	57	2495G	EW09-SS-033-010	4	1	0			
22	57	2495G	EW09-SS-033-010	4	2	0			
22	57	2495G	EW09-SS-033-010	4	3	1			
22	57	2495G	EW09-SS-033-010	4	4	1			
22	57	2495G	EW09-SS-033-010	4	5	0			
22	57	2495G	EW09-SS-033-010	4	6	2			
22	57	2495G	EW09-SS-033-010	4	7	1			
22	57	2495G	EW09-SS-033-010	4	8	1			
22	57	2495G	EW09-SS-033-010	4	9	3			
22	57	2495G	EW09-SS-033-010	4	10	3	12		
23	73	2495G	EW09-SS-033-010	5	1	1			
23	73	2495G	EW09-SS-033-010	5	2	2			
23	73	2495G	EW09-SS-033-010	5	3	2		Mean	13.2
23	73	2495G	EW09-SS-033-010	5	4	2		SD	10.1
23	73	2495G	EW09-SS-033-010	5	5	3		n	5

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
23	73	2495G	EW09-SS-033-010	5	6	2			
23	73	2495G	EW09-SS-033-010	5	7	1			
23	73	2495G	EW09-SS-033-010	5	8	0			
23	73	2495G	EW09-SS-033-010	5	9	0			
23	73	2495G	EW09-SS-033-010	5	10	0	13		
25	9	2493G	EW09-SS-034-010	1	1	0			
25	9	2493G	EW09-SS-034-010	1	2	1			
25	9	2493G	EW09-SS-034-010	1	3	0			
25	9	2493G	EW09-SS-034-010	1	4	0			
25	9	2493G	EW09-SS-034-010	1	5	0			
25	9	2493G	EW09-SS-034-010	1	6	0			
25	9	2493G	EW09-SS-034-010	1	7	1			
25	9	2493G	EW09-SS-034-010	1	8	0			
25	9	2493G	EW09-SS-034-010	1	9	0			
25	9	2493G	EW09-SS-034-010	1	10	1	3		
26	3	2493G	EW09-SS-034-010	2	1	1			
26	3	2493G	EW09-SS-034-010	2	2	3			
26	3	2493G	EW09-SS-034-010	2	3	4			
26	3	2493G	EW09-SS-034-010	2	4	3			
26	3	2493G	EW09-SS-034-010	2	5	1			
26	3	2493G	EW09-SS-034-010	2	6	1			
26	3	2493G	EW09-SS-034-010	2	7	0			
26	3	2493G	EW09-SS-034-010	2	8	1			
26	3	2493G	EW09-SS-034-010	2	9	2			
26	3	2493G	EW09-SS-034-010	2	10	2	18		
27	42	2493G	EW09-SS-034-010	3	1	0			
27	42	2493G	EW09-SS-034-010	3	2	1			
27	42	2493G	EW09-SS-034-010	3	3	1			
27	42	2493G	EW09-SS-034-010	3	4	2			
27	42	2493G	EW09-SS-034-010	3	5	2			
27	42	2493G	EW09-SS-034-010	3	6	0			
27	42	2493G	EW09-SS-034-010	3	7	0			
27	42	2493G	EW09-SS-034-010	3	8	2			
27	42	2493G	EW09-SS-034-010	3	9	0			
27	42	2493G	EW09-SS-034-010	3	10	0	8		
28	27	2493G	EW09-SS-034-010	4	1	0			
28	27	2493G	EW09-SS-034-010	4	2	2			
28	27	2493G	EW09-SS-034-010	4	3	4			
28	27	2493G	EW09-SS-034-010	4	4	5			
28	27	2493G	EW09-SS-034-010	4	5	0			
28	27	2493G	EW09-SS-034-010	4	6	2			
28	27	2493G	EW09-SS-034-010	4	7	0			
28	27	2493G	EW09-SS-034-010	4	8	0			
28	27	2493G	EW09-SS-034-010	4	9	0			
28	27	2493G	EW09-SS-034-010	4	10	1	14		
29	30	2493G	EW09-SS-034-010	5	1	1			
29	30	2493G	EW09-SS-034-010	5	2	0			
29	30	2493G	EW09-SS-034-010	5	3	0		Mean	10.6
29	30	2493G	EW09-SS-034-010	5	4	2		SD	5.7

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
29	30	2493G	EW09-SS-034-010	5	5	1		n	5
29	30	2493G	EW09-SS-034-010	5	6	2			
29	30	2493G	EW09-SS-034-010	5	7	1			
29	30	2493G	EW09-SS-034-010	5	8	2			
29	30	2493G	EW09-SS-034-010	5	9	0			
29	30	2493G	EW09-SS-034-010	5	10	1	10		
31	13	2494G	EW09-SS-035-010	1	1	1			
31	13	2494G	EW09-SS-035-010	1	2	1			
31	13	2494G	EW09-SS-035-010	1	3	2			
31	13	2494G	EW09-SS-035-010	1	4	0			
31	13	2494G	EW09-SS-035-010	1	5	2			
31	13	2494G	EW09-SS-035-010	1	6	1			
31	13	2494G	EW09-SS-035-010	1	7	1			
31	13	2494G	EW09-SS-035-010	1	8	1			
31	13	2494G	EW09-SS-035-010	1	9	1			
31	13	2494G	EW09-SS-035-010	1	10	2	12		
32	33	2494G	EW09-SS-035-010	2	1	0			
32	33	2494G	EW09-SS-035-010	2	2	1			
32	33	2494G	EW09-SS-035-010	2	3	1			
32	33	2494G	EW09-SS-035-010	2	4	1			
32	33	2494G	EW09-SS-035-010	2	5	0			
32	33	2494G	EW09-SS-035-010	2	6	1			
32	33	2494G	EW09-SS-035-010	2	7	2			
32	33	2494G	EW09-SS-035-010	2	8	2			
32	33	2494G	EW09-SS-035-010	2	9	1			
32	33	2494G	EW09-SS-035-010	2	10	1	10		
33	24	2494G	EW09-SS-035-010	3	1	0			
33	24	2494G	EW09-SS-035-010	3	2	1			
33	24	2494G	EW09-SS-035-010	3	3	1			
33	24	2494G	EW09-SS-035-010	3	4	0			
33	24	2494G	EW09-SS-035-010	3	5	1			
33	24	2494G	EW09-SS-035-010	3	6	1			
33	24	2494G	EW09-SS-035-010	3	7	0			
33	24	2494G	EW09-SS-035-010	3	8	0			
33	24	2494G	EW09-SS-035-010	3	9	0			
33	24	2494G	EW09-SS-035-010	3	10	1	5		
34	39	2494G	EW09-SS-035-010	4	1	0			
34	39	2494G	EW09-SS-035-010	4	2	2			
34	39	2494G	EW09-SS-035-010	4	3	4			
34	39	2494G	EW09-SS-035-010	4	4	1			
34	39	2494G	EW09-SS-035-010	4	5	3			
34	39	2494G	EW09-SS-035-010	4	6	0			
34	39	2494G	EW09-SS-035-010	4	7	1			
34	39	2494G	EW09-SS-035-010	4	8	0			
34	39	2494G	EW09-SS-035-010	4	9	3			
34	39	2494G	EW09-SS-035-010	4	10	2	16		
35	11	2494G	EW09-SS-035-010	5	1	0			
35	11	2494G	EW09-SS-035-010	5	2	2			
35	11	2494G	EW09-SS-035-010	5	3	1		Mean	12.6

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
35	11	2494G	EW09-SS-035-010	5	4	1		SD	5.7
35	11	2494G	EW09-SS-035-010	5	5	0		n	5
35	11	2494G	EW09-SS-035-010	5	6	0			
35	11	2494G	EW09-SS-035-010	5	7	4			
35	11	2494G	EW09-SS-035-010	5	8	5			
35	11	2494G	EW09-SS-035-010	5	9	4			
35	11	2494G	EW09-SS-035-010	5	10	3	20		
37	63	2473G	EW09-SS-217-010	1	1	0			
37	63	2473G	EW09-SS-217-010	1	2	0			
37	63	2473G	EW09-SS-217-010	1	3	0			
37	63	2473G	EW09-SS-217-010	1	4	0			
37	63	2473G	EW09-SS-217-010	1	5	0			
37	63	2473G	EW09-SS-217-010	1	6	0			
37	63	2473G	EW09-SS-217-010	1	7	0			
37	63	2473G	EW09-SS-217-010	1	8	0			
37	63	2473G	EW09-SS-217-010	1	9	3			
37	63	2473G	EW09-SS-217-010	1	10	0	3		
38	20	2473G	EW09-SS-217-010	2	1	0			
38	20	2473G	EW09-SS-217-010	2	2	0			
38	20	2473G	EW09-SS-217-010	2	3	0			
38	20	2473G	EW09-SS-217-010	2	4	0			
38	20	2473G	EW09-SS-217-010	2	5	0			
38	20	2473G	EW09-SS-217-010	2	6	0			
38	20	2473G	EW09-SS-217-010	2	7	0			
38	20	2473G	EW09-SS-217-010	2	8	1			
38	20	2473G	EW09-SS-217-010	2	9	0			
38	20	2473G	EW09-SS-217-010	2	10	0	1		
39	56	2473G	EW09-SS-217-010	3	1	0			
39	56	2473G	EW09-SS-217-010	3	2	0			
39	56	2473G	EW09-SS-217-010	3	3	1			
39	56	2473G	EW09-SS-217-010	3	4	0			
39	56	2473G	EW09-SS-217-010	3	5	0			
39	56	2473G	EW09-SS-217-010	3	6	1			
39	56	2473G	EW09-SS-217-010	3	7	0			
39	56	2473G	EW09-SS-217-010	3	8	0			
39	56	2473G	EW09-SS-217-010	3	9	0			
39	56	2473G	EW09-SS-217-010	3	10	0	2		
40	34	2473G	EW09-SS-217-010	4	1	0			
40	34	2473G	EW09-SS-217-010	4	2	0			
40	34	2473G	EW09-SS-217-010	4	3	0			
40	34	2473G	EW09-SS-217-010	4	4	0			
40	34	2473G	EW09-SS-217-010	4	5	0			
40	34	2473G	EW09-SS-217-010	4	6	0			
40	34	2473G	EW09-SS-217-010	4	7	0			
40	34	2473G	EW09-SS-217-010	4	8	0			
40	34	2473G	EW09-SS-217-010	4	9	0			
40	34	2473G	EW09-SS-217-010	4	10	0	0		
41	49	2473G	EW09-SS-217-010	5	1	0			
41	49	2473G	EW09-SS-217-010	5	2	2			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
41	49	2473G	EW09-SS-217-010	5	3	0		Mean	1.6
41	49	2473G	EW09-SS-217-010	5	4	0		SD	1.1
41	49	2473G	EW09-SS-217-010	5	5	0		n	5
41	49	2473G	EW09-SS-217-010	5	6	0			
41	49	2473G	EW09-SS-217-010	5	7	0			
41	49	2473G	EW09-SS-217-010	5	8	0			
41	49	2473G	EW09-SS-217-010	5	9	0			
41	49	2473G	EW09-SS-217-010	5	10	0	2		
43	66	2472G	EW09-SS-218-010	1	1	0			
43	66	2472G	EW09-SS-218-010	1	2	0			
43	66	2472G	EW09-SS-218-010	1	3	0			
43	66	2472G	EW09-SS-218-010	1	4	0			
43	66	2472G	EW09-SS-218-010	1	5	1			
43	66	2472G	EW09-SS-218-010	1	6	0			
43	66	2472G	EW09-SS-218-010	1	7	0			
43	66	2472G	EW09-SS-218-010	1	8	0			
43	66	2472G	EW09-SS-218-010	1	9	0			
43	66	2472G	EW09-SS-218-010	1	10	0	1		
44	68	2472G	EW09-SS-218-010	2	1	0			
44	68	2472G	EW09-SS-218-010	2	2	0			
44	68	2472G	EW09-SS-218-010	2	3	1			
44	68	2472G	EW09-SS-218-010	2	4	0			
44	68	2472G	EW09-SS-218-010	2	5	0			
44	68	2472G	EW09-SS-218-010	2	6	0			
44	68	2472G	EW09-SS-218-010	2	7	0			
44	68	2472G	EW09-SS-218-010	2	8	1			
44	68	2472G	EW09-SS-218-010	2	9	1			
44	68	2472G	EW09-SS-218-010	2	10	0	3		
45	61	2472G	EW09-SS-218-010	3	1	0			
45	61	2472G	EW09-SS-218-010	3	2	0			
45	61	2472G	EW09-SS-218-010	3	3	0			
45	61	2472G	EW09-SS-218-010	3	4	0			
45	61	2472G	EW09-SS-218-010	3	5	0			
45	61	2472G	EW09-SS-218-010	3	6	0			
45	61	2472G	EW09-SS-218-010	3	7	0			
45	61	2472G	EW09-SS-218-010	3	8	0			
45	61	2472G	EW09-SS-218-010	3	9	0			
45	61	2472G	EW09-SS-218-010	3	10	0	0		
46	12	2472G	EW09-SS-218-010	4	1	0			
46	12	2472G	EW09-SS-218-010	4	2	0			
46	12	2472G	EW09-SS-218-010	4	3	0			
46	12	2472G	EW09-SS-218-010	4	4	0			
46	12	2472G	EW09-SS-218-010	4	5	0			
46	12	2472G	EW09-SS-218-010	4	6	0			
46	12	2472G	EW09-SS-218-010	4	7	1			
46	12	2472G	EW09-SS-218-010	4	8	1			
46	12	2472G	EW09-SS-218-010	4	9	1			
46	12	2472G	EW09-SS-218-010	4	10	0	3		
47	64	2472G	EW09-SS-218-010	5	1	0			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
47	64	2472G	EW09-SS-218-010	5	2	0			
47	64	2472G	EW09-SS-218-010	5	3	0		Mean	1.4
47	64	2472G	EW09-SS-218-010	5	4	0		SD	1.5
47	64	2472G	EW09-SS-218-010	5	5	0		n	5
47	64	2472G	EW09-SS-218-010	5	6	0			
47	64	2472G	EW09-SS-218-010	5	7	0			
47	64	2472G	EW09-SS-218-010	5	8	0			
47	64	2472G	EW09-SS-218-010	5	9	0			
47	64	2472G	EW09-SS-218-010	5	10	0	0		
49	65	2471G	EW09-SS-220-010	1	1	0			
49	65	2471G	EW09-SS-220-010	1	2	0			
49	65	2471G	EW09-SS-220-010	1	3	0			
49	65	2471G	EW09-SS-220-010	1	4	0			
49	65	2471G	EW09-SS-220-010	1	5	0			
49	65	2471G	EW09-SS-220-010	1	6	0			
49	65	2471G	EW09-SS-220-010	1	7	1			
49	65	2471G	EW09-SS-220-010	1	8	0			
49	65	2471G	EW09-SS-220-010	1	9	0			
49	65	2471G	EW09-SS-220-010	1	10	0	1		
50	8	2471G	EW09-SS-220-010	2	1	0			
50	8	2471G	EW09-SS-220-010	2	2	0			
50	8	2471G	EW09-SS-220-010	2	3	0			
50	8	2471G	EW09-SS-220-010	2	4	0			
50	8	2471G	EW09-SS-220-010	2	5	0			
50	8	2471G	EW09-SS-220-010	2	6	0			
50	8	2471G	EW09-SS-220-010	2	7	0			
50	8	2471G	EW09-SS-220-010	2	8	0			
50	8	2471G	EW09-SS-220-010	2	9	0			
50	8	2471G	EW09-SS-220-010	2	10	0	0		
51	70	2471G	EW09-SS-220-010	3	1	0			
51	70	2471G	EW09-SS-220-010	3	2	0			
51	70	2471G	EW09-SS-220-010	3	3	0			
51	70	2471G	EW09-SS-220-010	3	4	0			
51	70	2471G	EW09-SS-220-010	3	5	0			
51	70	2471G	EW09-SS-220-010	3	6	0			
51	70	2471G	EW09-SS-220-010	3	7	0			
51	70	2471G	EW09-SS-220-010	3	8	0			
51	70	2471G	EW09-SS-220-010	3	9	0			
51	70	2471G	EW09-SS-220-010	3	10	0	0		
52	44	2471G	EW09-SS-220-010	4	1	0			
52	44	2471G	EW09-SS-220-010	4	2	0			
52	44	2471G	EW09-SS-220-010	4	3	0			
52	44	2471G	EW09-SS-220-010	4	4	0			
52	44	2471G	EW09-SS-220-010	4	5	0			
52	44	2471G	EW09-SS-220-010	4	6	0			
52	44	2471G	EW09-SS-220-010	4	7	0			
52	44	2471G	EW09-SS-220-010	4	8	0			
52	44	2471G	EW09-SS-220-010	4	9	0			
52	44	2471G	EW09-SS-220-010	4	10	0	0		

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
53	55	2471G	EW09-SS-220-010	5	1	0			
53	55	2471G	EW09-SS-220-010	5	2	0			
53	55	2471G	EW09-SS-220-010	5	3	0		Mean	0.6
53	55	2471G	EW09-SS-220-010	5	4	0		SD	0.9
53	55	2471G	EW09-SS-220-010	5	5	0		n	5
53	55	2471G	EW09-SS-220-010	5	6	2			
53	55	2471G	EW09-SS-220-010	5	7	0			
53	55	2471G	EW09-SS-220-010	5	8	0			
53	55	2471G	EW09-SS-220-010	5	9	0			
53	55	2471G	EW09-SS-220-010	5	10	0	2		
55	10	2520G	CI09-SS-020-010	1	1	0			
55	10	2520G	CI09-SS-020-010	1	2	0			
55	10	2520G	CI09-SS-020-010	1	3	0			
55	10	2520G	CI09-SS-020-010	1	4	0			
55	10	2520G	CI09-SS-020-010	1	5	0			
55	10	2520G	CI09-SS-020-010	1	6	2			
55	10	2520G	CI09-SS-020-010	1	7	0			
55	10	2520G	CI09-SS-020-010	1	8	0			
55	10	2520G	CI09-SS-020-010	1	9	0			
55	10	2520G	CI09-SS-020-010	1	10	0	2		
56	74	2520G	CI09-SS-020-010	2	1	0			
56	74	2520G	CI09-SS-020-010	2	2	0			
56	74	2520G	CI09-SS-020-010	2	3	0			
56	74	2520G	CI09-SS-020-010	2	4	0			
56	74	2520G	CI09-SS-020-010	2	5	0			
56	74	2520G	CI09-SS-020-010	2	6	0			
56	74	2520G	CI09-SS-020-010	2	7	0			
56	74	2520G	CI09-SS-020-010	2	8	0			
56	74	2520G	CI09-SS-020-010	2	9	0			
56	74	2520G	CI09-SS-020-010	2	10	0	0		
57	69	2520G	CI09-SS-020-010	3	1	0			
57	69	2520G	CI09-SS-020-010	3	2	0			
57	69	2520G	CI09-SS-020-010	3	3	0			
57	69	2520G	CI09-SS-020-010	3	4	0			
57	69	2520G	CI09-SS-020-010	3	5	0			
57	69	2520G	CI09-SS-020-010	3	6	0			
57	69	2520G	CI09-SS-020-010	3	7	0			
57	69	2520G	CI09-SS-020-010	3	8	0			
57	69	2520G	CI09-SS-020-010	3	9	0			
57	69	2520G	CI09-SS-020-010	3	10	0	0		
58	28	2520G	CI09-SS-020-010	4	1	0			
58	28	2520G	CI09-SS-020-010	4	2	0			
58	28	2520G	CI09-SS-020-010	4	3	0			
58	28	2520G	CI09-SS-020-010	4	4	0			
58	28	2520G	CI09-SS-020-010	4	5	0			
58	28	2520G	CI09-SS-020-010	4	6	0			
58	28	2520G	CI09-SS-020-010	4	7	0			
58	28	2520G	CI09-SS-020-010	4	8	0			
58	28	2520G	CI09-SS-020-010	4	9	0			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
58	28	2520G	CI09-SS-020-010	4	10	0	0		
59	16	2520G	CI09-SS-020-010	5	1	0			
59	16	2520G	CI09-SS-020-010	5	2	0			
59	16	2520G	CI09-SS-020-010	5	3	0		Mean	0.4
59	16	2520G	CI09-SS-020-010	5	4	0		SD	0.9
59	16	2520G	CI09-SS-020-010	5	5	0		n	5
59	16	2520G	CI09-SS-020-010	5	6	0			
59	16	2520G	CI09-SS-020-010	5	7	0			
59	16	2520G	CI09-SS-020-010	5	8	0			
59	16	2520G	CI09-SS-020-010	5	9	0			
59	16	2520G	CI09-SS-020-010	5	10	0	0		
61	29	2521G	CI09-SS-060-010	1	1	0			
61	29	2521G	CI09-SS-060-010	1	2	0			
61	29	2521G	CI09-SS-060-010	1	3	0			
61	29	2521G	CI09-SS-060-010	1	4	0			
61	29	2521G	CI09-SS-060-010	1	5	0			
61	29	2521G	CI09-SS-060-010	1	6	1			
61	29	2521G	CI09-SS-060-010	1	7	1			
61	29	2521G	CI09-SS-060-010	1	8	1			
61	29	2521G	CI09-SS-060-010	1	9	0			
61	29	2521G	CI09-SS-060-010	1	10	0	3		
62	41	2521G	CI09-SS-060-010	2	1	1			
62	41	2521G	CI09-SS-060-010	2	2	1			
62	41	2521G	CI09-SS-060-010	2	3	2			
62	41	2521G	CI09-SS-060-010	2	4	3			
62	41	2521G	CI09-SS-060-010	2	5	0			
62	41	2521G	CI09-SS-060-010	2	6	0			
62	41	2521G	CI09-SS-060-010	2	7	0			
62	41	2521G	CI09-SS-060-010	2	8	0			
62	41	2521G	CI09-SS-060-010	2	9	0			
62	41	2521G	CI09-SS-060-010	2	10	1	8		
63	58	2521G	CI09-SS-060-010	3	1	1			
63	58	2521G	CI09-SS-060-010	3	2	1			
63	58	2521G	CI09-SS-060-010	3	3	0			
63	58	2521G	CI09-SS-060-010	3	4	0			
63	58	2521G	CI09-SS-060-010	3	5	0			
63	58	2521G	CI09-SS-060-010	3	6	0			
63	58	2521G	CI09-SS-060-010	3	7	0			
63	58	2521G	CI09-SS-060-010	3	8	0			
63	58	2521G	CI09-SS-060-010	3	9	0			
63	58	2521G	CI09-SS-060-010	3	10	0	2		
64	78	2521G	CI09-SS-060-010	4	1	2			
64	78	2521G	CI09-SS-060-010	4	2	0			
64	78	2521G	CI09-SS-060-010	4	3	0			
64	78	2521G	CI09-SS-060-010	4	4	0			
64	78	2521G	CI09-SS-060-010	4	5	0			
64	78	2521G	CI09-SS-060-010	4	6	0			
64	78	2521G	CI09-SS-060-010	4	7	0			
64	78	2521G	CI09-SS-060-010	4	8	1			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
64	78	2521G	CI09-SS-060-010	4	9	1			
64	78	2521G	CI09-SS-060-010	4	10	2	6		
65	32	2521G	CI09-SS-060-010	5	1	0			
65	32	2521G	CI09-SS-060-010	5	2	0			
65	32	2521G	CI09-SS-060-010	5	3	1		Mean	5.0
65	32	2521G	CI09-SS-060-010	5	4	2		SD	2.4
65	32	2521G	CI09-SS-060-010	5	5	3		n	5
65	32	2521G	CI09-SS-060-010	5	6	0			
65	32	2521G	CI09-SS-060-010	5	7	0			
65	32	2521G	CI09-SS-060-010	5	8	0			
65	32	2521G	CI09-SS-060-010	5	9	0			
65	32	2521G	CI09-SS-060-010	5	10	0	6		
67	77	2522G	CI09-SS-080-010	1	1	0			
67	77	2522G	CI09-SS-080-010	1	2	0			
67	77	2522G	CI09-SS-080-010	1	3	0			
67	77	2522G	CI09-SS-080-010	1	4	1			
67	77	2522G	CI09-SS-080-010	1	5	0			
67	77	2522G	CI09-SS-080-010	1	6	0			
67	77	2522G	CI09-SS-080-010	1	7	1			
67	77	2522G	CI09-SS-080-010	1	8	0			
67	77	2522G	CI09-SS-080-010	1	9	0			
67	77	2522G	CI09-SS-080-010	1	10	0	2		
68	71	2522G	CI09-SS-080-010	2	1	0			
68	71	2522G	CI09-SS-080-010	2	2	0			
68	71	2522G	CI09-SS-080-010	2	3	0			
68	71	2522G	CI09-SS-080-010	2	4	0			
68	71	2522G	CI09-SS-080-010	2	5	0			
68	71	2522G	CI09-SS-080-010	2	6	0			
68	71	2522G	CI09-SS-080-010	2	7	0			
68	71	2522G	CI09-SS-080-010	2	8	0			
68	71	2522G	CI09-SS-080-010	2	9	0			
68	71	2522G	CI09-SS-080-010	2	10	0	0		
69	25	2522G	CI09-SS-080-010	3	1	0			
69	25	2522G	CI09-SS-080-010	3	2	0			
69	25	2522G	CI09-SS-080-010	3	3	0			
69	25	2522G	CI09-SS-080-010	3	4	0			
69	25	2522G	CI09-SS-080-010	3	5	0			
69	25	2522G	CI09-SS-080-010	3	6	0			
69	25	2522G	CI09-SS-080-010	3	7	0			
69	25	2522G	CI09-SS-080-010	3	8	0			
69	25	2522G	CI09-SS-080-010	3	9	0			
69	25	2522G	CI09-SS-080-010	3	10	0	0		
70	51	2522G	CI09-SS-080-010	4	1	0			
70	51	2522G	CI09-SS-080-010	4	2	0			
70	51	2522G	CI09-SS-080-010	4	3	0			
70	51	2522G	CI09-SS-080-010	4	4	0			
70	51	2522G	CI09-SS-080-010	4	5	0			
70	51	2522G	CI09-SS-080-010	4	6	0			
70	51	2522G	CI09-SS-080-010	4	7	0			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
70	51	2522G	CI09-SS-080-010	4	8	0			
70	51	2522G	CI09-SS-080-010	4	9	0			
70	51	2522G	CI09-SS-080-010	4	10	0	0		
71	48	2522G	CI09-SS-080-010	5	1	0			
71	48	2522G	CI09-SS-080-010	5	2	0			
71	48	2522G	CI09-SS-080-010	5	3	0		Mean	0.8
71	48	2522G	CI09-SS-080-010	5	4	0		SD	1.1
71	48	2522G	CI09-SS-080-010	5	5	0		n	5
71	48	2522G	CI09-SS-080-010	5	6	0			
71	48	2522G	CI09-SS-080-010	5	7	0			
71	48	2522G	CI09-SS-080-010	5	8	0			
71	48	2522G	CI09-SS-080-010	5	9	0			
71	48	2522G	CI09-SS-080-010	5	10	2	2		
73	36	2541G	control	1	1	0			
73	36	2541G	control	1	2	0			
73	36	2541G	control	1	3	0			
73	36	2541G	control	1	4	0			
73	36	2541G	control	1	5	0			
73	36	2541G	control	1	6	0			
73	36	2541G	control	1	7	0			
73	36	2541G	control	1	8	0			
73	36	2541G	control	1	9	0			
73	36	2541G	control	1	10	0	0		
74	17	2541G	control	2	1	0			
74	17	2541G	control	2	2	0			
74	17	2541G	control	2	3	0			
74	17	2541G	control	2	4	0			
74	17	2541G	control	2	5	0			
74	17	2541G	control	2	6	0			
74	17	2541G	control	2	7	0			
74	17	2541G	control	2	8	0			
74	17	2541G	control	2	9	0			
74	17	2541G	control	2	10	0	0		
75	6	2541G	control	3	1	0			
75	6	2541G	control	3	2	0			
75	6	2541G	control	3	3	0			
75	6	2541G	control	3	4	0			
75	6	2541G	control	3	5	0			
75	6	2541G	control	3	6	0			
75	6	2541G	control	3	7	0			
75	6	2541G	control	3	8	0			
75	6	2541G	control	3	9	0			
75	6	2541G	control	3	10	0	0		
76	2	2541G	control	4	1	0			
76	2	2541G	control	4	2	0			
76	2	2541G	control	4	3	0			
76	2	2541G	control	4	4	0			
76	2	2541G	control	4	5	0			
76	2	2541G	control	4	6	0			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
76	2	2541G	control	4	7	0			
76	2	2541G	control	4	8	0			
76	2	2541G	control	4	9	0			
76	2	2541G	control	4	10	0	0		
77	59	2541G	control	5	1	0			
77	59	2541G	control	5	2	0			
77	59	2541G	control	5	3	0		Mean	0.6
77	59	2541G	control	5	4	0		SD	1.3
77	59	2541G	control	5	5	0		n	5
77	59	2541G	control	5	6	1			
77	59	2541G	control	5	7	0			
77	59	2541G	control	5	8	1			
77	59	2541G	control	5	9	1			
77	59	2541G	control	5	10	0	3		

Water Quality Data

	NAS	CLIENT			Overlying water									Interstitial					assumed interstitial
BKR	SMPL	DESCRIP	REPL	DAY	TEMP	pH	SAL	DO	S	< or >	NH4-NH3	< or >	NH3	pH	SAL	< or >	NH4+NH3	< or >	NH3	temp.
bulk	2471G	EW09-SS-220-010												7.3	29.0		5.0		0.027	15
bulk	2472G	EW09-SS-218-010												7.2	29.0		5.4		0.023	
bulk	2473G	EW09-SS-217-010												7.6	30.0		5.0		0.053	
bulk	2493G	EW09-SS-034-010												7.4	29.5		3.8		0.026	
bulk	2494G	EW09-SS-035-010												7.4	29.5		2.5		0.016	
bulk	2495G	EW09-SS-033-010												7.6	30.0		1.6		0.016	
bulk	2496G	EW09-SS-032-010												7.3	30.0		3.5		0.019	
bulk	2498G	EW09-SS-030-010												7.4	30.0		2.4		0.016	
bulk	2507G	EW09-SS-005-010												7.3	29.5		19.0		0.101	
bulk	2520G	CI09-SS-020-010												7.8	30.0		14.2		0.236	
bulk	2521G	CI09-SS-060-010												7.4	30.0		68.9		0.460	
bulk	2522G	CI09-SS-080-010												7.6	30.0		25.3		0.267	
bulk	2541G	control												7.6	17.0		0.6		0.006	
1	2507G	EW09-SS-005-010	6	0	15.4	7.9	27.5	7.6	<0.02		2.3		0.050							
4	2498G	EW09-SS-030-010	6	0	15.4	7.9	27.5	7.2	<0.02		0.5		0.010							
15	2494G	EW09-SS-035-010	6	0	15.3	7.9	27.5	7.4	<0.02		0.2		0.004							
22	2541G	control	6	0	15.4	8.0	27.5	8.1	<0.02	<	0.1	<	0.003							
23	2496G	EW09-SS-032-010	6	0	15.2	8.0	27.5		<0.02		0.3		0.008							
26	2495G	EW09-SS-033-010	6	0	15.2	7.9	28.0	7.7	<0.02		0.1		0.003							
38	2522G	CI09-SS-080-010	6	0	15.2	8.0	27.5	7.8	<0.02		2.2		0.059							
43	2473G	EW09-SS-217-010	6	0	15.1	7.9	28.0	7.8	<0.02		0.6		0.012							
45	2493G	EW09-SS-034-010	6	0	15.1	7.9	28.0	7.7	<0.02		0.1		0.003							
52	2471G	EW09-SS-220-010	6	0	15.0	7.9	27.5	7.7	<0.02		0.3		0.007							
60	2472G	EW09-SS-218-010	6	0	15.0	8.0	27.5	8.0	<0.02		0.5		0.014							
72	2521G	CI09-SS-060-010	6	0	15.0	7.9	28.0	8.0	<0.02		5.6		0.119							
75	2520G	CI09-SS-020-010	6	0	15.0	7.9	28.0	7.5	<0.02		1.2		0.026							
1	2507G	EW09-SS-005-010	6	1	15.9	7.9	27.5	7.5												
4	2498G	EW09-SS-030-010	6	1	15.7	7.9	27.5	7.7												
15	2494G	EW09-SS-035-010	6	1	15.7	7.9	27.5	7.7												
22	2541G	control	6	1	15.8	8.1	27.0	8.2												
23	2495G	EW09-SS-032-010	6	1	15.6	7.9	27.5	7.8												
26	2495G	EW09-SS-033-010	6	1	15.8	7.9	27.5	7.8												
38	2522G	CI09-SS-080-010	6	1	15.7	8.0	27.5	7.9												
43	2473G	EW09-SS-217-010	6	1	15.5	8.0	27.5	7.9												
45	2493G	EW09-SS-034-010	6	1	15.5	7.9	27.5	7.7												
52	2471G	EW09-SS-220-010	6	1	15.4	7.9	27.5	7.5												
60	2472G	EW09-SS-218-010	6	1	15.6	7.9	27.5	7.8												
72	2521G	CI09-SS-060-010	6	1	15.6	8.0	27.0	7.5												
75	2520G	CI09-SS-020-010	6	1	15.6	7.9	27.5	8.0												
1	2507G	EW09-SS-005-010	6	2	16.0	7.9	28.0	7.6												
4	2498G	EW09-SS-030-010	6	2	15.9	7.9	28.0	7.6												
15	2494G	EW09-SS-035-010	6	2	15.9	7.9	28.5	7.8												

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BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3	Interstitial pH	SAL	< or >	NH4+NH3	< or >	NH3	assumed interstitial temp.
22	2541G	control	6	2	16.0	8.1	27.5	8.2												
23	2496G	EW09-SS-032-010	6	2	15.7	7.9	28.5	7.7												
26	2495G	EW09-SS-033-010	6	2	15.8	7.8	28.5	7.4												
38	2522G	CI09-SS-080-010	6	2	15.9	8.0	28.0	8.0												
43	2473G	EW09-SS-217-010	6	2	15.8	8.0	28.0	8.0												
45	2493G	EW09-SS-034-010	6	2	15.8	7.9	28.5	7.8												
52	2471G	EW09-SS-220-010	6	2	15.5	7.8	28.5	7.6												
60	2472G	EW09-SS-218-010	6	2	15.8	7.9	28.5	7.2												
72	2521G	CI09-SS-060-010	6	2	15.9	8.0	28.5	7.6												
75	2520G	CI09-SS-020-010	6	2	15.9	7.9	28.0	7.8												
1	2507G	EW09-SS-005-010	6	3	15.9	8.0	30.5	7.5												
4	2498G	EW09-SS-030-010	6	3	15.9	8.0	28.5	7.4												
15	2494G	EW09-SS-035-010	6	3	15.9	8.0	29.0	7.6												
22	2541G	control	6	3	16.0	8.1	28.0	7.8												
23	2496G	EW09-SS-032-010	6	3	15.8	7.9	28.5	7.4												
26	2495G	EW09-SS-033-010	6	3	15.8	8.0	29.0	7.7												
38	2522G	CI09-SS-080-010	6	3	15.9	8.1	29.0	7.8												
43	2473G	EW09-SS-217-010	6	3	15.8	8.0	28.5	7.8												
45	2493G	EW09-SS-034-010	6	3	15.7	7.9	29.0	7.3												
52	2471G	EW09-SS-220-010	6	3	15.5	7.9	29.0	7.4												
60	2472G	EW09-SS-218-010	6	3	15.7	8.0	28.5	7.6												
72	2521G	CI09-SS-060-010	6	3	15.8	8.1	28.5	7.6												
75	2520G	CI09-SS-020-010	6	3	15.8	8.0	29.0	7.7												
1	2507G	EW09-SS-005-010	6	4	15.9	8.0	27.5	7.9												
4	2498G	EW09-SS-030-010	6	4	15.7	8.0	28.0	7.8												
15	2494G	EW09-SS-035-010	6	4	15.9	8.0	28.0	7.9												
22	2541G	control	6	4	15.9	8.2	27.5	8.2												
23	2496G	EW09-SS-032-010	6	4	15.5	8.0	28.0	7.8												
26	2495G	EW09-SS-033-010	6	4	15.6	8.1	29.0	8.0												
38	2522G	CI09-SS-080-010	6	4	15.7	8.2	28.5	8.2												
43	2473G	EW09-SS-217-010	6	4	15.7	8.0	29.0	8.0												
45	2493G	EW09-SS-034-010	6	4	15.7	8.0	29.0	7.7												
52	2471G	EW09-SS-220-010	6	4	15.5	7.9	29.5	7.5												
60	2472G	EW09-SS-218-010	6	4	15.9	8.0	29.0	8.0												
72	2521G	CI09-SS-060-010	6	4	15.8	8.2	29.0	8.3												
75	2520G	CI09-SS-020-010	6	4	15.9	8.0	29.0	8.2												
1	2507G	EW09-SS-005-010	6	5	15.9	8.0	28.0	7.5												
4	2498G	EW09-SS-030-010	6	5	15.8	8.0	29.0	7.3												
15	2494G	EW09-SS-035-010	6	5	15.7	8.0	29.0	7.4												
22	2541G	control	6	5	15.9	8.1	28.0	7.8												
23	2496G	EW09-SS-032-010	6	5	15.6	7.9	28.5	7.4												
26	2495G	EW09-SS-033-010	6	5	15.6	8.0	29.0	7.8												
38	2522G	CI09-SS-080-010	6	5	15.7	8.2	29.0	7.9												

BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3	Interstitial pH	SAL	< or >	NH4+NH3	< or >	NH3	assumed interstitial temp.
43	2473G	EW09-SS-217-010	6	5	15.7	8.0	28.5	7.7												
45	2493G	EW09-SS-034-010	6	5	15.6	8.0	29.0	7.3												
52	2471G	EW09-SS-220-010	6	5	15.4	8.0	29.0	7.8												
60	2472G	EW09-SS-218-010	6	5	15.8	7.9	28.5	7.6												
72	2521G	CI09-SS-060-010	6	5	15.9	8.3	28.0	8.2												
75	2520G	CI09-SS-020-010	6	5	15.9	8.1	28.5	7.8												
1	2507G	EW09-SS-005-010	6	6	15.9	8.0	29.0	7.6												
4	2498G	EW09-SS-030-010	6	6	15.8	8.0	29.5	7.5												
15	2494G	EW09-SS-035-010	6	6	15.8	8.1	29.5	7.6												
22	2541G	control	6	6	15.9	8.1	28.0	7.9												
23	2496G	EW09-SS-032-010	6	6	15.6	8.0	30.0	7.5												
26	2495G	EW09-SS-033-010	6	6	15.6	8.0	30.0	7.9												
38	2522G	CI09-SS-080-010	6	6	15.7	8.2	30.0	8.1												
43	2473G	EW09-SS-217-010	6	6	15.7	8.0	29.0	7.9												
45	2493G	EW09-SS-034-010	6	6	15.6	8.0	29.5	7.4												
52	2471G	EW09-SS-220-010	6	6	15.5	8.0	31.0	7.9												
60	2472G	EW09-SS-218-010	6	6	15.7	7.9	29.0	7.8												
72	2521G	CI09-SS-060-010	6	6	15.8	8.4	30.0	8.6												
75	2520G	CI09-SS-020-010	6	6	15.9	8.1	30.0	8.1												
1	2507G	EW09-SS-005-010	6	7	15.9	8.1	28.5	6.8												
4	2498G	EW09-SS-030-010	6	7	15.8	8.2	29.0	6.9												
15	2494G	EW09-SS-035-010	6	7	15.7	8.2	29.0	6.9												
22	2541G	control	6	7	15.8	8.1	30.0	6.9												
23	2496G	EW09-SS-032-010	6	7	15.6	8.1	29.5	6.6												
26	2495G	EW09-SS-033-010	6	7	15.7	8.1	29.5	6.9												
38	2522G	CI09-SS-080-010	6	7	15.7	8.3	29.5	7.1												
43	2473G	EW09-SS-217-010	6	7	15.7	8.1	29.5	7.0												
45	2493G	EW09-SS-034-010	6	7	15.6	8.0	30.0	6.6												
52	2471G	EW09-SS-220-010	6	7	15.4	8.0	31.0	6.9												
60	2472G	EW09-SS-218-010	6	7	15.6	7.9	29.5	7.8												
72	2521G	CI09-SS-060-010	6	7	15.6	8.5	29.5	8.8												
75	2520G	CI09-SS-020-010	6	7	15.7	8.1	29.5	7.3												
1	2507G	EW09-SS-005-010	6	8	16.0	8.0	29.0	7.6												
4	2498G	EW09-SS-030-010	6	8	16.0	8.2	29.5	7.6												
15	2494G	EW09-SS-035-010	6	8	16.0	8.2	29.0	7.6												
22	2541G	control	6	8	15.9	8.0	28.5	7.7												
23	2496G	EW09-SS-032-010	6	8	15.6	8.0	30.5	7.3												
26	2495G	EW09-SS-033-010	6	8	15.7	8.1	30.0	7.8												
38	2522G	CI09-SS-080-010	6	8	15.7	8.4	29.5	8.4												
43	2473G	EW09-SS-217-010	6	8	15.7	8.1	30.5	7.9												
45	2493G	EW09-SS-034-010	6	8	15.7	8.0	30.5	7.2												
52	2471G	EW09-SS-220-010	6	8	15.4	8.0	31.0	7.6												
60	2472G	EW09-SS-218-010	6	8	15.7	8.0	30.0	7.7												

BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3	Interstitial pH	SAL	< or >	NH4+NH3	< or >	NH3	assumed interstitial temp.
72	2521G	CI09-SS-060-010	6	8	15.7	8.5	29.5	8.7												
75	2520G	CI09-SS-020-010	6	8	15.7	8.2	29.5	8.4												
1	2507G	EW09-SS-005-010	6	9	15.9	8.1	28.5	7.6												
4	2498G	EW09-SS-030-010	6	9	15.8	8.3	30.0	7.8												
15	2494G	EW09-SS-035-010	6	9	15.9	8.4	29.0	7.6												
22	2541G	control	6	9	15.9	8.0	28.5	7.7												
23	2496G	EW09-SS-032-010	6	9	15.6	8.2	30.0	7.8												
26	2495G	EW09-SS-033-010	6	9	15.7	8.1	30.5	8.0												
38	2522G	CI09-SS-080-010	6	9	15.7	8.5	30.0	8.9												
43	2473G	EW09-SS-217-010	6	9	15.7	8.1	30.5	8.3												
45	2493G	EW09-SS-034-010	6	9	15.7	8.1	30.5	7.4												
52	2471G	EW09-SS-220-010	6	9	15.5	8.0	31.0	7.9												
60	2472G	EW09-SS-218-010	6	9	15.7	8.0	30.0	8.0												
72	2521G	CI09-SS-060-010	6	9	15.7	8.6	30.5	8.6												
75	2520G	CI09-SS-020-010	6	9	15.8	8.4	29.5	9.2												
1	2507G	EW09-SS-005-010	6	10	15.8	8.0	29.0	8.1	<0.02		2.0		0.057	7.0	26.5		7.5		0.021	
4	2498G	EW09-SS-030-010	6	10	15.8	8.3	30.0	8.0	<0.02	<	0.1	<	0.005	7.0	28.5		1.2		0.003	
15	2494G	EW09-SS-035-010	6	10	15.8	8.3	29.5	7.9	<0.02	<	0.1	<	0.005	7.0	28.0		1.8		0.005	
22	2541G	control	6	10	15.8	8.0	29.0	8.0	<0.02	<	0.1	<	0.003	7.7	27.5	<	0.5	<	0.007	
23	2496G	EW09-SS-032-010	6	10	15.8	8.1	30.0	7.8	<0.02	<	0.1	<	0.003	7.1	30.0		1.3		0.004	
26	2495G	EW09-SS-033-010	6	10	15.7	8.0	30.0	7.7	<0.02	<	0.1	<	0.003	7.2	29.0		1.1		0.005	
38	2522G	CI09-SS-080-010	6	10	15.7	8.6	30.0	7.8	<0.02	<	0.1	<	0.010	7.8	29.0		1.2		0.019	
43	2473G	EW09-SS-217-010	6	10	15.7	8.2	31.0	7.9	<0.02	<	0.1	<	0.004	7.4	30.0		1.1		0.007	
45	2493G	EW09-SS-034-010	6	10	15.6	8.1	30.5	8.0	<0.02	<	0.1	<	0.003	7.1	29.5		1.2		0.004	
52	2471G	EW09-SS-220-010	6	10	15.4	8.0	31.0	8.1	<0.02	<	0.1	<	0.003	7.2	30.5		1.5		0.006	
60	2472G	EW09-SS-218-010	6	10	15.7	8.0	31.0	8.0	<0.02	<	0.1	<	0.003	7.2	28.0		1.2		0.005	
72	2521G	CI09-SS-060-010	6	10	15.7	8.5	31.0	8.3	<0.02		1.8		0.148	7.7	27.5		7.1		0.096	
75	2520G	CI09-SS-020-010	6	10	15.7	8.7	29.0	8.8	<0.02	<	0.1	<	0.013	7.6	28.5		1.0		0.010	
														The following interstitial value summary does not include the bulk sediment samples:						
				Mean	15.7	8.1	28.9	7.8	---		---		---	7.3	28.7		---		---	
				SD	0.2	0.2	1.0	0.4	---		---		---	0.3	1.2		---		---	
				n	143	143	143	142	26		26		26	13	13		13		13	
				Min	15.0	7.8	27.0	6.6	<0.02	<	0.1	<	0.003	7.0	26.5	<	0.5	<	0.007	
				Max	16.0	8.7	31.0	9.2	<0.02		5.6		0.148	7.8	30.5		7.5		0.096	

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CHAIN-OF-CUSTODY RECORDS

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2653

Project/Client Name: EW R1/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipper: UPS
Form filled out by: ANGELITA RODRIGUEZ

Shipping Date: 03.05.09
Airbill Number:
Turnaround requested: STD.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions [Jar tag number(s)]
3/4/09	0843	EW09-SS-102-010	5	SEDIMENT	X			NAS	#2491G			HOLD PENDING
	0909	EW09-SS-036-010	5	SEDIMENT	X				2492G			INSTRUCTIONS TO
	0930	EW09-SS-034-010	5	SEDIMENT	X				2493G			ANALYZE
	0953	EW09-SS-035-010	5	SEDIMENT	X				2494G			
	1015	EW09-SS-033-010	5	SEDIMENT	X				2495G			
	1034	EW09-SS-032-010	5	SEDIMENT	X				2496G			
	1054	EW09-SS-031-010	5	SEDIMENT	X				2497G			
	1114	EW09-SS-030-010	5	SEDIMENT	X				2498G			
	1137	EW09-SS-029-010	5	SEDIMENT	X				2499G			
	1156	EW09-SS-025-010	5	SEDIMENT	X				2500G			
	1300	EW09-SS-024-010	5	SEDIMENT	X				2501G			
	1322	EW09-SS-023-010	5	SEDIMENT	X				2502G			
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: [signature]	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 915 AM 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any jar with headspace, headspace was flushed w/ N_2 - MKR 3-6-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5-6.0°C	Received by: Michelle Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2665

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.05.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIQUEZ
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/4/09	1350	EW09-SS-020-010	5	SEDIMENT	X			NAS # 2503G				HOLD PENDING
	1430	EW09-SS-013-010	5	SEDIMENT	X				2504G			INSTRUCTIONS TO
	1502	EW09-SS-011-010	5	SEDIMENT	X				2505G			ANALYZE
	1526	EW09-SS-008-010	5	SEDIMENT	X				2506G			
	1549	EW09-SS-005-010	5	SEDIMENT	X				2507G			
	1626	EW09-SS-003-010	5	SEDIMENT	X				2508G			
	1644	EW09-SS-001-010	5	SEDIMENT	X				2509G			
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 915am 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. For any jars w/ headspace, headspace was filled w/ N_2 - MLR 3-6-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5 - 6.0 °C	Received by: Michele S. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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UPS Internet Shipping: Shipment Label FOR UPS SHIPPING ONLY

HEIDI
206-378 1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

6 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9398 6063

1

BILLING: P/P

Reference#1: EW Surface Sediment

1/8 11 1 05 WOTE70 87 0A 01/2009

TM

DATE 3/5/09

INITIALS

LAB SAMPLE
DO NOT TAMPER

3.5°C

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

4 OF 6

SHIP TO:
MICHELE REDMOND
541 265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9080 5245

1

BILLING: P/P

Reference#1: EW Surface Sediment

UIS 11 1.05 WXPD:70 87.0A 01/2009

TM

LOW OD
ICE
KMT MLS
DATE
TIME

LAB SAMPLE
DO NOT

2.5°C

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

5 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9116 8450

1

BILLING: P/P

Reference#1: EW Surface Sediment

UIS 11 1 0S WXPE70 87.0A 01/2009

TM

https://www.ups.com/uis/create?Action=GetLabelPrint&Type=UISReceipt&POPUP_LEVEL=... 3/5/2009

LAB SAMPLE
DO NOT TAMPER

DATE 3/5/09

INITIALS KAM

LAB SAMPLE
DO NOT TAMPER

DATE 3/5/09

INITIALS KAM

3.5°C

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

HEIDI ENDERS
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 1

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1

TRACKING #: 1Z Y34 89E 25 9007 4071

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11.1 05 WXP1E70 87.9A 01/2009

TM

Page 1 of 1

DATE 3/5/02

INITIALS

LAB SAMPLE
DO NOT TAMPER

DATE

INITIALS

LAB SAMPLE
DO NOT TAMPER

UPS Internet Shipping: Shipment Label FOR UPS SHIPPING ONLY

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

2 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1

TRACKING #: 1Z Y34 89E 01 9177 8023

BILLING: P/P

Reference#1: EW Surface Sediment

US 11 1 05 WXPE70 87.0A 01/2009

TM

DATE 3/5/09

INITIALS MAY

LAB [illegible] AMPEX

DO[illegible]

6.0°C

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https://www.ups.com/uis/create?Action=... 3/5/2009

HEIDI
206-378-1364
WINDWARE ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 6

SHIP TO:
MICHELE REDMOND
541-265 7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9128 2013

1

BILLING: P/P

Reference#1: EW Surface Sediment

US 11 1 05 WX09E70 87.0A 01/2009

TM

LAB SAMPLE
DO NOT TAMPER

2.5°C

https://www.ups.com/uis/cr

FOR UPS SHIPPING ONLY /ISRreceipt&POPUP_LEVEL=... 3/5/2009

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL INC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

3 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9472 0436

1

BILLING: P/P

Reference#1: BW Surface Sediment

UIS 11 1 05 WXP8270 87.0A 01/2009

TM

LAB DO

5.5 °C

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2557

Project/Client Name: EW RI/FS
Project Number:
Contact Name: ~~MARILA MITCHELL~~ HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIQUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipper: UPS
Form filled out by: ANGELITA RODRIQUEZ

Shipping Date: 03.02.09
Airbill Number:
Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/1/09	0956	EW09-SS-220-010	5	SEDIMENT	X			NAS #	2471G			HOLD PENDING
	1104	EW09-SS-218-010	5	SEDIMENT	X				2472G			INSTRUCTIONS TO
	1130	EW09-SS-217-010	5	SEDIMENT	X				2473G			ANALYZE
	1221	EW09-SS-216-010	5	SEDIMENT	X				2474G			
	1256	EW09-SS-207-010	5	SEDIMENT	X				2475G			
	1315	EW09-SS-204-010	5	SEDIMENT	X				2476G			
	1349	EW09-SS-202-010	5	SEDIMENT	X				2477G			
	1410	EW09-SS-200-010	5	SEDIMENT	X				2478G			
	~~1415~~	~~EW09-SS-130-010~~										
	1435	EW09-SS-130-010	5	SEDIMENT	X				2479G			
	1453	EW09-SS-129-010	5	SEDIMENT	X				2480G			
	1512	EW09-SS-127-010	5	SEDIMENT	X				2481G			
		Total Number of Containers	55/75	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00 am 3/2/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

If sample jar was not full, headspace was flushed w/ N_2 - MLR 3-3-09

To be completed by Laboratory upon sample receipt:

Date of receipt: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5-4.5°C	Received by: Michele L. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2656

Project/Client Name: EW RI/FS
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIGUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.02.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIGUEZ
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY						Comments / Instructions (Jar tag number(s))
3/1/09	1530	EW09-SS122-010	5	SEDIMENT	X		NAS # 2482G				HOLD PENDING
	1554	EW09-SS121-010	5	SEDIMENT	X			2483G			INSTRUCTIONS TO
	1615	EW09-SS120-010	5	SEDIMENT	X			2484G			ANALYZE
	1636	EW09-SS132-010	5	SEDIMENT	X			2485G			✓
		Total Number of Containers	20/75	Purchase Order / Statement of Work #							

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00am 3/2/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any sample jar that was not full, headspace was flushed w/ N_2 MR 3-3-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5 - 4.5°C	Received by: Michele Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

UPS Next Day Air®
UPS Worldwide Express®

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE PACKAGE	SHIPPER RELEASE
[illegible]		☐	☐

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☐ DOCUMENTS ONLY

SATURDAY DELIVERY ☐

J205 991 386 9

J205 991 386 9

SHIPMENT FROM

UPS ACCOUNT NO. [illegible]

REFERENCE NUMBER

TELEPHONE

[illegible]

UPS Next Day Air®

DELIVERY TO

TELEPHONE

[illegible]

J205 991 386 9

J205 991 386 9

010191120 1/07 S

United Parcel Service, Louisville, KY

DATE OF SHIPMENT

[illegible]

LAB SAMPLE
DO NOT TAMPER

DATE 3/1/02

INITIALS [illegible]

4.0°C

LAB SAMPLE
DO NOT TAMPER

UPS Next Day Air®
UPS Worldwide Express℠

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE AIR PACKAGE	SHIPPER RELEASE
		X	

☐ EXPRESS (INT'L)
☐ DOCUMENTS ONLY
SATURDAY DELIVERY ☐

J193 291 327 9

SHIPMENT FROM
UPS ACCOUNT NO. Y54[illegible]
REFERENCE NUMBER

TELEPHONE
[illegible]

DELIVERY TO
TELEPHONE 541-[illegible]
[illegible]

UPS Next Day Air®

J193 291 327 9

DATE OF SHIPMENT

010191120 1/05 S

United Parcel Service, Louisville, KY

DATE 3/10
INITIAL [illegible]

1.5°C

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UPS Worldwide Express®

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT
5	

EXPRE (INT'L)

DOCUMEN ONLY

SATURDAY DELIVERY

J205 991 387 8

J205 991 387 8

SHIPMENT FROM

UPS ACCOUNT NO.

REFERENCE NUMBER

TELEPHONE

DELIVERY TO

TELEPHONE

UPS Next Day Air®

1

J205 991 387 8

J205 991 387 8

DATE OF SHIPMENT

01019112D 1/0.

United Parcel Service, Louisville, KY

LA[illegible]LE
DO NOT TAMPE
[illegible]
PER

DATE 3/1/09
INITIALS [illegible]

DATE 3/1/09
INITIALS [illegible]

2.5°C

UPS Next Day Air®
UPS Worldwide Express™

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE AIR PACKAGE	SHIPPER RELEASE
5		✓	

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☐ DOCUMENTS ONLY
SATURDAY DELIVERY ☐

J193 291 330 4

J193 291 330 4

SHIPMENT FROM
UPS ACCOUNT NO.
REF

TELEPHONE

Seattle, WA

DELIVER TO
TELEPHONE
Northwestern Aquatic Sciences
Yaquina Bay Rd
Newport, OR

UPS Next Day Air®

J193 291 330 4

J193 291 330 4

DATE OF SHIPMENT

120 1/05 S United Parcel Service, Louisville, KY

10348 041367_P1 61055412 30 of 100

LAB SAMPLE
DO NOT TAMPE

DATE 3/2/02
INITIALS

LAB SA
DO NOT

DATE 3/2/02
INITIALS

3.5°C

UPS Next Day Air®
UPS Worldwide Express®

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE PACKAGE	SHIPPER RELEASE

☐ EXPRESS (INT'L)
☐ DOCUMENTS ONLY
☐ SATURDAY DELIVERY

J205 991 382 3

SHIPMENT FROM

UPS ACCOUNT NO. Y 34 1E

REFERENCE NUMBER

TELEPHONE

[illegible]

DELIVERY TO

TELEPHONE

[illegible]

UPS Next Day Air®

J205 991 382 3

J205 991 382 3

TRACKING NUMBER

DATE OF SHIPMENT 3/2/09

010191120 1/07 S

10335 041335_P1 61158412 5 DELIVERY

LAB SAMPLE
DO NOT TAMPER

DATE 3/2/09
INITIALS [illegible]

LAB SAMPLE
DO NOT TAMPER

DATE 3/2/09
INITIALS [illegible]

4.5°C

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2672

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: T.Do, J. Florer

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: T.Do

Shipping Date: 03.13.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (Jar tag number(s))
1/23/09	1430	SPB-NB-1014	4 (3.5L)	Sediment	X		NAS # 2519G					Contact Helle Andersen for analysis instructions
03.12.09	1320	CI09-SS-020-010	10	↓	X		2520G					
↓	1600	CI09-SS-060-010	10	↓	X		2521G					
↓	1830	CI09-SS-080-010	10	↓	X		2522G					
		Total Number of Containers	14	Purchase Order / Statement of Work #								

1) Released by: HELLE ANDERSEN	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WILDWOOD ENV LLC		Company:	
Date/Time: 03.13.09 8:45 AM	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. Any jars with headspace had the headspace flushed w/ nitrogen MLR 3.14.09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-14-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 09:00
Cooler temperature: 1.5 - 3.0°C	Received by: Michele Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

Page 14 of 14

https://www.ups.com/uis/create?Action[illegible]SRecipt&POPUP_LEVEL... 3/13/2009

DATE 3/13/09
TIME 11AM
INITIALS
LAB SAMPLE
DO NOT TAMPER

HEIDI ENDERS
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

30 LBS

1 OF 1

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

1+S

TRACKING #: 1Z Y34 89E 41 9032 0505

BILLING: P/P

US 11.1.05 WXPE70 87 0A 11/2009

TM

SATURDAY DELIVERY!

DATE 3/13/09
INITIALS

LAB SAMPLE
DO NOT TAMPER

3.0°C

https://www.ups.com/uis/create?Action=ShipRecord&ISRecordID=1Z9Y34890100UISReceipt&POPUP_LEVEL... 3/11/2009

DATE 3/12/09

INITIALS MM

EAT SAMPLE

DO NOT TAMPER

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 2

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 44 9248 8488

1 S

BILLING: P/P

SATURDAY DELIVERY

Saturday DELIVERY

PLACE DIRECTLY BELOW ADDRESS LABEL

011169 2/04 MW

DATE 3/13/09

INITIALS MM

EAT SAMPLE

DO NOT TAMPER

1.5-C

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

2 OF 2

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR **1 S**

TRACKING #: 1Z Y34 89E 44 9012 5293

BILLING: P/P

SATURDAY
DELIVERY

TM

CAUTION
Heavy Package
Over 70 lbs.

DATE 3/13/09

INITIALS

https://www.ups.com/uis/create?ActionOriginPair=PopupPrintPage&Type=Receipt&POPUP_LEVEL... 3/11/2009

DATE 3/13/09

INITIALS KBK

LAB SAMPLE
DO NOT TAMPER

1.5°C

REFERENCE TOXICANT RESULTS AND ANALYSIS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-RA1

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2550 Client: QC Test Investigator pg. 1-7 MSR removed

Test Type (rangefinding/definitive) definitive Test Length (hr) 96 5-29-07 6-2-07

Species *Eohaustorius estuarius*

STUDY MANAGEMENT

Client: QC Test

Client's Study Monitor: N/A

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. M.S. Redmond MSR

QA Officer L.K. Nemeth

1. Lidia P. Sandoval LPS 2. G.J. IRISSARRI GJI

3. Susan Gogl SG 4.

5. 6.

Study Schedule:

Test Beginning: 4-21-09 1215 Test Ending: 4-25-09 1140

TEST MATERIAL

Description: Ammonia prepared from ammonium chloride; stock prepared 3-18-08, 9760 mg/L (=9.76 mg/mL) expressed as N

DILUTION WATER

Description: Yaquina Bay, Oregon, sea water

Date of Preparation/Collection: 4-20-09

Water Quality: Cond.(umhos/cm): ----- Salinity (ppt) 28.0 pH 8.0

Hardness (mg/L as $CaCO_3$): ----- Alkalinity (mg/L as $CaCO_3$): -----

Treatments: Filtered to 0.4 um, salinity adjusted with Milli-Q deionized water, aerated

TEST LOCATION

Test conducted in (circle one): room 1 room 2 trailer water bath other: room 4

Randomization chart:

B	250	62	500	125	31	Q				
A	31	125	250	Q	500	62				

Error codes: 1) Correction of handwriting error
2) Written in wrong location; entry deleted
3) Wrong date deleted; replaced with correct date
4) Error found in measurement; measurement repeated

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2550 Client: QC Test Investigator

TEST ORGANISMS

Species: *Eohaustorius estuarius* Age: adult Size:

Source: Yaquina Bay, Oregon

If field-collected:

Date Collected: 4-15-09

Field conditions: Interstitial temperature: 10.5°C Interstitial salinity: 15.0 ‰

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal. (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
4-15-09	13.9	8.1	20.0	9.2				
4-16-09	14.0	7.9	20.5	9.1				
4-17-09	14.2	8.0	25.0	9.0				
4-18-09	14.2	8.1	27.5	9.1				
4-19-09	14.1	8.1	28.0	8.5				
4-20-09	14.2	8.0	30.0	8.3				
4-21-09	14.5	8.0	30.0	8.4				
Mean	14.2	8.0	25.9	8.8				
S.D.	0.2	0.1	4.2	0.4				
(N)	(7)	(7)	(7)	(7)				

Photoperiod during acclimation: Constant light

TEST PROCEDURES AND CONDITIONS

Test concentrations (50% series recommended): 500, 250, 125, 62, 31, and 0 mg/L

Test chamber: 250 mL beakers Test volume: 100 mL

Replicates/treatment: 2 Organisms/treatment: 20 (10/repl)

Test water changes: None Aeration during test: None

Feeding: None.

Duration: 24-hr, 48-hr, (96-hr) Test temperature (deg.C): 15.0 +/- 1.0

Beaker placement: Stratified randomization Photoperiod: Constant light

Test salinity (ppt): 28.0 +/- 1.0

MISCELLANEOUS NOTES

Test Solution Preparation:

4-21-09 GJL

Test Conc. (mg/L)	mL of stock (9760 mg/L) per 200 mL	
500	10.2	Bring up to 200 mL with dilution water, then split between 2 replicates
250	5.1	
125	2.55	
62	1.28	
31	0.64	
0	0	

Light intensity measurements:	Date	Location	foot-candles
	4-25-09	above glass plate under mesh	3.8

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-RA1

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2550 Client QC Test Investigator

DAILY RECORD SHEET

Day 0 (4/21/09) LPS

AS 4-21-09

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	~~16~~ 15.6	7.4	28.0	8.1	10	10
2. 250	15.5	7.6	27.5	8.1	10	10
3. 125	15.5	7.7	27.5	8.1	10	10
4. 62	15.6	7.8	27.5	8.1	10	10
5. 31	15.5	7.9	27.5	8.1	10	10
6. 0	15.8	8.1	27.0	8.1	~~5~~ 10	10

LPS 4-21-09

Day 1 (4/22/09) 6:32 / LPS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	15.6	7.6	28.0	7.2	Ø (10d)	1 (9d)
2. 250	15.6	7.7	27.0	7.0	6 (4d)	5 (5d)
3. 125	15.6	7.7	27.5	7.2	10	10
4. 62	15.6	7.8	27.5	7.2	10	10
5. 31	15.6	7.8	27.0	7.3	10	10
6. 0	15.7	7.8	27.0	7.4	10	10

Day 2 (4/23/09) LPS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500 *	15.7	7.6	28.0	7.4	Ø	Ø (1d)
2. 250	15.7	7.8	27.5	7.3	2 (4d)	4 (1d)
3. 125	15.7	7.7	27.5	7.3	10	10
4. 62	15.8	7.8	27.5	7.4	10	10
5. 31	15.7	7.8	27.0	7.4	10	10
6. 0	15.8	7.8	27.0	7.3	10	10

* WQ in rep. B

Day 3 (4/24/09) AS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	—	—	—	—	Ø	Ø
2. 250	15.6	7.8	29.0	7.4	Ø (2d)	2 (2d)
3. 125	15.6	7.8	29.0	7.2	10	10
4. 62	15.7	7.9	28.5	7.3	10	10
5. 31	15.7	7.9	28.0	7.3	10	10
6. 0	15.6	7.8	28.0	7.3	10	10

Day 4 (4/25/09) AS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	—	—	—	—	0	0
2. 250 *	15.6	7.8	28.5	7.8	0	2
3. 125	15.6	7.8	29.0	7.4	10	10
4. 62	15.7	7.9	28.0	7.5	10	9 (10)
5. 31	15.7	7.9	27.5	7.5	10	10
6. 0	15.8	7.9	27.5	7.4	10	10
WQ: Mean	15.6	7.8	27.87	7.5		
SD	0.1	0.1	~~0.7~~ 0.6	0.3		
n	28	28	28	28		

* WQ in "B" replicate

AS 4-25-09 Fixed calculation

CETIS Summary Report

Report Date: 18 May-09 13:54 (p 1 of 1)
Test Code: 20-8615-9583/999-2550

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Batch ID:	20-7529-5111	Test Type:	Survival	Analyst:	
Start Date:	21 Apr-09 12:15	Protocol:		Diluent:	Yaquina Bay Seawater
Ending Date:	25 Apr-09 11:40	Species:	Eohaustorius estuarius	Brine:	
Duration:	95h	Source:	Field Collected	Age:	

Sample ID:	02-9716-0651	Code:	11B672F3	Client:	Internal Lab
Sample Date:	21 Apr-09 12:15	Material:	Ammonia as nitrogen	Project:	
Receive Date:	21 Apr-09 12:15	Source:	Reference Toxicant		
Sample Age:	N/A	Station:			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
01-2955-0586	Proportion Survived	125	250	177	20.5%		Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	Conc-mg/	95% LCL	95% UCL	TU	Method
07-3172-5895	Proportion Survived	EC50	183	163	205		Spearman-Kärber

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	2	1	1	1	1	1	0	0	0.0%	0.0%
31		2	1	1	1	1	1	0	0	0.0%	0.0%
62		2	0.95	0.924	0.976	0.9	1	0.0129	0.0707	7.44%	5.0%
125		2	1	1	1	1	1	0	0	0.0%	0.0%
250		2	0.1	0.0472	0.153	0	0.2	0.0258	0.141	141.0%	90.0%
500		2	0	0	0	0	0	0	0		100.0%

Proportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2
0	Dilution Water	1	1
31		1	1
62		1	0.9
125		1	1
250		0	0.2
500		0	0

CETIS Test Data Worksheet

Report Date: 18 May-09 13:53 (p 1 of 1)
Test Code: 20-8615-9583/999-2550

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Start Date:	21 Apr-09 12:15	Species:	Eohaustorius estuarius	Sample Code:	11B672F3
End Date:	25 Apr-09 11:40	Protocol:		Sample Source:	Reference Toxicant
Sample Date:	21 Apr-09 12:15	Material:	Ammonia as nitrogen	Sample Station:	

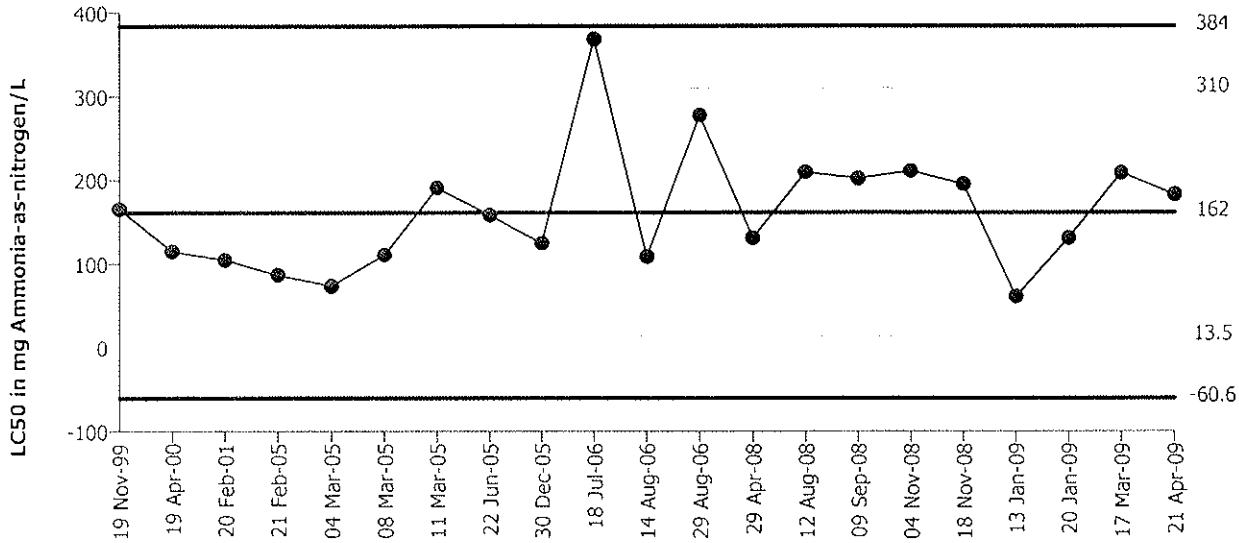
Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	2	10	10	
0	D	2	8	10	10	
31		1	3	10	10	
31		2	7	10	10	
62		1	11	10	10	
62		2	5	10	9	
125		1	6	10	10	
125		2	10	10	10	
250		1	4	10	0	
250		2	12	10	2	
500		1	1	10	0	
500		2	9	10	0	

Data entry verified against laboratory bench sheets.
[illegible]
5-18-09

Amphipod, Eohaustorius estuarius, acute reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Eohaustorius estuarius (Amphipod)	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Amphipod, Eohaustorius estuarius, acute reference toxicant test



Mean:	161.7	Count:	20	-2s Warning Limit:	13.48	-3s Action Limit:	-60.63
Sigma:	74.11	CV:	45.80%	+2s Warning Limit:	309.9	+3s Action Limit:	384

Quality Control Data

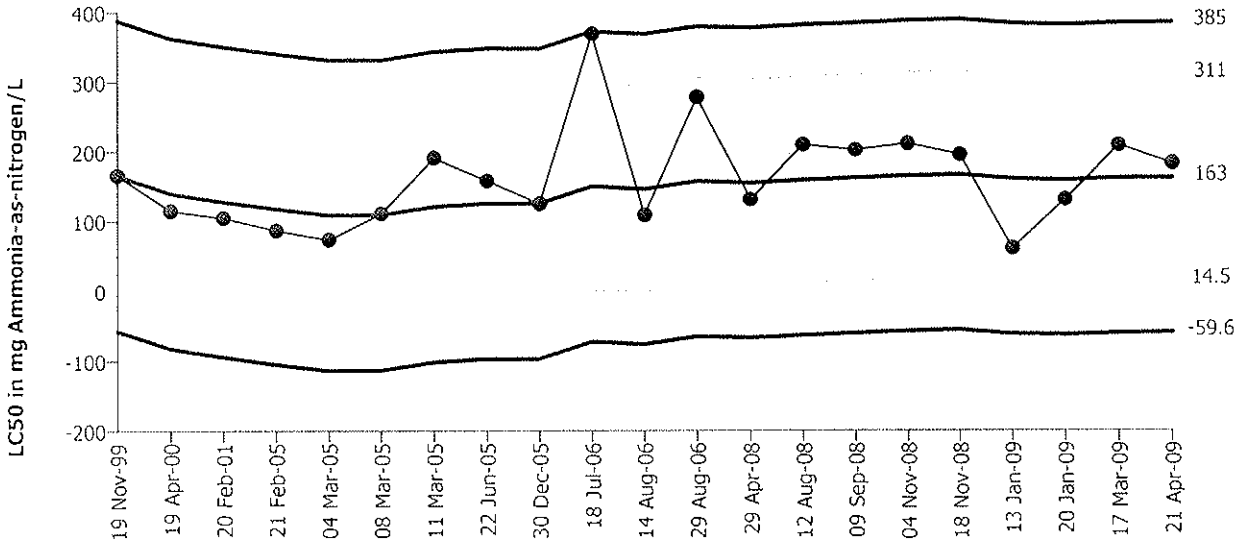
Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	1999	Nov	19	165.5	3.778	0.05098			08-8047-8205	19-1096-0771
2	2000	Apr	19	114.8	-46.89	-0.6327			16-2064-0490	14-1542-6174
3	2001	Feb	20	104.8	-56.94	-0.7684			01-8827-6895	16-6208-1639
4	2005		21	86.83	-74.87	-1.01			09-2612-0890	14-1988-7862
5		Mar	4	73.51	-88.19	-1.19			18-6741-9263	03-3923-4536
6			8	110.9	-50.78	-0.6852			06-7346-2735	09-1676-9814
7			11	190.7	28.96	0.3908			09-4022-8352	06-3336-1149
8		Jun	22	157.9	-3.778	-0.05098			11-2691-7082	13-9495-1529
9		Dec	30	124.8	-36.88	-0.4976			07-5802-9309	05-7960-9956
10	2006	Jul	18	368.5	206.8	2.79	(+)		09-9291-1665	12-4928-9594
11		Aug	14	108.8	-52.89	-0.7136			09-2436-3006	07-0528-9136
12			29	277.6	115.9	1.563			18-6928-6460	08-4845-0989
13	2008	Apr	29	131	-30.66	-0.4137			05-4539-2604	07-8525-2912
14		Aug	12	209.6	47.89	0.6462			01-8497-3298	02-5050-8460
15		Sep	9	201.9	40.22	0.5427			08-3162-4387	05-2476-3967
16		Nov	4	211.1	49.37	0.6662			05-2331-4280	13-4979-4657
17			18	195.4	33.66	0.4542			02-0122-0866	14-6072-4099
18	2009	Jan	13	61.01	-100.7	-1.359			10-7224-4902	18-3015-6866
19			20	131.1	-30.59	-0.4128			03-4280-4836	02-8836-7655
20		Mar	17	208.9	47.21	0.6371			08-4454-4357	07-9647-7485
21		Apr	21	183	21.27	0.2871			20-8615-9583	07-3172-5895

Analyst: MSR 5-18-09 QA:

Amphipod, Eohaustorius estuarius, acute reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Eohaustorius estuarius (Amphipod)	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Amphipod, Eohaustorius estuarius, acute reference toxicant test



Mean:	161.7	Count:	20	-2s Warning Limit:	14.52	-3s Action Limit:	-59.59
Sigma:	74.11	CV:	45.80%	+2s Warning Limit:	311	+3s Action Limit:	385.1

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	1999	Nov	19	165.5	3.778	0.05098			08-8047-8205	19-1096-0771
2	2000	Apr	19	114.8	-46.89	-0.6327			16-2064-0490	14-1542-6174
3	2001	Feb	20	104.8	-56.94	-0.7684			01-8827-6895	16-6208-1639
4	2005		21	86.83	-74.87	-1.01			09-2612-0890	14-1988-7862
5		Mar	4	73.51	-88.19	-1.19			18-6741-9263	03-3923-4536
6			8	110.9	-50.78	-0.6852			06-7346-2735	09-1676-9814
7			11	190.7	28.96	0.3908			09-4022-8352	06-3336-1149
8		Jun	22	157.9	-3.778	-0.05098			11-2691-7082	13-9495-1529
9		Dec	30	124.8	-36.88	-0.4976			07-5802-9309	05-7960-9956
10	2006	Jul	18	368.5	206.8	2.79	(+)		09-9291-1665	12-4928-9594
11		Aug	14	108.8	-52.89	-0.7136			09-2436-3006	07-0528-9136
12			29	277.6	115.9	1.563			18-6928-6460	08-4845-0989
13	2008	Apr	29	131	-30.66	-0.4137			05-4539-2604	07-8525-2912
14		Aug	12	209.6	47.89	0.6462			01-8497-3298	02-5050-8460
15		Sep	9	201.9	40.22	0.5427			08-3162-4387	05-2476-3967
16		Nov	4	211.1	49.37	0.6662			05-2331-4280	13-4979-4657
17			18	195.4	33.66	0.4542			02-0122-0866	14-6072-4099
18	2009	Jan	13	61.01	-100.7	-1.359			10-7224-4902	18-3015-6866
19			20	131.1	-30.59	-0.4128			03-4280-4836	02-8836-7655
20		Mar	17	208.9	47.21	0.6371			08-4454-4357	07-9647-7485
21		Apr	21	183	21.27	0.2871			20-8615-9583	07-3172-5895

Analyst: MSR 5-18-09 QA:

Report

of

Test No. 783-2

Juvenile *Neanthes* 20-Day Sediment Toxicity
Test of Marine Sediments

Submitted to

Windward Environmental LLC
200 West Mercer St., Suite 401
Seattle, WA 98119

Submitted by

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

June 10, 2009

TOXICITY TEST REPORT

TEST IDENTIFICATION

Test No.: 783-2

Title: Juvenile *Neanthes* 20-day sediment toxicity test of marine sediments.

Protocol: NAS-XXX-NA4, June 20, 1990. Rev.4 (3-1-05). Based on: Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments (PSEP 1995), with modifications as specified by the Dredged Material Management Program (DMMP, formerly Puget Sound Dredged Disposal Analysis Program or PSDDA) and Washington State Sediment Management Standards (SMS).

STUDY MANAGEMENT

Study Sponsor: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Sponsor's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences, P.O. Box 1437, Newport, Oregon 97365.

Test Location: Newport Laboratory.

Laboratory's Study Personnel: M.S. Redmond, M.S., Proj. Mngr./ Study Dir.; L.K. Nemeth, B.A., M.B.A., QA Officer; R.S. Caldwell, Ph.D., Sr. Aq. Toxicol.; G.J. Irissarri, B.S., Aq. Toxicol.; G.A. Buhler, B.S., Aq. Toxicol.; S J. Gage, B.A., Sr.Tech.; L.P. Sandoval, B.S., Tech.

Study Schedule:

Test Beginning: 4-17-09, 1030 hrs.

Test Ending: 5-7-09, 1000 hrs.

Disposition of Study Records: All specimens, raw data, reports and other study records are stored according to Good Laboratory Practice regulations at Northwestern Aquatic Sciences, 3814 Yaquina Bay Rd., Newport, OR 97365.

Good Laboratory Practices: The test was conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

Statement of Quality Assurance: The test data were reviewed by the Quality Assurance Unit to assure that the study was performed in accordance with the protocol and standard operating procedures. This report is an accurate reflection of the raw data.

TEST MATERIAL

Control Sediment: Control sediment (NAS Sample #2541G) was collected from the *Eohaustorius estuarius* amphipod collection site, Yaquina Bay, Oregon, on 4-15-09. Interstitial salinity was 17.0 ‰. The sediment was sieved through a 0.5-mm stainless steel screen and stored at 4°C in the dark.

Test Sediments: Nine test sediments and three reference sediments were tested. Details follow:

NAS Sample No.	2471G	2472G	2473G
Sample Description	EW09-SS-220-010	EW09-SS-218-010	EW09-SS-217-010
Collection Date	3-1-09	3-1-09	3-1-09
Receipt Date	3-3-09	3-3-09	3-3-09
Interstitial Salinity (‰)	29.0	29.0	30.0

NAS Sample No.	2493G	2494G	2495G
Sample Description	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-033-010
Collection Date	3-4-09	3-4-09	3-4-09
Receipt Date	3-6-09	3-6-09	3-6-09
Interstitial Salinity (‰)	29.5	29.5	30.0

NAS Sample No.	2496G	2498G	2507G
Sample Description	EW09-SS-032-010	EW09-SS-030-010	EW09-SS-005-010
Collection Date	3-4-09	3-4-09	3-4-09
Receipt Date	3-6-09	3-6-09	3-6-09
Interstitial Salinity (‰)	30.0	30.0	29.5

NAS Sample No.	2520G	2521G	2522G
Sample Description	CI09-SS-020-010	CI09-SS-060-010	CI09-SS-080-010
Collection Date	3-12-09	3-12-09	3-12-09
Receipt Date	3-14-09	3-14-09	3-14-09
Interstitial Salinity (‰)	30.0	30.0	30.0

Sample Storage: Samples were stored at 4°C in the dark.
Treatments: The samples were minimally homogenized by mixing with stainless steel implements.

TEST WATER

Source: Yaquina Bay, Oregon
Date(s) of Collection: 4-15-09
Water Quality: Salinity 27.0‰, pH 8.0
Pretreatment: Filtered to ≤0.40 µm, salinity-adjusted with MilliQ® deionized water, aerated.

TEST ORGANISMS

Species: *Neanthes arenaceodentata,* marine polychaete worm
Age: 2-3 week post-emergence juveniles
Initial wt.: 1.17 mg
Source: Laboratory cultures at the Department of Biology, California State University, Long Beach, California. Worms were received on 4-9-09.
Acclimation: Average conditions during the two days prior to testing were: temperature, 20.6 ± 0.9°C; pH, 8.0 ± 0.3; salinity, 30.1 ± 2.2‰; dissolved oxygen, 7.3 ± 0.5 mg/L. Photoperiod was constant light.

TEST PROCEDURES AND CONDITIONS

The following is an abbreviated statement of the test procedures and a statement of the test conditions actually employed. See the test protocol (Appendix I) for a more detailed description of the test procedures used in this study.
Test Chambers: 1 L covered borosilicate glass beakers.
Test Volumes: 175 ml of test, reference, or control sediment; 950 ml total volume.
Replicates/Treatment: 5
Sediment Salinity Adjustment: None
Organisms/Treatment: 25 (5/replicate)
Water Volume Changes: One third of the seawater in each beaker was replaced every third day.
Aeration: Provided through a 1-mL glass pipette placed not closer than 2 cm from sediment, bubbled at a minimal rate (about 100 bubbles/minute) that did not disturb the sediment surface.
Feeding: Animals were fed 40 mg TetraMarine® per beaker every other day.
Acceptance Criteria: Results are valid if mean control survival is at least 90%. DMMP and SMS require control sediment mortality of ≤10% and a growth rate of >0.38 mg/individual/day.
Performance Criteria: For DMMP and SMS testing, the reference sediment mortality should be ≤20% with a growth rate of ≥80% that of the negative control sediment.
Effects Criteria: 1) survival after 20 days, 2) average individual biomass, and 3) average individual growth rate. Death is defined as no visible appendage movement or response to tactile stimulation. Missing worms are considered dead.
Water Quality and Other Test Conditions: The temperature, pH, salinity, and dissolved oxygen were measured in the overlying water of one replicate on test days 0 and 20, and on test days 3, 6, 9, 12, 15, and 18 prior to test solution renewal. Total dissolved sulfide and total ammonia-N were measured in the overlying water of the one replicate test chamber on days 0 and 20. Total ammonia-N was also measured in the overlying water of one replicate test chamber on day 3 prior to water renewal. Total soluble sulfide and total ammonia-N were measured using Hach reagents based on the methylene blue (EPA Method 376.2) and salicylate (Clin. Chim. Acta 14:403, 1996) colorimetric methods, respectively; samples were not distilled prior to analysis. Un-ionized ammonia-N was computed using "Un-ionized Ammonia Calculator", v1.0 (Dr. Landon Ross, Florida Department of Environmental Protection). The photoperiod was constant light.

DATA ANALYSIS METHODS

Percent survival, individual biomass, and individual growth rate at the end of the test were determined from the final observations according to the formulas:

Percent survival = 100 x (no. of surviving worms/initial number of worms)
Individual biomass = total dry wt. of worms/number of surviving worms weighed
Individual growth rate = (individual biomass - the initial dry wt.)/the number of test days

The means and standard deviations were then calculated for each treatment level. The statistical software employed for these calculations was Microsoft Excel 2000.

PROTOCOL DEVIATIONS

1. Several overlying water temperature measurements were slightly above the protocol-specified range of 20.0 ± 1.0°C (maximum 21.4°C).
2. In two instances, aeration to a beaker was interrupted and dissolved oxygen decreased (minimum 2.4 mg/L). Aeration was restarted immediately in both cases.
3. The control sediment had an interstitial salinity of less than 20.0‰ (17.0‰), and should have been adjusted before addition of worms; however, this sediment is sand with very little water content.

REFERENCE TOXICANT TEST

The reference toxicant test is a standard multi-concentration toxicity test using ammonia expressed as NH_3-N and administered as NH_3Cl, to evaluate the performance of the test organisms used in the sediment toxicity test. The performance is evaluated by comparing the results of this test with historical results obtained at the laboratory. A summary of the reference toxicant test result is given below. The reference toxicant test raw data are found in Appendix II.

Test No.: 999-2549
Reference Toxicant and Source: Ammonia as ammonium chloride, 9.76 mg ammonia as N/ml stock prepared 3-18-08
Test Date: 4-17-09
Dilution Water Used: Yaquina Bay, Oregon, seawater; 27.0‰
Result: The 96-hr LC50 was 259 mg NH_3-N/L. This result is within the laboratory's control chart warning limits (122–315 mg NH_3-N/L).

RESULTS AND DISCUSSION

Observations of water quality parameters during the test are summarized in Table 1. Individual water quality measurements are located in the raw data (Appendix II).

Except as noted above, all measurements of standard water quality parameters were within protocol-specified ranges. Dissolved sulfide was not detected in the overlying water (detection limit 0.02 mg/L). Total ammonia-N concentrations in the overlying water ranged from <0.1 mg/L to 9.8 mg/L (maximum 0.283 mg/L un-ionized ammonia).

Table 2 shows the effects of test sediment exposures on survival and growth of *Neanthes*. The test met the acceptability criterion (≥90%) for control survival; mean survival in the control was 100.0%. The individual growth rate in the controls averaged 1.19 mg/day/worm. This meets the SMS recommendation for a minimum growth rate of 0.72 mg/day/worm for *Neanthes*. The average initial weight of worms was 1.17 mg, slightly above the recommended range of 0.5–1.0 mg, but met the required specification of >0.25 mg. The reference sediments included in the study met the performance standard requirement that mortality in the reference sediment should be ≤20%; mean mortality was 0.0% in all three reference sediments (CI09-SS-020-010, CI09-SS-060-010, and CI09-SS-080-010). The reference sediment growth rate criterion was also met for all three reference sediments. According to SMS criteria, the mean individual growth rate in the reference sediment should be ≥80% of the mean individual growth rate in the control sediment. Control growth rate was 1.19 mg/day/worm, and that in reference sediments CI09-SS-020-010, CI09-SS-060-010, and CI09-SS-080-010 was

1.15 mg/day/worm (96.6% of control growth rate), 1.21 mg/day/worm (102% of control growth rate), and 1.35 mg/day/worm (113% of control growth rate), respectively.

The test control acceptance criteria and reference sediment performance criteria for survival and growth were met. Positive control performance was within the laboratory's acceptance limits. It is concluded, therefore, that the test has developed fully acceptable data for use in making management decisions.

Because no statistical comparisons were performed between the test sample and the control or reference sediment, no conclusions are given regarding the toxicity of test sediments.

STUDY APPROVAL

Michele J. Redmond 6-10-09
Project Manager/ Study Director Date

Julie R. Fiore 6-10-09
Quality Assurance Unit Date

Linda K. Nemetz 6/16/09
Assistant Laboratory Director Date

Table 1. Summary of overlying water quality conditions during tests of the polychaete, *Neanthes arenaceodentata*, exposed to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Temperature (°C)	19.9 ± 0.6	19.2	21.4	104
pH	7.9 ± 0.2	7.4	8.4	104
Salinity (‰)	28.3 ± 1.0	26.0	30.0	104
Dissolved Oxygen (mg/L)	6.5 ± 0.7	2.4	7.3	108
Total soluble sulfide (mg/L)	---	<0.02	<0.02	26
Total Ammonia-N (mg/L)	---	<0.1	9.8	39
Un-ionized Ammonia (mg/L)	---	<0.002	0.283	39

Table 2. Means and standard deviations (n=5) of percent survival, individual dry weight, and individual growth rate of *Neanthes arenaceodentata* exposed for 20 days to marine sediments.

Sample description	Percent Survival (20-days)	Individual dry wt. (mg)	Individual growth rate (mg/day/worm)
Control (NAS #2541G)	100.0 ± 0.0	25.0 ± 4.2	1.19 ± 0.21
CI09-SS-020-010 (NAS #2520G)	100.0 ± 0.0	24.1 ± 3.9	1.15 ± 0.20
CI09-SS-060-010 (NAS #2521G)	100.0 ± 0.0	25.5 ± 4.9	1.21 ± 0.24
CI09-SS-080-010 (NAS #2522G)	100.0 ± 0.0	28.1 ± 2.1	1.35 ± 0.11
EW09-SS-005-010 (NAS #2507G)	100.0 ± 0.0	22.5 ± 4.8	1.06 ± 0.24
EW09-SS-030-010 (NAS #2498G)	100.0 ± 0.0	20.8 ± 2.3	0.98 ± 0.12
EW09-SS-032-010 (NAS #2496G)	92.0 ± 11.0	23.2 ± 2.1	1.10 ± 0.11
EW09-SS-033-010 (NAS #2495G)	100.0 ± 0.0	22.3 ± 1.8	1.06 ± 0.09
EW09-SS-034-010 (NAS #2493G)	100.0 ± 0.0	25.0 ± 2.0	1.19 ± 0.10
EW09-SS-035-010 (NAS #2494G)	100.0 ± 0.0	21.6 ± 3.4	1.02 ± 0.17
EW09-SS-217-010 (NAS #2473G)	100.0 ± 0.0	24.9 ± 4.3	1.18 ± 0.22
EW09-SS-218-010 (NAS #2472G)	100.0 ± 0.0	26.1 ± 2.2	1.25 ± 0.11
EW09-SS-220-010 (NAS #2471G)	100.0 ± 0.0	22.4 ± 2.1	1.06 ± 0.11

APPENDIX I

PROTOCOL

TEST PROTOCOL

JUVENILE POLYCHAETE, *NEANTHES ARENACEODENTATA*, 20-DAY SOLID PHASE SEDIMENT BIOASSAY

1. INTRODUCTION

1.1 Purpose of Study: The purpose of this study is to identify marine sediments that are toxic to a marine polychaete worm.

1.2 Summary of Method: The 20-day static renewal test is performed using laboratory-cultured, 2-3 week post-emergence juvenile worms purchased from a supplier. Test sediments are placed in the bottom of 1-liter glass beakers used as test vessels which are then filled with clean seawater. Five replicate containers for each test sediment, reference sediment, and the control sediment, each containing 5 test organisms, are employed. During test setup, three subsamples of five worms each are randomly selected to provide an estimate of initial biomass. During the exposure period, each chamber is provided with 40 mg of food on an every-other-day basis. Every third day, one-third of the seawater in each chamber is exchanged with fresh seawater. Survival and growth are the response criteria used. The mean and standard deviation for each treatment and test endpoint are given in the final report. Between-treatment statistical comparisons may be made, where each treatment is compared to the control and/or reference sediment. This protocol is based on PSEP (1995) guidelines, PSDDA (PSDDA 1989, U.S. ACOE et al. 2000) modifications, and SMS guidelines (WDOE 2003).

2. STUDY MANAGEMENT

2.1 Sponsor's Name and Address:

2.2 Sponsor's Study Monitor:

2.3 Name of Testing Laboratory:
Northwestern Aquatic Sciences
3814 Yaquina Bay Road, P.O. Box 1437
Newport, OR 97365.

2.4 Test Location: Newport Laboratory

2.5 Laboratory's Personnel to be Assigned to the Study:
Project Manager/Technical Director:
Qual. Assurance Officer:
Aquatic Toxicologist:
Aquatic Toxicologist:

2.6 Proposed Testing Schedule: Tests should begin within 2 weeks (8 weeks with samples under nitrogen for PSDDA or SMS) of sample collection. Reference toxicant test to be run concurrently.

2.7 Good Laboratory Practices: The test is conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

3. TEST MATERIAL
The test materials are marine or estuarine sediments. The collected sediments are placed in a suitable container for shipping and storage. The preferred container is a solvent and acid cleaned 1 L glass jar fitted with a TFE-lined screw cap. The jars are filled completely so that there is no air space. At the laboratory, the samples may be stored at 4°C in the dark in the original sealed containers for up to 2 weeks (8 weeks with no headspace or with samples under nitrogen for PSDDA or SMS) prior to testing. The negative control sediment is from a clean site. In addition, one or more reference sediments, clean sediments with physical characteristics similar to the test sediments, may also be employed.

4. TEST WATER
Test water is filtered Yaquina Bay seawater adjusted to a salinity of 28 ppt. The water is pumped from Yaquina Bay into a 6000 gal seasoned fiberglass reservoir from which it is supplied under pump pressure to the laboratory. Filtration is accomplished using a sand filter followed by 5 µm, 1µm, and 0.40µm cartridge filters. An alternative seawater supply of similar quality may be used.

5. TEST ORGANISMS
5.1 Species: *Neanthes arenaceodentata*

5.2 5.2. Source: *Neanthes* are obtained from laboratory cultures. California State University, Long Beach, Dept. of Biology is a source for purchasing these worms.

5.3 5.3. Laboratory Handling: Worms are received from the supplier in plastic bags containing seawater and algae (*Enteromorpha*). Upon receipt, water quality data are taken on 1 or 2 bags and all bags with worms are then placed in holding aquaria containing seawater at 20 ± 1°C, and the salinity is adjusted to 28 ± 2 ppt. Worms are generally maintained for 1-2 days prior to use in tests, but may be held longer if water changes are provided. Gentle aeration is supplied to the holding aquaria. During the holding period, organisms are fed ground TetraMarine® (approximately 0.1 g per 200-300 worms) on an every-other-day basis. If the food is not being consumed, feeding should be reduced. No water changes are required if holding time is less than 1 week.

5.4 Age at Study Initiation: 2-3 week post-emergence juveniles (0.5-1.0 mg dry weight).

6. DESCRIPTION OF TEST SYSTEM
6.1 Test Chambers and Environmental Control: Test chambers used in the toxicity test are 1000 ml glass beakers. The beakers are covered to minimize contamination and evaporation of seawater or loss of volatile compounds. Test chambers are maintained at constant temperature by partial immersion in a temperature-controlled water bath or by placement in a temperature-controlled room. Minimal aeration is supplied through a glass pipet. The aeration rate should be 150 - 300 mL/minute or approximately 100 bubbles per minute). The test is performed under continuous illumination, using ambient laboratory lighting of low to moderate intensity. SMS may require UV light for PAH-contaminated intertidal sediments.

6.2 Cleaning: All laboratory glassware, including test chambers, is cleaned as described in EPA/600/4-90/027F. New glassware and test systems are soaked 15 minutes in tap water and scrubbed with detergent (or cleaned in an automatic dishwasher); rinsed twice with tap water; carefully rinsed once with fresh, dilute (10%, V:V) hydrochloric or nitric acid to remove scale, metals, and bases; rinsed twice with deionized water; rinsed once with acetone to remove organic compounds (using a fume hood or canopy); and rinsed three times more with deionized water. Test systems and chambers are rinsed again with dilution water just before use.

7 EXPERIMENTAL DESIGN AND TEST PROCEDURES
7.1 Experimental Design: An experimental design is used consisting of exposure of test organisms to a number of test sediments, one or more reference sediments, and a control sediment. Each treatment consists of five replicate test chambers each containing 5 animals. An additional replicate containing 5 test organisms is used for daily water quality measurements. More replicates, with or without test organisms as appropriate, may be employed for periodic interstitial water quality measurements. Blind, random testing is used.

7.2 Preparation of Test Sediments: The interstitial salinity of the test, reference, and control sediments is measured. If initial interstitial salinities are not ≥20 ppt, the interstitial salinities must be adjusted as specified in the PSEP (1995) protocols.

Certain projects may require purging of excess ammonia from sediment interstitial water. PSDDA and SMS allow purging to be considered when interstitial total ammonia concentrations exceed specified limits. However, purging is allowed only by agency permission, so the decision to purge should be made by the client. Testing of purged sediments may require concurrent testing of the same sediments unpurged.

If no salinity adjustment or purging is done, sediments are used without further treatment. Each test sediment is mixed thoroughly using a non-contaminating implement, then an aliquot (175 ml) sufficient to make a 2-cm-deep layer is added to each test beaker, and the surface is smoothed. Bubbles are removed from the sediment by gently tapping each beaker against the palm of the hand. Seawater at the test temperature and salinity is carefully added into the beaker to the 750 ml mark utilizing a water dispersal technique to avoid suspending the sediment. The beakers are then placed into the water bath or constant-temperature room and covered with watchglasses. An air delivery pipet is inserted into each beaker under the watchglass. Overhead lights provide constant illumination. Water in the test beakers is aerated without disturbing the sediments. The test system is then allowed to temperature equilibrate overnight.

Beginning the Test: More worms than are needed for the bioassay are transferred to a shallow glass dish containing seawater of the test salinity and temperature. Worms are impartially distributed to a series of seawater-filled cups, each holding 5 worms. Enough cups for the test plus three additional cups are prepared. One container of 5 worms is randomly added to each replicate. Three of the cups containing worms are randomly selected and set aside. Worms from these cups are used to estimate initial total biomass. To determine initial total biomass, worms from these three cups are quickly rinsed with deionized water, placed on a preweighed aluminum pan, dried at 50°C to a constant weight, and weighed to the nearest 0.1 mg.

Once worms are added to a replicate, the number of animals that do not burrow into the test sediment within one hour is recorded. Worms not burrowed are removed and replaced with healthy worms, unless the observer believes the failure to burrow is a response to toxic material. Following addition of worms to the test chambers, additional water is added to achieve a final volume of 950 ml.

TetraMarine® is provided to each beaker (40 mg/beaker). The food is preweighed into plastic cups, wetted with bioassay test water, and rinsed into the test beakers.

7.4 Effects Criteria: Effects criteria are 1) survival after 20 days, 2) total biomass (dry weight), 3) average individual biomass (total biomass divided by the number of surviving worms), and 4) average individual growth rate.

7.5 Test Conditions: Test containers are maintained at a constant 20 ± 1°C. The test salinity is 28 ± 2 ppt. The dissolved oxygen concentration in each test container must be greater than 60% saturation (PSEP 1995) or 4.0 mg/L (PSDDA) throughout the 20-day test. Each beaker is supplied with oil-free compressed air provided at a rate of approximately 100 bubbles per minute through disposable glass pipettes. Each beaker is covered by a watchglass to minimize evaporation and the possibility of cross contamination between beakers. The test is conducted under constant illumination of moderate to low intensity.

During the 20-day exposure, one-third of the seawater in each beaker is replaced every third day. Prior to seawater replacement, water quality measurements are determined for one replicate test chamber for each test, reference, and control sediment. Water replacement is achieved by siphoning one-third of the volume of test water, then replacing it with fresh 28 ± 2 ppt test water that has been maintained at 20 ± 1 °C. Care should be taken not to disturb the sediments.

7.6 Feeding: Animals are fed 40 mg TetraMarine® per beaker on an every-other-day basis during the test.

7.7 Test Duration, Type and Frequency of Observations, and Methods: The duration of the sediment toxicity test is 20 days. The test chambers are observed daily to ensure that adequate aeration is provided and to note the general status of each chamber. The temperature of the environmental chamber should also be monitored daily. The type and frequency of observations to be made are summarized as follows:

TYPE OF OBSERVATION	TIMES OF OBSERVATION
Biological Data	
Survival	end of test
Biomass	end of test
Physical and Chemical Data	
Sediment interstitial salinity	at test beginning (bulk sediments) & end
Salinity, dissolved oxygen, pH, and temperature of overlying water (one replicate only)	day 0, day 20 and prior to partial replacement of test water every third day
Temperature in temperature beaker	daily
Ammonia and sulfides in overlying water (one replicate)	at test beginning & end; for PSDDA and SMS, on day 3 prior to seawater replacement *
Ammonia, sulfide, pH & salinity in interstitial water (optional)	for PSDDA and SMS, ammonia, pH, & salinity in bulk sediments; additional measurements as requested by client
Check air and lights	daily

*PSEP (1995) recommends ammonia-N and sulfide monitoring prior to the first and second water renewals when initial monitoring reveals >0.7 mg/L un-ionized ammonia or >5.0 mg/L sulfides.

Following the exposure period, worms from each chamber are removed from the test sediment by gently sieving the sediment through a 0.5 mm screen. Worms often are in their tubes and can be removed by gently prodding either end of the tube with a fine-point paintbrush. The number of surviving worms is recorded. Surviving worms are placed in a container of clean seawater until all chambers have been sieved. Then worms from each chamber are quickly rinsed with deionized water, placed on a pre-weighed aluminum pan, dried at 50°C to a constant weight, and weighed to the nearest 0.1 mg.

Dissolved oxygen is measured directly in test bakers using a polarographic oxygen probe calibrated according to the manufacturer's recommendations. The pH is measured using a properly calibrated pH meter with scale divisions of 0.1 pH units. Temperature is measured using a calibrated mercury thermometer or a telethermometer. Salinity is measured using a refractometer. The method used for the measurement of total ammonia-N in the overlying water and sediment porewater from sediment bioassays is based on the salicylate colorimetric method of Hach Chemical Co. and was adapted from Clin. Chim. Acta., 14: 403 (1966). The method used for the measurement of dissolved sulfide in the overlying water and sediment porewater in marine sediment bioassays is the methylene blue colorimetric method based on SM 4500-S^{2-} (Standard Methods 1995 [19th edition]). Any observed changes in sediment color or the formation of a sediment discontinuity layer is also recorded.

7.8 Criteria of Test Acceptance: For the test to be considered acceptable, mean mortality of organisms in the control treatment at the end of the test should be ≤10%

7.9 Performance criteria: For PSDDA and SMS, control sediment should have mean mortality ≤10% and target mean growth rate >0.72 mg/worm/day (failure if growth rate <0.38 mg/worm/day). Initial weight of worms should be 0.5-1.0 mg (failure if <0.25 mg). Reference sediment should have mean mortality ≤20% and mean growth rate ≥80% of the control sediment.

Reference Toxicant test: A routine reference toxicant test is run concurrently with each sediment test. This is normally a 96-hr test with cadmium chloride. PSDDA and SMS also require a water-only ammonia test when ammonia concentrations exceed specified limits.

8. DATA ANALYSIS

The mean and standard deviation are calculated for each endpoint employed (e.g. 20-day survival, 20-day total biomass, 20-day average individual biomass, and average individual growth rate) and for each treatment (i.e. test sediment). Between-treatment comparisons may be made using a Student's t-test, Wilcoxon's Two-Sample test, Mann-Whitney U test, or Rankit Analysis, where each treatment is compared to the control or the reference sediment. An arcsine-square root transformation of proportional data, and tests for normality and heterogeneity of variances, are performed prior to statistical comparisons.

9. REPORTING

A report of the test results must include the following information: name and identification of the test; the investigator and laboratory; information on the test, reference, and control sediments including the initial and final interstitial salinities; information on the source of seawater used; detailed information about the test organisms including acclimation conditions; a description of the experimental design and test chambers and other test conditions including water quality; information about any aeration that may have been required; definition of the effect criteria and other observations; unusual responses, if any, in the control treatment; 20-day survival in each exposure chamber and the mean and standard deviation for each treatment; initial total biomass (dry weight) for three groups of five worms; 20-day total biomass (dry weight) in each exposure chamber and the mean and standard deviation for each treatment; 20-day average individual biomass (dry weight) in each exposure chamber and the mean and standard deviation for each treatment; average individual growth rate in each exposure chamber and the mean and standard deviation for each treatment; 96-hour LC50 with reference toxicant; a description of data analysis methods employed and documentation of statistical test results; any unusual information about the test or deviations from procedures.

10. STUDY DESIGN ALTERATION

Amendments made to the protocol must be approved by the sponsor and study director and should include a description of the change, the reason for the change, the date the change took effect, and the dated signatures of the study director and sponsor. Any deviations in the protocol must be described and recorded in the study raw data.

11. REFERENCED PROCEDURES

Johns, D.M., T.C. Ginn, and D.R. Reish. 1990. Protocol for juvenile Neanthes sediment bioassay. Prepared for U.S. Env. Prot. Agency, Region 10 -Office of Puget Sound, Seattle, WA, 17 pp.

Puget Sound Dredged Disposal Analysis (PSDDA). 1989. Management plan report - unconfined open-water disposal of dredged material, Phase II - (north and south Puget Sound). Puget Sound Dredged Disposal Analysis, Army Corps of Engineers, Seattle, WA. (and other modifications made through the PSDDA process and Sediment Management Annual Review Meetings).

Puget Sound Estuary Program. 1995. Recommended guidelines for conducting laboratory bioassays on Puget Sound sediments. Prepared for U.S. Env. Prot. Agency, Region 10, Office of Puget Sound, Seattle, WA, and Puget Sound Water Quality Authority, Olympia, WA.

Snedecor, G.W. and W.G. Cochran. 1967. Statistical methods. Sixth Ed., The Iowa State Univ. Press. Ames, Iowa., 593 pp.

U.S. Army Corps of Engineers, Seattle District; U.S. EPA, Region 10; Washington Department of Natural Resources; Washington Department of Ecology. 2000. Dredged material evaluation and disposal procedures: a user's manual for the dredged disposal analysis (PSDDA) program.

Washington State Department of Ecology. 2003. Sediment sampling and analysis plan appendix. Publication no. 03-09-043, WDOE, Olympia, WA.

Weber, C.I. (Ed.) 1991. Methods for measuring the acute toxicity of effluents to freshwater and marine organisms (fourth edition). EPA/600/4-90/027.

12. APPROVALS

.... for .....
Name Date

.... for NORTHWESTERN AQUATIC SCIENCES
Name Date

APPENDIX II

RAW DATA

TEST DESCRIPTION, MONITORING, AND RESULTS BENCHSHEETS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator pgs. 1-53 reviewed MSR 6-10-09

STUDY MANAGEMENT

Client: Windward Environmental, LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Client's Study Monitor: Mrs. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. M.S. Redmond MSR

QA Officer L.K. Nemeth

1. GA Bulton GB
2. G.J. IRISSARRI GJI
3. Susan Gage SG
4. Lilia P Sandoval LPS
5. R.S. Caldwell RSC
6.
7.
8.

Study Schedule:

Test Beginning: 4-17-09 10:30 Test Ending: 5-7-09 10:00

TEST MATERIAL

General description (see sample logbook/chain-of-custody for details):

NAS Sample No.:	2471G	2472G	2473G	2493G	2494G
Description:	EW09-SS-220-010	EW09-SS-218-010	EW09-SS-217-010	EW09-SS-034-010	EW09-SS-035-010
Collection Date:	3/1/09	3/1/09	3/1/09	3/4/09	3/4/09
Receipt Date:	3/3/09	3/3/09	3/3/09	3/6/09	3/6/09
Inters.Salinity (ppt):	29.0	29.0	30.0	29.5	29.5
:					

NAS Sample No.:	2495G	2496G	2498G	2507G	2520G
Description:	EW09-SS-033-010	EW09-SS-032-010	EW09-SS-030-010	EW09-SS-005-010	CI09-SS-020-010
Collection Date:	3/4/09	3/4/09	3/4/09	3/4/09	3/12/09
Receipt Date:	3/6/09	3/6/09	3/6/09	3/6/09	3/14/09
Inters.Salinity (ppt):	30.0	30.0	30.0	29.5	30.0
:					

NAS Sample No.:	2521G	2522G			
Description:	CI09-SS-060-010	CI09-SS-080-010			
Collection Date:	3/12/09	3/12/09			
Receipt Date:	3/14/09	3/14/09			
Inters.Salinity (ppt):	30.0	30.0			
:					

NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					

Error codes: 1) correction of handwriting error
2) written in wrong location; entry deleted
3) wrong date deleted, replaced with correct date
4) error found in measurement; measurement repeated

Test No. 783-2 Client Windward Investigator

SEDIMENT DESCRIPTIONS -- SUPPLEMENTAL NOTES

Sample No.	Description
	LRS (2) 4-16-09 ~~brown gray fine~~
2471G	brown gray sandy mud with shell fragments
2472G	DARK GRAY MUDDY FINE SAND
2473G	Dark Gray muddy Fine SAND
2493G	Dark gray fine mud
2494G	dark gray fine mud
2495G	DARK GREY/GREEN FINE MUD
2496G	brown gray fine mud
2498G	DARK GRAY/GREEN FINE MUD
2507G	Dark Gray mud with shell Fragments
2520G	GRAY SAND
2521G	Fine gray Muddy sand with shells
2522G	brown gray fine sandy mud
2541G	brown sand

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

TEST WATER

Source: Yaquina Bay, Oregon, sea water

Date(s) of Collection: 4-15-09 Salinity (ppt) ~~28.0~~ 27.0 pH 8.0

Treatments: filtered to 0.4 µm, salinity-adjusted with MilliQ deionized water, aerated

TEST ORGANISMS

Species: *Neanthes arenaceodentata* Date received: 4/9/09

Source: Dept. of Biology, CA State University, Long Beach, CA

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
4-9-09	19.7	7.3	35.0	6.6	0.5/350	Tetramarine	yes	receiving water
4-10-09	20.3	8.0	30.0	7.6				
4-11-09	20.1	7.9	32.0	6.9			yes	
4-12-09	22.0	8.1	30.0	6.6	0.5/350	Tetramarine		
4-13-09	22.1	8.0	29.5	7.3	"	"	yes	
4-14-09	20.2	8.1	28.0	7.6				
4-15-09	20.2	8.1	28.0	8.2				
4-16-09	20.1	8.1	29.0	7.5	a little	Tetramarine		
4-17-09	20.4	8.1	29.0	7.6				
Mean	20.6	8.0	30.1	7.3				
S.D.	0.9	0.3	2.2	0.5				
(N)	(9)	(9)	(9)	(9)				

Photoperiod during acclimation: constant light

TEST PROCEDURES AND CONDITIONS

Test chambers: 1 L glass beakers covered with watchglasses

Test volumes: 175 ml of test sediment; 950 ml total volume

Replicates/treatment: (5) 5 Organisms/treatment: (25) 25

Test water changes: Every third day beginning with day 3

Aeration: yes, at least 2 cm above sediment surface Beaker placement: Total randomization

Feeding: every other day beginning with day zero Photoperiod: Constant light

Test temperature (deg.C): 20 Salinity: 28 +/- 2 ppt

Additional replicates included for water quality purposes (indicate numbers of each that apply):

1 Water quality beaker (with test organisms; may also be day 20 sacrificial beaker)

____ Day zero sacrificial beaker (no test organisms)

____ Day ____ sacrificial beaker(s) (with test organisms)

Control Sediment:

Source: Yaquina Bay, Oregon

Date collected: 4-15-09 Interstitial salinity: 17.0 ‰

Sieved through 0.5 -mm screen

Storage: 4°C in the dark NAS# 2541G

MISCELLANEOUS NOTES

Light intensity measurements:

Date	Location in room	foot-candles
~ 25-09	beaker #16	47.0
	#61	30.3

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

Test conducted in (circle one): room 1 room 2 (trailer) water bath other:

Randomization chart: wall

upper shelf

3	6					75	78		
2	5		→	→	→	74	77		
1	4					73	76		

door

Randomization chart:

Randomization chart:

Randomization chart:

TEST SCHEDULE SUMMARY

Date	4-17-09	4-18-09	4-19-09	4-20-09	4-21-09	4-22-09	4-23-09	4-24-09	4-25-09	4-26-09	4-27-09	4-28-09	4-29-09	4-30-09	5-1-09	5-2-09	5-3-09	5-4-09	5-5-09	5-6-09	5-7-09
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Feed	x		x		x		x		x		x		x		x		x		x		
Record WQ	x			x			x			x			x			x			x		x
Change water				x			x			x			x			x			x		
Overlying NH4,S	x			NH3																	x
Initials	LPS	LPS	LJS	LPS	sf	sf	sf	sf/mr	LJS	sf	sf	sf	sf	sf/mr	LPS		sf	sf	sf	LPS	
Porewater NH4, ppt, pH																					ppt only
Initials																					LPS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 0 (4/19/09) 6SL LPS Temperature beaker: 20.9 deg.C

air okay? (if not, details in comments below) yes overlying ammonia sampled? yes (days 0,3,20)

water change? (every third day) --

fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. not buried	Comments
1						0	
2						0	
3						0	
4						0	
5						0	
6						0	
7						0	
8						0	
9						0	
10						0	
11						0	
12						0	
13						0	
14						0	
15						0	
16						0	
17						0	
18						0	
* 19	20.9	7.9	26.5	7.2	<0.02	0	
20						0	
21						0	
22						0	
* 23	20.6	8.0	26.5	7.2	<0.02	0	
* 24	20.4	7.9	26.5	7.1	<0.02	0	
25						0	
26						0	
27						0	
28						0	
29						0	
30						0	
31						0	
32						0	
33						0	
34						0	
35						0	
36						0	
37						0	
38						0	
39						0	
40						0	

* Water quality beakers

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 0 cont'd. (4 /17 /09) 6:55

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. not buried	Comments
41						0	
42						0	
* 43	20.7	7.9	26.5	7.1	<0.02	0	
44						0	
45						0	
* 46	20.8	7.9	26.5	7.0	<0.02	0	
47						0	
* 48	20.4	8.0	26.5	7.2	<0.02	0	
* 49	20.6	7.9	26.5	7.1	<0.02	0	
50						0	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
* 58	20.8	7.9	26.5	7.1	<0.02	0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
* 66	20.4	8.0	26.5	7.3	<0.02	0	
* 67	20.7	7.9	26.5	7.2	<0.02	0	
68						0	
69						0	
70						0	
* 71	20.6	8.0	26.0	7.3	<0.02	0	
* 72	20.6	8.0	26.5	7.2	<0.02	0	
73						0	
74						0	
75						0	
76						0	
77						0	
* 78	20.7	7.9	27.0	6.9	<0.02	0	

* Water quality beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 1 (4/18/09) LBS Temperature beaker: 20.8 deg.C

air okay? (if not, details in comments below) yes

water change? (every third day) —

fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Day 2 (4/19/09) LBS Temperature beaker: 21.4 deg.C

air okay? (if not, details in comments below) yes

water change? (every third day) —

fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 3 (4/12/09) [illegible] Temperature beaker: 19.6 deg.C

air okay? (if not, details in comments below) Yes overlying NH3 sampled (days 0,3,20)? Yes
water change? (every third day) yes
fed? (every second day) —

PSQ 1-20-09

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19	19.6	~~7.8~~ 7.8	27.5	6.8	
23	19.4	7.8	28.0	6.8	
24	19.4	7.7	28.0	6.6	
43	19.4	7.8	28.0	6.6	
46	19.6	7.8	28.5	6.8	
48	19.2	7.9	27.5	6.9	
49	19.5	7.9	27.5	6.6	
58	19.6	7.4	28.5	6.7	
66	19.4	7.8	28.0	7.0	
67	19.3	7.6	28.5	6.2	
71	19.4	7.7	27.5	6.8	
72	19.4	7.7	28.0	6.6	
78	19.6	7.7	28.0	6.6	

Day 4 (4/12/09) [illegible] Temperature beaker: 19.9 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) —
fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 5 (4/22/09) Temperature beaker: 20.2 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) —
fed? (every second day) —

Beaker No.	Temp (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Day 6 (4/23/09) Temperature beaker: 19.5 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) yes
fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19	19.5	7.8	30.0	6.8	
23	19.4	8.0	29.0	7.0	
24	19.3	8.0	28.5	6.6	
43	19.3	8.2	29.0	6.4	
46	19.6	8.4	29.0	6.6	
48	19.3	8.1	28.5	6.6	
49	19.4	8.0	29.0	6.6	
58	19.4	8.2	29.0	6.8	
66	19.2	7.9	29.0	6.9	
67	19.6	7.8	28.5	6.4	
71	19.5	7.8	29.5	6.6	
72	19.5	7.9	29.0	6.6	
78	19.7	8.1	29.0	6.5	

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 7 (4/24/09) [illegible]

Temperature beaker: 19.5 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) —
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Day 8 (4/25/09) MLR

Temperature beaker: 19.2 deg.C

air okay? (if not, details in comments below) all but #58 OK
water change? (every third day) —
fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58	air off at ~~10:45~~ 10:15		DO = 3.1 mg/L; air restarted; by 10:45, DO = 5.0 mg/L		
66		MLR			
67					
71					
72					
78					

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 9 (4/26/09) [illegible] Temperature beaker 20.2 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) yes
fed? (every second day) —

Beaker No.	Temp (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19	20.2	7.8	30.0	6.2	
23	20.0	7.8	28.0	6.4	
24	19.8	7.9	27.5	6.1	
43	20.1	8.2	28.0	6.6	
46	20.1	8.2	27.0	6.3	
48	19.7	8.3	28.5	6.2	
49	20.1	7.9	27.0	5.9	
58	20.0	8.3	27.5	6.6	
66	19.8	7.8	27.0	6.4	
67	20.3	7.8	27.0	6.1	
71	20.1	7.8	27.5	6.4	
72	19.8	7.9	27.0	6.4	
78	20.2	8.1	27.0	6.2	

Day 10 (4/27/09) [illegible] Temperature beaker 19.3 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) —
fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

NEANTHES SP 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 11 (4/28/09) Temperature beaker: 19.6 deg.C

air okay? (if not, details in comments below) All ok

water change? (every third day) --

fed? (every second day) --

Beaker No.	Temp (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Day 12 (4/29/09) Temperature beaker: 19.8 deg.C

air okay? (if not, details in comments below) yes

water change? (every third day) yes

fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19	19.8	7.8	6.6	29.0	
23	19.5	7.8	6.5	29.0	
24	19.4	8.0	6.3	28.5	
43	19.4	8.2	6.6	28.5	
46	19.5	8.2	6.6	28.0	
48	19.3	8.3	6.4	28.0	
49	19.5	8.0	6.0	28.5	
58	19.4	8.4	6.9	28.0	
66	19.2	7.9	6.6	28.0	
67	19.6	7.9	6.5	28.0	
71	19.5	8.0	6.8	28.5	
72	19.3	8.0	6.4	28.5	
78	19.6	8.1	6.2	29.0	

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 13 (4/30/09) AJ Temperature beaker: 19.8 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) –
fed? (every second day) –

Beaker No.	Temp. (deg C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Day 14 (5/1/09) AJ Temperature beaker: 19.6 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) –
fed? (every second day) Yes

Beaker No.	Temp. (deg C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 15 (5 12 09) MSR Temperature beaker: 21.0 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) yes
fed? (every second day) –

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19	21.0	7.7	30.0	6.3	
23	21.1	7.7	28.5	6.4	
24	20.9	7.8	29.0	6.0	
43	21.2	8.1	29.0	6.3	
46	21.3	8.0	28.5	5.9	
48	20.9	8.2	29.5	6.2	
49	21.2	7.8	28.5	5.6	
58	21.0	8.3	28.5	5.8	
66	20.6	7.7	29.0	6.2	
67	21.2	7.7	28.0	6.3	
71	21.1	7.8	28.5	6.7	
72	20.9	7.8	28.0	6.1	
78	21.4	8.0	28.0	6.2	

Day 16 (5 13 09) UPS / 631 Temperature beaker: 20.7 deg.C

air okay? (if not, details in comments below) YES
water change? (every third day) –
fed? (every second day) YES

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 17 (5/4/09) Temperature beaker: 20.9 deg.C

air okay? (if not, details in comments below) yes

water change? (every third day) –

fed? (every second day) –

Beaker No	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19	~~20.0~~	~~7.8~~ 6.91 @ 5:50			~~AERATION IN BEAKER #7 OFF~~
23					~~DO = 2.4 mg/L AERATION RESTABLISHED~~
24					@ 6:51 5-5-09
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Day 18 (5/5/09) 6:51

Temperature beaker: 20.0 deg.C

air okay? (if not, details in comments below) YES, EXCEPT BEAKER #7 (SEE BELOW)

water change? (every third day) yes

fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19	20.0	7.8	30.0	6.9	AERATION IN BEAKER #7 OFF. D.O = 2.4 mg/L.
23	20.0	7.8	28.0	7.1	AERATION RESTABLISHED. D.O. 40 MINUTES
24	19.6	7.9	28.5	6.5	LATER: 4.9 mg/L
43	20.1	8.3	28.0	6.8	
46	20.1	8.1	28.0	6.6	
48	19.6	8.2	28.5	6.5	
49	20.0	8.0	27.5	6.2	
58	20.0	8.2	28.5	6.9	
66	19.6	7.8	29.0	6.5	
67	20.0	7.8	28.5	6.7	
71	20.0	7.9	27.5	7.0	
72	19.9	7.9	27.5	6.7	
78	20.2	8.1	27.5	6.7	

Test No. 783-2 Client Windward Investigator

DAILY RECORD SHEET

Day 19 (5/6 09) [illegible] Temperature beaker: 20.3 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) –
fed? (every second day) –

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
19					
23					
24					
43					
46					
48					
49					
58					
66					
67					
71					
72					
78					

Day 20 (5/7 09) 6:02 10:09/15 Temperature beaker: 19.4 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) –
fed? (every second day) –

overlying NH3 sampled (days 0,3,20)? 0 6 20 ~~19 4 53~~

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	
19	19.4	7.7	30.0	6.7	<0.02	
23	19.5	7.5	29.0	7.0	<0.02	
24	19.3	7.8	29.5	6.4	<0.02	
43	19.6	8.2	29.0	7.0	<0.02	
46	19.6	8.1	29.5	6.5	<0.02	
48	19.3	8.1	30.0	6.6	<0.02	
49	19.5	7.9	29.5	6.1	<0.02	
58	19.4	8.0	30.0	6.6	<0.02	
66	19.2	7.7	30.0	6.4	<0.02	
67	19.5	7.8	29.5	6.7	<0.02	
71	19.6	7.8	30.0	6.7	<0.02	
72	19.4	7.8	29.5	6.6	<0.02	
78	19.4	8.1	30.0	6.6	<0.02	

Test No 783-2 Client Windward Investigator

DAY 20 TEST TERMINATION SHEET

Beaker No.	Interstitial Salinity	No. of survivors	Initial	Comment
1		5	MLR	
2		5	LPS	
3		5	GJL	
4		5	GJL	
5		5	GJL	
6		5	LPS	
7		5	GJL	
8		5	GJL	
9		5	MLR	
10		5	GJL	
11		5	GJL	
12		5	LPS	
13		5	MLR	
14		5	GJL	
15		5	GJL	
16		5	LPS	
17		5	GJL	
18		5	GJL	
* 19	30.5		LPS	
20		5	LPS	
21		5	GJL	
22		5	MLR	
* 23	29.5		LPS	
* 24	30.0		LPS	
25		5	LPS	
26		5	GJL	
27		5	GJL	
28		5	LPS	
29		5	MLR	
30		5	GJL	
31		5	LPS	
32		5	GJL	
33		5	MLR	
34		5	GJL	
35		5	GJL	
36		5	LPS	
37		5	GJL	
38		5	MLR	
39		5	GJL	
40		5	LPS	

Beaker No.	Interstitial Salinity	No. of survivors	Initial	Comment
41		5	GJL	
42		5	LPS	
* 43	29.5		LPS	
44		5	GJL	
45		5	GJL	
* 46	29.5		LPS	
47		5	MLR	
* 48	30.0		LPS	
* 49	29.0		LPS	
50		5	MLR	
51		5	GJL	
52		5	MLR	
53		5	LPS	
54		5	GJL	
55		5	GJL	
56		5	LPS	
57		5	MLR	
* 58	30.0		LPS	
59		5	GJL	
60		5	LPS	
61		5	GJL	
62		4	MLR	
63		5	GJL	
64		5	LPS	
65		5	GJL	
* 66	29.5		LPS	
* 67	29.5		LPS	
68		5	GJL	
69		5	GJL	
70		5	LPS	
* 71	29.0		LPS	
* 72	29.0		LPS	
73		5	GJL	
74		5	GJL	
75		5	LPS	
76		5	GJL	
77		5	LPS	
* 78	30.0		LPS	

* Water quality beakers

Test No. 783-2 Client Windward Investigator

ZERO-TIME WEIGHING DATA SHEET

Tare: Date 4-14-09 Oven temp (C.) 50 Drying time (hr.) 22 Initials SDF
Standard Weights: 10 mg: 10.003 100mg: 100.006

Final: Date 4-20-09 Oven temp (C.) 50.51 Drying time (hr.) 28 Initials SDF
Standard Weights: 10 mg: 10.010 100mg: 100.013

Equip. used: Oven: Blue M #2 Balance: Sartorius M3P

(Dry overnight at 50 degrees C)

Pan #	Tare wt. (mg)	Total wt. (mg)	#weighed	Comments
1	48.42	55.25	5	
2	49.25	54.30	5	
3	49.31	55.13	5	

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-2 Client Windward Investigator

WEIGHING DATA SHEET

Tare:	Date 4-22-09	Oven temp (C.) 57°	Drying time (hr.) 20	Initials JRF
	Standard Weights:	10 mg: 10.003	100mg: 100.005	
Final #1:	Date 5-11-09	Oven temp (C.) 50-57°C	Drying time (hr.) 26	Initials JRF
	Standard Weights:	10 mg: 10.009	100mg: 100.019	
Final #2:	Date 5-12-09	Oven temp (C.) 45-50	Drying time (hr.) 2	Initials JRF
	Standard Weights:	10 mg: 10.006	100mg: 100.013	
Final #3:	Date 5-13-09	Oven temp (C.) 40-50	Drying time (hr.) 1.5	Initials JRF
	Standard Weights:	10 mg: 10.007	100mg: 100.015	

Equip. used: Oven Blue M #2 Balance Sartorius M3P

(Dry overnight at 50 degrees C)

Bkr. #	Pan #	Tare wt. (mg)	Total wt. (mg) 1	2	3	no. weighed	put into pans-initials	Comments
1	1	92.01			210.89	5		
2	2	92.22			203.90	5		
3	3	86.28			213.17	5		
4	4	89.31			215.49	5		
5	5	85.57			210.55	5		
6	6	89.30			221.60	5		
7	7	82.54			176.11	5		
8	8	81.68			231.73	5		
9	9	80.23			206.93	5		
10	10	87.34			204.47	5		
11	11	88.63			220.17	5		
12	12	86.80			204.62	5		
13	13	87.94			218.61	5		
14	14	85.05			226.24	5		
15	15	80.50			194.08	5		
16	16	84.27			175.37	5		
17	17	85.01			191.52	5		
18	18	83.34			219.51	5		
19	19							
20	20	86.81			215.56	5		
21	21	83.26			161.41	5		
22	22	82.78			163.57	5		
23	23							
24	24							
25	25	88.63			179.05	5		
26	26	89.24			204.93	5		
27	27	82.22			190.42	5		
28	28	92.56			208.07	5		
29	29	89.30	218.25	218.204	217.67	5		
30	30	86.45	231.17	230.81	230.44	5		
31	31	86.92	210.44	210.24	210.04	5		
32	32	87.67	207.65	207.47	206.42	5		
33	33	88.74	189.89	189.67	189.51	5		

Water quality beakers

Test No. 783-2 Client Windward Investigator

WEIGHING DATA SHEET

See page 19 for information on drying times and temperatures, standard weights,etc.

Bkr. #	Pan #	Tare wt. (mg)	Total wt. (mg) 1	2	3	no. weighed	put into pans-initials	Comments
34	34	83.60	179.84	179.60	179.38	5		
35	35	84.56	219.29	218.10	217.94	5		
36	36	83.53	171.99	171.81	171.70	4		
37	37	83.44	194.30	194.01	193.85	5		
38	38	89.35	208.05	207.76	207.62	5		
39	39	83.67	206.48	206.25	206.02	5		
40	40	90.07	184.61	184.45	184.31	5		
41	41	85.61	221.36	221.13	220.97	5		
42	42	87.31	199.94	199.66	199.51	5		
43	43							
44	44	80.50	222.08	221.86	221.72	5		
45	45	92.72	203.70	203.40	203.14	5		
46	46							
47	47	87.38	204.66	204.41	204.25	5		
48	48							
49	49							
50	50	90.00	229.46	229.21	229.02	5		
51	51	83.91	214.26	213.99	213.87	5		
52	52	80.47	195.70	195.50	195.42	5		
53	53	86.45	209.36	209.05	208.86	5		
54	54	90.73	228.18	227.92	227.76	5		
55	55	88.95	242.89	242.62	242.47	5		
56	56	84.79	232.28	231.98	231.38	5		
57	57	89.18	223.51	223.26	223.16	5		
58	58							
59	59	84.70			220.12	5		
60	60	84.25			197.21	5		
61	61	82.97			181.35	5		
62	62	84.17			166.90	4		
63	63	88.24			176.53	5		
64	64	86.20			190.37	5		
65	65	86.71			184.87	5		
66	66							
67	67							
68	68	79.68			178.75	5		
69	69	85.77			206.96	5		
70	70	82.29			220.23	5		
71	71							
72	72							
73	73	83.68			219.25	5		
74	74	84.97			243.69	5		
75	75	87.96			227.22	5		
76	76	85.08			207.38	5		
77	77	79.63			200.33	5		
78	78							

Water quality beakers

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH3-N Std.	-----	0.089	1.00
	3.0 mg/L NH3-N Std.	-----	0.300	3.00
	6.0 mg/L NH3-N Std.	-----	0.572	6.00
	10.0 mg/l NH3-N Std.	-----	0.990	10.00
	3.0 mg/L spike	-----	0.300	3.06
	3.0 mg/L spike dupl.	-----	0.297	3.03
	5.0 mg/L 2nd source	-----	0.482	4.91
1.	Day 0 (4-17-09)	######		
2.	19	1	0.065	0.66
3.	23	1	0.050	0.51
4.	24	1	0.023	0.23
5.	43	1	0.056	0.57
6.	46	1	0.030	0.31
7.	48	1	0.426	4.34
8.	49	1	0.287	2.92
9	58	1	0.060	0.61
10.	66	1	0.117	1.19
11.	67	1	0.045	0.46
12.	71	1	0.000	ND
13.	72	1	0.224	2.28
14.	78	1	0.042	0.43
15.				
16.				
17.				
18.				
19.				
20.				
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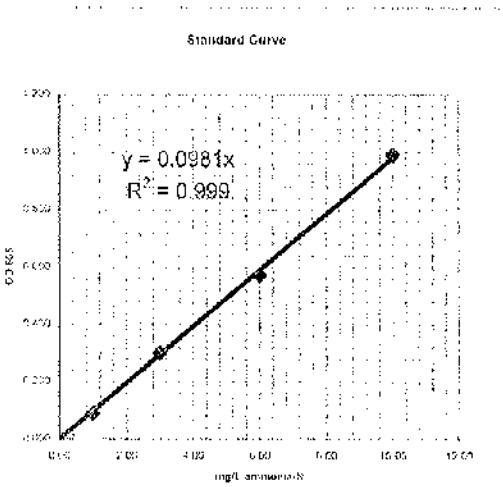
32.				
33.				
34.				
35.				
36.				



Reporting limit (mg/L) =	0.1
Recovery (%) =	101.4
Precision (RPD) =	1.01
2nd source (%) =	98.2
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-2
Test Day: 0
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 5/12/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	.089	1.00
	3.0 mg/L NH_3-N Std.	-----	.300	3.00
	6.0 mg/L NH_3-N Std	-----	.572	6.00
	10.0 mg/L NH_3-N Std.	-----	.990	10.00
	3.0 mg/L spike	-----	.300	
	3.0 mg/L spike dupl.	-----	.297	
	5.0 mg/L 2nd source	-----	.482	
1.	Day 0 (4-17-09)	######		
2.	19	1	.065	
3.	23	1	.050	
4.	24	1	.023	
5.	43	1	.056	
6.	46	1	.030	
7.	48	1	.426	
8.	49	1	.287	
9.	58	1	.060	
10.	66	1	.117	
11.	67	1	.045	
12.	71	1	.000	
13.	72	1	.224	
14.	78	1	.042	
15.				
16.				
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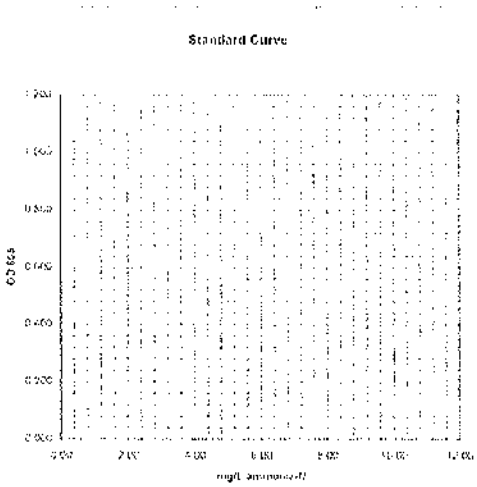

Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-2
Test Day 0
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 5/12/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	0.089	1.00
	3.0 mg/L NH_3-N Std.	-----	0.300	3.00
	6.0 mg/L NH_3-N Std.	-----	0.572	6.00
	10.0 mg/L NH_3-N Std.	-----	0.990	10.00
	3.0 mg/L spike	-----	0.300	3.06
	3.0 mg/L spike dupl.	-----	0.297	3.03
	5.0 mg/L 2nd source	-----	0.482	4.91
1.	Day 3 (4-20-09)	######		
2.	19	1	0.238	2.43
3.	23	1	0.223	2.27
4.	24	1	0.131	1.34
5.	43	1	0.187	1.91
6.	46	1	0.157	1.60
7.	48	1	0.960	9.78
8.	49	1	0.730	7.44
9.	58	1	0.191	1.95
10.	66	1	0.270	2.75
11.	67	1	0.178	1.81
12.	71	1	0.081	0.83
13.	72	1	0.500	5.10
14.	78	1	0.216	2.20
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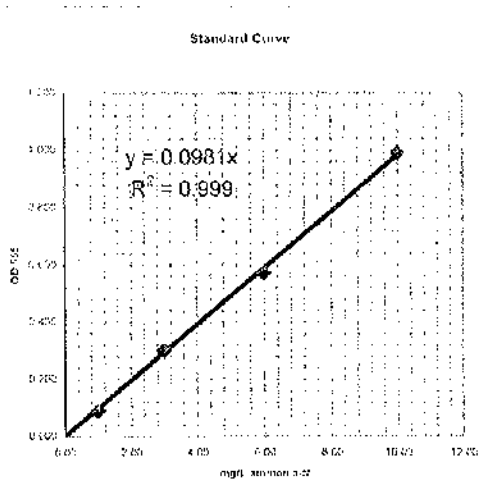
33.				
34.				
35.				
36				



Reporting limit (mg/L) =	0.1
Recovery (%) =	101.4
Precision (RPD) =	1.01
2nd source (%) =	98.2
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-2
Test Day: 3
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 5/12/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	.089	1.00
	3.0 mg/L NH_3-N Std.	-----	.300	3.00
	6.0 mg/L NH_3-N Std.	-----	.572	6.00
	10.0 mg/L NH_3-N Std.	-----	.990	10.00
	3.0 mg/L spike	-----	.300	
	3.0 mg/L spike dupl.	-----	.299	
	5.0 mg/L 2nd source	-----	.482	
1.	Day 3 (4-20-09)	######		
2.	19	1	.238	
3.	23	1	.223	
4.	24	1	.131	
5.	43	1	.189	
6.	46	1	.157	
7.	48	1	.960	
8.	49	1	.730	
9.	58	1	.191	
10.	66	1	.270	
11.	67	1	.178	
12.	71	1	.081	
13.	72	1	.500	
14.	78	1	.216	
15.				
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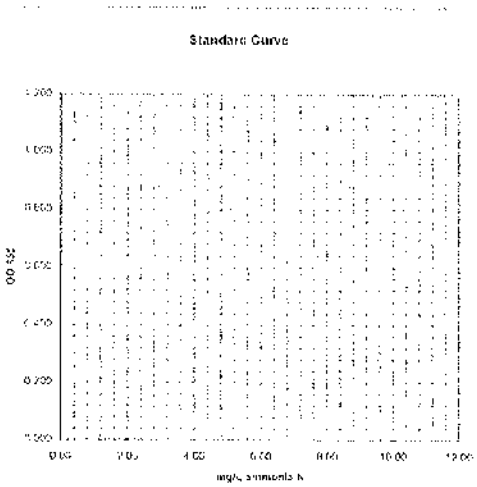

Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-2
Test Day: 3
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 5/12/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	0.089	1.00
	3.0 mg/L NH_3-N Std.	-----	0.300	3.00
	6.0 mg/L NH_3-N Std.	-----	0.572	6.00
	10.0 mg/L NH_3-N Std.	-----	0.990	10.00
	3.0 mg/L spike	-----	0.300	3.06
	3.0 mg/L spike dupl.	-----	0.297	3.03
	5.0 mg/L 2nd source	-----	0.482	4.91
1.	Day 20 (5-7-09)	######		
2.	19	1	0.025	0.25
3.	23	1	0.009	ND
4.	24	1	0.092	0.94
5.	43	1	0.015	0.15
6.	46	1	0.043	0.44
7.	48	1	0.022	0.22
8.	49	1	0.017	0.17
9.	58	1	0.016	0.16
10.	66	1	0.065	0.66
11.	67	1	0.020	0.20
12.	71	1	0.047	0.48
13.	72	1	0.017	0.17
14.	78	1	0.019	0.19
15.				
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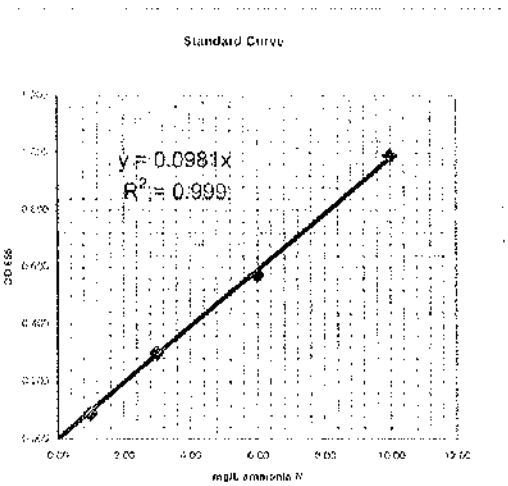

Reporting limit (mg/L) =	0.1
Recovery (%) =	101.4
Precision (RPD) =	1.01
2nd source (%) =	98.2
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-2
Test Day: 20
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 5/12/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	.089	1.00
	3.0 mg/L NH_3-N Std.	-----	.300	3.00
	6.0 mg/L NH_3-N Std.	-----	.572	6.00
	10.0 mg/L NH_3-N Std.	-----	.990	10.00
	3.0 mg/L spike	-----	.300	
	3.0 mg/L spike dupl.	-----	.297	
	6.0 mg/L 2nd source	-----	.452	
1.	Day 20 (5-7-09)	######		
2.	19	1	.015	
3.	23	1	.009	
4.	24	1	.092	
5.	43	1	.015	
6.	46	1	.043	
7.	48	1	.022	
8.	49	1	.017	
9.	58	1	.016	
10.	66	1	.065	
11.	67	1	.020	
12.	71	1	.047	
13.	72	1	.017	
14.	78	1	.019	
15.				
16.				
17.				
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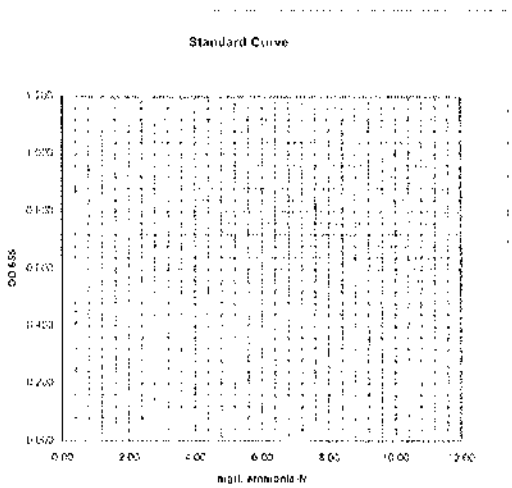


Reporting limit (mg/L) =	0.1
Recovery (%) =	#VALUE!
Precision (RPD) =	#VALUE!
2nd source (%) =	#VALUE!
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-2
Test Day: 20
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 5/12/2009

TEST DATA ANALYSIS RECORDS

Neanthes Growth Test
Randomization Key

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
61	2507G	EW09-SS-005-010	1	
21	2507G	EW09-SS-005-010	2	
51	2507G	EW09-SS-005-010	3	
12	2507G	EW09-SS-005-010	4	
54	2507G	EW09-SS-005-010	5	
49	2507G	EW09-SS-005-010	6	wq replicate
33	2498G	EW09-SS-030-010	1	
27	2498G	EW09-SS-030-010	2	
34	2498G	EW09-SS-030-010	3	
38	2498G	EW09-SS-030-010	4	
7	2498G	EW09-SS-030-010	5	
58	2498G	EW09-SS-030-010	6	wq replicate
62	2496G	EW09-SS-032-010	1	
36	2496G	EW09-SS-032-010	2	
47	2496G	EW09-SS-032-010	3	
11	2496G	EW09-SS-032-010	4	
32	2496G	EW09-SS-032-010	5	
78	2496G	EW09-SS-032-010	6	wq replicate
28	2495G	EW09-SS-033-010	1	
65	2495G	EW09-SS-033-010	2	
39	2495G	EW09-SS-033-010	3	
2	2495G	EW09-SS-033-010	4	
37	2495G	EW09-SS-033-010	5	
24	2495G	EW09-SS-033-010	6	wq replicate
5	2493G	EW09-SS-034-010	1	
60	2493G	EW09-SS-034-010	2	
1	2493G	EW09-SS-034-010	3	
29	2493G	EW09-SS-034-010	4	
50	2493G	EW09-SS-034-010	5	
43	2493G	EW09-SS-034-010	6	wq replicate
77	2494G	EW09-SS-035-010	1	
76	2494G	EW09-SS-035-010	2	
22	2494G	EW09-SS-035-010	3	
64	2494G	EW09-SS-035-010	4	
42	2494G	EW09-SS-035-010	5	
46	2494G	EW09-SS-035-010	6	wq replicate
69	2473G	EW09-SS-217-010	1	
26	2473G	EW09-SS-217-010	2	
30	2473G	EW09-SS-217-010	3	
40	2473G	EW09-SS-217-010	4	
56	2473G	EW09-SS-217-010	5	
23	2473G	EW09-SS-217-010	6	wq replicate
73	2472G	EW09-SS-218-010	1	
18	2472G	EW09-SS-218-010	2	
14	2472G	EW09-SS-218-010	3	
9	2472G	EW09-SS-218-010	4	
15	2472G	EW09-SS-218-010	5	
19	2472G	EW09-SS-218-010	6	wq replicate

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
45	2471G	EW09-SS-220-010	1	
17	2471G	EW09-SS-220-010	2	
68	2471G	EW09-SS-220-010	3	
3	2471G	EW09-SS-220-010	4	
10	2471G	EW09-SS-220-010	5	
67	2471G	EW09-SS-220-010	6	wq replicate
52	2520G	CI09-SS-020-010	1	
25	2520G	CI09-SS-020-010	2	
44	2520G	CI09-SS-020-010	3	
57	2520G	CI09-SS-020-010	4	
31	2520G	CI09-SS-020-010	5	
66	2520G	CI09-SS-020-010	6	wq replicate
53	2521G	CI09-SS-060-010	1	
74	2521G	CI09-SS-060-010	2	
16	2521G	CI09-SS-060-010	3	
59	2521G	CI09-SS-060-010	4	
20	2521G	CI09-SS-060-010	5	
48	2521G	CI09-SS-060-010	6	wq replicate
13	2522G	CI09-SS-080-010	1	
6	2522G	CI09-SS-080-010	2	
41	2522G	CI09-SS-080-010	3	
55	2522G	CI09-SS-080-010	4	
8	2522G	CI09-SS-080-010	5	
72	2522G	CI09-SS-080-010	6	wq replicate
75	2541G	control	1	
4	2541G	control	2	
35	2541G	control	3	
63	2541G	control	4	
70	2541G	control	5	
71	2541G	control	6	wq replicate

Endpoints Data Entry and Calculations File

BKR=beaker number (=pan number)
INIT NO.=initial number of worms exposed
FINAL IW PPT=interstitial salinity in ppt on day 20
SURV=number of worms surviving after 20 days
MORT=number of worms dead after 20 days
INIT WT=mean weight of worms sampled on day zero (mg)
TARE WT=weight of pan used for that replicate on day 20 (mg)
WT COUNT=number of worms weighed at test end
FINAL WT=TARE WT + weight of worms recovered on day 20 (mg)
PSURV=% SURV=100(SURV/INIT NO.)
PMORT=%MORT=100(MORT/INIT NO.)
TWT=total biomass=FINAL-TARE
WT=individual biomass=TWT/WT COUNT
GR=individual growth rate=(WT-INIT WT)/20

INIT WT

pan#	tare wt	total wt	# weighed	individual wt
1	48.42	55.25	5	1.37
2	49.25	54.30	5	1.01
3	48.38	55.13	5	1.15
			MEAN	1.17

Data entry verified against laboratory bench sheets MSR 5-19-09

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	INIT. NO.	FINAL IW PPT	SURV	MORT	INIT WT	TARE WT	WT COUNT	FINAL WT	PSURV	PMORT	TWT	WT	GR		TWT	WT	GR	PSURV	PMORT
1	61	2507G	EW09-SS-005-010	1	5		5	0	1.17	82.97	5	181.35	100.0	0.0	98.4	19.7	0.93						
2	21	2507G	EW09-SS-005-010	2	5		5	0	1.17	83.26	5	161.41	100.0	0.0	78.2	15.6	0.72	Mean	112.3	22.5	1.06	100.0	0.0
3	51	2507G	EW09-SS-005-010	3	5		5	0	1.17	83.91	5	213.87	100.0	0.0	130.0	26.0	1.24	S.D.	24.1	4.8	0.24	0.0	0.0
4	12	2507G	EW09-SS-005-010	4	5		5	0	1.17	86.80	5	204.62	100.0	0.0	117.8	23.6	1.12	n	5	5	5	5	5
5	54	2507G	EW09-SS-005-010	5	5		5	0	1.17	90.73	5	227.76	100.0	0.0	137.0	27.4	1.31						
6	49	2507G	EW09-SS-005-010	6 wq replicate	5	29.0																	
7	33	2498G	EW09-SS-030-010	1	5		5	0	1.17	88.74	5	189.51	100.0	0.0	100.8	20.2	0.95						
8	27	2498G	EW09-SS-030-010	2	5		5	0	1.17	82.22	5	190.92	100.0	0.0	108.7	21.7	1.03	Mean	104.2	20.8	0.98	100.0	0.0
9	34	2498G	EW09-SS-030-010	3	5		5	0	1.17	83.60	5	179.38	100.0	0.0	95.8	19.2	0.90	S.D.	11.6	2.3	0.12	0.0	0.0
10	36	2498G	EW09-SS-030-010	4	5		5	0	1.17	85.35	5	207.62	100.0	0.0	122.3	24.5	1.16	n	5	5	5	5	5
11	7	2498G	EW09-SS-030-010	5	5		5	0	1.17	82.54	5	176.11	100.0	0.0	93.6	18.7	0.88						
12	58	2498G	EW09-SS-030-010	6 wq replicate	5	30.0																	
13	62	2496G	EW09-SS-032-010	1	5		4	1	1.17	84.17	4	166.90	80.0	20.0	82.7	20.7	0.98						
14	36	2496G	EW09-SS-032-010	2	5		4	1	1.17	83.53	4	171.70	80.0	20.0	88.2	22.0	1.04	Mean	107.6	23.2	1.10	92.0	8.0
15	47	2496G	EW09-SS-032-010	3	5		5	0	1.17	87.39	5	204.25	100.0	0.0	116.9	23.4	1.11	S.D.	21.1	2.1	0.11	11.0	11.0
16	11	2496G	EW09-SS-032-010	4	5		5	0	1.17	88.63	5	220.17	100.0	0.0	131.5	26.3	1.26	n	5	5	5	5	5
17	32	2496G	EW09-SS-032-010	5	5		5	0	1.17	87.67	5	206.42	100.0	0.0	118.8	23.8	1.13						
18	78	2495G	EW09-SS-033-010	6 wq replicate	5	30.0																	
19	28	2495G	EW09-SS-033-010	1	5		5	0	1.17	92.56	5	208.07	100.0	0.0	115.5	23.1	1.10						
20	65	2495G	EW09-SS-033-010	2	5		5	0	1.17	86.77	5	184.87	100.0	0.0	98.2	19.6	0.92	Mean	111.5	22.3	1.06	100.0	0.0
21	39	2495G	EW09-SS-033-010	3	5		5	0	1.17	83.67	5	206.02	100.0	0.0	122.4	24.5	1.16	S.D.	8.8	1.8	0.09	0.0	0.0
22	2	2495G	EW09-SS-033-010	4	5		5	0	1.17	92.22	5	203.90	100.0	0.0	111.7	22.3	1.06	n	5	5	5	5	5
23	37	2495G	EW09-SS-033-010	5	5		5	0	1.17	83.44	5	193.85	100.0	0.0	110.4	22.1	1.05						
24	24	2495G	EW09-SS-033-010	6 wq replicate	5	30.0																	
25	5	2493G	EW09-SS-034-010	1	5		5	0	1.17	85.57	5	210.55	100.0	0.0	125.0	25.0	1.19						
26	60	2493G	EW09-SS-034-010	2	5		5	0	1.17	84.25	5	197.21	100.0	0.0	113.0	22.6	1.07	Mean	124.8	25.0	1.19	100.0	0.0
27	1	2493G	EW09-SS-034-010	3	5		5	0	1.17	92.01	5	210.89	100.0	0.0	118.9	23.8	1.13	S.D.	9.9	2.0	0.10	0.0	0.0
28	29	2493G	EW09-SS-034-010	4	5		5	0	1.17	89.30	5	217.67	100.0	0.0	128.4	25.7	1.22	n	5	5	5	5	5
29	50	2493G	EW09-SS-034-010	5	5		5	0	1.17	90.00	5	229.02	100.0	0.0	139.0	27.8	1.33						
30	43	2493G	EW09-SS-034-010	6 wq replicate	5	29.5																	
31	77	2494G	EW09-SS-035-010	1	5		5	0	1.17	79.63	5	200.33	100.0	0.0	120.7	24.1	1.15						
32	76	2494G	EW09-SS-035-010	2	5		5	0	1.17	85.08	5	207.38	100.0	0.0	122.3	24.5	1.16	Mean	108.0	21.6	1.02	100.0	0.0
33	22	2494G	EW09-SS-035-010	3	5		5	0	1.17	82.78	5	163.57	100.0	0.0	80.8	16.2	0.75	S.D.	16.9	3.4	0.17	0.0	0.0
34	54	2494G	EW09-SS-035-010	4	5		5	0	1.17	86.20	5	190.37	100.0	0.0	104.2	20.8	0.98	n	5	5	5	5	5
35	42	2494G	EW09-SS-035-010	5	5		5	0	1.17	87.31	5	199.51	100.0	0.0	112.2	22.4	1.06						
36	46	2494G	EW09-SS-035-010	6 wq replicate	5	29.5																	

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	INIT NO	FINAL IW PPT	SURV	MORT	INIT WT	TARE WT	WT COUNT	FINAL WT	PSURV	PMORT	TWT	WT	GR		TWT	WT	GR	PSURV	PMORT
37	69	2473G	EW09-SS-217-010	1	5		5	0	1.17	85.77	5	206.96	100.0	0.0	121.2	24.2	1.15						
38	26	2473G	EW09-SS-217-010	2	5		5	0	1.17	89.24	5	204.93	100.0	0.0	115.7	23.1	1.10	Mean	124.3	24.9	1.18	100.0	0.0
39	30	2473G	EW09-SS-217-010	3	5		5	0	1.17	86.45	5	230.44	100.0	0.0	144.0	28.8	1.38	S.D.	21.6	4.3	0.22	0.0	0.0
40	40	2473G	EW09-SS-217-010	4	5		5	0	1.17	90.07	5	184.31	100.0	0.0	94.2	18.8	0.58	n	5	5	5	5	5
41	56	2473G	EW09-SS-217-010	5	5		5	0	1.17	84.79	5	231.38	100.0	0.0	146.6	29.3	1.41						
42	23	2473G	EW09-SS-217-010	6 wq replicate	5	29.5																	
43	73	2472G	EW09-SS-218-010	1	5		5	0	1.17	83.68	5	219.25	100.0	0.0	135.6	27.1	1.30						
44	18	2472G	EW09-SS-218-010	2	5		5	0	1.17	83.34	5	219.51	100.0	0.0	135.2	27.2	1.30	Mean	130.6	26.1	1.25	100.0	0.0
45	14	2472G	EW09-SS-218-010	3	5		5	0	1.17	85.05	5	226.24	100.0	0.0	141.2	28.2	1.35	S.D.	10.9	2.2	0.11	0.0	0.0
46	9	2472G	EW09-SS-218-010	4	5		5	0	1.17	80.23	5	206.93	100.0	0.0	126.7	25.3	1.21	n	5	5	5	5	5
47	15	2472G	EW09-SS-218-010	5	5		5	0	1.17	80.50	5	194.08	100.0	0.0	113.6	22.7	1.08						
48	19	2472G	EW09-SS-218-010	6 wq replicate	5	30.5																	
49	45	2471G	EW09-SS-220-010	1	5		5	0	1.17	92.72	5	203.14	100.0	0.0	110.4	22.1	1.05						
50	17	2471G	EW09-SS-220-010	2	5		5	0	1.17	85.01	5	191.52	100.0	0.0	106.5	21.3	1.01	Mean	112.0	22.4	1.06	100.0	0.0
51	68	2471G	EW09-SS-220-010	3	5		5	0	1.17	79.58	5	178.75	100.0	0.0	99.1	19.8	0.93	S.D.	10.6	2.1	0.11	0.0	0.0
52	3	2471G	EW09-SS-220-010	4	5		5	0	1.17	86.28	5	213.17	100.0	0.0	126.9	25.4	1.21	n	5	5	5	5	5
53	10	2471G	EW09-SS-220-010	5	5		5	0	1.17	87.34	5	204.47	100.0	0.0	117.1	23.4	1.11						
54	67	2471G	EW09-SS-220-010	6 wq replicate	5	29.5																	
55	52	2520G	CI09-SS-020-010	1	5		5	0	1.17	80.47	5	195.42	100.0	0.0	115.0	23.0	1.09						
56	25	2520G	CI09-SS-020-010	2	5		5	0	1.17	88.53	5	179.05	100.0	0.0	90.4	18.1	0.85	Mean	120.7	24.1	1.15	100.0	0.0
57	44	2520G	CI09-SS-020-010	3	5		5	0	1.17	80.50	5	221.72	100.0	0.0	141.2	28.2	1.35	S.D.	19.7	3.9	0.20	0.0	0.0
58	57	2520G	CI09-SS-020-010	4	5		5	0	1.17	89.18	5	223.15	100.0	0.0	134.0	26.8	1.28	n	5	5	5	5	5
59	31	2520G	CI09-SS-020-010	5	5		5	0	1.17	86.92	5	210.04	100.0	0.0	123.1	24.6	1.17						
60	65	2520G	CI09-SS-020-010	6 wq replicate	5	29.5																	
61	53	2521G	CI09-SS-060-010	1	5		5	0	1.17	86.45	5	208.86	100.0	0.0	122.4	24.5	1.17						
62	74	2521G	CI09-SS-060-010	2	5		5	0	1.17	84.97	5	243.69	100.0	0.0	158.7	31.7	1.53	Mean	127.3	25.5	1.21	100.0	0.0
63	16	2521G	CI09-SS-060-010	3	5		5	0	1.17	84.27	5	175.37	100.0	0.0	91.1	18.2	0.85	S.D.	24.4	4.9	0.24	0.0	0.0
64	59	2521G	CI09-SS-060-010	4	5		5	0	1.17	84.70	5	220.12	100.0	0.0	135.4	27.1	1.30	n	5	5	5	5	5
65	20	2521G	CI09-SS-060-010	5	5		5	0	1.17	86.81	5	215.56	100.0	0.0	128.8	25.8	1.23						
66	48	2521G	CI09-SS-060-010	6 wq replicate	5	30.0																	
67	13	2522G	CI09-SS-080-010	1	5		5	0	1.17	87.94	5	218.61	100.0	0.0	130.7	26.1	1.25						
68	6	2522G	CI09-SS-080-010	2	5		5	0	1.17	89.30	5	221.60	100.0	0.0	132.3	26.5	1.26	Mean	140.4	28.1	1.35	100.0	0.0
69	41	2522G	CI09-SS-080-010	3	5		5	0	1.17	85.61	5	220.97	100.0	0.0	135.4	27.1	1.29	S.D.	10.7	2.1	0.11	0.0	0.0
70	55	2522G	CI09-SS-080-010	4	5		5	0	1.17	88.95	5	242.47	100.0	0.0	153.5	30.7	1.46	n	5	5	5	5	5
71	8	2522G	CI09-SS-080-010	5	5		5	0	1.17	81.68	5	231.93	100.0	0.0	150.3	30.1	1.44						
72	72	2522G	CI09-SS-080-010	6 wq replicate	5	29.0																	
73	75	2541G	control	1	5		5	0	1.17	87.96	5	227.22	100.0	0.0	139.3	27.9	1.33						
74	4	2541G	control	2	5		5	0	1.17	89.31	5	215.49	100.0	0.0	126.2	25.2	1.20	Mean	125.0	25.0	1.19	100.0	0.0
75	35	2541G	control	3	5		5	0	1.17	84.56	5	217.94	100.0	0.0	133.4	26.7	1.28	S.D.	21.2	4.2	0.21	0.0	0.0
76	63	2541G	control	4	5		5	0	1.17	88.24	5	176.53	100.0	0.0	88.3	17.7	0.82	n	5	5	5	5	5
77	70	2541G	control	5	5		5	0	1.17	82.29	5	220.23	100.0	0.0	137.9	27.6	1.32						
78	71	2541G	control	6 wq replicate	5	29.0																	

Data entry verified against laboratory bench sheets 6/3/09 JRF

Water Quality Data

BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3
19	2472G	EW09-SS-218-010	6	0	20.9	7.9	26.5	7.2	<0.02		0.7		0.022
23	2473G	EW09-SS-217-010	6	0	20.6	8.0	26.5	7.2	<0.02		0.5		0.021
24	2495G	EW09-SS-033-010	6	0	20.4	7.9	26.5	7.1	<0.02		0.2		0.007
43	2493G	EW09-SS-034-010	6	0	20.7	7.9	26.5	7.1	<0.02		0.6		0.019
46	2494G	EW09-SS-035-010	6	0	20.8	7.9	26.5	7.0	<0.02		0.3		0.010
48	2521G	CI09-SS-060-010	6	0	20.4	8.0	26.5	7.2	<0.02		4.3		0.172
49	2507G	EW09-SS-005-010	6	0	20.6	7.9	26.5	7.1	<0.02		2.9		0.094
58	2498G	EW09-SS-030-010	6	0	20.8	7.9	26.5	7.1	<0.02		0.6		0.020
66	2520G	CI09-SS-020-010	6	0	20.4	8.0	26.5	7.3	<0.02		1.2		0.047
67	2471G	EW09-SS-220-010	6	0	20.7	7.9	26.5	7.2	<0.02		0.5		0.015
71	2541G	control	6	0	20.6	8.0	26.0	7.3	<0.02	<	0.1	<	0.004
72	2522G	CI09-SS-080-010	6	0	20.6	8.0	26.5	7.2	<0.02		2.3		0.092
78	2496G	EW09-SS-032-010	6	0	20.7	7.9	27.0	6.9	<0.02		0.4		0.014
19	2472G	EW09-SS-218-010	6	3	19.6	7.8	27.5	6.8			2.4		0.058
23	2473G	EW09-SS-217-010	6	3	19.4	7.8	28.0	6.8			2.3		0.053
24	2495G	EW09-SS-033-010	6	3	19.4	7.7	28.0	6.6			1.3		0.025
43	2493G	EW09-SS-034-010	6	3	19.4	7.8	28.0	6.6			1.9		0.045
46	2494G	EW09-SS-035-010	6	3	19.6	7.8	28.5	6.8			1.6		0.038
48	2521G	CI09-SS-060-010	6	3	19.2	7.9	27.5	6.9			9.8		0.283
49	2507G	EW09-SS-005-010	6	3	19.5	7.9	27.5	6.6			7.4		0.220
58	2498G	EW09-SS-030-010	6	3	19.6	7.4	28.5	6.7			2.0		0.019
66	2520G	CI09-SS-020-010	6	3	19.4	7.8	28.0	7.0			2.8		0.064
67	2471G	EW09-SS-220-010	6	3	19.3	7.6	28.5	6.2			1.8		0.027
71	2541G	control	6	3	19.4	7.7	27.5	6.8			0.8		0.016
72	2522G	CI09-SS-080-010	6	3	19.4	7.7	28.0	6.6			5.1		0.095
78	2496G	EW09-SS-032-010	6	3	19.6	7.7	28.0	6.6			2.2		0.042
19	2472G	EW09-SS-218-010	6	6	19.5	7.8	30.0	6.8					
23	2473G	EW09-SS-217-010	6	6	19.4	8.0	29.0	7.0					
24	2495G	EW09-SS-033-010	6	6	19.3	8.0	28.5	6.6					
43	2493G	EW09-SS-034-010	6	6	19.3	8.2	29.0	6.4					
46	2494G	EW09-SS-035-010	6	6	19.6	8.4	29.0	6.6					
48	2521G	CI09-SS-060-010	6	6	19.3	8.1	28.5	6.6					
49	2507G	EW09-SS-005-010	6	6	19.4	8.0	29.0	6.6					
58	2498G	EW09-SS-030-010	6	6	19.4	8.2	29.0	6.8					
66	2520G	CI09-SS-020-010	6	6	19.2	7.9	29.0	6.9					
67	2471G	EW09-SS-220-010	6	6	19.6	7.8	28.5	6.4					
71	2541G	control	6	6	19.5	7.8	29.5	6.6					
72	2522G	CI09-SS-080-010	6	6	19.5	7.9	29.0	6.6					
78	2496G	EW09-SS-032-010	6	6	19.7	8.1	29.0	6.5					
58	2498G	EW09-SS-030-010	6	8				3.1					
58	2498G	EW09-SS-030-010	6	8				5.0					
19	2472G	EW09-SS-218-010	6	9	20.2	7.8	30.0	6.2					
23	2473G	EW09-SS-217-010	6	9	20.0	7.8	28.0	6.4					
24	2495G	EW09-SS-033-010	6	9	19.8	7.9	27.5	6.1					
43	2493G	EW09-SS-034-010	6	9	20.1	8.2	28.0	6.6					
46	2494G	EW09-SS-035-010	6	9	20.1	8.2	27.0	6.3					
48	2521G	CI09-SS-060-010	6	9	19.7	8.3	28.5	6.2					
49	2507G	EW09-SS-005-010	6	9	20.1	7.9	27.0	5.9					
58	2498G	EW09-SS-030-010	6	9	20.0	8.3	27.5	6.6					
66	2520G	CI09-SS-020-010	6	9	19.8	7.8	27.0	6.4					
67	2471G	EW09-SS-220-010	6	9	20.3	7.8	27.0	6.1					
71	2541G	control	6	9	20.1	7.8	27.5	6.4					
72	2522G	CI09-SS-080-010	6	9	19.8	7.9	27.0	6.4					

BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3
78	2496G	EW09-SS-032-010	6	9	20.2	8.1	27.0	6.2					
19	2472G	EW09-SS-218-010	6	12	19.8	7.8	29.0	6.6					
23	2473G	EW09-SS-217-010	6	12	19.5	7.8	29.0	6.5					
24	2495G	EW09-SS-033-010	6	12	19.4	8.0	28.5	6.3					
43	2493G	EW09-SS-034-010	6	12	19.4	8.2	28.5	6.6					
46	2494G	EW09-SS-035-010	6	12	19.5	8.2	28.0	6.6					
48	2521G	CI09-SS-060-010	6	12	19.3	8.3	28.0	6.4					
49	2507G	EW09-SS-005-010	6	12	19.5	8.0	28.5	6.0					
58	2498G	EW09-SS-030-010	6	12	19.4	8.4	28.0	6.9					
66	2520G	CI09-SS-020-010	6	12	19.2	7.9	28.0	6.6					
67	2471G	EW09-SS-220-010	6	12	19.6	7.9	28.0	6.5					
71	2541G	control	6	12	19.5	8.0	28.5	6.8					
72	2522G	CI09-SS-080-010	6	12	19.3	8.0	28.5	6.4					
78	2496G	EW09-SS-032-010	6	12	19.6	8.1	29.0	6.2					
19	2472G	EW09-SS-218-010	6	15	21.0	7.7	30.0	6.3					
23	2473G	EW09-SS-217-010	6	15	21.1	7.7	28.5	6.4					
24	2495G	EW09-SS-033-010	6	15	20.9	7.8	29.0	6.0					
43	2493G	EW09-SS-034-010	6	15	21.2	8.1	29.0	6.3					
46	2494G	EW09-SS-035-010	6	15	21.3	8.0	28.5	5.9					
48	2521G	CI09-SS-060-010	6	15	20.9	8.2	29.5	6.2					
49	2507G	EW09-SS-005-010	6	15	21.2	7.8	28.5	5.6					
58	2498G	EW09-SS-030-010	6	15	21.0	8.3	28.5	5.8					
66	2520G	CI09-SS-020-010	6	15	20.6	7.7	29.0	6.2					
67	2471G	EW09-SS-220-010	6	15	21.2	7.7	28.0	6.3					
71	2541G	control	6	15	21.1	7.8	28.5	6.7					
72	2522G	CI09-SS-080-010	6	15	20.9	7.8	28.0	6.1					
78	2496G	EW09-SS-032-010	6	15	21.4	8.0	28.0	6.2					
7	2498G	EW09-SS-030-010	5	18				2.4					
7	2498G	EW09-SS-030-010	5	18				4.9					
19	2472G	EW09-SS-218-010	6	18	20.0	7.8	30.0	6.9					
23	2473G	EW09-SS-217-010	6	18	20.0	7.8	28.0	7.1					
24	2495G	EW09-SS-033-010	6	18	19.6	7.9	28.5	6.5					
43	2493G	EW09-SS-034-010	6	18	20.1	8.3	28.0	6.8					
46	2494G	EW09-SS-035-010	6	18	20.1	8.1	28.0	6.6					
48	2521G	CI09-SS-060-010	6	18	19.6	8.2	28.5	6.5					
49	2507G	EW09-SS-005-010	6	18	20.0	8.0	27.5	6.2					
58	2498G	EW09-SS-030-010	6	18	20.0	8.2	28.5	6.9					
66	2520G	CI09-SS-020-010	6	18	19.6	7.8	29.0	6.5					
67	2471G	EW09-SS-220-010	6	18	20.0	7.8	28.5	6.7					
71	2541G	control	6	18	20.0	7.9	27.5	7.0					
72	2522G	CI09-SS-080-010	6	18	19.9	7.9	27.5	6.7					
78	2496G	EW09-SS-032-010	6	18	20.2	8.1	27.5	6.7					
19	2472G	EW09-SS-218-010	6	20	19.4	7.7	30.0	6.7	<0.02		0.3		0.005
23	2473G	EW09-SS-217-010	6	20	19.5	7.8	29.0	7.0	<0.02	<	0.1	<	0.002
24	2495G	EW09-SS-033-010	6	20	19.3	7.8	29.5	6.4	<0.02		0.9		0.022
43	2493G	EW09-SS-034-010	6	20	19.6	8.2	29.0	7.0	<0.02		0.2		0.009
46	2494G	EW09-SS-035-010	6	20	19.6	8.1	29.5	6.5	<0.02		0.4		0.020
48	2521G	CI09-SS-060-010	6	20	19.3	8.1	30.0	6.6	<0.02		0.2		0.010
49	2507G	EW09-SS-005-010	6	20	19.5	7.9	29.5	6.1	<0.02		0.2		0.005
58	2498G	EW09-SS-030-010	6	20	19.4	8.0	30.0	6.6	<0.02		0.2		0.006
66	2520G	CI09-SS-020-010	6	20	19.2	7.7	30.0	6.4	<0.02		0.7		0.012
67	2471G	EW09-SS-220-010	6	20	19.5	7.8	29.5	6.7	<0.02		0.2		0.005
71	2541G	control	6	20	19.6	7.8	30.0	6.7	<0.02		0.5		0.011
72	2522G	CI09-SS-080-010	6	20	19.4	7.8	29.5	6.6	<0.02		0.2		0.004
78	2496G	EW09-SS-032-010	6	20	19.4	8.1	30.0	6.6	<0.02		0.2		0.009

BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3
				Mean	19.9	7.9	28.3	6.5	---		---		---
				SD	0.6	0.2	1.0	0.7	---		---		---
				n	104	104	104	108	26		39		39
				Min	19.2	7.4	26.0	2.4	<0.02		< 0.1	<	0.002
				Max	21.4	8.4	30.0	7.3	<0.02		9.8		0.283

CHAIN-OF-CUSTODY RECORDS

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2663

Project/Client Name: EW R1/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.05.09
Shipper: UPS
Airbill Number:
Form filled out by: AUGENTA RODRIQUEZ
Turnaround requested: STD.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/4/09	0843	EW09-SS-102-010	5	SEDIMENT	X			NAS	#2491G			HOLD PENDING
	0909	EW09-SS-036-010	5	SEDIMENT	X				2492G			INSTRUCTIONS TO
	0930	EW09-SS-034-010	5	SEDIMENT	X				2493G			ANALYZE
	0953	EW09-SS-035-010	5	SEDIMENT	X				2494G			
	1015	EW09-SS-033-010	5	SEDIMENT	X				2495G			
	1034	EW09-SS-032-010	5	SEDIMENT	X				2496G			
	1054	EW09-SS-031-010	5	SEDIMENT	X				2497G			
	1114	EW09-SS-030-010	5	SEDIMENT	X				2498G			
	1137	EW09-SS-029-010	5	SEDIMENT	X				2499G			
	1156	EW09-SS-025-010	5	SEDIMENT	X				2500G			
	1300	EW09-SS-024-010	5	SEDIMENT	X				2501G			
	1322	EW09-SS-023-010	5	SEDIMENT	X				2502G			
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: [signature]	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 915 am 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any jar with headspace, headspace was flushed w/ N_2 - MLR

To be completed by Laboratory upon sample receipt: 3-6-

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5-6.0°C	Received by: Michele Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2665

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.05.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIQUEZ
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXCHEM							Comments / Instructions (Jar tag number(s))
3/4/09	1350	EW09-SS-020-010	5	SEDIMENT	X			NAS #	2503G			HOLD PENDING
	1430	EW09-SS-013-010	5	SEDIMENT	X				2504G			INSTRUCTIONS TO
	1502	EW09-SS-011-010	5	SEDIMENT	X				2505G			ANALYZE
	1526	EW09-SS-008-010	5	SEDIMENT	X				2506G			
	1549	EW09-SS-005-010	5	SEDIMENT	X				2507G			
	1626	EW09-SS-003-~~001~~ 010	5	SEDIMENT	X				2508G			
	1644	EW09-SS-001-010	5	SEDIMENT	X				2509G			
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: [signature]	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 9:15am 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. For any jars w/headspace, headspace was filled w/ N2 - MLR 3-6-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5 - 6.0 °C	Received by: Michele S. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

UPS Internet Shipping: Shipment Label FOR UPS SHIPPING ONLY

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

6 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1

TRACKING #: 1Z Y34 89E 01 9398 6063

BILLING: P/P

Reference#1: BW Surface Sediment

UPS 11 1.05 WX23J70 07.0A 01/2009

TM

DATE 3/5/09

INITIALS

LAB SAMPLE
DO NOT TAMPER

3.5°C

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

4 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9080 5245

1

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11 1 05 WWW870 87.0A 01/2004

TM

LOW OD
15 LBS

LAB SAMPLE
DO NOT

2.5°C

LAB SAMPLE
DO NOT TAMPER

DATE 3/5/09
INITIALS [illegible]

https://www.ups.com/uis/create?Action=GetPrintPage&ShipPrintOnly=1&ISReceipt&POPUP_LEVEL=... 3/5/2009

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

5 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR **1**
TRACKING #: 1Z Y34 89E 01 9116 8450

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11 7.05, WXE20 87.0A 01/2009

TM

DATE 3/5/09
INITIALS [illegible]

LAB SAMPLE
DO NOT TAMPER

3.5°C

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

HEIDI ENDERS
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 1

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1

TRACKING #: 1Z Y34 89E 25 9007 4071

BILLING: P/P

Reference#1: EW Surface Sediment

TM

Page 1 of 1

DATE 3/5/02
INITIALS

LAB SAMPLE
DO NOT TAMPER

02
LAB SAMPLE
DO NOT TAMPER

6.0°C

UPS Internet Shipping: Shipment Label FOR UPS SHIPPING ONLY

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

2 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9177 8023

1

BILLING: P/P

Reference#1: EW Surface Sediment

US 11 1 05 WXP1020 82.0A 01/2009

TM

DATE 5/5/09

INITIALS [illegible]

LAB [illegible] SAMPLE
DO [illegible]

6.0°C

page 40 of 53

https://www.ups.com/uis/create?Action=ShipPrint&ShipPrintOnly=1&ISRReceipt&POPUP_LEVEL=... 3/5/2009

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1

TRACKING #: 1Z Y34 89E 01 9128 2013

BILLING: P/P

Reference#1: EW Surface Sediment

US 11 1 05 W2PE70 87.0A 01/2009

TM

LAB SAMPLE
DO NOT TAMPER

25°C

https://www.ups.com/uis/cr... 3/5/2009

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

3 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9472 0436

1

BILLING: P/P

Reference#1: EW Surface Sediment

TM

LAB
DO

5.5 °C

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2557

Project/Client Name: EW RI/FS
Project Number:
Contact Name: ~~MARINA MITCHELL~~ HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIQUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.02.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIQUEZ
Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/1/09	0956	EW09-SS-220-010	5	SEDIMENT	X			NAS #	2471G			HOLD PENDING
	1104	EW09-SS-218-010	5	SEDIMENT	X				2472G			INSTRUCTIONS TO
	1130	EW09-SS-217-010	5	SEDIMENT	X				2473G			ANALYZE
	1221	EW09-SS-216-010	5	SEDIMENT	X				2474G			
	1256	EW09-SS-207-010	5	SEDIMENT	X				2475G			
	1315	EW09-SS-204-010	5	SEDIMENT	X				2476G			
	1349	EW09-SS-202-010	5	SEDIMENT	X				2477G			
	1410	EW09-SS-200-010	5	SEDIMENT	X				2478G			
	~~1435~~ ~~1416~~	~~EW09-SS-190-010~~ ~~EW09-SS-300-010~~										
	1435	EW09-SS-130-010	5	SEDIMENT	X				2479G			
	1453	EW09-SS-129-010	5	SEDIMENT	X				2480G			
	1512	EW09-SS-127-010	5	SEDIMENT	X				2481G			
		Total Number of Containers	55/75	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00 Am 3/2/09	Date/Time:	Date/Time:	Date/Time:

Page 13 of 53

* Distribution: White copies accompany shipment; yellow retained by consignor.

If sample jar was not full, headspace was flushed w/ N2 - MLR 3-3-

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5-4.5°C	Received by: Michele S. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2556

Project/Client Name: EW RI/FS
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIGUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipper: UPS
Form filled out by: ANGELITA RODRIGUEZ

Shipping Date: 03.02.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/1/09	1530	EW09-SS122-010	5	SEDIMENT	X			NAS # 2482G				HOLD PENDING
	1554	EW09-SS119-010	5	SEDIMENT	X			2483G				INSTRUCTIONS TO
	1615	EW09-SS120-010	5	SEDIMENT	X			2484G				ANALYZE
	1636	EW09-SS132-010	5	SEDIMENT	X			2485G				✓
		Total Number of Containers	20/75	Purchase Order / Statement of Work #								

ES to HA 03/03

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00am 3/2/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any sample jar that was not full, headspace was flushed w/ N_2 MLR 3-3-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5 - 4.5 °C	Received by: Michele Redmond

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

UPS Next Day Air®
UPS Worldwide Express®

Shipping Document

Weight	Dimensional Weight	Large Package	Shipper Release
[illegible]		☒	☐

☐ Express (NITL)

☐ Documents Only

Saturday Delivery ☐

J205 991 386 9

J205 991 386 9

Shipment From

UPS Account No. [illegible]

Reference Number

Telephone

[illegible]

Delivery To

Telephone

[illegible]

UPS Next Day Air®

J205 991 386 9

J205 991 386 9

J205 991 386 9

010191120 1/07 S

United Parcel Service, Louisville, KY

Date of Shipment

[illegible]

LAB SAMPLE
DO NOT TAMPER

Date [illegible]

Initials [illegible]

4.0°C

LAB SAMPLE
DO NOT TAMPER

UPS Next Day Air®
UPS Worldwide Express℠

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE A/P PACKAGE	SHIPPER RELEASE
		X	

☐ EXPRESS (INT'L)

☐ DOCUMENTS ONLY

SATURDAY DELIVERY ☐

J193 291 327 9

J193 291 327 9

SHIPMENT FROM

UPS ACCOUNT NO. Y34[illegible]

REFERENCE NUMBER

TELEPHONE

[illegible]

DELIVERY TO

TELEPHONE 341-[illegible]

[illegible]

UPS Next Day Air®

J193 291 327 9

J193 291 327 9

TRACKING NUMBER

DATE OF SHIPMENT

010191120 1/05 S

United Parcel Service, Louisville, KY

DATE 3/1/02

INITIALS [illegible]

1.5°C

UPS Next Day Air®
UPS Worldwide Express®

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	
WEIGHT		

EXPRESS (INT'L)

DOCUMENTS ONLY

SATURDAY DELIVERY

SHIPMENT FROM

UPS ACCOUNT NO.

REFERENCE NUMBER

TELEPHONE

J205 991 387 8

J205 991 387 8

DELIVERY TO

TELEPHONE

UPS Next Day Air®

J205 991 387 8

J205 991 387 8

DATE OF SHIPMENT

010191120 1/4.

United Parcel Service, Louisville, KY

LAB SAMPLE
DO NOT TAMPER

DATE

INITIALS

PER

DATE

INITIALS

2.5°C

UPS Next Day Air®
UPS Worldwide Express™

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE AIR PACKAGE	SHIPPER RELEASE
5		☒	☐

☐ EXPRESS (INTL)

☐ DOCUMENTS ONLY

SATURDAY DELIVERY ☐

J193 291 330 4

J193 291 330 4

SHIPMENT FROM

UPS ACCOUNT NO

REF

TELEPHONE

Hella Anderson

Windward Environmental LLC

200 W Mercer St Suite 401

Seattle, WA 98119

DELIVERY TO

TELEPHONE

Michele Bodman

Northwestern Aquatic Sciences

3840 Yaquina Bay Rd

Newport, OR 97365

UPS Next Day Air®

1

J193 291 330 4

J193 291 330 4

DATE OF SHIPMENT

3/1/01

120 1/05 S United Parcel Service, Louisville, KY

10348

041397_P1

61055412

30 of 100

LAB SAMPLE
DO NOT TAMPE

DATE 3/1/01
INITIALS [illegible]

LAB SA
DO NOT

DATE 3/1/01
INITIALS [illegible]

3.5°C

UPS Next Day Air®
UPS Worldwide Express™

Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE PACKAGE	SHIPPER RELEASE
		☐	☐

☐ EXPRESS (INT'L)

☐ DOCUMENTS ONLY

SATURDAY DELIVERY ☐

J205 991 382 3

J205 991 382 3

10335

041335_P1

61158412

SHIPMENT FROM

UPS ACCOUNT NO. Y 34 E

REFERENCE NUMBER

TELEPHONE

[illegible]

[illegible]

[illegible]

Seattle WA [illegible]

UPS Next Day Air®

DELIVERY TO

TELEPHONE

[illegible]

[illegible]

[illegible]

Newport [illegible]

J205 991 382 3

J205 991 382 3

TRACKING NUMBER

DATE OF SHIPMENT 3/2/09

010191120 1/07 S

KY

DELIVERY

LAB SAMPLE
DO NOT TAMPER!

DATE 3/2/09

INITIALS [illegible]

LAB SAMPLE
DO NOT TAMPER!

DATE 3/2/09

[illegible]

4.5°C

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2672

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09-08-09-46
Contact Name: Helle Andersen
Sampled By: T.Do, J. Florer

Ship to: NAS
Attn: Michele Redmond
Shipping Date: 03.13.09
Shipper: UPS
Airbill Number:
Form filled out by: T.Do
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (Jar tag number(s))
1/23/09	1430	SPB-NB-1014	4 (3.5L)	Sediment	X		NAS # 2519G					Contact Helle Andersen for analysis instructions
03.12.09	1320	CI09-SS-020-010	10	↓	X			2520G				
↓	1600	CI09-SS-060-010	10		X			2521G				
	1830	CI09-SS-080-010	10	↓	X			2522G				
		Total Number of Containers	14	Purchase Order / Statement of Work #								

1) Released by: HELLE ANDERSEN	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.13.09 8:45 AM	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. Any jars with bec dispan had the headspace flushed w/ nitrogen MR 3.14

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-14-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 09:00
Cooler temperature: 1.5 - 3.0°C	Received by: Michele L. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

BRIDI ENDERS
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

30 LBS

1 OF 1

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M. **1+S**

TRACKING #: 1Z Y34 89E 41 9032 0505

BILLING: P/P

UIS 11.1 05 WXPE20 87 0A 01/2009 TM

https://www.ups.com/uis/create?ActionOriginPair=PRINTING_ONUSReceipt&POPUP_LEVEL... 3/13/2009

SATURDAY DELIVERY!

DATE 3/13/09
INITIALS HM

LAB SAMPLE
DO NOT TAMPER

3.0°C

https://www.ups.com/uis/create?Action=GetLabelPrint&ShipPrint=1&UISReceipt&POPUP_LEVEL... 3/11/2009

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 2

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1 S

TRACKING #: 1Z Y34 89E 44 9248 8488

BILLING: P/P

SATURDAY DELIVERY

Saturday DELIVERY

PLACE DIRECTLY BELOW ADDRESS LABEL

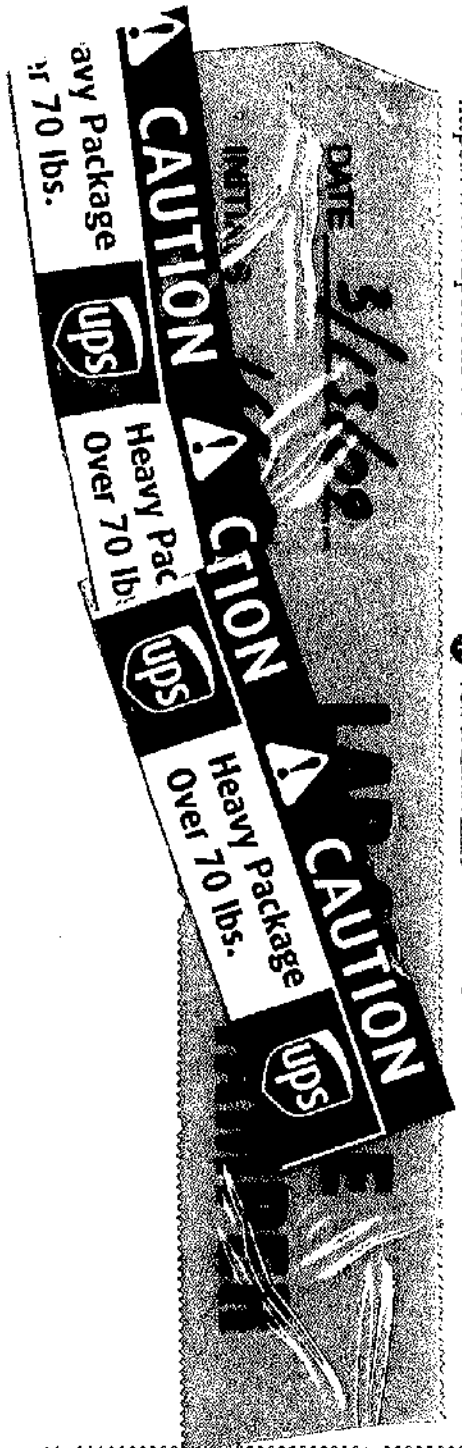
011169 2/04 MW

DATE 3/11/09

INITIALS MW

EXT SAMPLE
DO NOT TAMPER

1.5-C



https://www.ups.com/uis/create?ActionOriginPair=UPSShipping_UPSReceipt&POPUP_LEVEL... 3/11/2009

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

2 OF 2

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1 S

TRACKING #: 1Z Y34 89E 44 9012 5293

BILLING: P/P

SATURDAY DELIVERY

DATE 3/12/09

INITIALS

LAB SAMPLE
DO NOT TAMPER

1.5°C

REFERENCE TOXICANT RESULTS AND ANALYSIS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-_____

ACUTE TOXICITY TEST (ALL SPECIES)

reviewed p. 1-7 MLR 5-30-09

Test No. 999-2549 Client: QC Test Investigator MLR

Test Type (rangefinding/definitive) definitive Test Length (hr) 96

Species *Neanthes arenaceodentata*

STUDY MANAGEMENT

Client: QC Test

Client's Study Monitor: N/A

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir M.S. Redmond MLR

QA Officer L.K. Nemeth

1. Liora P. Sandoval LPS 2. G.J. IRISSARRI GJI
3. Susan Gage sg 4.
5. 6.

Study Schedule:

Test Beginning: 4-17-09 0940 Test Ending: 4-21-09 1030

TEST MATERIAL

Description: Ammonia prepared from ammonium chloride; stock prepared 3-18-08, 9760 mg/L (=9.76 mg/mL) expressed as N

DILUTION WATER

Description: Yaquina Bay, Oregon, sea water

Date of Preparation/Collection: 4-15-09

Water Quality: Cond. (umhos/cm): ----- Salinity (ppt) 27.0 pH 8.0

Hardness (mg/L as $CaCO_3$): ----- Alkalinity (mg/L as $CaCO_3$): -----

Treatments: Filtered to 0.4 um, salinity adjusted with Milli-Q deionized water, aerated

TEST LOCATION

Test conducted in (circle one): room 1 room 2 (trailer) water bath other:_____

Randomization chart:

D	278	110	700	175	441	Q				
C	700	278	441	Q	175	110				
B	175	700	Q	110	278	441				
A	110	Q	175	441	700	278				

Error codes: 1) Correction of handwriting error
2) Written in wrong location; entry deleted
3) Wrong date deleted; replaced with correct date
4) Error found in measurement; measurement repeated

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-____

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2549 Client: QC Test Investigator _____

TEST ORGANISMS

Species: *Neanthes arenaceodentata* Age: _____ Size: ~~1.47~~ 1.17 mg

Source: Dept. of Biology, CA State University, Long Beach, CA received 4-9-09 5-29-09

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal. (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
4-9-09	18.7	7.3	35.0	6.6	0.13/350	Tetramarine	yes	
4-10-09	20.3	8.0	30.0	7.6				
4-11-09	20.1	7.9	32.0	6.9			yes	
4-12-09	22.0	8.1	30.0	6.6	0.13/350	Tetramarine		
4-13-09	22.1	8.0	29.5	7.3	"	"	yes	
4-14-09	20.2	8.1	28.0	7.6				
4-15-09	20.2	8.1	28.0	8.2				
4-16-09	20.1	8.1	28.0	7.5	a little	Tetramarine		
4-17-09	20.4	8.1	28.0	7.6				
Mean	20.6	8.0	30.1	7.3				
S.D.	0.9	0.3	2.2	0.5				
(N)	(9)	(9)	(9)	(9)				

Photoperiod during acclimation: constant light

TEST PROCEDURES AND CONDITIONS

Test concentrations (50% series recommended): 700, 441, 278, 175, 110, 0

(63% series)

Test chamber: 250 mL beakers Test volume: 100 mL

Replicates/treatment: 4 Organisms/treatment: 20 (5/repl)

Test water changes: None Aeration during test: None

Feeding: None.

Duration: 24-hr, 48-hr, (96-hr) Test temperature (deg.C): 20 +/- 1

Beaker placement: Stratified randomization Photoperiod: Constant light

Salinity: 28 +/- 2 ppt

MISCELLANEOUS NOTES

Test Solution Preparation:

4-17-09 [illegible]

Test Conc. (mg/L)	mL of stock (9760 mg/L) per 400 mL	
700	28.7	Bring up to
441	18.1	400 mL with
278	11.4	dilution water,
175	7.2	then split
110	4.5	between 4
0	0	replicates

Light intensity measurements: Date Location in room foot-candles

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-____

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2549 Client QC Test Investigator _____

DAILY RECORD SHEET

Day 0 (4/17/09) LPS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	20.5	7.2	27.5	7.2	5	5	5	5
2. 441	20.3	7.3	27.5	7.1	5	5	5	5
3. 278	20.5	7.5	27.5	7.2	5	5	5	5
4. 175	20.4	7.6	27.0	7.2	5	5	5	5
5. 110	20.6	7.7	27.0	7.3	5	5	5	5
6 0	20.5	8.0	27.0	7.3	5	5	5	5

Day 1 (4/18/09) LPS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	21.7	7.5	29.0	5.5	Ø (5d)	Ø (5d)	Ø (5d)	Ø (5d)
2. 441	21.5	7.4	29.0	6.3	5	5	4 (1d)	4 (1d)
3. 278	21.8	7.4	28.5	6.9	5	5	5	5
4. 175	21.8	7.6	28.5	6.8	5	5	5	5
5. 110	21.8	7.8	28.0	6.8	5	5	5	5
6 0	21.7 ~~21.6~~	8.1	28.0	6.8	5	5	5	5

Day 2 (4/19/09) GJ2

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1 700	—	—	—	—	Ø	Ø	Ø	Ø
2. 441	21.7	7.2	29.0	5.7	1 (4D)	4 (1D)	3 (1D)	4
3. 278	21.7	7.5	28.0	6.9	5	5	5	5
4. 175	21.7	7.7	28.0	6.8	5	5	5	5
5. 110	21.6	7.8	27.5	6.8	5	5	5	5
6. 0	21.6	8.0	27.5	6.8	5	5	5	5

Day 3 (4/20/09) LPS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	—	—	—	—	Ø	Ø	Ø	Ø
2. 441	19.2	7.1	30.0	5.9	Ø (1d)	Ø (4d)	Ø (3d)	Ø (4d)
3. 278	19.5	7.4	30.0	6.8	4 (1d)	3 (2d)	Ø (5d)	Ø (5d)
4. 175	19.6	7.7	29.5	6.9	5	5	5	5
5. 110	19.8	7.8	29.0	6.9	5	5	5	5
6. 0	19.5	8.0	29.5	7.0	5	5	5	5

Day 4 (4/21/09 sf

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	—	—	—	—	Ø	Ø	Ø	Ø
2. 441	—	—	—	—	Ø	Ø	Ø	Ø
3. 278	20.0	7.3	30.5	6.5	4	3	Ø	Ø
4. 175	19.9	7.6	30.0	6.5	5	5	5	5
5. 110	19.9	7.8	30.0	6.6	5	5	5	5
6. 0	19.8	8.0	30.0	6.8	5	5	5	5

WQ:				
Mean	20.7	7.6	28.6	6.7
SD	0.9	0.3	1.1	0.5
n	26	26	26	26

CETIS Summary Report

Report Date: 18 May-09 14 42 (p 1 of 1)
Test Code: 13-1727-4467/999-2549

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Batch ID:	13-3689-3600	Test Type:	Survival	Analyst:	
Start Date:	17 Apr-09 09:40	Protocol:		Diluent:	Yaquina Bay Seawater
Ending Date:	21 Apr-09 10:30	Species:	Neanthes arenaceodentata	Brine:	
Duration:	4d 1h	Source:	California State U. Long Beach	Age:	

Sample ID:	00-4167-2576	Code:	27BDF80	Client:	Internal Lab
Sample Date:	17 Apr-09 09:40	Material:	Ammonia as nitrogen	Project:	
Receive Date:	17 Apr-09 09:40	Source:	Reference Toxicant		
Sample Age:	N/A	Station:			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
06-7615-5948	Proportion Survived	175	278	221	31.2%		Steel Many-One Rank Test

Point Estimate Summary

Analysis ID	Endpoint	Level	Conc-mg/	95% LCL	95% UCL	TU	Method
09-2424-6010	Proportion Survived	EC50	259	235	286		Spearman-Kärber

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
110		4	1	1	1	1	1	0	0	0.0%	0.0%
175		4	1	1	1	1	1	0	0	0.0%	0.0%
278		4	0.35	0.196	0.504	0	0.8	0.0753	0.412	118.0%	65.0%
441		4	0	0	0	0	0	0	0		100.0%
700		4	0	0	0	0	0	0	0		100.0%

Proportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	1	1	1	1
110		1	1	1	1
175		1	1	1	1
278		0.8	0.6	0	0
441		0	0	0	0
700		0	0	0	0

CETIS Test Data Worksheet

Report Date: 18 May-09 14:41 (p 1 of 1)
Test Code: 13-1727-4467/999-2549

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Start Date:	17 Apr-09 09:40	Species:	Neanthes arenaceodentata	Sample Code:	27BDF80
End Date:	21 Apr-09 10:30	Protocol:		Sample Source:	Reference Toxicant
Sample Date:	17 Apr-09 09:40	Material:	Ammonia as nitrogen	Sample Station:	

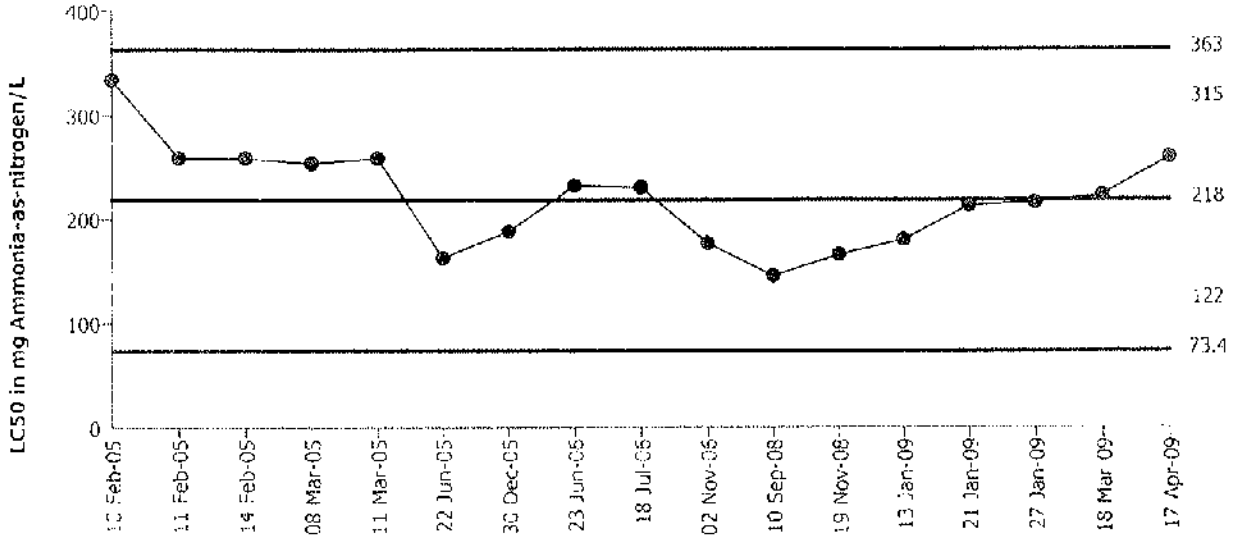
Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	24	5	5	
0	D	2	15	5	5	
0	D	3	9	5	5	
0	D	4	8	5	5	
110		1	16	5	5	
110		2	10	5	5	
110		3	1	5	5	
110		4	13	5	5	
175		1	18	5	5	
175		2	7	5	5	
175		3	5	5	5	
175		4	11	5	5	
278		1	14	5	4	
278		2	17	5	3	
278		3	20	5	0	
278		4	4	5	0	
441		1	6	5	0	
441		2	23	5	0	
441		3	19	5	0	
441		4	3	5	0	
700		1	22	5	0	
700		2	2	5	0	
700		3	21	5	0	
700		4	12	5	0	

Data entry verified against laboratory bench sheets
MER
5-18-09

Polychaete, N. arenaceodentata, acute reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Neanthes arenaceodentata (Polycha	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Polychaete, N. arenaceodentata, acute reference toxicant test



Mean:	218.3	Count:	16	-2s Warning Limit:	121.7	-3s Action Limit:	73.37
Sigma:	48.31	CV:	22.10%	+2s Warning Limit:	314.9	+3s Action Limit:	363.2

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2005	Feb	10	333.8	115.5	2.39	(+)		07-2142-2429	14-4996-1630
2			11	258.1	39.82	0.8242			09-7820-5859	15-2621-6614
3			14	258.1	39.82	0.8242			10-4039-9251	09-1851-7488
4		Mar	8	253.5	35.2	0.7286			07-7871-6240	18-8368-7756
5			11	258.1	39.82	0.8242			14-8657-5991	03-1667-0035
6		Jun	22	162.6	-55.68	-1.153			17-9049-4827	04-4446-2090
7		Dec	30	188.2	-30.14	-0.6238			09-3229-1974	06-9837-0860
8	2006	Jun	23	231.8	13.48	0.2791			02-7771-3278	18-1187-0488
9		Jul	18	230	11.66	0.2414			15-3651-0178	09-1838-8420
10		Nov	2	176.5	-41.78	-0.8649			03-6247-3723	09-5744-6640
11	2008	Sep	10	145.4	-72.9	-1.509			07-3790-0013	08-3902-8512
12		Nov	19	165.6	-52.68	-1.09			14-5853-1662	10-8216-3432
13	2009	Jan	13	180.2	-38.09	-0.7884			08-6593-0729	04-9197-1402
14			21	212.8	-5.459	-0.113			00-3690-9044	14-7485-7397
15			27	215.5	-2.786	-0.05767			09-4103-2034	16-3083-3739
16		Mar	18	223	4.687	0.09702			08-8400-8308	09-7188-0177
17		Apr	17	259.3	40.99	0.8485			13-1727-4467	09-2424-6010

MSR

Analyst: 5-18-09 QA:

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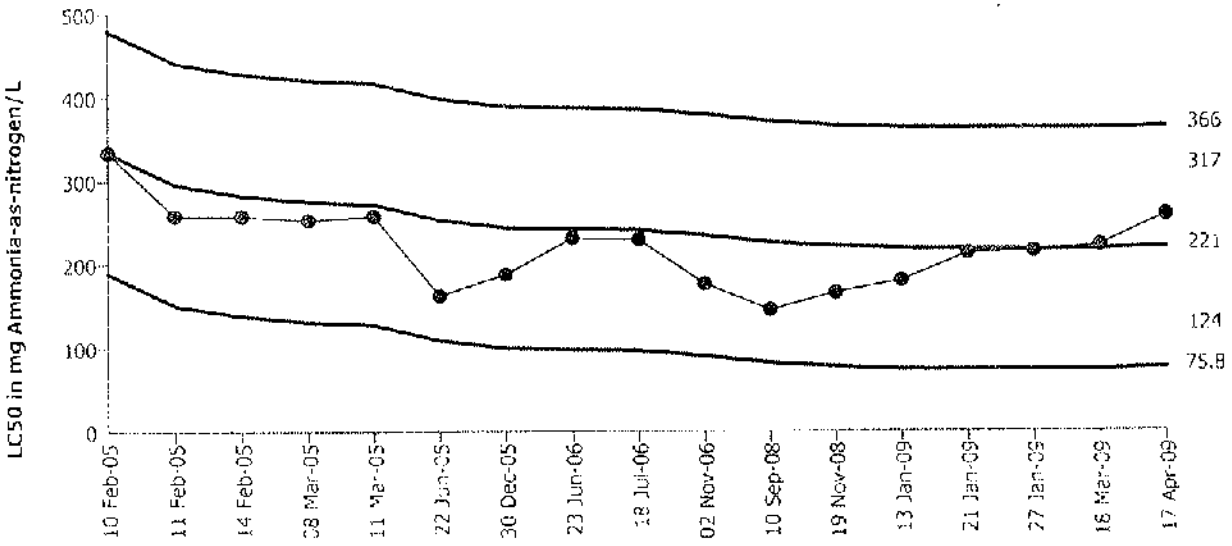
Polychaete, N. arenaceodentata, acute reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Neanthes arenaceodentata (Polycha	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Polychaete, N. arenaceodentata, acute reference toxicant test



Mean:	218.3	Count:	16	-2s Warning Limit:	124.1	-3s Action Limit:	75.81
Sigma:	48.31	CV:	22.10%	+2s Warning Limit:	317.4	+3s Action Limit:	365.7

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2005	Feb	10	333.8	115.5	2.39	(+)		07-2142-2429	14-4996-1530
2			11	258.1	39.82	0.8242			09-7820-5859	15-2821-6614
3			14	258.1	39.82	0.8242			10-4039-9251	09-1851-7468
4		Mar	8	253.5	35.2	0.7286			07-7871-6246	18-8368-7756
5			11	258.1	39.82	0.8242			14-8657-5991	03-1667-0035
6		Jun	22	162.6	-55.68	-1.153			17-9049-4827	04-4446-2090
7		Dec	30	188.2	-30.14	-0.6238			09-3229-1974	06-9837-0860
8	2006	Jun	23	231.8	13.48	0.2791			02-7771-3278	18-1187-0488
9		Jul	18	230	11.66	0.2414			15-3651-0178	09-1838-8420
10		Nov	2	176.5	-41.78	-0.8649			03-6247-3723	09-5744-6640
11	2008	Sep	10	145.4	-72.9	-1.509			07-3790-0013	06-3902-8512
12		Nov	19	165.6	-52.68	-1.09			14-5853-1662	10-8216-3432
13	2009	Jan	13	180.2	-38.09	-0.7884			08-6593-0729	04-9197-1402
14			21	212.8	-5.459	-0.113			00-3690-9044	14-7485-7397
15			27	215.5	-2.786	-0.05767			09-4103-2034	16-3083-3739
16		Mar	18	223	4.687	0.09702			08-8400-8308	09-7188-0177
17		Apr	17	259.3	40.99	0.8485			13-1727-4467	09-2424-6010

MLR

page 7 of 2

Analyst: 5-18-09 QA: _____

Report

of

Test No. 783-3

Larval Sediment Toxicity Test with
Mytilus galloprovincialis

Submitted to

Windward Environmental LLC
200 West Mercer St., Suite 401
Seattle, WA 98119

Submitted by

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

June 10, 2009

TOXICITY TEST REPORT

TEST IDENTIFICATION

Test No.: 783-3

Title: *Mytilus galloprovincialis* larval sediment toxicity test of marine sediments.

Protocol: NAS-XXX-CG4/MG4, June 20, 1990. Rev. 2, Feb.10, 1997. Based on: Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments (PSEP 1995), with modifications as specified by the Dredged Material Management Program (DMMP, formerly Puget Sound Dredged Disposal Analysis Program or PSDDA) and Washington State Sediment Management Standards (SMS).

STUDY MANAGEMENT

Study Sponsor: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Sponsor's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences, P.O. Box 1437, Newport, Oregon 97365.

Test Location: Newport Laboratory

Laboratory's Study Personnel: M.S. Redmond, M.S., Proj. Mngr.; G.J. Irissarri, B.S., Study Dir.; L.K. Nemeth, B.A., M.B.A., QA Officer; R.S. Caldwell, Ph.D., Sr. Aq. Toxicol.; S. Gage, B.A., Sr. Tech.; L.P. Sandoval, B.S., Tech.

Study Schedule:

Test Beginning: 4-22-09, 1610 hrs.

Test Ending: 4-24-09, 1730 hrs.

Disposition of Study Records: All specimens, raw data, reports and other study records are stored according to Good Laboratory Practice regulations at Northwestern Aquatic Sciences, 3814 Yaquina Bay Rd., Newport, OR 97365.

Good Laboratory Practices: The test was conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

Statement of Quality Assurance: The test data were reviewed by the Quality Assurance Unit to assure that the study was performed in accordance with the protocol and standard operating procedures. This report is an accurate reflection of the raw data.

TEST MATERIAL

Test Sediments: Nine test sediments and three reference sediments were tested. Details follow:

NAS Sample No.	2471G	2472G	2473G
Sample Description	EW09-SS-220-010	EW09-SS-218-010	EW09-SS-217-010
Collection Date	3-1-09	3-1-09	3-1-09
Receipt Date	3-3-09	3-3-09	3-3-09
Interstitial Salinity (‰)	29.0	29.0	30.0

NAS Sample No.	2493G	2494G	2495G
Sample Description	EW09-SS-034-010	EW09-SS-035-010	EW09-SS-033-010
Collection Date	3-4-09	3-4-09	3-4-09
Receipt Date	3-6-09	3-6-09	3-6-09
Interstitial Salinity (‰)	29.5	29.5	30.0

NAS Sample No.	2496G	2498G	2507G
Sample Description	EW09-SS-032-010	EW09-SS-030-010	EW09-SS-005-010
Collection Date	3-4-09	3-4-09	3-4-09
Receipt Date	3-6-09	3-6-09	3-6-09
Interstitial Salinity (‰)	30.0	30.0	29.5

counts (Appendix II). The QC counts were close (coefficients of variation from 0 to 4 for counts of normal larvae) to the initial counts and were considered acceptable.

The test met the control acceptance criterion of ≥70% normal in the seawater control; the control percent normality was 91.1%. Because the control acceptance criterion was met, and the positive control result was within limits, it is concluded that the test has developed fully acceptable data for use in making management decisions.

Although SMS does not have a specific reference sediment performance criterion, the DMMP criterion is sometimes applied. The DMMP criterion specifies that the combined mortality and abnormality in the reference sediment be ≤35% of the seawater control value. Seawater-control-normalized combined mortality and abnormality in reference sediments CI09-SS-020-010, CI09-SS-060-010, and CI09-SS-080-010 was 4.2%, 10.4%, and 11.5%, respectively, which meets the DMMP criterion.

Because no statistical comparisons were performed between the test sample and the control or reference sediment, no conclusions are given regarding the toxicity of test sediments.

STUDY APPROVAL

Michele S. Redmond 6-10-09
Project Manager Date

Gerald Lussier 6-10-09
Study Director Date

Sandra K. Kemble 6/6/09
Assistant Laboratory Director Date

Julie R. Fiore 6-10-09
Quality Assurance Unit Date

Table 1. Summary of water quality conditions during the tests of mussel, *Mytilus galloprovincialis*, larvae exposed to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Temperature (°C)	15.5 ± 0.2	15.1	15.9	39
pH	8.0 ± 0.1	7.8	8.1	39
Salinity (‰)	27.7 ± 0.3	27.5	28.5	39
Dissolved Oxygen (mg/L)	7.8 ± 0.2	7.2	8.2	39
Total soluble sulfide (mg/L)	---	<0.02	<0.02	26
Total Ammonia-N (mg/L)	---	<0.1	0.4	26

Table 2. Means and standard deviations (n=5) of number normal larvae and percent NCMA (combined mortality and abnormality, normalized to the seawater control) of mussel, *Mytilus galloprovincialis*, larvae exposed to marine sediments.

Sample Description	Number normal	Normalized combined percent mortality & abnormality (NCMA)
Seawater control	234 ± 8	0.0 ± 3.2
CI09-SS-020-010 (NAS #2520G)	224 ± 14	4.2 ± 6.0
CI09-SS-060-010 (NAS #2521G)	210 ± 17	10.4 ± 7.1
CI09-SS-080-010 (NAS #2522G)	207 ± 24	11.5 ± 10.0
EW09-SS-005-010 (NAS #2507G)	217 ± 20	7.3 ± 8.4
EW09-SS-030-010 (NAS #2498G)	211 ± 12	9.7 ± 5.0
EW09-SS-032-010 (NAS #2496G)	204 ± 26	12.6 ± 11.0
EW09-SS-033-010 (NAS #2495G)	212 ± 10	9.3 ± 4.3
EW09-SS-034-010 (NAS #2493G)	197 ± 9	16.0 ± 3.8
EW09-SS-035-010 (NAS #2494G)	197 ± 22	16.0 ± 9.4
EW09-SS-217-010 (NAS #2473G)	226 ± 20	3.3 ± 8.3
EW09-SS-218-010 (NAS #2472G)	222 ± 13	5.1 ± 5.6
EW09-SS-220-010 (NAS #2471G)	209 ± 20	10.9 ± 8.6

APPENDIX I

PROTOCOL

TEST PROTOCOL

BIVALVE LARVAL SEDIMENT BIOASSAY

1. INTRODUCTION:

1.1 Purpose of Study: The purpose of this study is to identify test sediments that are toxic to bivalve larvae.

1.2 Summary of Method: The 48- to 60-hr static test is performed using newly fertilized embryos of the Pacific oyster, Crassostrea gigas or blue mussel, Mytilus sp. Eighteen grams of test sediment suspended in 900 mL of test water are vigorously mixed for 10 sec in the 1 L glass test vessels to produce the test medium. After 4 hr, the test containers are inoculated with <2-hr-old embryos at a level sufficient to yield a final concentration of 20-40 per ml. Five replicates are used for each treatment, reference, and control sediment (A sixth replicate is used only for water quality measurements). Mortality, abnormal development, and combined mortality/abnormality during exposure are the response criteria used. The mean ± S.D. for each treatment and test endpoint is given in the final report. Between-treatment comparisons may be made with Student's t-test, or by using an analysis of variance with an appropriate post-hoc test.

2. STUDY MANAGEMENT:

2.1 Sponsor's Name and Address: _____

2.2 Sponsor's Study Monitor: _____

2.3 Name of Testing Laboratory:
Northwestern Aquatic Sciences
Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

2.4 Test Location: _____

2.5 Laboratory's Personnel to be Assigned to the Study:
Project Manager/Technical Director: _____
Qual. Assurance Officer: _____
Aquatic Biologist: _____
Aquatic Biologist: _____

2.6 Proposed Testing Schedule: Tests to begin within 2 weeks (8 weeks if held under nitrogen for PSDDA) of sample collection. Reference toxicant test to be run concurrently.

2.7 Good Laboratory Practices: Tests are conducted according to Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

3. TEST MATERIAL

The test materials are marine sediments. The collected sediments are placed in solvent and acid cleaned 1 L glass jars fitted with TFE-lined screw caps. Samples are stored at 4°C in the dark for up to 14 days. For PSDDA testing, the samples may be stored under nitrogen at 4°C in the dark in the original sealed containers for up to 8 weeks prior to testing. In addition to the test sediments, one or more reference sediments (a clean sediment with physical characteristics similar to the test sediments) must be employed. A second control sediment from a clean site may also be used (optional).

4. TEST WATER

Test water is filtered Yaquina Bay seawater adjusted to a salinity of 28 ppt. The water is pumped daily from Yaquina Bay into a 6000 gal seasoned fiberglass reservoir from which it is supplied under pump pressure to the laboratory. Filtration is accomplished using a sand filter followed by a medium porosity (10-25 um) cartridge filter, then a ≤0.45 um filter. An alternative seawater supply of similar quality may be used. The use of sterile seawater may be desirable.

5. TEST ORGANISMS

5.1 Species: Pacific oyster, *Crassostrea gigas* or blue mussel *Mytilus* sp.

5.2 Source: Adult oysters are purchased from Oregon Oyster Co., Newport, OR, a commercial grower. Blue mussels are purchased from a commercial supplier such as Carlsbad Aquafarms, Carlsbad, CA.

5.3 Age at Study Initiation: Less than two-hour-old embryos.

5.4 Conditioning/Acclimation of Adults: Adult bivalves are conditioned/acclimated by holding for up to eight weeks in seasoned fiberglass water trays supplied with a minimum of 1 L/min of unfiltered Yaquina Bay, OR water (22-32 ppt) at a temperature of approximately 18-22°C (14-18°C for mussels). Supplemental feeding with cultured algae may be desirable. A 14 hour/10 hour light-dark photoperiod is employed.

5.5 Spawning and Fertilization: Adult bivalves are cleaned by brushing and placed into spawning trays supplied with seawater. The bivalves are spawned by gradually increasing the water temperature to 5-10°C above the conditioning temperature over approximately a one hour period. Sperm from a sacrificed male may be added to the spawning tray to aid stimulation of natural spawning. If spawning does not occur, the water is cooled and the cycle is repeated. Bivalves that begin spawning are rinsed and isolated in clean sterile seawater for collection of gametes.

Eggs from two or more females are fertilized by addition of sperm from two or more males at a concentration of 10^5 to 10^7/ml. After fertilization, the embryo density is adjusted to approximately 2000-4000/ml by dilution with 28 ppt seawater. Embryos are kept suspended by frequent gentle agitation with a perforated plunger and the temperature is maintained at test temperature. The quality of the embryos is verified before testing by microscopic examination. Less than 2-hr-old embryos are used in the test.

6. DESCRIPTION OF TEST SYSTEM

6.1 Test Chambers and Environmental Control: Test chambers used in the toxicity test are covered 1 L glass beakers. Test chambers are maintained at constant temperature by partial immersion in a temperature-controlled water bath or placement in a temperature-controlled environmental chamber. Aeration is generally recommended but not required by PSEP unless dissolved oxygen falls below 60% saturation. Aeration is required for PSDDA. The test is performed under a 14:10 L:D photoperiod with illumination supplied by fluorescent lamps.

6.2 Cleaning: All laboratory glassware, including test chambers, is cleaned as described in EPA/600/4-90/027. (NAS SOP No. G-1.) New glassware and test systems are soaked 15 minutes in tap water and scrubbed with detergent (or cleaned in automatic dishwasher); rinsed twice with tap water; carefully rinsed once with fresh, dilute (10%, V:V) hydrochloric or nitric acid to remove scale, metals, and bases; rinsed twice with deionized water; rinsed once with acetone to remove organic compounds (using a fume hood or canopy); and rinsed three times with deionized water. Test systems and chambers are rinsed again with dilution water just before use.

7. EXPERIMENTAL DESIGN AND TEST PROCEDURES

7.1 Experimental Design: The experimental design consists of exposure of bivalve embryos to a number of test sediments, one or more reference sediments, a clean sand control sediment (optional), and a no-sediment (seawater) control. Each treatment consists of five replicate test containers, each containing from 20,000 to 40,000 bivalve embryos. A sixth replicate series is used for water quality measurements. Complete randomization of test containers is used.

7.2 Test Procedure: Eighteen grams of test or control sediment is added to the appropriate 1 L test container and the test water is added to a final volume of 900 mL. The containers are vigorously mixed for 10 seconds and then allowed to settle for 4 hr. Each test vessel is then inoculated with 20,000 to 40,000 <2-hr-old bivalve embryos (~ 1 ml of embryo stock). The embryos are incubated at 20 ± 1 °C for oysters (16 ± 1°C for mussels) for 48-60 h to permit development into normal prodissoconch I stage larvae. Immediately after inoculation of the test vessels with embryos, 10 ml aliquots are removed from each of the five no-sediment control replicates and preserved in 5% buffered formalin. These are counted at a later date to establish the average initial embryo concentration.

The test is terminated after 48-60 hr by carefully decanting the supernatant liquid into a 1000 ml beaker. Ten milliliter aliquots are then taken from each beaker, placed into a 30 ml glass vial, and preserved in 5% buffered formalin. The beaker contents are gently agitated using a perforated plastic plunger at the time of aliquot removal to ensure that the aliquots accurately reflect the embryo/larval concentration of the entire test vessel. Larvae are subsequently counted in the 30 ml vials using an inverted compound microscope to determine the total number of larvae and the number failing to develop a complete shell; these data are used for calculating the percent mortality, percent abnormality, and percent combined mortality and abnormality (percent abnormal/dead). Approximately 10% of the samples may be counted by a second investigator as a QA/QC measure.

7.3 Effect Criteria: Effect criteria are: 1) mortality of the embryos, and 2) abnormal development (failure to produce completely developed shells). A third effect expression is a combination of these two, percent abnormal/dead. This is functionally equivalent to percent normal.

The initial number of embryos are determined by averaging the counts of all eggs in initial subsamples of the five seawater control test containers. Live abnormal larvae are those observed at 48-60 hr in which a fully shelled, straight-hinged, D-shaped prodissoconch I stage has been reached.

7.4 Test Conditions: The test exposure duration is 48-60 h. The test temperature is 20 ± 1°C for oysters and 16 ± 1°C for mussels. The salinity is 28 ± 1 ppt. The photoperiod is a 14:10 hr, L:D cycle of fluorescent light. Aeration is not required for PSEP unless dissolved oxygen falls below 60% saturation; aeration is required for PSDDA (dissolved oxygen must be maintained at > 4 mg/L). Test chambers are 1 L glass beakers held in a controlled temperature environment

7.5 Feeding: Embryos are not fed during the test.

7.6 Test Duration, Type and Frequency of Observations, and Methods: The test duration is 48-60 hours. The type and frequency of observations to be made during the test are summarized as follows:

TYPE OF OBSERVATION	TIMES OF OBSERVATION
Biological Data	
Mortality and abnormal development	End of test (at 48-60 hours)
Physical and Chemical Data	
Temperature, dissolved oxygen, salinity, & pH	Daily in water quality beakers
Ammonia-N and sulfide	Beginning & end of test in water quality beakers

Temperature is measured with a calibrated mercury thermometer or telethermometer. Dissolved oxygen is directly measured in test vessels using a polarographic oxygen probe calibrated according to the

manufacturer's recommendations. Salinity is measured using a refractometer. The pH is measured with a pH probe and a calibrated meter with scale divisions of 0.1 pH units. Ammonia-N is measured using the HACH Model FF-3 test kit (ammonia-N detection limit 0.1 mg/L). Sulfide is measured using the HACH Hydrogen Sulfide Test Kit Model HS-WR (sulfide detection limit 0.01 mg/L).

7.7 Criteria of Test Acceptance: The test results are acceptable if at least 70% of the seawater control larvae achieve a normal,D-shaped prodissoconch I stage. Also, for PSDDA, effects in the reference sediments must be ≤ 35% over the seawater control.

8. DATA ANALYSIS METHODS

Prior to issuance of the July 1995 revision of the PSEP recommended guidelines for conducting laboratory bioassays, no specific guidance was given for the computation of endpoints. All three standard endpoints, percent abnormal, percent combined mortality/abnormality, and percent mortality have occasionally been computed both with, and without, normalization for the seawater control. In order to be consistent with what we assume to be the PSAMP format, all endpoints given in reports are usually the non-normalized endpoints. In addition, normalized percent mortality (NPM), and normalized combined mortality/abnormality (NCMA) are computed and are included in the raw data computer printouts. The formulas employed for each of these computations are as follows:

PABN (Percent Abnormality) = 100*(A/T)
PABND (Combined Percent Mortality/Abnormality) = 100*((I-N)/I)
PMORT (Percent Mortality) = 100*((I-T)/I)
NPM (Normalized Percent Mortality) = 100*(1-(T/TS))
NCMA (Normalized Combined Percent Mortality/Abnormality) = 100*(1-(N/NS))

where the following are counts per 10 ml subsample:

N = normal larvae counted
A = abnormal larvae counted
T = N+A (total larvae counted)
I = number of inoculated embryos (from average of zero time counts)
TS = average of total larvae counted in seawater controls
NS = average of normal larvae counted in seawater controls

Other endpoints may be computed at client request.

The means and standard deviation are then calculated for each treatment level. Between-treatment comparisons for each biological endpoint may be made using a t-test or a one-way analysis of variance F test (Snedecor and Cochran 1967). An arcsine square root data transformation is required for proportional data.

9. REPORTING

A standard NAS report of the test results must include the following information: name and identification of the test; the investigator and laboratory; sediment holding temperature data; information on the test sediment including the interstitial salinity; information on the source of seawater used; detailed information about the test organisms including acclimation conditions; a description of the experimental design and test chambers and other test conditions including water quality; information about any aeration that may have been required; definition of the effect criteria and other observations; unusual responses, if any, in the control treatment; individual replicate and mean and S.D. data for larval mortality after 48-60 hr; individual replicate and mean and S.D. data for larval abnormalities after 48-60 hr; individual replicate and mean and S.D. data for combined abnormality and mortality; 48-hr LC50 and EC50 with reference toxicant; a description of data analysis methods and documentation of statistical test results; any unusual information about the test or deviations from procedures.

10. STUDY DESIGN ALTERATION

Amendments made to the protocol must be approved by the sponsor and study director and should include a description of the change, the reason for the change, the date the change took effect, and the dated signatures of

the study director and sponsor. Any deviations in the protocol must be described and recorded in the study raw data.

11. REFERENCE TOXICANT

Reference toxicant testing should be included with each study or at regular intervals as defined in the Quality Assurance Program of the laboratory.

12. REFERENCED GUIDELINES

ASTM. 1989. Standard guide for conducting static acute toxicity tests with embryos of four species of saltwater bivalve molluscs. ASTM Standard Method No. E 724-89. Am. Soc. Test. Mat., Philadelphia, PA.

PSDDA. 1990. Summary and conclusions of the Puget Sound Dredged Disposal Analysis (PSDDA) Bioassay Workshop. memorandum for the record. U.S. Army Corps of Engineers, Seattle District.

Puget Sound Estuary Program. 1995. Recommended guidelines for conducting laboratory bioassays on Puget Sound sediments. Prepared for U.S. Env. Prot. Agency, Region 10, Office of Puget Sound, Seattle, WA and Puget Sound Water Quality Authority, P.O. Box 40900, Olympia, WA.

Snedecor, G.W. and W.G. Cochran. 1967. Statistical methods. Sixth ed., The Iowa State Univ. Press. Ames, Iowa., 593 pp.

Weber, C.I. (Ed.) 1991. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fourth Edition). EPA/600/4-90/027.

13. APPROVALS

_____ _____ for _____
Name Date

_____ _____ for NORTHWESTERN AQUATIC SCIENCES
Name Date

APPENDIX II

RAW DATA

TEST DESCRIPTION, MONITORING, AND RESULTS BENCHSHEETS

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-CG/MG4
NAS-XXX-SP/DE4

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

reviewed pgs. 1-37 MLR 6-10-09

Test No. 783-3 Client Windward Investigator

STUDY MANAGEMENT

Client: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119
Client's Study Monitor: Ms. Kelle Andersen
Testing Laboratory: Northwestern Aquatic Sciences
Test Location: Newport Laboratory
Laboratory's Study Personnel:
Proj. Man./Study Dir. M.S. Redmond MSR/G.J. Irissarri GJI
QA Officer L.K. Nemeth
1. Susan Gage SG 2. Lidia P. Sandoval LPS
3. B.S. Caldwell 4.
5. 6.

Study Schedule:
Test Beginning: 4-22-09 1610 Test Ending: 4-24-09 1730

TEST MATERIAL

General description (see sample logbook/chain-of-custody for details):

NAS Sample No.:	2471G	2472G	2473G	2493G	2494G
Description:	EW09-SS-220-010	EW09-SS-218-010	EW09-SS-217-010	EW09-SS-034-010	EW09-SS-035-010
Collection Date:	3/1/09	3/1/09	3/1/09	3/4/09	3/4/09
Receipt Date:	3/3/09	3/3/09	3/3/09	3/6/09	3/6/09
Inters.Salinity (ppt):	29.0	29.0	30.0	29.5	29.5

NAS Sample No.:	2495G	2496G	2498G	2507G	2520G
Description:	EW09-SS-033-010	EW09-SS-032-010	EW09-SS-030-010	EW09-SS-005-010	CI09-SS-020-010
Collection Date:	3/4/09	3/4/09	3/4/09	3/4/09	3/12/09
Receipt Date:	3/6/09	3/6/09	3/6/09	3/6/09	3/14/09
Inters.Salinity (ppt):	30.0	30.0	30.0	29.5	30.0

NAS Sample No.:	2521G	2522G			
Description:	CI09-SS-060-010	CI09-SS-080-010			
Collection Date:	3/12/09	3/12/09			
Receipt Date:	3/14/09	3/14/09			
Inters.Salinity (ppt):	30.0	30.0			

NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					

Error codes: 1) correction of handwriting error
2) written in wrong location; entry deleted
3) wrong date deleted, replaced with correct date
4) error found in measurement; measurement repeated

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-3 Client Windward Investigator

SEDIMENT DESCRIPTIONS -- SUPPLEMENTAL NOTES

Sample No.	Description
2471G	brown gray sandy mud with shell fragments
2472G	dark gray muddy fine sand
2473G	dark gray muddy fine sand
2493G	dark gray fine mud
2494G	dark gray fine mud
2495G	dark gray/green fine mud
2496G	brown gray fine mud
2498G	dark gray/green fine mud
2507G	dark gray mud with shell fragments
2520G	gray sand
2521G	fine gray muddy sand with shells
2522G	brown gray fine sandy mud

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-3 Client Windward Investigator

TEST ORGANISMS

Species: *Mytilus galloprovincialis* Date Received: 2-19-09
Source: Carlsbad Aquafarms, Carlsbad, CA

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal (ppt)	DO (mg/L)	Comments
4-10-09	9.5	8.2	31.0	11.2	
4-13-09	9.1	8.3	30.0	11.6	
4-15-09	10.4	8.4	31.5	11.8	
4-17-09	13.8	8.5	30.0	12.2	
4-20-09	14.4	8.3	30.5	11.1	
4-22-09	11.3	8.0	31.0	13.4	
Mean	11.4	8.3	30.7	11.9	
S.D.	2.2	0.2	0.6	0.8	
(N)	(6)	(6)	(6)	(6)	

Photoperiod during acclimation: outdoor ambient conditions

TEST WATER

Source: Yaquina Bay, Oregon, sea water
Date of Collection: 4-20-09 Salinity (ppt) 28 ppt pH 8.0
Treatments: filtered to 0.4 µm, salinity-adjusted with MilliQ deionized water, aerated

SPAWNING AND GAMETE HANDLING

Spawning: Initial: 1330 AM/PM Final: 1420 AM/PM Fertilization: 1520 AM/PM
Number of organisms used: females: 9 males: 3
Egg Dilution (1 ml diluted to 500 ml):
Count/ml of dilution: 1. 51 2. 57 3. 52 Mean: 53.3
Dilution factor = DF (mean x 500/25,000) = 1.0

TEST PROCEDURES AND CONDITIONS

Test chambers: 1 L glass beakers covered with watchglasses
Test volumes: 18 g of test sediment; 900 ml of test water
Replicates/treatment: (5) 5 Organisms/treatment: (20-40/ml) 25.7
Use 6th replicate/test sediment for water quality and development assessment beaker
Test water changes: None Aeration: yes Feeding: none Photoperiod: 14L:10D
Test temperature (deg.C): mussels 16, oysters 20, echinoderms 15
Beaker placement: Total randomization
Larval stock (20,000-40,000/ml) inoculation volume: 1.0 ml; <2-hr old
Subsample size for counting: 10 ml

MISCELLANEOUS NOTES

Light intensity measurements:

Date	Location in room	foot-candles
4-24-09	BEAKER # 14	92
	BEAKER # 39	78

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-3 Client Windward Investigator _____

Test conducted in (circle one): room 1 room 2 trailer water bath other: room #4

Randomization chart:

Beakers arrang D in numerical									
order on shelves.									

Randomization chart:

Randomization chart:

Randomization chart:

Randomization chart:

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-3 Client Windward Investigator

WATER QUALITY RECORD

Day 0 (4/22/09) LPC/GJ overlying NH3 sampled? yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	Comments
1	15.2	7.9	27.5	8.0	<0.02	
8	15.2	7.9	28.0	7.5	<0.02	
16	15.3	7.9	27.5	7.8	<0.02	
20	15.2	7.9	27.5	7.4	<0.02	
21	15.2	7.9	28.0	7.6	<0.02	
31	15.5	7.9	27.5	7.8	<0.02	
33	15.4	7.9	27.5	7.9	<0.02	
43	15.6	7.9	27.5	7.9	<0.02	
58	15.3	7.9	27.5	7.9	<0.02	
60	15.1	7.8	27.5	7.2	<0.02	
68	15.1	7.9	27.5	8.1	<0.02	
74	15.1	7.9	28.0	7.4	<0.02	
78	15.2	7.9	27.5	8.2	<0.02	

Day 1 (4/23/09) SF/LPC

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
1	15.6	8.0	28.0	8.0	
8	15.7	7.9	27.5	8.0	
16	15.7	8.0	27.5	8.0	
20	15.7	8.0	28.0	8.0	
21	15.7	8.0	28.5	7.6	
31	15.9	8.1	27.5	8.0	
33	15.7	8.0	27.5	8.0	
43	15.7	7.9	27.5	8.0	
58	15.7	7.9	27.5	7.8	
60	15.7	8.0	27.5	7.8	
68	15.7	8.0	27.5	7.7	
74	~~15.7~~ 15.4	8.0	28.0	8.0	
78	15.6	8.0	27.5	8.0	

Day 2 (4/24/09) SF overlying NH3 sampled? Yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	Comments
1	15.2	8.0	28.0	7.8	< 0.02	No Alk to beakers #
8	15.3	8.0	28.0	7.7	< 0.02	18, 43, 64 & 77
16	15.5	8.0	27.5	7.8	< 0.02	Alk reestablished
20	15.4	8.0	28.0	7.8	< 0.02	
21	15.4	8.0	28.0	7.7	< 0.02	
31	15.7	8.1	28.0	7.9	< 0.02	
33	15.6	8.0	27.5	7.9	< 0.02	
43	15.7	8.0	28.0	7.8	< 0.02	
58	15.5	8.0	28.0	7.7	< 0.02	
60	15.4	8.0	27.5	7.6	< 0.02	
68	15.4	8.0	28.0	7.8	< 0.02	
74	15.5	8.0	27.5	7.7	< 0.02	
78	15.5	8.0	28.0	7.9	< 0.02	

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-3 Client Windward Investigator

5-8-09 8

LARVAL COUNT DATA

Beaker no.	Response N	Response A
1	~~242~~	~~11~~
2	242	11
3	213	17
4	200	10
5	239	7
6	189	12
7	200	9
8		
9	227	8
10	201	6
11	233	4
12	219	2
13	224	7
14	206	8
15	230	6
16		
17	206	8
18	171	13
19	219	4
20		
21		
22	209	4
23	199	14
24	238	2
25	236	3
26	231	6
27	248	3
28	205	8
29	238	15
30	232	6
31		
32	210	7
33		
34	240	6
35	235	11
36	202	7
37	195	8
38	241	5
39	217	8
40	206	4

1-2-09

Beaker no.	Response N	Response A
41	203	5
42	193	15
43		
44	171	4
45	222	4
46	196	3
47	219	4
48	210	4
49	183	3
50	224	5
51	236	8
52	209	4
53	231	5
54	219	2
55	212	6
56	222	6
57	199	5
58		
59	206	3
60		
61	220	6
62	189	23
63	218	6
64	205	9
65	209	5
66	220	16
67	207	8
68		
69	237	6
70	195	9
71	205	7
72	170	39
73	233	13
74		
75	183	19
76	224	4
77	179	13
78		

Beaker no.	Response N	Response A
	~~0~~ time 5	
2	246	
29	310	
35	250	
56	224	
73	254	

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-3 Client Windward Investigator

LARVAL COUNT DATA -- QC COUNTS

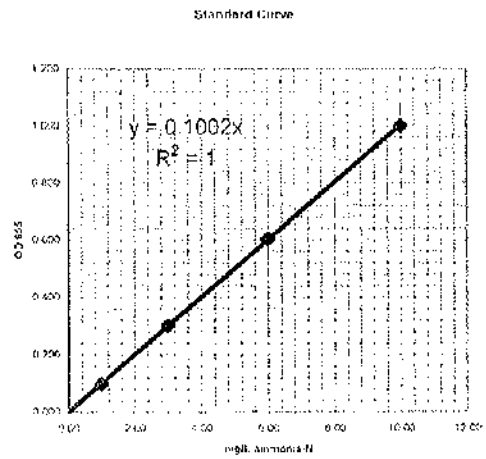
6-1-09 6SL

Beaker no.	Response N	Response A	Beaker no.	Response N	Response A	Beaker no.	Response N	Response A
1			41					
2			42					
3			43					
4	195	9	44					
5			45					
6			46					
7			47					
8			48	220	4			
9	225	7	49					
10			50					
11			51					
12			52					
13			53					
14			54					
15			55					
16			56					
17			57					
18			58					
19			59					
20			60					
21			61					
22			62	188	23			
23			63					
24	231	2	64					
25			65					
26			66					
27	248	4	67					
28			68					
29			69	223	5			
30			70					
31			71					
32			72					
33			73					
34			74					
35			75					
36			76					
37			77					
38			78					
39								
40								

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	0.098	1.00
	3.0 mg/L NH_3-N Std.	-----	0.301	3.00
	6.0 mg/L NH_3-N Std.	-----	0.604	6.00
	10.0 mg/L NH_3-N Std.	-----	1.000	10.00
	3.0 mg/L spike	-----	0.301	3.00
	3.0 mg/L spike dupl.	-----	0.309	3.08
	5.0 mg/L 2nd source	-----	0.482	4.81
1.	Day 0 (4-22-09)	######		
2.	1	1	0.000	ND
3.	8	1	0.000	ND
4.	16	1	0.023	0.23
5.	20	1	0.000	ND
6.	21	1	0.001	ND
7.	31	1	0.004	ND
8.	33	1	0.000	ND
9.	43	1	0.008	ND
10.	58	1	0.000	ND
11.	60	1	0.041	0.41
12.	68	1	0.000	ND
13.	74	1	0.000	ND
14.	78	1	0.000	ND
15.	Day 2 (4-24-09)	######		
16.	1	1	0.000	ND
17.	8	1	0.000	ND
18.	16	1	0.002	ND
19.	20	1	0.000	ND
20.	21	1	0.000	ND
21.	31	1	0.000	ND
22.	33	1	0.000	ND
23.	43	1	0.000	ND
24.	58	1	0.000	ND
25.	60	1	0.014	0.14
26.	68	1	0.000	ND
27.	74	1	0.000	ND
28.	78	1	0.000	ND
29.				
30.				
31.				
32.				
33.				
34.				
35.				
36.				



Reporting limit (mg/L) =	0.1
Recovery (%) =	101.5
Precision (RPD) =	-2.62
2nd source (%) =	96.2
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-3
Test Day: 0 & 2
Species: *Mytilus*

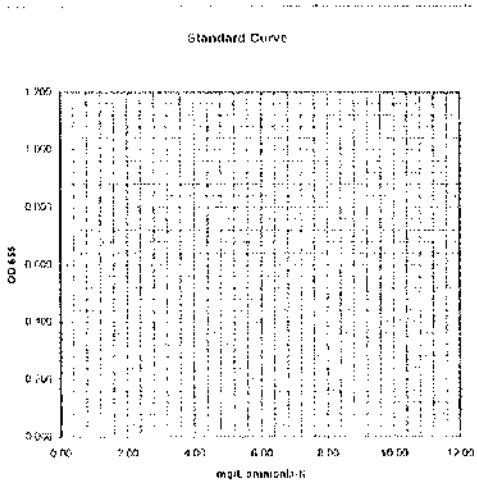
Overlying water

Analyst: RSC
Date analysed: 4/29/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	.098	1.00
	3.0 mg/L NH_3-N Std.	-----	.301	3.00
	6.0 mg/L NH_3-N Std.	-----	.609	6.00
	10.0 mg/l. NH_3-N Std.	-----	1.00	10.00
	3.0 mg/L spike	-----	.301	
	3.0 mg/L spike dupl.	-----	.309	
	5.0 mg/L 2nd source	-----	.482	
1.	Day 0 (4-22-09)	######		
2.	1	1	.000	
3.	8	1	.000	
4.	16	1	.023	
5.	20	1	.000	
6.	21	1	.001	
7.	31	1	.009	
8.	33	1	.000	
9.	43	1	.008	
10.	58	1	.000	
11.	60	1	.011	
12.	68	1	.000	
13.	74	1	.000	
14.	78	1	.000	
15.	Day 2 (4-24-09)	######		
16.	1	1	.000	
17.	8	1	.000	
18.	16	1	.001	
19.	20	1	.000	
20.	21	1	.000	
21.	31	1	.000	
22.	33	1	.000	
23.	43	1	.000	
24.	58	1	.000	
25.	60	1	.014	
26.	68	1	.000	
27.	74	1	.000	
28.	78	1	.000	
29.				
30.				
31.				
32.				
33.				
34.				
35.				
36.				



Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-3
Test Day: 0 & 2
Species: *Mytilus*

Overlying water

Analyst: RSC
Date analysed: 4/29/2009

Carlsbad Aquafarms, LLC

Invoice

Mail: P.O. Box 2600 92018
4600 Carlsbad Blvd.
Carlsbad, CA 92008
760 438 2444

DATE	INVOIC...
2/18/2009	3697

rec'd
2-19-09
SV

BILL TO:

Northwestern Aquatic Sciences
P.O. Box 1437
Newport, Oregon 97365
Phone 541-265-7225
Fax 541-265-2799

SHIP TO:

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
Newport, Oregon 97365
FedX 097240973
UPS 849169

P.O. #	TERMS	SHIP DA...	SHIP VIA	F.O.B.	AIRBILL #
verbal Ger...	Net 30	2/18/2009	FEDX	S.D.	796348677793

QUANTI...	ITEM	DESCRIPTION	PRICE LBS.	AMOUNT
1	Bio Assay Mus	Mytilus Gallo Provincialis	125.00	125.00
1	BOX CHARGE	Box Charge	10.00	10.00

THIS IS YOUR INVOICE

Total	$135.00

TEST DATA ANALYSIS RECORDS

Larval Sediment Test
Randomization Key

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
56	swcontrol	swcontrol	1	
29	swcontrol	swcontrol	2	
73	swcontrol	swcontrol	3	
2	swcontrol	swcontrol	4	
35	swcontrol	swcontrol	5	
1	swcontrol	swcontrol	6	wq replicate
63	2507G	EW09-SS-005-010	1	
53	2507G	EW09-SS-005-010	2	
46	2507G	EW09-SS-005-010	3	
57	2507G	EW09-SS-005-010	4	
38	2507G	EW09-SS-005-010	5	
60	2507G	EW09-SS-005-010	6	wq replicate
67	2498G	EW09-SS-030-010	1	
41	2498G	EW09-SS-030-010	2	
14	2498G	EW09-SS-030-010	3	
65	2498G	EW09-SS-030-010	4	
30	2498G	EW09-SS-030-010	5	
74	2498G	EW09-SS-030-010	6	wq replicate
23	2496G	EW09-SS-032-010	1	
18	2496G	EW09-SS-032-010	2	
39	2496G	EW09-SS-032-010	3	
70	2496G	EW09-SS-032-010	4	
34	2496G	EW09-SS-032-010	5	
20	2496G	EW09-SS-032-010	6	wq replicate
55	2495G	EW09-SS-033-010	1	
61	2495G	EW09-SS-033-010	2	
50	2495G	EW09-SS-033-010	3	
4	2495G	EW09-SS-033-010	4	
64	2495G	EW09-SS-033-010	5	
68	2495G	EW09-SS-033-010	6	wq replicate
6	2493G	EW09-SS-034-010	1	
7	2493G	EW09-SS-034-010	2	
37	2493G	EW09-SS-034-010	3	
32	2493G	EW09-SS-034-010	4	
62	2493G	EW09-SS-034-010	5	
58	2493G	EW09-SS-034-010	6	wq replicate
42	2494G	EW09-SS-035-010	1	
72	2494G	EW09-SS-035-010	2	
76	2494G	EW09-SS-035-010	3	
75	2494G	EW09-SS-035-010	4	
3	2494G	EW09-SS-035-010	5	
8	2494G	EW09-SS-035-010	6	wq replicate
27	2473G	EW09-SS-217-010	1	
51	2473G	EW09-SS-217-010	2	
59	2473G	EW09-SS-217-010	3	
71	2473G	EW09-SS-217-010	4	
25	2473G	EW09-SS-217-010	5	
43	2473G	EW09-SS-217-010	6	wq replicate
15	2472G	EW09-SS-218-010	1	
47	2472G	EW09-SS-218-010	2	
69	2472G	EW09-SS-218-010	3	
36	2472G	EW09-SS-218-010	4	
45	2472G	EW09-SS-218-010	5	
21	2472G	EW09-SS-218-010	6	wq replicate

Larval Sediment Test
Randomization Key

BKR	NAS SMPI	CLIENT DESCRIP	REPL	
28	2471G	EW09-SS-220-010	1	
17	2471G	EW09-SS-220-010	2	
11	2471G	EW09-SS-220-010	3	
66	2471G	EW09-SS-220-010	4	
77	2471G	EW09-SS-220-010	5	
33	2471G	EW09-SS-220-010	6	wq replicate
40	2520G	CI09-SS-020-010	1	
24	2520G	CI09-SS-020-010	2	
5	2520G	CI09-SS-020-010	3	
12	2520G	CI09-SS-020-010	4	
54	2520G	CI09-SS-020-010	5	
78	2520G	CI09-SS-020-010	6	wq replicate
48	2521G	CI09-SS-060-010	1	
9	2521G	CI09-SS-060-010	2	
49	2521G	CI09-SS-060-010	3	
52	2521G	CI09-SS-060-010	4	
19	2521G	CI09-SS-060-010	5	
16	2521G	CI09-SS-060-010	6	wq replicate
26	2522G	CI09-SS-080-010	1	
22	2522G	CI09-SS-080-010	2	
10	2522G	CI09-SS-080-010	3	
44	2522G	CI09-SS-080-010	4	
13	2522G	CI09-SS-080-010	5	
31	2522G	CI09-SS-080-010	6	wq replicate

Endpoints Data Entry and Calculations File

BKR=beaker number
INIT=number of inoculated embryos (from average of zero-time counts)
NORM=number normal
ABN=number abnormal
TOTAL=NORM+ABN
PMORT=percent mortality=100((INIT-TOTAL)/INIT)
PABN=percent abnormality=100(ABN/TOTAL)
PABND=combined percent mortality and abnormality=100((INIT-NORM)/INIT)
NPM=normalized percent mortality=100(1-(TOTAL/TS)).
where TS=average of total larvae counted in seawater controls
NCMA=normalized combined percent mortality and abnormality=100(1-(NORM/NS))
where NS=average of normal larvae counted in seawater controls

zero counts	
a	246
b	310
c	250
d	224
e	254
Mean =	257

Data entry verified against laboratory bench sheets
MSR 5-19-09

NS (mean normal)	TS (mean total)
234.0	245.2

%normal in SW cont relative to INIT
91.1

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL		INIT	NORM	ABN	TOTAL	PMORT	PABN	PABND	NPM	NCMA
1	55	swcontrol	swcontrol	1		257	222	6	228	11.2	2.6	13.6	7.0	5.1
2	29	swcontrol	swcontrol	2		257	238	15	253	1.5	5.9	7.3	-3.2	-1.7
3	73	swcontrol	swcontrol	3		257	233	13	246	4.2	5.3	9.3	-0.3	0.4
4	2	swcontrol	swcontrol	4		257	242	11	253	1.5	4.3	5.8	-3.2	-3.4
5	35	swcontrol	swcontrol	5		257	235	11	246	4.2	4.5	8.5	-0.3	-0.4
6	1	swcontrol	swcontrol	6	wq replicate	257								
7	63	2507G	EW09-SS-005-010	1		257	218	6	224	12.8	2.7	15.1	8.6	6.8
8	53	2507G	EW09-SS-005-010	2		257	231	5	236	8.1	2.1	10.0	3.8	1.3
9	46	2507G	EW09-SS-005-010	3		257	196	3	199	22.5	1.5	23.7	18.8	16.2
10	57	2507G	EW09-SS-005-010	4		257	199	5	204	20.6	2.5	22.5	16.8	15.0
11	38	2507G	EW09-SS-005-010	5		257	241	5	246	4.2	2.0	6.2	-0.3	-3.0
12	60	2507G	EW09-SS-005-010	6	wq replicate	257								
13	67	2498G	EW09-SS-030-010	1		257	207	8	215	16.3	3.7	19.4	12.3	11.5
14	41	2498G	EW09-SS-030-010	2		257	203	5	208	19.0	2.4	21.0	15.2	13.2
15	14	2498G	EW09-SS-030-010	3		257	205	8	214	16.7	3.7	19.8	12.7	12.0
16	65	2498G	EW09-SS-030-010	4		257	209	5	214	16.7	2.3	18.6	12.7	10.7
17	30	2498G	EW09-SS-030-010	5		257	232	6	238	7.3	2.5	9.7	2.9	0.9
18	74	2498G	EW09-SS-030-010	6	wq replicate	257								

	NORM	PMORT	PABN	PABND	NPM	NCMA
Mean	234.0	4.5	4.5	8.9	0.0	0.0
S.D.	7.5	4.0	1.2	2.9	4.2	3.2
n	5	5	5	5	5	5
Mean	217.0	13.6	2.2	15.5	9.5	7.3
S.D.	19.6	7.9	0.4	7.6	8.2	8.4
n	5	5	5	5	5	5
Mean	211.4	15.2	2.9	17.7	11.2	9.7
S.D.	11.7	4.5	0.7	4.6	4.7	5.0
n	5	5	5	5	5	5

Test no. 783-3

Larval Sediment Test

5/19/09

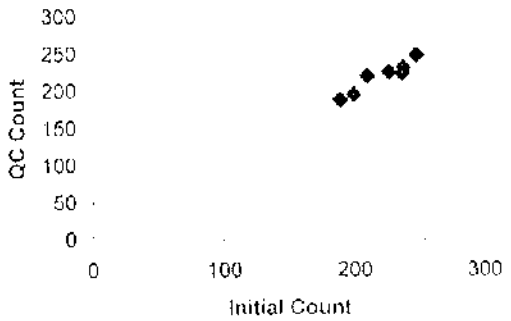
INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL		INIT	NORM	ABN	TOTAL	PMORT	PABN	PABND	NPM	NCMA
19	23	2496G	EW09-SS-032-010	1		257	199	14	213	17.1	6.6	22.5	13.1	15.0
20	18	2496G	EW09-SS-032-010	2		257	171	13	184	28.3	7.1	33.4	25.0	26.9
21	39	2496G	EW09-SS-032-010	3		257	217	8	225	12.4	3.6	15.5	8.2	7.3
22	70	2496G	EW09-SS-032-010	4		257	195	9	204	20.6	4.4	24.1	16.8	16.7
23	34	2496G	EW09-SS-032-010	5		257	240	6	246	4.2	2.4	6.5	-0.3	-2.6
24	20	2496G	EW09-SS-032-010	6	wq replicate	257								
25	55	2495G	EW09-SS-033-010	1		257	212	8	218	15.1	2.8	17.4	11.1	9.4
26	61	2495G	EW09-SS-033-010	2		257	220	6	226	12.0	2.7	14.3	7.8	6.0
27	50	2495G	EW09-SS-033-010	3		257	224	5	229	10.8	2.2	12.8	6.6	4.3
28	4	2495G	EW09-SS-033-010	4		257	200	10	210	18.2	4.8	22.1	14.4	14.5
29	64	2495G	EW09-SS-033-010	5		257	205	9	214	16.7	4.2	20.2	12.7	12.4
30	68	2495G	EW09-SS-033-010	6	wq replicate	257								
31	6	2493G	EW09-SS-034-010	1		257	189	12	201	21.7	5.0	26.4	18.0	19.2
32	7	2493G	EW09-SS-034-010	2		257	200	9	209	18.6	4.3	22.1	14.8	14.5
33	37	2493G	EW09-SS-034-010	3		257	195	8	203	21.0	3.9	24.1	17.2	16.7
34	32	2493G	EW09-SS-034-010	4		257	210	7	217	15.5	3.2	18.2	11.5	10.3
35	62	2493G	EW09-SS-034-010	5		257	189	23	212	17.4	10.8	26.4	13.5	19.2
36	58	2493G	EW09-SS-034-010	6	wq replicate	257								
37	42	2494G	EW09-SS-035-010	1		257	193	15	208	19.0	7.2	24.8	15.2	17.5
38	72	2494G	EW09-SS-035-010	2		257	170	39	209	18.6	18.7	33.8	14.8	27.4
39	76	2494G	EW09-SS-035-010	3		257	224	4	228	11.2	1.8	12.8	7.0	4.3
40	75	2494G	EW09-SS-035-010	4		257	183	19	202	21.3	9.4	28.7	17.6	21.8
41	3	2494G	EW09-SS-035-010	5		257	213	17	230	10.4	7.4	17.1	6.2	9.0
42	8	2494G	EW09-SS-035-010	6	wq replicate	257								
43	27	2473G	EW09-SS-217-010	1		257	248	3	251	2.3	1.2	3.4	-2.4	-6.0
44	51	2473G	EW09-SS-217-010	2		257	236	8	244	5.0	3.3	8.1	0.5	-0.9
45	59	2473G	EW09-SS-217-010	3		257	206	3	209	18.5	1.4	19.8	14.8	12.0
46	71	2473G	EW09-SS-217-010	4		257	205	7	212	17.4	3.3	20.2	13.5	12.4
47	25	2473G	EW09-SS-217-010	5		257	236	3	239	6.9	1.3	8.1	2.5	-0.9
48	43	2473G	EW09-SS-217-010	6	wq replicate	257								
49	15	2472G	EW09-SS-218-010	1		257	230	6	236	8.1	2.5	10.4	3.8	1.7
50	47	2472G	EW09-SS-218-010	2		257	219	4	223	13.2	1.8	14.7	9.1	6.4
51	69	2472G	EW09-SS-218-010	3		257	237	6	243	5.4	2.5	7.7	0.9	-1.3
52	36	2472G	EW09-SS-218-010	4		257	202	7	209	18.6	3.3	21.3	14.8	13.7
53	45	2472G	EW09-SS-218-010	5		257	222	4	226	12.0	1.8	13.6	7.8	5.1
54	21	2472G	EW09-SS-218-010	6	wq replicate	257								
55	28	2471G	EW09-SS-220-010	1		257	205	8	213	17.1	3.8	20.2	13.1	12.4
56	17	2471G	EW09-SS-220-010	2		257	206	8	214	16.7	3.7	19.8	12.7	12.0
57	11	2471G	EW09-SS-220-010	3		257	233	4	237	7.7	1.7	9.3	3.3	0.4
58	66	2471G	EW09-SS-220-010	4		257	220	16	236	8.1	6.8	14.3	3.8	6.0
59	77	2471G	EW09-SS-220-010	5		257	179	13	192	25.2	6.6	30.3	21.7	23.5

	NORM	PMORT	PABN	PABND	NPM	NCMA
Mean	204.4	16.5	4.8	20.4	12.6	12.6
S.D.	25.8	9.0	2.0	10.0	9.4	11.0
n	5	5	5	5	5	5
Mean	212.2	14.6	3.3	17.4	10.5	9.3
S.D.	10.0	3.1	1.1	3.9	3.3	4.3
n	5	5	5	5	5	5
Mean	196.6	18.8	5.7	23.4	15.0	16.0
S.D.	8.8	2.5	3.1	3.4	2.7	3.8
n	5	5	5	5	5	5
Mean	196.6	16.1	8.9	23.4	12.2	16.0
S.D.	21.9	5.0	6.2	8.5	5.2	9.4
n	5	5	5	5	5	5
Mean	226.2	10.0	2.1	11.9	5.8	3.3
S.D.	19.5	7.5	1.1	7.6	7.8	8.3
n	5	5	5	5	5	5
Mean	222.0	11.4	2.4	13.6	7.3	5.1
S.D.	13.2	5.1	0.6	5.1	5.3	5.6
n	5	5	5	5	5	5
Mean	208.6	15.0	4.5	18.8	10.9	10.9
S.D.	20.1	7.3	2.2	7.8	7.6	8.6
n	5	5	5	5	5	5

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL		INIT	NORM	ABN	TOTAL	PMORT	PABN	PABND	NPM	NCMA		NORM	PMORT	PABN	PABND	NPM	NCMA
60	33	2471G	EW09-SS-220-010	6	wq replicate	257															
61	40	2520G	CI09-SS-020-010	1		257	206	4	210	18.2	1.9	19.8	14.4	12.0							
62	24	2520G	CI09-SS-020-010	2		257	238	2	240	6.5	0.8	7.3	2.1	-1.7	Mean	224.2	11.4	1.5	12.7	7.2	4.2
63	5	2520G	CI09-SS-020-010	3		257	239	7	246	4.2	2.8	6.9	-0.3	-2.1	S.D.	14.1	5.8	0.9	5.5	6.1	6.0
64	12	2520G	CI09-SS-020-010	4		257	219	2	221	13.9	0.9	14.7	9.9	6.4	n	5	5	5	5	5	5
65	54	2520G	CI09-SS-020-010	5		257	219	2	221	13.9	0.9	14.7	9.9	6.4							
66	78	2520G	CI09-SS-020-010	6	wq replicate	257															
67	48	2521G	CI09-SS-060-010	1		257	210	4	214	16.7	1.9	18.2	12.7	10.3							
68	9	2521G	CI09-SS-060-010	2		257	227	8	235	8.5	3.4	11.6	4.2	3.0	Mean	209.6	15.6	2.1	18.4	12.6	10.4
69	49	2521G	CI09-SS-060-010	3		257	183	3	186	27.6	1.6	28.7	24.1	21.8	S.D.	16.6	7.0	0.7	6.5	7.4	7.1
70	52	2521G	CI09-SS-060-010	4		257	209	4	213	17.1	1.9	18.6	13.1	10.7	n	5	5	5	5	5	5
71	19	2521G	CI09-SS-060-010	5		257	219	4	223	13.2	1.8	14.7	9.1	6.4							
72	16	2521G	CI09-SS-060-010	6	wq replicate	257															
73	26	2522G	CI09-SS-080-010	1		257	231	6	237	7.7	2.5	10.0	3.3	1.3							
74	22	2522G	CI09-SS-080-010	2		257	209	4	213	17.1	1.9	18.6	13.1	10.7	Mean	207.2	17.2	2.5	19.3	13.3	11.5
75	10	2522G	CI09-SS-080-010	3		257	201	6	207	19.4	2.9	21.7	15.6	14.1	S.D.	23.5	9.5	0.5	9.1	9.9	10.0
76	44	2522G	CI09-SS-080-010	4		257	171	4	175	31.9	2.3	33.4	28.6	26.9	n	5	5	5	5	5	5
77	13	2522G	CI09-SS-080-010	5		257	224	7	231	10.0	3.0	12.8	5.8	4.3							
78	31	2522G	CI09-SS-080-010	6	wq replicate	257															

Comparison of Initial Counts and QC Counts

Beaker No.	Normal Larvae: Initial Count Normal	Initial Count Abnormal	QC Count Normal	QC Count Abnormal	cv(normal)
4	200	10	195	9	2
9	227	8	225	7	1
24	238	2	231	2	2
27	248	3	248	4	0
48	210	4	220	4	3
62	189	23	188	23	0
69	237	6	223	5	4



Intercept	21.93852
Slope	0.888593
r square	0.888297

Data entry verified against laboratory bench sheets
MLR
6-1-09

Great Lakes Dredge & Dock
laboratory bench sheets
6-3-09 JRF

Water Quality Data File

BKR	NAS SMPL	CLIENT DESCRIP	REP	DAY	TEMP	pH	SAL	DO	S	NH3
1	swcontrol	swcontrol	6	0	15.2	7.9	27.5	8.0	<0.02	<0.1
8	2494G	EW09-SS-035-010	6	0	15.2	7.9	28.0	7.5	<0.02	<0.1
16	2521G	CI09-SS-060-010	6	0	15.3	7.9	27.5	7.8	<0.02	0.2
20	2496G	EW09-SS-032-010	6	0	15.2	7.9	27.5	7.4	<0.02	<0.1
21	2472G	EW09-SS-218-010	6	0	15.2	7.9	28.0	7.6	<0.02	<0.1
31	2522G	CI09-SS-080-010	6	0	15.5	7.9	27.5	7.8	<0.02	<0.1
33	2471G	EW09-SS-220-010	6	0	15.4	7.9	27.5	7.9	<0.02	<0.1
43	2473G	EW09-SS-217-010	6	0	15.6	7.9	27.5	7.9	<0.02	<0.1
58	2493G	EW09-SS-034-010	6	0	15.3	7.9	27.5	7.4	<0.02	<0.1
60	2507G	EW09-SS-005-010	6	0	15.1	7.8	27.5	7.2	<0.02	0.4
68	2495G	EW09-SS-033-010	6	0	15.1	7.9	27.5	8.1	<0.02	<0.1
74	2498G	EW09-SS-030-010	6	0	15.1	7.9	28.0	7.4	<0.02	<0.1
78	2520G	CI09-SS-020-010	6	0	15.2	7.9	27.5	8.2	<0.02	<0.1
1	swcontrol	swcontrol	6	1	15.6	8.0	28.0	8.0		
8	2494G	EW09-SS-035-010	6	1	15.7	7.9	27.5	8.0		
16	2521G	CI09-SS-060-010	6	1	15.7	8.0	27.5	8.0		
20	2496G	EW09-SS-032-010	6	1	15.7	8.0	28.0	8.0		
21	2472G	EW09-SS-218-010	6	1	15.7	8.0	28.5	7.6		
31	2522G	CI09-SS-080-010	6	1	15.9	8.1	27.5	8.0		
33	2471G	EW09-SS-220-010	6	1	15.7	8.0	27.5	8.0		
43	2473G	EW09-SS-217-010	6	1	15.7	7.9	27.5	8.0		
58	2493G	EW09-SS-034-010	6	1	15.7	7.9	27.5	7.8		
60	2507G	EW09-SS-005-010	6	1	15.7	8.0	27.5	7.8		
68	2495G	EW09-SS-033-010	6	1	15.7	8.0	27.5	7.7		
74	2498G	EW09-SS-030-010	6	1	15.4	8.0	28.0	8.0		
78	2520G	CI09-SS-020-010	6	1	15.6	8.0	27.5	8.0		
1	swcontrol	swcontrol	6	2	15.2	8.0	28.0	7.8	<0.02	<0.1
8	2494G	EW09-SS-035-010	6	2	15.3	8.0	28.0	7.7	<0.02	<0.1
16	2521G	CI09-SS-060-010	6	2	15.5	8.0	27.5	7.8	<0.02	<0.1
20	2496G	EW09-SS-032-010	6	2	15.4	8.0	28.0	7.8	<0.02	<0.1
21	2472G	EW09-SS-218-010	6	2	15.4	8.0	28.0	7.7	<0.02	<0.1
31	2522G	CI09-SS-080-010	6	2	15.7	8.1	28.0	7.9	<0.02	<0.1
33	2471G	EW09-SS-220-010	6	2	15.6	8.0	27.5	7.9	<0.02	<0.1
43	2473G	EW09-SS-217-010	6	2	15.7	8.0	28.0	7.8	<0.02	<0.1
58	2493G	EW09-SS-034-010	6	2	15.5	8.0	28.0	7.7	<0.02	<0.1
60	2507G	EW09-SS-005-010	6	2	15.4	8.0	27.5	7.6	<0.02	0.1
68	2495G	EW09-SS-033-010	6	2	15.4	8.0	28.0	7.8	<0.02	<0.1
74	2498G	EW09-SS-030-010	6	2	15.5	8.0	27.5	7.7	<0.02	<0.1
78	2520G	CI09-SS-020-010	6	2	15.5	8.0	28.0	7.9	<0.02	<0.1
				Mean	15.5	8.0	27.7	7.8	---	---
				SD	0.2	0.1	0.3	0.2	---	---
				n	39	39	39	39	26	26
				Min	15.1	7.8	27.5	7.2	<0.02	<0.1
				Max	15.9	8.1	28.5	8.2	<0.02	0.4

CHAIN-OF-CUSTODY RECORDS

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2663

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipper: UPS
Form filled out by: ANGELITA RODRIGUEZ

Shipping Date: 03.05.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/4/09	0843	EW09-SS-102-010	5	SEDIMENT	X			NAS #2491G				HOLD PENDING
	0909	EW09-SS-036-010	5	SEDIMENT	X			2492G				INSTRUCTIONS TO
	0930	EW09-SS-034-010	5	SEDIMENT	X			2493G				ANALYZE
	0953	EW09-SS-035-010	5	SEDIMENT	X			2494G				
	1015	EW09-SS-033-010	5	SEDIMENT	X			2495G				
	1034	EW09-SS-032-010	5	SEDIMENT	X			2496G				
	1054	EW09-SS-031-010	5	SEDIMENT	X			2497G				
	1114	EW09-SS-030-010	5	SEDIMENT	X			2498G				
	1137	EW09-SS-029-010	5	SEDIMENT	X			2499G				
	1156	EW09-SS-025-010	5	SEDIMENT	X			2500G				
	1300	EW09-SS-024-010	5	SEDIMENT	X			2501G				
	1322	EW09-SS-023-010	5	SEDIMENT	X			2502G				
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: [signature]	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 915 Am 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any jars with headspace, headspace was flushed w/ N_2 - MLR

To be completed by Laboratory upon sample receipt: 3-6-09

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5-6.0°C	Received by: Michelle Redmond

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

page 1 of 37

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2665

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.05.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIGUEZ
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (jar tag number(s))
3/4/09	1350	EW09-SS-020-010	5	SEDIMENT	X			NAS #	2503G			HOLD PENDING
	1430	EW09-SS-013-010	5	SEDIMENT	X				2504G			INSTRUCTIONS TO
	1502	EW09-SS-011-010	5	SEDIMENT	X				2505G			ANALYZE
	1526	EW09-SS-008-010	5	SEDIMENT	X				2506G			
	1549	EW09-SS-005-010	5	SEDIMENT	X				2507G			
	1626	EW09-SS-003-~~001~~ 010	5	SEDIMENT	X				2508G			
	1644	EW09-SS-001-010	5	SEDIMENT	X				2509G			
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: [signature]	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 915am 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. For any jars w/ headspace, headspace was filled w/ N_2 - MLR 3-6-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5 - 6.0°C	Received by: Michele S. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

UPS Internet Shipping: Shipment Label FOR UPS SHIPPING ONLY

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

6 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9398 6063

1

BILLING: P/P

Reference#1: BW Surface Sediment

US 11 1 05. WXPE70 67 0A 01/2009

TM

DATE 3/5/09

INITIALS

LAB SAMPLE
DO NOT TAMPER

3.5°C

HEIDI
206 378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

4 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR **1**

TRACKING #: 1Z Y34 89E 01 9080 5245

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11.11.05 WX25270 87 DA 01/2009

TM

DATE 2/5/09
INITIALS MM
LOW 00
12 PM

LAB SAMPLE
DO NOT

2.5°C

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

5 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR **1**
TRACKING #: 1Z Y34 89E 01 9116 8450

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11.3.05 WXPE70 82.0A 01/2009 TM

https://www.ups.com/uis/create?Action=GetLabelPrint&ShipmentIdentificationNumber=1Z...&Type=GIF&Size=4x6&Resolution=203&ShipmentType=1&ShipmentTypeCode=UISReceipt&POPUP_LEVEL=... 3/5/2009

LAB SAMPLE
DO NOT TAMPER

DATE 3/5/09
INITIALS

LAB SAMPLE
DO NOT TAMPER

DATE 3/5/09
INITIALS

3.5°C

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

HEIDI ENDERS
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 1

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 25 9007 4071

1

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11.1.05 WXSZ20 87.0A 01/2009

TM

Page 1 of 1

DATE 3/5/09

INITIALS

LAB SAMPLE
DO NOT TAMPER

22

LAB SAMPLE
DO NOT TAMPER

6.0°C

page 23 of 37

UPS Internet Shipping: Shipment Label FOR UPS SHIPPING ONLY

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

2 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

TRACKING #: 1Z Y34 89E 01 9177 8023

1

BILLING: P/P

Reference# 1: EW Surface Sediment

US 11 3 05 WXPE70 87.0A 01/2009

TM

DATE 8/5/09

INITIALS

LAB SAMPLE DOCUMENTAMPER

6.0°C

https://www.ups.com/uis/create?Action=... FOR UPS SHIPPING ONLY UISReceipt&POPUP_LEVEL=... 3/5/2009

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1

TRACKING #: 1Z Y34 89E 01 9128 2013

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11 1 05 WSPE20 87.0A 01/2009

TM

LAB SAMPLE
DO NOT TAMPER

2.5°C

https://www.ups.com/uis/cr

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

3 OF 6

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR

1

TRACKING #: 1Z Y34 89E 01 9472 0436

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11.1.05 WGF870 87.06 01/2009

TM

ONLY USR receipt&POPUP_LEVEL=... 3/5/2009

LAB
00

5.5 °C

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2657

Project/Client Name: EW R1/FS
Project Number:
Contact Name: ~~MARINA MITCHELL~~ HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIQUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.02.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIQUEZ
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (jar tag number(s))
3/1/09	0956	EW09-SS-220-010	5	SEDIMENT	X			NAS#	2471G			HOLD PENDING
	1104	EW09-SS-218-010	5	SEDIMENT	X				2472G			INSTRUCTIONS TO
	1130	EW09-SS-217-010	5	SEDIMENT	X				2473G			ANALYZE
	1221	EW09-SS-216-010	5	SEDIMENT	X				2474G			
	1256	EW09-SS-207-010	5	SEDIMENT	X				2475G			
	1315	EW09-SS-204-010	5	SEDIMENT	X				2476G			
	1349	EW09-SS-202-010	5	SEDIMENT	X				2477G			
	1410	EW09-SS-200-010	5	SEDIMENT	X				2478G			
	~~1435~~ 1416	~~EW09-SS-198-010~~ ~~EW09-SS-130-010~~										
	1435	EW09-SS-130-010	5	SEDIMENT	X				2479G			
	1453	EW09-SS-129-010	5	SEDIMENT	X				2480G			
	1512	EW09-SS-127-010	5	SEDIMENT	X				2481G			
		Total Number of Containers	55/75	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00 Am 3/2/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

If sample jar was not full, headspace was flushed w/ N_2 - MLR 3-3-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5-4.5 °C	Received by: Michele L. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

Page 2 of 37

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2656

Project/Client Name: EW RI/FS
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIGUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipper: UPS
Form filled out by: ANGELITA RODRIGUEZ

Shipping Date: 03.02.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/1/09	1530	EW09-SS122-010	5	SEDIMENT	X			NAS # 2482G				HOLD PENDING
	1554	EW09-SS119-010	5	SEDIMENT	X			2483G				INSTRUCTIONS TO
	1615	EW09-SS120-010	5	SEDIMENT	X			2484G				ANALYZE
	1636	EW09-SS132-010	5	SEDIMENT	X			2485G				✓
		Total Number of Containers	20/75	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00am 3/2/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any sample jar that was not full, headspace was flushed w/ N2 - MR 3-3-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5 - 4.5 °C	Received by: Michele Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

Page 28 of 37

UPS Next Day Air®
UPS Worldwide Express℠

Shipping Document

Weight	Dimensional Weight	Large Package	Shipper Release
		☐	☐

☐ EXPRESS (INT'L)

☐ DOCUMENTS ONLY

SATURDAY DELIVERY ☐

J205 991 386 9

J205 991 386 9

EXPORT

SHIPMENT FROM

UPS ACCOUNT NO.

REFERENCE NUMBER

TELEPHONE

UPS Next Day Air®

1

DELIVERY TO

TELEPHONE

J205 991 386 9

J205 991 386 9

010191120 1/07 S

United Parcel Service, Louisville, KY

DATE OF SHIPMENT

LAB SAMPLE
DO NOT TAMPER

DATE

INITIALS

4.0°C

LAB SAMPLE
DO NOT TAMPER

UPS Next Day Air®
UPS Worldwide Express®
Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE AIR PACKAGE	SHIPPER RELEASE
		☒	☐

☐ EXPRESS (INTL)
☐ DOCUMENTS ONLY
SATURDAY DELIVERY ☐

J193 291 327 9

SHIPMENT FROM
UPS ACCOUNT NO. Y [illegible]
REFERENCE NUMBER

TELEPHONE
Hella [illegible] 201 [illegible]
Windward Government LLC
2001 O [illegible] St Suite 400
Sacramento [illegible]

UPS Next Day Air®

DELIVERY TO
TELEPHONE
[illegible] 541-265-[illegible]
Northwest Aquatic [illegible]
[illegible] Yaquina [illegible]
Newport [illegible] 97365

J193 291 327 9
TRACKING NUMBER

DATE OF SHIPMENT
3 / 1 / 1

010191120 1/05 S United Parcel Service, Louisville, KY

10249 041390_P1 61055412 27 of 100

DATE 3/1/01
INITIAL [illegible]

1.5°C

UPS Next Day Air
UPS Worldwide Express
Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	P

EXPRI (INT'L)

DOCUMEN ONLY

SATURDAY DELIVERY

J205 991 387 8

J205 991 387 8

EXPORT

SHIPMENT FROM

UPS ACCOUNT NO. Y-37 x 16.

REFERENCE NUMBER

TELEPHONE

H.H. Anderson 206-50-1504

Overhead Door of Puyallup

2[illegible] D. [illegible] St. Puyallup

Puyallup, WA 98371

DELIVERY TO

TELEPHONE

[illegible]

Northwestern Aquatic Sciences

3411 Yaquina Bay Rd

Newport 97365

UPS Next Day Air

1

J205 991 387 8

J205 991 387 8

DELIVERY

DATE OF SHIPMENT

3 12 [illegible]

10334

041330_P1

61158412

100

010191120 1/0

United Parcel Service, Louisville, KY

LAB SAMPLE
DO NOT TAMPE

DATE 3/1/08

INITIALS [illegible]

PER

DATE 3/1/08

INITIALS [illegible]

2.5°C

UPS Next Day Air®
UPS Worldwide Express™
Shipping Document

WEIGHT	DIMENSIONAL WEIGHT	LARGE AIR PACKAGE	SHIPPER RELEASE
5 c		☒	☐

☐ EXPRESS (INT'L)
☐ DOCUMENTS ONLY
SATURDAY DELIVERY ☐

J193 291 330 4

SHIPMENT FROM
UPS ACCOUNT NO
REF

TELEPHONE
Hella Anderson
Windward Environmental LLC
200 W Mercer St Suite 401
Seattle, WA 98119

DELIVERY TO
TELEPHONE
Michele Redman
Northwestern Aquatic Sciences
2817 Yaquina Bay Rd
Newport, OR 97365

UPS Next Day Air®

J193 291 330 4

DATE OF SHIPMENT
3/7/01

120 1/05 S United Parcel Service, Louisville, KY

10348
041387_P1
61055412
30 of 100

LAB SAMPLE
DO NOT TAMPE

DATE 3/8/01
INITIALS KW

LAB SA
DO NOT TA

DATE 3/8/01
INITIALS KW

3.5°C

UPS Next Day Air®
UPS Worldwide Express®
Shipping Document

Weight	Dimensional Weight	Large Package	Shipper Release
		☐	☐

☐ Express (Int'l)
☐ Documents Only
☐ Saturday Delivery

J205 991 382 3

J205 991 382 3

10335

041335_P1

61158412

Shipment From
UPS Account No. Y 34 1E
Reference Number

Telephone

Delivery To

Telephone

Residential ☐

UPS Next Day Air® 1

J205 991 382 3

J205 991 382 3

Tracking Number

Date Of Shipment

010191120 1/07 S

LAB SAMPLE
DO NOT TAMPER!
DATE 3/2/07
INITIALS

LAB SAMPLE
DO NOT TAMPER!
DATE 3/2/07

4.5°C

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2672

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: T.Do, J. Florer

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: T.Do

Shipping Date: 03.13.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (Jar tag number(s))
1/23/09	1430	SPB-NB-1014	4 (3.5L)	Sediment	X		NAS # 2519G					Contact Helle Andersen for analysis instructions
03.12.09	1320	CI09-SS-020-010	10	↓	X			2520G				
↓	1600	CI09-SS-060-010	10		X			2521G				
↓	1830	CI09-SS-080-010	10	↓	X			2522G				
		Total Number of Containers	14	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature:	Company:	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.13.09 / 8:45 AM	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. Any jars with headspace had the headspace flushed w/ nitrogen MLR 3-14-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-14-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 09:00
Cooler temperature: 1.5 - 3.0°C	Received by: Michele L. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

page 31 of 32

HEIDI ENDERS
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

30 LBS

1 OF 1

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M. **1+S**

TRACKING #: 1Z Y34 89E 41 9032 0505

BILLING: P/P

UPS 11.1.05. WXPIE70 87.0A 01/2009 TM

SATURDAY DELIVERY!

DATE 3/12/09
INITIALS

LAB SAMPLE
DO NOT TAMPER

3.0°C

DATE 3/12/09
INITIALS

LAB SAMPLE
DO NOT TAMPER

https://www.ups.com/uis/create?ActionOriginPair=Print&Locale=en_US&ONWSReceipt&POPUP_LEVEL... 3/13/2009

page 35 of 37

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

1 OF 2

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR
TRACKING #: 1Z Y34 89E 44 9248 8488

1 S

BILLING: P/P

SATURDAY DELIVERY

TM

Saturday
DELIVERY
PLACE DIRECTLY BELOW ADDRESS LABEL

011189 2/04 MW

DATE 3/10/09
INITIALS MGY

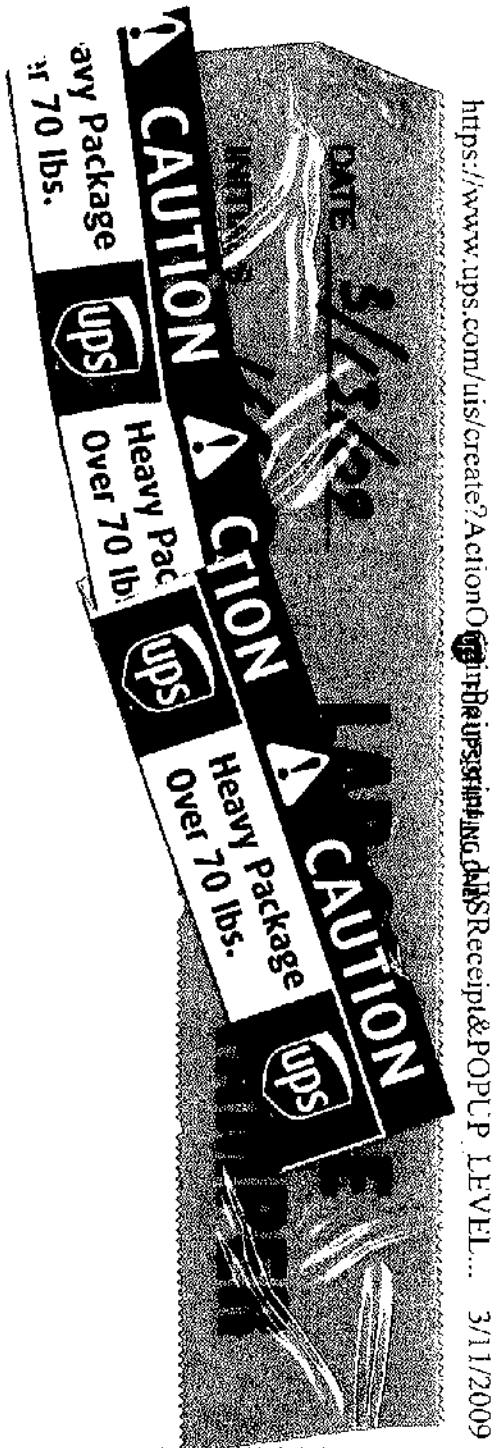
EPA SAMPLE
DO NOT TAMPER

DATE 3/11/09
INITIALS MGY

EPA SAMPLE
DO NOT TAMPER

https://www.ups.com/uis/create?Action=... UISReceipt&POPUP_LEVEL... 3/11/2009

1.5-C



HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

50 LBS

2 OF 2

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS NEXT DAY AIR **1 S**

TRACKING #: 1Z Y34 89E 44 9012 5293

BILLING: P/P

SATURDAY DELIVERY

DATE 3/13/09

INITIALS

LAB SAMPLE
DO NOT TAMPER

1.5°C

REFERENCE TOXICANT RESULTS AND ANALYSIS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-CG/MG2

BIVALVE LARVAL TEST BASED ON EPA/600/R-95/136

REVIEWED PAGES 1-7A -6SL MJC 6/10/09

Test No. 999-2551 Client: QC Test Investigator

STUDY MANAGEMENT

Client: QC Test

Client's Study Monitor: QC Test

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Mgr./Study Dir. M.S. Redmond MSR G.J. Irissarri GJI

QA Officer L.K. Nemeth

1. Susan Gage SG 2.

3. M.S. Redmond MSR 4.

Study Schedule:

Test Beginning: 4-22-09 1620 Test Ending: 4-24-09 1800

TEST MATERIAL

Description: Copper as $CuSO_4 \cdot 5H_2O$, Argent Lot# 0195,

NAS Sample No.		1.0 mg/ml stock prepared: 8-3-07		
Date of Collection:				
Date of Receipt:				
Temperature (deg C):				
Dissolved oxygen (mg/L):				
pH:				
Conductivity (umhos/cm):				
Hardness (mg/L):				
Alkalinity (mg/L):				
Salinity (ppt):				
Total chlorine (mg/L):				
Total ammonia-N (mg/L):				

DILUTION WATER

Description: Yaquina Bay, OR Seawater

Date of Collection: 4-21-09 Salinity (ppt) 30.0 pH 8.0

Treatments: Aerated, filtered to 0.4 um, salinity adjusted with Milli-Q® deionized water

TEST ORGANISMS

Species: *Mytilus galloprovincialis* Date Received: 2-19-09

Source: Carlsbad Aquafarms, Carlsbad, CA

Acclimation Data:

Date	Temp (deg.C)	pH	Sal (ppt)	D.O. (mg/L)	Comments
4-10-09	9.5	8.2	31.0	11.2	Held outside in trays of
4-13-09	9.1	8.3	30.0	11.6	flowing seawater
4-15-09	10.4	8.4	31.5	11.8	
4-17-09	13.8	8.5	30.0	12.2	
4-20-09	14.4	8.3	30.5	11.1	
4-22-09	11.3	8.0	31.0	13.4	
Mean	11.4	8.3	30.7	11.9	
S.D.	2.2	0.2	0.6	0.8	
(N)	6	6	6	6	

Photoperiod during acclimation: Outdoor ambient conditions

Error codes: 1) correction of handwriting error
2) written in wrong location; entry deleted
3) wrong date deleted, replaced with correct date
4) error found in measurement; measurement repeated

Revised 12-7-01

Test No. 999-2551 Client QC Test Investigator

SPAWNING AND GAMETE HANDLING

Spawning: Initial: 1330 AM/PM Final: 1420 AM/PM Fertilization: 1520 AM/PM
Number of organisms used: females: 9 males: 3
Egg Dilution (1 ml diluted to 100 ml):
Count/ml of dilution: 1. 51 2. 57 3. 52 Mean: 53.3
Dilution factor = DF (mean x 100/2500) = 1.0
Further diluted 1:10 w/ dilution water

TEST PROCEDURES AND CONDITIONS

Test concentrations (50% series recommended): 64, 32, 16, 8, 4, 2, 1 and 0 ug/L

Test chamber: 30 ml glass vials Test volume: 10 ml Replicates/treatment (4): 4
Organisms/ml (15-30): 20.3 Test water changes: None Aeration during test: None
Feeding: None Photoperiod: 16L:8D Salinity: 30 +/- 2 ppt
Temperature: 20 +/- 1 °C, oysters; 16 +/- 1 °C, mussels Beaker placement: Stratified randomization

RANDOMIZATION CHART

A	2	64	8	0	32	4	1	16		
B	0	1	4	2	64	16	8	32		
C	1	16	32	2	8	64	0	4		
D	8	4	0	16	1	32	64	2		

PREPARATION OF TEST SOLUTIONS

Test Conc. (Cu, ug/L)	ml of working stock #2 (2 ug/mL)	Dilution water (ml/100mL)
64	3.2	Brought up to a
32	1.6	final volume of
16	0.8	100 ml with
8	0.4	dilution water.
4	0.2	
2	0.1	
1	0.05	
0	0	

4-22-09
652

1st working stock made by 1:99 (1.0 mL ↑100mL) dilution of concentrated 1 mg/mL stock solution. Final concentration 10 ug/mL.
2nd working stock made (working stock #2) made by 20:80 (20 mL ↑100mL) dilution of 1st working stock. Final concentration 2 ug/mL.

Comments:

Test No. 999-2551 Client QC Test Investigator

WATER QUALITY DATA

Conc. (ug/L)	Date: 4-22-09 initials: sf Temp. (deg.C)	pH	Sal. (ppt)	DO (mg/L)	Date: 4-24-09 initials: sf Temp. (deg.C)	pH	Sal. (ppt)	DO (mg/L)
64	15.9	8.0	29.5	8.2	15.3	8.1	29.5	
32	15.8	8.0	30.0	8.2	15.2	8.1	30.0	7.9
16	15.9	8.0	30.0	8.2	15.3	8.1	30.0	7.8
8	15.8	8.0	30.0	8.2	15.2	8.1	30.0	7.9
4	15.8	8.0	30.0	8.2	15.2	8.1	30.5	7.9
2	15.9	8.0	30.0	8.2	15.2	8.1	30.5	7.9
1	15.9	8.0	30.0	8.2	15.3	8.1	30.0	7.8
Control	16.0	8.0	30.0	8.2	15.3	8.1	30.0	7.8
Brine control	---	---	---	---	---	---	---	---

D.O. MISTAKENLY NOT MEASURED - GJ

WATER QUALITY:	Mean	SD	N
Temperature (°C):	15.6	0.3	16
pH:	8.1	0.1	16
Salinity (ppt):	30.0	0.3	16
DO (mg/L):	7.8	0.2	~~16~~ 15 GJ 5-11-09

WATER BATH TEMPERATURE (°C):

Day 0: 16.0 Day 0: 16.0
Day 1: 16.3 Day 1: 16.1
Day 2: 15.5 Day 2: 15.3

LARVAL COUNT DATA

4-29-09 sf

5-6-09 GJ

Conc. (ug/L)	Replicate 1 N	Replicate 1 A	Replicate 2 N	Replicate 2 A	Replicate 3 N	Replicate 3 A	Replicate 4 N	Replicate 4 A
64	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
32	~~0~~	37	~~0~~	46	~~0~~	43	~~0~~	34
16	~~0~~	207	~~0~~	196	~~0~~	202	~~0~~	186
8	177	29	171	25	169	31	160	28
4	200	9	184	7	179	12	183	13
2	197	9	180	8	186	7	178	10
1	197	4	202	4	198	6	193	11
Control	187	7	204	10	182	9	185	8
Brine control	---	---	---	---	---	---	---	---
Zero time	225	210	202	198	198	215		

Zero time: Mean 208 SD 11 N 6 CV=(sd/mean)x100 5.3%

Remarks:

Carlsbad Aquafarms, LLC

Invoice

Mail: P.O. Box 2600 92018
4600 Carlsbad Blvd.
Carlsbad, CA 92008
760 438 2444

DATE	INVOIC...
2/18/2009	3697

rec'd
2-19-09
SV

BILL TO:

Northwestern Aquatic Sciences
P.O. Box 1437
Newport, Oregon 97365
Phone 541-265-7225
Fax 541-265-2799

SHIP TO:

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
Newport, Oregon 97365
FedX 097240973
UPS 849169

P.O. #	TERMS	SHIP DA...	SHIP VIA	F.O.B.	AIRBILL #
verbal Ger...	Net 30	2/18/2009	FEDX	S.D.	796348677793

QUANTI...	ITEM	DESCRIPTION	PRICE LBS.	AMOUNT
1	Bio Assay Mus	Mytilus Gallo Provincialis	125.00	125.00
1	BOX CHARGE	Box Charge	10.00	10.00

THIS IS YOUR INVOICE

Total	$135.00

CETIS Summary Report

Report Date: 07 May-09 13:21 (p 1 of 1)
Test Code: 14-8434-2049/999-2551

Bivalve Larval Survival and Development Test — Northwestern Aquatic Sciences

Batch ID:	03-9926-6783	Test Type:	Development-Survival	Analyst:	
Start Date:	22 Apr-09 16:20	Protocol:	EPA/600/R-95/136 (1995)	Diluent:	Yaquina Bay Seawater
Ending Date:	24 Apr-09 18:00	Species:	Mytilis galloprovincialis	Brine:	
Duration:	50h	Source:	Carlsbad Aquafarms	Age:	

Sample ID:	20-6453-4147	Code:	7B0E4A83	Client:	Internal Lab
Sample Date:	22 Apr-09 16:20	Material:	Copper sulfate	Project:	
Receive Date:	22 Apr-09 16:20	Source:	Reference Toxicant		
Sample Age:	N/A	Station:			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-2626-9098	Combined Proportion Norm	4	8	5.66	7.76%		Dunnett's Multiple Comparison Test
09-8454-7144	Proportion Normal	4	8	5.66	2.13%		Dunnett's Multiple Comparison Test
19-9856-5963	Proportion Survived	16	32	22.6	8.63%		Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	Conc-µg/L	95% LCL	95% UCL	TU	Method
08-0378-1124	Combined Proportion Norm	EC25	8.85	8.5	9.21		Linear Interpolation (ICPIN)
13-5148-5626	Combined Proportion Norm	EC50	9.82	9.62	10		Spearman-Kärber
05-8620-0628	Proportion Normal	EC25	8.94	8.83	9.06		Linear Interpolation (ICPIN)
00-7354-1065	Proportion Normal	EC50	10.3	10.1	10.5		Spearman-Kärber
02-9364-6881	Proportion Survived	EC50	24.7	24.1	25.3		Spearman-Kärber

CETIS Test Data Worksheet

Report Date: 07 May-09 13:17 (p 1 of 1)
Test Code: 14-8434-2049/999-2551

Bivalve Larval Survival and Development Test — Northwestern Aquatic Sciences

Start Date:	22 Apr-09 16:20	Species:	Mytilis galloprovincialis	Sample Code:	7B0E4A83
End Date:	24 Apr-09 18:00	Protocol:	EPA/600/R-95/136 (1995)	Sample Source:	Reference Toxicant
Sample Date:	22 Apr-09 16:20	Material:	Copper sulfate	Sample Station:	

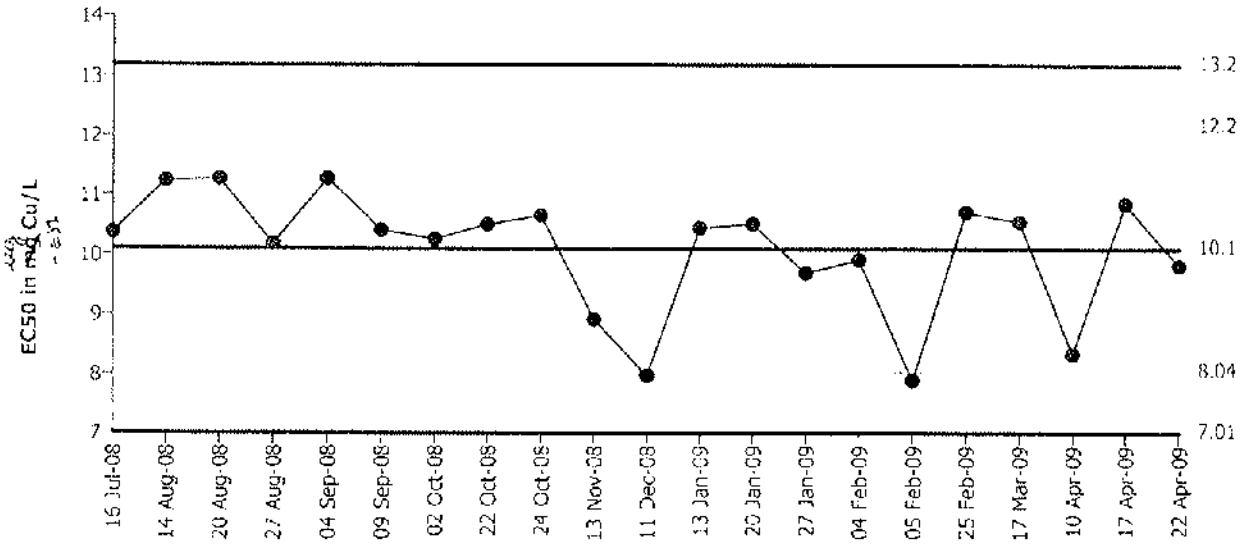
Conc-µg/L	Code	Rep	Pos	Initial Density	Final Density	# Counted	# Normal	Notes
0	D	1	11	208	194	194	187	
0	D	2	30	208	214	214	204	
0	D	3	14	208	191	191	182	
0	D	4	21	208	193	193	185	
1		1	9	208	201	201	197	
1		2	4	208	206	206	202	
1		3	16	208	204	204	198	
1		4	1	208	204	204	193	
2		1	13	208	206	206	197	
2		2	26	208	188	188	180	
2		3	19	208	193	193	186	
2		4	8	208	188	188	178	
4		1	28	208	209	209	200	
4		2	27	208	191	191	184	
4		3	16	208	191	191	179	
4		4	10	208	196	196	183	
8		1	20	208	206	206	177	
8		2	25	208	196	196	171	
8		3	31	208	200	200	169	
8		4	32	208	188	188	160	
16		1	2	208	207	207	0	
16		2	17	208	196	196	0	
16		3	12	208	202	202	0	
16		4	16	208	186	186	0	
32		1	22	208	37	37	0	
32		2	23	208	46	46	0	
32		3	6	208	43	43	0	
32		4	7	208	34	34	0	
64		1	5	208	0	0	0	
64		2	29	208	0	0	0	
64		3	24	208	0	0	0	
64		4	3	208	0	0	0	

Data entry verified against laboratory bench sheets.
MLR
5-7-09

Mussel, Mytilus galloprovincialis, larval reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Development-Survival	Organism:	Mytilis galloprovincialis (Bay Mussel)	Material:	Copper sulfate
Protocol:	EPA/600/R-95/136 (1995)	Endpoint:	Combined Proportion Normal	Source:	Reference Toxicant-REF

Mussel, Mytilus galloprovincialis, larval reference toxicant test



Mean:	10.1	Count:	20	-2s Warning Limit:	8.04	-3s Action Limit:	7.01
Sigma:	1.03	CV:	10.20%	+2s Warning Limit:	12.16	+3s Action Limit:	13.19

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2008	Jul	16	10.37	0.2672	0.2594			18-1150-7117	16-3527-2329
2		Aug	14	11.24	1.137	1.104			12-8931-6863	20-7642-1019
3			20	11.27	1.167	1.133			19-4579-5616	00-7579-3706
4			27	10.18	0.07725	0.075			18-7297-1272	10-5736-6985
5		Sep	4	11.26	1.164	1.13			02-7708-0428	01-9226-6928
6			9	10.4	0.3011	0.2923			12-9553-0847	17-6174-6855
7		Oct	2	10.25	0.1529	0.1484			04-9105-2036	20-3651-5827
8			22	10.5	0.4025	0.3908			16-0042-1443	11-3766-4499
9			24	10.85	0.5466	0.5307			20-5421-7789	13-0292-5145
10		Nov	13	8.916	-1.184	-1.15			17-0909-3962	02-2052-4191
11		Dec	11	7.972	-2.128	-2.066	(-)		00-1475-7138	01-1351-8023
12	2009	Jan	13	10.44	0.3445	0.3344			04-0817-1036	21-2930-3213
13			20	10.51	0.4122	0.4002			02-2538-4831	13-8875-7300
14			27	9.7	-0.3997	-0.3881			00-6960-8804	01-8603-9082
15		Feb	4	9.915	-0.1852	-0.1798			14-3208-3962	08-0716-4477
16			5	7.9	-2.2	-2.136	(-)		07-5379-7597	16-7556-2490
17			25	10.71	0.6138	0.596			02-9344-5689	00-6520-7898
18		Mar	17	10.55	0.4474	0.4343			12-3347-4691	02-6171-7354
19		Apr	10	8.343	-1.757	-1.706			01-5780-6407	08-9701-2553
20			17	10.85	0.7526	0.7307			10-9548-8364	16-4477-3416
21			22	9.821	-0.279	-0.2709			14-8434-2049	13-5148-5626

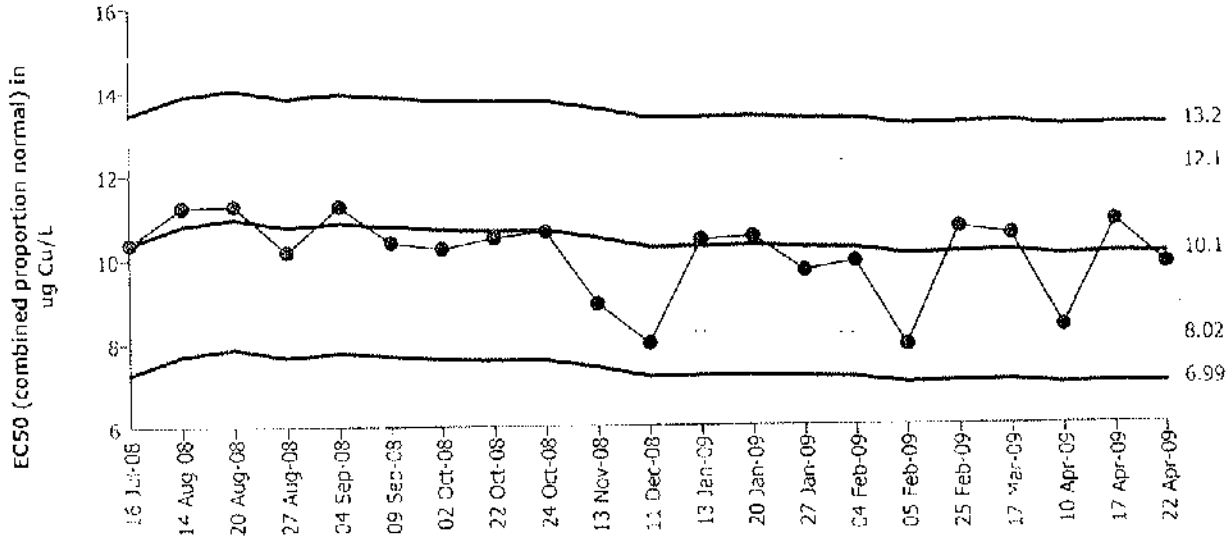
MSR

Analyst: 5-7-09 QA:

Mussel, Mytilus galloprovincialis, larval reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Development-Survival	Organism:	Mytilis galloprovincialis (Bay Mussel)	Material:	Copper sulfate
Protocol:	EPA/600/R-95/136 (1995)	Endpoint:	Combined Proportion Normal	Source:	Reference Toxicant-REF

Mussel, Mytilus galloprovincialis, larval reference toxicant test



Mean:	10.1	Count:	20	-2s Warning Limit:	8.023	-3s Action Limit:	6.993
Sigma:	1.03	CV:	10.20%	+2s Warning Limit:	12.14	+3s Action Limit:	13.17

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2008	Jul	16	10.37	0.2672	0.2594			18-1150-7117	16-3527-2329
2		Aug	14	11.24	1.137	1.104			12-8931-6863	20-7642-1019
3			20	11.27	1.167	1.133			19-4579-5616	00-7579-3706
4			27	10.18	0.07725	0.075			18-7297-1272	10-5738-6985
5		Sep	4	11.26	1.164	1.13			02-7708-0428	01-9226-3928
6			9	10.4	0.3011	0.2923			12-9553-0847	17-6174-6855
7		Oct	2	10.25	0.1529	0.1484			04-9105-2036	20-3651-5827
8			22	10.5	0.4025	0.3908			16-0042-1443	11-3766-4499
9			24	10.65	0.5466	0.5307			20-5421-7789	13-0292-5145
10		Nov	13	8.916	-1.184	-1.15			17-0909-3962	02-2052-4191
11		Dec	11	7.972	-2.128	-2.066	(-)		00-1475-7138	01-1351-8023
12	2009	Jan	13	10.44	0.3445	0.3344			04-0817-1036	21-2930-3213
13			20	10.51	0.4122	0.4002			02-2538-4831	13-8875-7300
14			27	9.7	-0.3997	-0.3881			00-6960-8804	01-8503-9082
15		Feb	4	9.915	-0.1852	-0.1798			14-3208-3962	08-0716-4477
16			5	7.9	-2.2	-2.136	(-)		07-5379-7597	16-7556-2490
17			25	10.71	0.6138	0.596			02-9344-5689	00-6520-7898
18		Mar	17	10.55	0.4474	0.4343			12-3347-4691	02-6171-7354
19		Apr	10	8.343	-1.757	-1.706			01-5780-6407	08-9701-2553
20			17	10.85	0.7526	0.7307			10-9548-8364	18-4477-3416
21			22	9.821	-0.279	-0.2709			14-8434-2049	13-5148-5626

MSR 6-1-09

Analyst: _____ QA. _____

Report

of

Test No. 783-4

Eohaustorius estuarius 10-Day Toxicity Test of Marine Sediments

Submitted to

Windward Environmental LLC
200 West Mercer St., Suite 401
Seattle, WA 98119

Submitted by

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

September 15, 2009

TOXICITY TEST REPORT

TEST IDENTIFICATION

Test No.: 783-4

Title: *Eohaustorius estuarius* 10-day sediment toxicity test of marine sediments.

Protocol: NAS-XXX-EE4, February 20, 1992. Rev.3 (March 1, 2005). Based on: Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments (PSEP 1995), with modifications as specified by the Dredged Material Management Program (DMMP, formerly Puget Sound Dredged Disposal Analysis Program or PSDDA) and Washington State Sediment Management Standards (SMS).

STUDY MANAGEMENT

Study Sponsor: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Sponsor's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences, P.O. Box 1437, Newport, Oregon 97365.

Test Location: Newport Laboratory.

Laboratory's Study Personnel: M.S. Redmond, M.S., Proj. Mngr./ Study Dir.; L.K. Nemeth, B.A., M.B.A., QA Officer; R.S. Caldwell, Ph.D., Sr. Aq. Toxicol.; G.J. Irissarri, B.S., Aq. Toxicol.; G.A. Buhler, B.S., Aq. Toxicol.; S.J. Gage, B.A., Sr. Tech.; L.P. Sandoval, B.S., Tech.; Y. Nakahama, Asst. Tech.

Study Schedule:

Test Beginning: 8-11-09, 1045 hrs.

Test Ending: 8-21-09, 1000 hrs.

Disposition of Study Records: All specimens, raw data, reports and other study records are stored according to Good Laboratory Practice regulations at Northwestern Aquatic Sciences, 3814 Yaquina Bay Rd., Newport, OR 97365.

Good Laboratory Practices: The test was conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

Statement of Quality Assurance: The test data were reviewed by the Quality Assurance Unit to assure that the study was performed in accordance with the protocol and standard operating procedures. This report is an accurate reflection of the raw data.

TEST MATERIAL

Control Sediment: Control sediment (NAS Sample #2807G) was collected from the *Eohaustorius estuarius* amphipod collection site, Yaquina Bay, Oregon, on 8-7-09. There was insufficient sample to determine interstitial salinity. The sediment was sieved through a 0.5-mm stainless steel screen and stored at 4°C in the dark.

Test Sediments: Two test sediments and two reference sediments were tested. Details follow:

NAS Sample No.	2736G	2758G
Sample Description	EW09-SS-215-010	EW09-SS-015-010
Collection Date	6-22-09	6-23-09
Receipt Date	6-24-09	6-25-09
Interstitial Salinity (‰)	24.0	28.5

NAS Sample No.	2788G	2790G
Sample Description	CI09-SS-120-010	CI09-SS-180-010
Collection Date	7-7-09	7-7-09
Receipt Date	7-9-09	7-9-09
Interstitial Salinity (‰)	29.5	27.0

Sample Storage: Samples were stored at 4°C in the dark.

Treatments: The samples were minimally homogenized by mixing with stainless steel implements.

TEST WATER

Source: Yaquina Bay, Oregon
Date of Collection: 8-9-09
Water Quality: Salinity 27.0 ‰, pH 8.2
Pretreatment: Filtered to ≤0.40 µm, salinity-adjusted with MilliQ deionized water, aerated.

TEST ORGANISMS

Species: *Eohaustorius estuarius*, amphipod
Age: adult
Source: Yaquina Bay, Oregon
Acclimation: Amphipods were collected on 8-7-09 at interstitial water conditions of 15.5 °C and 36.0 ‰. They were acclimated to test temperature and salinity over four days before addition to the test. Average holding conditions during this time were: temperature, 15.3 ± 0.1 °C; pH, 8.2 ± 0.1; salinity, 29.0 ± 0.7 ‰; and dissolved oxygen 8.2 ± 0.1 mg/L. The photoperiod was constant light.

TEST PROCEDURES AND CONDITIONS

The following is an abbreviated statement of the test procedures and a statement of the test conditions actually employed. See the test protocol (Appendix I) for a more detailed description of the test procedures used in this study.

Test Chambers: 1 L covered borosilicate glass beakers
Test Volumes: 175 ml of test, reference, or control sediment; 950 ml total volume.
Replicates/Treatment: 5 (plus one water quality replicate, also used to measure interstitial water ammonia-N on day 10)
Salinity adjustment: none
Organisms/Treatment: 100 (20/replicate)
Water Volume Changes per 24 hr: None.
Aeration: Provided through a 1-mL glass pipette placed not closer than 2 cm from sediment, bubbled at a minimal rate (about 100 bubbles/minute) that did not disturb the sediment surface.
Feeding: None.
Acceptance Criteria: Results are valid if mean control mortality does not exceed 10%, and does not exceed 20% in any one control replicate.
Performance Criteria: For DMMP testing, mean percent mortality in the reference sediment should not be more than 20% greater than that in the control sediment. For SMS testing, mean percent mortality in the reference sediment should be <25%.
Effects Criteria: 1) mortality after 10 days, 2) daily emergence of amphipods from the test sediments, and 3) failure of surviving amphipods to rebury at the end of the exposure period. Death is defined as no visible appendage movement or response to tactile stimulation. Unrecovered animals at the end of the exposure period were considered dead.
Water Quality and Other Test Conditions: The temperature, pH, salinity, and dissolved oxygen were measured in the water quality replicate test chamber daily. Total soluble sulfide and total ammonia-N were measured in the overlying water of the water quality replicate test chamber on days 0 and 10. Interstitial total ammonia-N, pH, and salinity were measured in bulk sediments and from the water quality beaker on test day 10. Interstitial water samples were obtained by centrifugation or by settling. Total soluble sulfide and total ammonia-N were measured using Hach reagents based on the methylene blue (EPA Method 376.2) and salicylate (Clin. Chim. Acta 14:403, 1996) colorimetric methods, respectively; samples were not distilled prior to analysis. Un-ionized ammonia-N was computed using "Un-ionized Ammonia Calculator", v1.0 (Dr. Landon Ross, Florida Department of Environmental Protection). The photoperiod was constant light.

DATA ANALYSIS METHODS

The percent amphipod mortality, percent of surviving amphipods failing to rebury at the end of the test, and percent total effective mortality were determined from the final observations according to the formulas:

Percent Mortality = 100 x ([initial amphipods - surviving amphipods]/initial amphipods)

Percent Survivors not Reburied = 100 x ([surviving amphipods - number survivors reburied]/surviving amphipods)

Percent Total Effective Mortality = 100 x ([initial amphipods - surviving amphipods]+ [surviving amphipods - number survivors reburied])/initial amphipods

Another endpoint was the sum of observed daily sediment emergence events in a test beaker throughout the test. Control and treatment means and standard deviations for the biological endpoints described above and for water quality data were computed using Microsoft EXCEL 2000.

PROTOCOL DEVIATIONS

1. Several overlying water salinity measurements were slightly above the protocol-specified range of 28.0 ± 1.0‰ (maximum 29.5‰).
2. Occasionally during the test, aeration was interrupted to one or more beakers. In those cases, dissolved oxygen was measured, aeration restarted, and dissolved oxygen measured again. Minimum dissolved oxygen was 6.4 mg/L.

REFERENCE TOXICANT TEST

The reference toxicant test is a standard multi-concentration toxicity test using ammonia expressed as NH_3-N and administered as NH_3Cl, to evaluate the performance of the test organisms used in the sediment toxicity test. The performance is evaluated by comparing the results of this test with historical results obtained at the laboratory. A summary of the reference toxicant test result is given below. The reference toxicant test raw data are found in Appendix II.

Test No.: 999-2607
Reference Toxicant and Source: Ammonia as ammonium chloride, 9.76 mg ammonia as N/ml stock prepared 3-18-08
Test Date: 8-11-09
Dilution Water Used: Yaquina Bay, Oregon, seawater; 27.0 ‰, pH 8.2
Result: The 96-hr LC50 was 226 mg NH_3-N/L. This result is within the laboratory's control chart warning limits (14.1–311 mg NH_3-N/L).

RESULTS AND DISCUSSION

Observations of overlying water quality parameters during the test are summarized in Table 1. Interstitial water quality measurements during the test are summarized in Table 2. Individual water quality measurements are located in the raw data (Appendix II).

Except as noted above, all measurements of standard water quality parameters were within protocol-specified ranges. Dissolved sulfide was not detected in the overlying water (detection limit 0.02 mg/L). Total ammonia-N concentrations in the overlying water ranged from <0.1 mg/L to 6.0 mg/L (maximum 0.670 mg/L un-ionized ammonia).

In the bulk sediment samples, interstitial total ammonia-N concentrations ranged from 3.0 to 63.6 mg/L. In samples taken on day 10 of the bioassay, interstitial total ammonia-N concentrations ranged from <0.5 mg/L to 18.1 mg/L, with a maximum un-ionized ammonia concentration of 0.155 mg/L (Table 2).

Table 3 shows the effects of test sediment exposures on emergence, mortality, and reburial. The test met the acceptability criterion (≤10%) for mean control mortality; mean mortality in the control was 4.0%. In addition, replicate control mortality was 0.0, 0.0, 0.0, 10.0, and 10.0%; therefore, the control replicate acceptability criterion was met (≤20% in any one replicate). Reference sediment responses met the SMS criterion (<25% mortality); mean mortality in reference sediments CI09-SS-120-010 and CI09-SS-180-010 was 6.0%, and 22.0%, respectively. The reference toxicant test result was within the laboratory's control chart warning limits. It is concluded, therefore, that the test has developed fully acceptable data for use in making management decisions.

Because no statistical comparisons were performed between the test sample and the control or reference sediment, no conclusions are given regarding the toxicity of test sediments.

STUDY APPROVAL

Michele S. Redmond 9/18/09
Project Manager/ Study Director Date

Julie R. Fiore 9-21-09
Quality Assurance Unit Date

Linda K. Jenuth 9/11/09
Assistant Laboratory Director Date

Table 1. Summary of overlying water quality conditions during exposure of amphipods, *Eohaustorius estuarius*, to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Temperature (°C)	15.7 ± 0.1	15.4	16.0	55
pH	8.3 ± 0.2	8.0	8.7	55
Salinity (‰)	28.5 ± 0.6	27.0	29.5	55
Dissolved oxygen (mg/L)	7.8 ± 0.4	6.4	8.5	63
Total soluble sulfide (mg/L)	---	<0.02	<0.02	10
Total ammonia-N (mg/L)	---	<0.1	6.0	10
Un-ionized ammonia (mg/L)	---	<0.003	0.670	10

Table 2. Summary of interstitial water quality conditions on day 10 of exposure of amphipods, *Eohaustorius estuarius*, to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Salinity (‰)	28.2 ± 0.4	28.0	29.0	5
pH	7.4 ± 0.3	7.0	7.8	5
Total ammonia-N (mg/L)	---	<0.5	18.1	5
Un-ionized ammonia (mg/L)	---	<0.007	0.155	5

Table 3. Means and standard deviations (n=5) of sediment emergence, percent mortality, percent of survivors failing to rebury, and percent total effective mortality of *Eohaustorius estuarius* exposed to marine sediments.

Sample description	Emergence[1] (no./replicate)	Percent mortality	Percent Survivors Failing to Rebury	Percent Total Effective Mortality
Control (NAS #2807G)	2.8 ± 6.3	4.0 ± 5.5	0.0 ± 0.0	4.0 ± 5.5
CI09-SS-120-010 (NAS #2788G)	2.4 ± 4.3	6.0 ± 4.2	0.0 ± 0.0	6.0 ± 4.2
CI09-SS-180-010 (NAS #2790G)	0.2 ± 0.4	22.0 ± 10.4	1.2 ± 2.6	23.0 ± 9.7
EW09-SS-215-010 (NAS #2736G)	10.4 ± 6.2	13.0 ± 7.6	0.0 ± 0.0	13.0 ± 7.6
EW09-SS-015-010 (NAS #2758G)	10.2 ± 6.5	6.0 ± 5.5	0.0 ± 0.0	6.0 ± 5.5

[1] Daily emergence counts include all amphipods observed on or above the sediment surface, whether living or dead.

APPENDIX I

PROTOCOL

TEST PROTOCOL

AMPHIPOD, *EOHAUSTORIUS ESTUARIUS*, 10-DAY SOLID PHASE SEDIMENT BIOASSAY

1. INTRODUCTION

1.1 Purpose of Study: The purpose of this study is to identify marine test sediments that are toxic to an estuarine amphipod.

1.2 Summary of Method: The 10-day static test is performed using adult amphipods obtained from a wild population. Test sediments are placed in the bottom of 1-liter glass beakers used as test vessels that are then filled with clean seawater. Five replicate containers for each test sediment, reference site sediment, and the collection site control sediment, each containing 20 test organisms, are employed. Survival, emergence from the sediment during exposure, and failure to rebury in clean sediment after the test are the response criteria used. The mean and standard deviation for each treatment and test endpoint are given in the final report. Between-treatment statistical comparisons may be made, where each treatment is compared to the control and/or reference sediment. This protocol is based on PSEP (1995) guidelines, PSDDA (PSDDA 1989, U.S. ACOE et al. 2000) modifications, SMS (WDOE 2003) and ASTM E-1367 (ASTM 2004).

2. STUDY MANAGEMENT

2.1 Sponsor's Name and Address:

_____

_____

_____

2.2 Sponsor's Study Monitor:

_____

2.3 Name of Testing Laboratory:
Northwestern Aquatic Sciences
3814 Yaquina Bay Road, P.O. Box 1437
Newport, OR 97365

2.4 Test Location: Newport Laboratory

2.5 Laboratory's Personnel to be Assigned to the Study:
Project Manager/Technical Director: _____
Quality Assurance Officer: _____
Aquatic Toxicologist: _____
Aquatic Toxicologist: _____

2.6 Proposed Testing Schedule: Tests should begin within 2 weeks (8 weeks with samples under nitrogen for PSDDA or SMS) of sample collection. A reference toxicant test is run concurrently.

2.7 Good Laboratory Practices: The test is conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

3. TEST MATERIAL

The test materials are marine or estuarine sediments. *E. estuarius* is a desirable test species for sediments with interstitial water salinity of 2-28 ppt, and the use of the *E. estuarius* bioassay is preferred for sediments with salinities <25 ppt. The collected sediments are placed in a suitable container for shipping and storage. The preferred container is a solvent and acid cleaned 1 L glass jar fitted with a TFE-lined screw cap. The jars are filled completely so that there is no air space. At the laboratory, the samples may be stored at 4°C in the dark in the original sealed containers for up to 2 weeks (8 weeks with no headspace or with samples under nitrogen for PSDDA

or SMS) prior to testing. The negative control sediment is from a clean site, normally the amphipod collection site. In addition, one or more reference sediments, clean sediments with physical characteristics similar to the test sediments, may also be employed.

4. TEST WATER

Test water is filtered Yaquina Bay seawater adjusted to the selected test salinity. The water is pumped from Yaquina Bay into a 6000 gal seasoned fiberglass reservoir from which it is supplied under pump pressure to the laboratory. Filtration is accomplished using a sand filter followed by 5 µm, 1 µm, and 0.40 µm cartridge filters. An alternative seawater supply of similar quality may be used. Seawater should be held at ≤15°C for ≤2 days prior to test initiation.

5. TEST ORGANISMS

5.1 Species: Estuarine amphipod, *Eohaustorius estuarius*.

5.2 Source: Field collected from the lower portion of Beaver Creek, OR, or Yaquina Bay, OR in the intertidal zone. Interstitial water salinity and temperature are measured at the collection site. The sediments are sieved in the field using a 1.0 mm screen and the recovered amphipods, along with miscellaneous debris, are washed into plastic pails of collection site sediment and returned promptly to the laboratory.

5.3 Laboratory Handling: Pails containing the amphipods are placed in a laboratory water bath or controlled temperature room for temperature control and supplied with gentle aeration. As soon as possible after collection, the amphipods are sieved from the pails of sediment and are removed from the holding vessel using a fine mesh aquarium dip net and placed into Pyrex glass sorting trays. The test organisms are picked from the detritus using a large bore eye dropper and 100 amphipods each are placed into small plastic freezer containers (9 cm x 9 cm x 6 cm) holding a 1 cm layer of clean sediment from the collection area. Freezer containers are immersed in a seawater tray provided with seawater and aeration, and held under constant illumination for at least 2 days, but no longer than 10 days prior to the beginning of the test. It may be necessary to acclimate the amphipods to the test salinity, depending upon the collection site salinity and the test water salinity. Although moderate rates of salinity change are preferred, this species is tolerant of rapid salinity changes (DeWitt, et al., 1989).

5.4 Age at Study Initiation: Adult

6. DESCRIPTION OF TEST SYSTEM

6.1 Test Chambers and Environmental Control: Test chambers used in the toxicity test are 1000 ml glass beakers. The beakers are covered to minimize contamination and evaporation of seawater or loss of volatile compounds. Test chambers are maintained at constant temperature by partial immersion in a temperature-controlled water bath or by placement in a temperature-controlled room. Minimal aeration (approx. 100 bubbles/min.) is supplied through a glass pipet with the tip placed at least 2 cm above the sediment surface. The test is performed under continuous illumination, using ambient laboratory lighting. SMS may require UV light for PAH-contaminated intertidal sediments.

6.2 Cleaning: All laboratory glassware, including test chambers, is cleaned as described in EPA/600/4-90/027F. New glassware and test systems are soaked 15 minutes in tap water and scrubbed with detergent (or cleaned in an automatic dishwasher); rinsed twice with tap water; carefully rinsed once with fresh, dilute (10%, V:V) hydrochloric or nitric acid to remove scale, metals, and bases; rinsed twice with deionized water; rinsed once with acetone to remove organic compounds (using a fume hood or canopy); and rinsed three times more with deionized water. Test systems and chambers are rinsed again with dilution water just before use.

7. EXPERIMENTAL DESIGN AND TEST PROCEDURES

7.1 Experimental Design: An experimental design is used consisting of exposure of test organisms to a number of test sediments, one or more reference sediments, and to the collection site control sediment. Each treatment consists of five replicate test chambers each containing 20 animals. An additional replicate containing 20 test organisms is used for daily water quality measurements. More replicates, with or without

test organisms as appropriate, may be employed for periodic interstitial water quality measurements. Blind, random testing is used.

7.2 Preparation of Test Sediments: The interstitial salinity of the test, reference, and control sediments is measured. Adjustment of interstitial salinities is not recommended for *Eohaustorius estuarius* under standard guidelines, as *E. estuarius* tolerates a broad salinity range and any adjustments disturb the test sediments. However, if client project specifications require interstitial salinity adjustment, the PSEP (1995) procedure described for *Rhepoxynius abronius* and *Neanthes arenaceodentata* testing may be used.

Certain projects may require purging of excess ammonia from sediment interstitial water. PSDDA and SMS allow purging to be considered when interstitial total ammonia concentrations are 60 mg/L or above (at pH = 7.7; un-ionized >0.8 mg/L). However, purging is allowed only by agency permission, so the decision to purge should be made by the client. Testing of purged sediments may require concurrent testing of the same sediments unpurged.

If no salinity adjustment or purging is done, sediments are used without further treatment. Each test sediment is mixed thoroughly using a non-contaminating implement, then an aliquot (175 ml) sufficient to make a 2-cm-deep layer is added to each test beaker, and the surface is smoothed. Bubbles are removed from the sediment by gently tapping each beaker against the palm of the hand. Seawater at the test temperature and salinity is carefully added into the beaker to the 750 ml mark utilizing a water dispersal technique to avoid suspending the sediment. The beakers are then placed into the water bath or constant-temperature room and covered with watchglasses. An air delivery pipet is inserted into each beaker under the watchglass. Overhead lights provide constant illumination. Water in the test beakers is aerated without disturbing the sediments. The test system is then allowed to temperature equilibrate overnight.

7.3 Beginning the Test: Amphipods are wet sieved, using a 1.0 mm sieve, from the holding sediment and impartially distributed to a series of seawater-filled containers each holding 10 amphipods. Two containers of 10 animals each are randomly added to each replicate. Once amphipods are added to a replicate, the number of animals that do not burrow into the test sediment within 15 minutes is recorded. Amphipods not burrowed are removed and replaced with healthy amphipods, unless they are actively swimming or burrowing and re-emerging, as this may be a response to toxic material. Following addition of amphipods to the test chambers, additional water is added to achieve a final volume of 950 ml.

7.4 Effects Criteria: Effects criteria are 1) survival after 10 days, 2) daily emergence of amphipods from the test sediments, and 3) failure of amphipods to rebury in sediment at the end of the exposure period. Death is defined as no visible appendage movement or response to tactile stimulation.

7.5 Test Conditions: Test containers are maintained at a constant 15 ± 1°C. The selected test salinity is kept within ± 1 ppt. Frequently, a test salinity of 28 ppt is used to be consistent with *Rhepoxynius* and *Ampelisca* tests. The dissolved oxygen concentration in each test container must be greater than 60% saturation throughout the 10-day test. Each beaker is supplied with oil-free compressed air provided at a rate of approximately 100 bubbles per minute through disposable glass pipettes positioned with their tips at least 2 cm above the sediment surface. Each beaker is covered by a watchglass to minimize evaporation and the possibility of cross contamination between beakers. The test is conducted under constant illumination.

7.6 Feeding: Animals are not fed at any time before or during the test.

7.7 Test Duration, Type and Frequency of Observations, and Methods: The duration of the sediment toxicity test is 10 days. The type and frequency of observations to be made are summarized as follows:

TYPE OF OBSERVATION	TIMES OF OBSERVATION
Biological Data	
Emergence from sediment	daily
Survival	end of test
Reburial	end of test
Physical and Chemical Data	
Sediment interstitial salinity	at test beginning (bulk sediments) & end
Salinity, dissolved oxygen, pH, &temperature of overlying water (1 replicate only)	daily
Ammonia and sulfides in overlying water (1 replicate)	at test beginning & end
Ammonia, sulfide, pH, & salinity in interstitial water (optional)	for PSDDA and SMS, ammonia, pH, & salinity in bulk sediments and at test beginning and end; sulfide as requested by client
Check air and lights	daily

The presence of amphipods that have emerged from the sediments is recorded daily. Any other unusual observations are recorded. No amphipods are removed at any time until the termination of the test. The bioassay is terminated after 10 days of sediment exposure. The sediment is wet sieved through a 0.5 mm screen to recover buried amphipods. The number of surviving amphipods is recorded. For the reburial endpoint, surviving amphipods from each beaker are transferred to containers with a layer of control sediment and observed under constant illumination. The numbers of amphipods able to bury within a 1-hour exposure period are then recorded.

Dissolved oxygen is measured directly in test beakers using an air-calibrated polarographic oxygen probe. The pH is measured using a properly calibrated pH meter with scale divisions of 0.1 pH units. Temperature is measured using a calibrated mercury thermometer or a telethermometer. Salinity is measured using a refractometer. The method used for the measurement of total ammonia-N in the overlying water and sediment porewater from sediment bioassays is based on the salicylate colorimetric method of Hach Chemical Co. and was adapted from Clin. Chim. Acta., 14: 403 (1966). The method used for the measurement of dissolved sulfide in the overlying water and sediment porewater in marine sediment bioassays is the methylene blue colorimetric method based on SM 4500-S^{2-} (Standard Methods 1995 (19th edition). Any observed changes in sediment color or the formation of a sediment discontinuity layer is also recorded.

7.8 Criteria of Test Acceptance: For the test to be considered acceptable, the minimum mean survival of organisms in the control treatment at the end of the test must be 90%, and survival in each control replicate must be at least 80%.

7.9 Performance Criterion: For PSDDA, mean percent mortality in the reference sediments must be ≤20% over the negative control. For SMS, mean percent mortality in the reference sediments must be <25%.

7.10 Reference Toxicant Test: A routine reference toxicant test is run concurrently with each sediment test. This may be a 48-hr test with sodium dodecyl sulfate (preferred), or a 96-hr test with cadmium chloride (frequently required by client). PSDDA and SMS also require a water-only ammonia test when any test sediment interstitial ammonia is > 30 mg/L total ammonia (at pH=7.7; un-ionized >0.4 mg/L).

8. DATA ANALYSIS

The mean and standard deviation are calculated for each endpoint employed (e.g. mortality) and for each treatment (i.e. test sediment). Between-treatment comparisons may be made using a t-test (Student's t-test, approximate t-test, one-sample t-test), Wilcoxon Two-Sample test, Mann-Whitney test, or Rankit Analysis, where each treatment is compared to the control or the reference sediment. An arcsine-square root transformation of proportional data, and tests for normality and heterogeneity of variances, are performed prior to statistical comparisons. An estimate of

total effective mortality (optional) may also be calculated by summing percent mortality and percent failure to rebury.

9. REPORTING

A report of the test results must include the following information: name and identification of the test; the investigator and laboratory; sediment holding temperature data; information on the test sediment including the interstitial salinity for control, reference and test sediments; information on the source of seawater used; detailed information about the test organisms including acclimation conditions; a description of the experimental design and test chambers and other test conditions including water quality; information about any aeration that may have been required; definition of the effects criteria and other observations; unusual responses, if any, in the control treatment; daily emergence for each beaker and the 10-day mean and S.D. for each treatment; 10-day mortality for each beaker and the mean and S.D. for each treatment; failure to rebury and total effective mortality (optional) in each beaker and the mean and S.D. for each treatment; 96-hr LC50 with reference toxicant; a description of data analysis methods employed and documentation of statistical test results; any unusual information about the test or deviations from procedures.

10. STUDY DESIGN ALTERATION

Amendments made to the protocol must be approved by the sponsor and study director and should include a description of the change, the reason for the change, the date the change took effect, and the dated signatures of the study director and sponsor. Any deviations in the protocol must be described and recorded in the study raw data.

11. REFERENCES FOR PROCEDURES

ASTM. 2004. Standard test method for measuring the toxicity of sediment-associated contaminants with estuarine and marine invertebrates. ASTM Standard Method No. E1367-03e1. In: 2004 Annual Book of ASTM Standards, volume 11.05, Biological effects and environmental fate; biotechnology; pesticides. ASTM International, West Conshohocken, PA.

DeWitt, T.H., R.C. Swartz and J.O. Lamberson. 1989. Measuring the acute toxicity of estuarine sediments. Environ. Toxicol. Chem. 8: 1035-1048.

Puget Sound Dredged Disposal Analysis (PSDDA). 1989. Management plan report - unconfined open-water disposal of dredged material, Phase II - (north and south Puget Sound). Puget Sound Dredged Disposal Analysis, Army Corps of Engineers, Seattle, WA. (and other modifications made through the PSDDA process and Sediment Management Annual Review Meetings).

Puget Sound Estuary Program. 1995. Recommended guidelines for conducting laboratory bioassays on Puget Sound sediments. Prepared for U.S. Env. Prot. Agency, Region 10, Office of Puget Sound, Seattle, WA and Puget Sound Water Quality Authority, P.O. Box 40900, Olympia, WA.

U.S. Army Corps of Engineers, Seattle District; U.S. EPA, Region 10; Washington Department of Natural Resources; Washington Department of Ecology. 2000. Dredged material evaluation and disposal procedures: a user's manual for the dredged disposal analysis (PSDDA) program.

Washington State Department of Ecology. 2003. Sediment sampling and analysis plan appendix. Publication no. 03-09-043, WDOE, Olympia, WA.

Weber, C.I. (Ed.) 1993. Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms (Fourth Edition). EPA/600/4-90/027F.

12. APPROVALS

_____ _____ for _____ _____
Name Date

_____ _____ for **NORTHWESTERN AQUATIC SCIENCES**
Name Date

APPENDIX II

RAW DATA

TEST DESCRIPTION, MONITORING, AND RESULTS BENCHSHEETS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-FE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator reviewed pgs. 1-41 MSR 9-11-09

STUDY MANAGEMENT

Client: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Client's Study Monitor: Ms. Helle Anderson

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. M.S. Redmond MSR

QA Officer L.K. Nemeth

1. [illegible] 2. Yves Nakahara YN
3. Lidia P. Sandoval LPS 4. Susan Cook SC
5. G.J. Irissarri GJI 6. R.S. Caldwell RSC
7. 8.

Study Schedule:

Test Beginning: 8-11-09 1045 Test Ending: 8-21-09 1000

TEST MATERIAL

General description (see sample logbook/chain-of-custody for details):

NAS Sample No.:	2736G	2758G	2788G	2790G	
Description:	EW09-SS-215-010	EW09-SS-015-010	CI09-SS-120-010	CI09-SS-180-010	
Collection Date:	6/22/09	6/23/09	7/7/09	7/7/09	
Receipt Date:	6/24/09	6/25/09	7/9/09	7/9/09	
Inters.Salinity (ppt):	24.0	28.5	29.5	27.0	
:					
NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					
NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					
NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					

Error codes: 1) correction of handwriting error
2) written in wrong location; entry deleted
3) wrong date deleted, replaced with correct date
4) error found in measurement; measurement repeated

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-FF4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

SEDIMENT DESCRIPTIONS -- SUPPLEMENTAL NOTES

Sample No.	Description
2736G	Black sticky mud with wood chunks
2758G	dark brown to black mud with a lot of shell material
2788G	brown muddy sand
2790G	Tan sticky mud some rocks
2807G	brown sand

Test No. 783-4 Client Windward Investigator

TEST ORGANISMS

Species: *Eohaustorius estuarius* Date Collected: 8-7-09
Source: Yaquina Bay, Oregon

Field conditions when collected:
Interstitial temperature: 15.5 °C ~~36.0~~ 8-11-09 Interstitial salinity: 36.0 ‰

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
8-8-09	15.3	8.2	30.0	8.1			yes	
8-9-09	15.2	8.3	28.5	8.2				
8-10-09	15.4	8.1	28.5	8.1				
8-11-09	15.3	8.2	29.0	8.2				
Mean	15.3	8.2	29.0	8.2				
S.D.	0.1	0.1	0.7	0.1				
(N)	(4)	(4)	(4)	(4)				

Photoperiod during acclimation: constant light

TEST PROCEDURES AND CONDITIONS

Test chambers: 1 L glass beakers covered with watchglasses
Test volumes: 175 ml of test sediment; 950 ml total volume
Replicates/treatment: (5) 5 Organisms/treatment: (100) 100
Additional replicates included for water quality purposes (indicate numbers of each that apply):

_____ Ammonia-purging sacrificial beakers (no test organisms)

_____ Day zero sacrificial beaker (no test organisms)

1 Day 10 sacrificial beaker (also water quality beaker; with test organisms)

_____ Day _____ sacrificial beaker(s) (with test organisms)

Test water changes: None
Feeding: None
Beaker placement: Total randomization

Aeration: Yes, at least 2 cm above the sediment surface
Photoperiod: Constant light
Test temperature (deg.C) 15.0 +/- 1.0
Salinity (ppt): 28.0 +/- 1.0

MISCELLANEOUS NOTES

Light intensity measurements:

Date	Location in room	foot-candles
8-14-09	beaker #17	60.0

Test No 783-4 Client Windward Investigator

Control Sediment:
Source: Yaquina Bay, Oregon
Date collected: 8-7-09 Interstitial salinity: insufficient sample
Sieved through 0.5-mm screen
Storage: 4°C in the dark NAS# 28076

Test conducted in (circle one): room 1 room 2 trailer water bath other: room 44

Randomization chart: wall

top shelf

3	6			27	30				
2	5	→	→	26	29				
1	4			25	28				

→ door

Randomization chart:

Randomization chart:

Randomization chart:

TEST WATER

Source: Yaquina Bay, Oregon, sea water
Date of Collection: 8-9-09 Salinity (ppt) 27.0 pH 8.2
Treatments: filtered to 0.4 µm, salinity-adjusted with MilliQ deionized water, aerated

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

overlying NH3 sampled (days 0,10)? Yes

Day 0 (8/11/09) YN / LBS

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. ** emerged	Air	Comments
1						0	o/c	
* 2	15.9	8.2	27.0	8.0	<0.02	0		
* 3	15.9	8.1	27.5	7.9	<0.02	0		
4						0		
5						0		
6						0		
7						0		
8						0		
* 9	15.9	8.0	27.5	7.9	<0.02	0		
10						0		
11						0		
12						0		
13						0		
14						0		
15						0		
16						0		
17						0		
18						1		replaced 1 Eoh
19						0		
20						0		
21						1		replaced 1 Eoh
22						0		
23						0		
24						1		replaced 1 Eoh
25						0		
* 26	15.7	8.2	28.0	7.9	<0.02	0		
* 27	15.7	8.1	28.0	8.1	<0.02	0		
28						0		
29						0		
30						0	✓	

* Water Quality Beakers ** for day zero only, this is number not buried within 10-15 minutes

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 1 (8/12/09) US

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					0	OK	
* 2	15.9	8.1	27.5	7.8	0	OFF *	DO: 7.4
* 3	15.9	8.2	27.5	8.0	0	OFF *	
4					0	OK	
5					0	OK	
6					0	OFF *	DO: 7.1
7					0	OK	
8					0	OFF *	DO: 7.0
* 9	15.8	8.1	28.0	7.9	0	OFF *	DO: 7.1
10					3	OK	
11					3	OFF *	DO: 7.2
12					1	OK	
13					2		
14					0		
15					0		
16					0		
17					0		
18					0		
19					0		
20					1		
21					1		
22					1		
23					0		
24					0		
25					0		
* 26	15.6	8.2	27.5	8.1	0		
* 27	15.6	8.1	28.0	7.9	1	OFF *	DO: 7.3
28					0	OK	
29					0	OK	
30					0	OK	
							*: AIR REESTABLISHED

* Water Quality Beakers

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 2 (8/13/09) yr

Beaker No.	Temp. (deg C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					Ø	OK	
* 2	15.9	8.3	27.5	7.9	2		
* 3	15.8	8.5	28.0	7.9	Ø		
4					Ø		
5					Ø		
6					Ø		
7					Ø		
8					Ø		
* 9	15.8	8.2	28.0	7.9	Ø		
10					Ø		
11					Ø		
12					1		
13					2		
14					Ø		
15					Ø		
16					Ø		
17					Ø		
18					1		
19					1		
20					Ø		
21					Ø		
22					2		
23					Ø		
24					Ø		
25					Ø		
* 26	15.6	8.4	28.5	7.9	Ø		
* 27	15.6	8.3	28.0	7.9	2		
28					Ø		
29					Ø		
30					Ø		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 3 (8/14/09)

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					1	ok	
* 2	16.0	8.2	28.0	8.0	0		
* 3	15.8	8.3	28.5	7.4	0		
4					0		
5					0		
6					0		
7					0		
8					0		
* 9	15.8	8.2	28.0	7.8	0		
10					0		
11					3		
12					0		
13					1		
14					0		
15					0		
16					0		
17					0		
18					0		
19					0		
20					0		
21					0		
22					0		
23					0		
24					0		
25					0		
* 26	15.7	8.3	28.5	7.7	2		
* 27	15.7	8.3	28.5	7.5	0		
28					0		
29					0		
30					1		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 4 (8/15/09) YMSR

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					0	OK	
* 2	15.8	8.2	29.0	8.5	3		
* 3	15.8	8.2	28.5	8.0	1		
4					0		
5					0		
6					0		
7					0		
8					0		
* 9	15.8	8.0	29.0	8.2	0		
10					1		
11				random mark - ignore YMSR 8-15-09	2		
12					2		
13					0		
14					0		
15					0		
16					0		
17					0		
18					2		
19					2		
20					0		
21					0		
22					2		
23					0		
24					0		
25					0		
* 26	15.7	8.2	29.0	8.2	0		
* 27	15.7	8.2	29.5	7.6	2	OFF	DO: 6.4; restarted
28					0	OK	
29					0		
30					4		

* Water Quality Beakers

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 5 (8 1/6 109 sf

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					0	ok	
* 2	15.8	8.3	28.5	~~7.580~~	3		
* 3	15.7	8.4	28.5	~~7.277~~	1		
4					0		
5				7.80	0		
6				8-11-09	0		
7					0		
8					0		
* 9	15.7	8.2	28.5	~~7.378~~	0		
10					2		
11					2		
12					2		
13					0		
14					0		
15					0		
16					0		
17					0		
18					7		
19					3		
20					0		
21					2		
22					2		
23					0		
24					0		
25					0		
* 26	15.6	8.3	29.5	~~7.178~~	2		
* 27	15.5	8.4	29.0	~~7.176~~	0		
28					0		
29					0		
30					1		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 6 (8/17/09 yr

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					Ø	OK	
* 2	15.8	8.3	28.0	8.1	2	OK	*DO = 8.3
* 3	15.7	8.4	28.5	7.8	3	OK	
4					Ø		
5					Ø		
6					Ø		
7					Ø		
8					Ø		
* 9	15.7	8.1	28.5	7.9	Ø		
10					Ø		
11					3		
12					1		
13					Ø		
14					Ø		
15					Ø		
16					Ø		
17					Ø		
18					1		
19					2		
20					Ø		
21					3		
22					Ø		
23					2		
24					Ø		
25					1		
* 26	15.5	8.4	29.0	8.0	Ø		
* 27	15.5	8.4	29.0	8.1	Ø		
28					Ø		
29					Ø		
30					3		
							* Air reestablished

* Water Quality Beakers

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 7 (8/18 69)631

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					1	OK	
* 2	15.9	8.2	29.0	8.0	2		
* 3	15.8	8.4	29.5	7.9	1		
4					0		
5					0		
6					0		
7					0		
8					0		
* 9	15.7	8.1	29.0	8.2	0		
10					1		
11					1		
12					1		
13					1		
14					0		
15					0		
16					0		
17					0		
18					2		
19					2		
20					0		
21					3		
22					2		
23					0		
24					1		
25					1		
* 26	15.6	8.4	29.5	8.2	0		
* 27	15.6	8.4	29.5	7.6	0		
28					0		
29					0		
30					1		

* Water Quality Beakers

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 8 (8/20/09) US

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	No. emerged	Air	Comments
1					1	OK	
* 2	15.6	8.2	28.5	7.6	0		
* 3	15.5	8.5	29.0	7.7	3		
4					0		
5					0		
6					0		
7					0		
8					0		
* 9	15.5	8.1	29.0	7.9	0		
10					1		
11					1		
12					1		
13					0		
14					0		
15					0		
16					0		
17					0		
18					0		
19					0		
20					0		
21					2		
22					1		
23					0		
24					0		
25					0		
* 26	15.5	8.5	29.5	8.2	0		
* 27	15.4	8.4	29.5	7.2	2		
28					0		
29					0		
30					3		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

Day 9 (8 120 109) YN

Beaker No.	Temp. (deg.C)	pH	Sal (ppt)	DO (ppm)	No. emerged	Air	Comments
1					4	OK	
* 2	15.8	8.1	28.0	8.0	1		
* 3	15.8	8.6	28.5	7.9	Ø		
4					Ø		
5					Ø		
6					Ø		
7					Ø		
8					Ø		
* 9	15.7	8.1	29.0	7.9	Ø		
10					Ø		
11					1		
12					3		
13					Ø		
14					Ø		
15					Ø		
16					Ø		
17					Ø		
18					2		
19					Ø		
20					Ø		
21					1		
22					2		
23					Ø		
24					Ø		
25					Ø		
* 26	15.5	8.6	29.0	8.2	Ø		
* 27	15.4	8.5	28.5	7.1	1		
28					Ø		
29					Ø		
30					1		
					Dry Weight		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAILY RECORD SHEET

overlying NH3 sampled (days 0,10)? yes

Day 10 (8/12/109) yes / LES

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. emerged	Air	Comments
1						1	OK	
* 2	15.9	8.2	28.0	7.8	<0.02	1		
* 3	15.8	8.7	28.5	7.7	<0.02	2		
4						Ø		
5						Ø		
6						Ø		
7						Ø		
8						Ø		
* 9	15.8	8.1	29.0	7.9	<0.02	Ø		
10						Ø		
11						3		
12						Ø		
13						2		
14						Ø		
15						Ø		
16						Ø		
17						Ø		
18						2		
19						Ø		
20						Ø		
21						2		
22						2		
23						Ø		
24						Ø		
25						Ø		
* 26	15.7	8.7	29.5	8.4	<0.02	Ø		
* 27	15.6	8.6	29.0	7.3	<0.02	1		
28						Ø		
29						Ø		
30						Ø		

* Water Quality Beakers

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-EE4

MARINE AMPHIPOD 10-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-4 Client Windward Investigator

DAY 10 TEST TERMINATION SHEET

Beaker No.	No. of Survivors	Number reburied	Initial	Comment
1	18	18	GB	
2				
3				
4	20	20	GB	
5	17 ~~20~~	~~20~~ 16	GB	
6	19	19	GJL	
7	20	20	GB	
8	14	14	GB	
9				
10	15	15	GJL	
11	20	20	GJL	
12	18	18	GJL	
13	18	18	GJL	
14	20	20	GB	
15	16	16	GB	
16	20	20	GJL	
17	18	18	GJL	
18	18	18	GB	
19	18	18	GB	
20	13	13	GJL	
21	20	20	GJL	
22	18	18	GB	
23	19	19	GB	
24	19	19	GB	
25	18	18	GB	
26				
27				
28	18	18	GJL	
29	18	18	GJL	+ 1 DEAD
30	17	17	GB	

Beaker No.	No. of Survivors	Number reburied	Initial	Comment

water quality beakers

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	-----		
	1.0 mg/L NH_3-N Std.	-----	0.118	1.00		
	3.0 mg/L NH_3-N Std.	-----	0.280	3.00		
	6.0 mg/L NH_3-N Std.	-----	0.570	6.00		
	10.0 mg/L NH_3-N Std.	-----	0.940	10.00		
	3.0 mg/L spike	-----	0.265	2.81		
	3.0 mg/L spike dupl.	-----	0.261	2.76		
	5.0 mg/L 2nd source		0.458	4.85		
1.	Day 0 (8-10-09)	#######				
2.	2736G	5	0.350	18.54		
3.	2758G	5	1.200	63.55		
4.	2788G	5	0.565	29.92		
5.	2790G	5	0.057	3.02		
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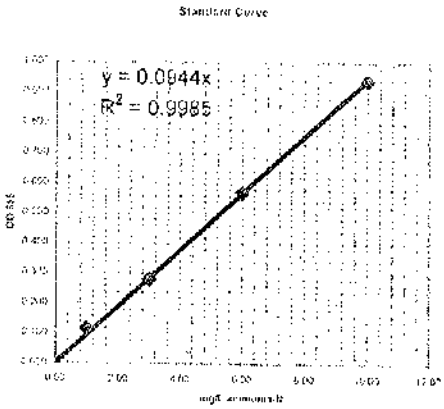

Reporting limit (mg/L) =	0.5
Recovery (%) =	92.9
Precision (RPD) =	1.52
2nd source (%) =	97.0
Sample volume (ml):	0.10
Dilution factor	5

Sample Set Description:

Test No.: 783-4
Test Day: 0
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 8/10/2009

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	-----		
	1.0 mg/L NH_3-N Std.	-----	.118	1.00		
	3.0 mg/L NH_3-N Std.	-----	.280	3.00		
	6.0 mg/L NH_3-N Std.	-----	.570	6.00		
	10.0 mg/L NH_3-N Std.	-----	.940	10.00		
	3.0 mg/L spike	-----	.265			
	3.0 mg/L spike dupl.	-----	.261			
	5.0 mg/L 2nd source		.458			
1.	Day 0 (8-10-09)	######				
2.	2736G	5	.350		7.5	24.0
3.	2758G	5	.320		7.6	25.5
4.	2788G	5	.565		7.9	29.5
5.	2790G	5	.057		7.3	27.0
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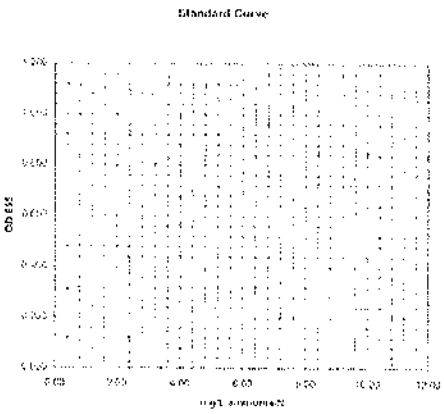
35						
36						



Reporting limit (mg/L) = 0.5

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.10
Dilution factor 5

Sample Set Description:
Test No.: 783-4
Test Day: 0
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 8/10/2009

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	-----		
	1.0 mg/L NH_3-N Std.	-----	0.115	1.00		
	3.0 mg/L NH_3-N Std.	-----	0.324	3.00		
	6.0 mg/L NH_3-N Std.	-----	0.676	6.00		
	10.0 mg/L NH_3-N Std	-----	1.100	10.00		
	3.0 mg/L spike	-----	0.335	3.03		
	3.0 mg/l spike dupl.	-----	0.327	2.96		
	5.0 mg/l 2nd source		0.551	4.98		
1.	Day 10 (8-21-09)	######				
2.	2	5	0.008	ND		
3.	3	5	0.401	18.13		
4.	9	5	0.028	1.27		
5.	26	5	0.029	1.31		
6.	27	5	0.147	6.65		
7						
8.						
9.						
10.						
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16.						
17.						
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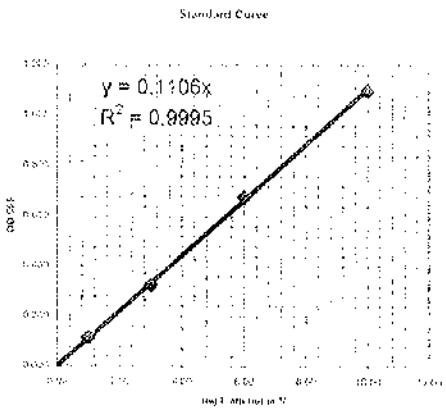

Reporting limit (mg/L) =	0.5
Recovery (%) =	99.8
Precision (RPD) =	2.42
2nd source (%) =	99.7
Sample volume (ml):	0.10
Dilution factor	5

Sample Set Description:

Test No.: 783-4
Test Day: 10 (8-21-09)
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 8/21/2009

Total Ammonia-N in Sediment Pore Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH3-N (mg/L)	pH	Salinity (ppt)
	Blank	-----	-----	-----		
	1.0 mg/L NH3-N Std.	-----	.115	1.00		
	3.0 mg/L NH3-N Std.	-----	.324	3.00		
	6.0 mg/L NH3-N Std.	-----	.676	6.00		
	10.0 mg/L NH3-N Std.	-----	1.10	10.00		
	3.0 mg/L spike	-----	.335			
	3.0 mg/L spike dupl.	-----	.327			
	5.0 mg/L 2nd source		.551			
1.	Day 10 (8-21-09)	######				
2.	2	5	.008		7.6	29.0
3.	3	5	.007		7.5	29.0
4.	9	5	.028		7.6	29.0
5	26	5	.029		7.8	29.0
6.	27	5	.147		7.3	29.0
7.						
8.						
9.						
10.						
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12.						
13.						
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15.						
16.						
17						
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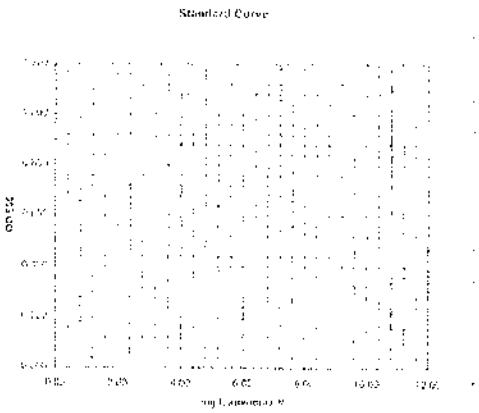

Reporting limit (mg/L) = 0.5

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.10
Dilution factor 5

Sample Set Description:
Test No.: 783-4
Test Day: 10 (8-21-09)
Species: *Eohaustorius*

Sediment porewaters

Analyst: RSC
Date analysed: 8/21/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	0.115	1.00
	3.0 mg/L NH_3-N Std.	-----	0.324	3.00
	6.0 mg/L NH_3-N Std.	-----	0.676	6.00
	10.0 mg/L NH_3-N Std.	-----	1.100	10.00
	3.0 mg/L spike	-----	0.335	3.03
	3.0 mg/L spike dupl.	-----	0.327	2.96
	5.0 mg/L 2nd source	-----	0.551	4.98
1.	Day 0 (8-11-09)	#######		
2.	2	1	0.000	ND
3.	3	1	0.662	5.99
4.	9	1	0.001	ND
5.	26	1	0.208	1.88
6.	27	1	0.298	2.69
7.				
8.				
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10.				
11.				
12.				
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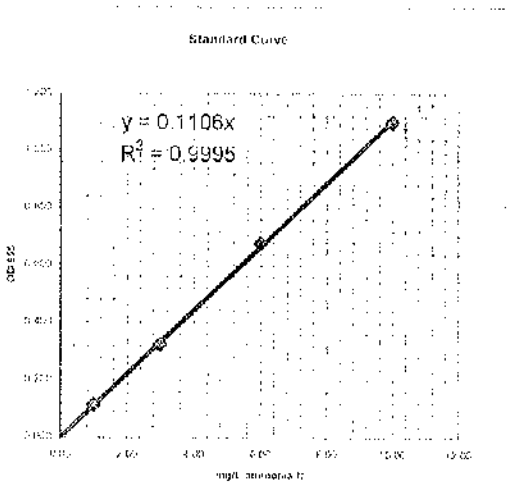

Reporting limit (mg/l) =	0.1
Recovery (%) =	99.8
Precision (RPD) =	2.42
2nd source (%) =	99.7
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No: 783-4
Test Day: 0 (8-11-09)
Species: *Echaustorius*

Overlying water

Analyst: RSC
Date analysed: 8/21/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

Sample description	Dilution factor	OD655	NH3-N (mg/L)
Blank	-----	-----	-----
1.0 mg/L NH3-N Std.	-----	.115	1.00
3.0 mg/L NH3-N Std.	-----	.324	3.00
6.0 mg/L NH3-N Std.	-----	.676	6.00
10.0 mg/L NH3-N Std.	-----	1.10	10.00
3.0 mg/L spike	-----	.735	
3.0 mg/L spike dupl.	-----	.327	
5.0 mg/L 2nd source	-----	.555	
1. Day 0 (8-11-09)	#######		
2. 2	1	.501	
3. 3	1	.662	
4. 9	1	.301	
5. 26	1	.208	
6. 27	1	.298	
7.			
8.			
9.			
10.			
11.			
12.			
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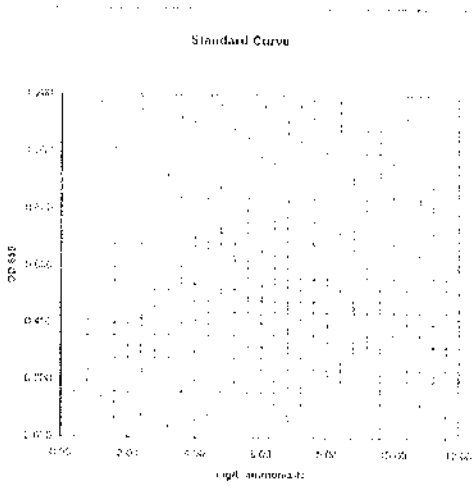

Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-4
Test Day 0 (8-11-09)
Species: *Eohaustorius*

Overlying water

Analyst: RSC
Date analysed: 8/21/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD_{655}	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std	-----	0.115	1.00
	3.0 mg/L NH_3-N Std	-----	0.324	3.00
	6.0 mg/L NH_3-N Std.	-----	0.676	6.00
	10.0 mg/L NH_3-N Std.	-----	1.100	10.00
	3.0 mg/L spike	-----	0.335	3.03
	3.0 mg/L spike cupl.	-----	0.327	2.96
	5.0 mg/L 2nd source	-----	0.551	4.98
1.	Day 10 (8-21-09)	#######		
2.	2	1	0.000	ND
3.	3	1	0.575	5.20
4.	9	1	0.000	ND
5.	26	1	0.001	ND
6.	27	1	0.261	2.36
7.				
8.				
9.				
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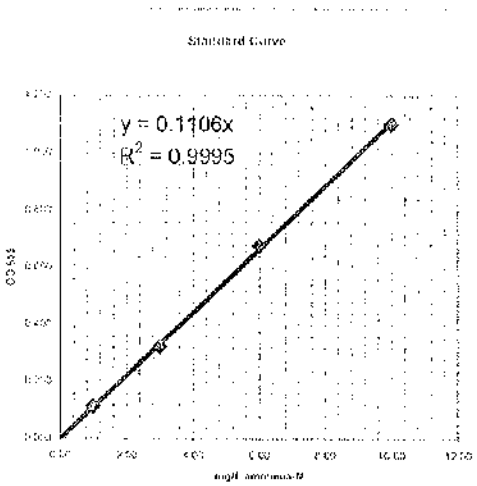

Reporting limit (mg/L) =	0.1
Recovery (%) =	99.8
Precision (RPD) =	2.42
2nd source (%) =	99.7
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-4
Test Day: 10 (8-21-09)
Species: *Eohaustorius*

Overlying water

Analyst: RSC
Date analysed: 8/21/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH3-N Std.	-----	.115	1.00
	3.0 mg/L NH3-N Std.	-----	.324	3.00
	6.0 mg/L NH3-N Std.	-----	.636	6.00
	10.0 mg/L NH3-N Std.	-----	1.10	10.00
	3.0 mg/L spike	-----	.335	
	3.0 mg/L spike dupl.	-----	.327	
	5.0 mg/L 2nd source	-----	.551	
1.	Day 10 (8-21-09)	######		
2.	2	1	.000	
3	3	1	.575	
4.	9	1	.000	
5.	26	1	.001	
6.	27	1	.261	
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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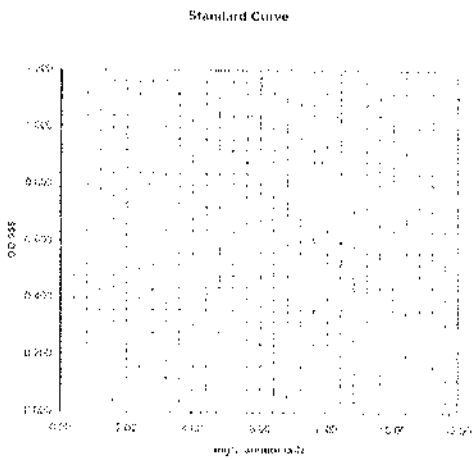
33				
34.				
35.				
36.				



Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-4
Test Day: 10 (8-21-09)
Species: *Eohaustorius*

Overlying water

Analyst: RSC
Date analysed: 8/21/2009

TEST DATA ANALYSIS RECORDS

Marine Amphipod Test
Randomization Key

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
12	2736G	EW09-SS-215-010	1	
18	2736G	EW09-SS-215-010	2	
10	2736G	EW09-SS-215-010	3	
24	2736G	EW09-SS-215-010	4	
30	2736G	EW09-SS-215-010	5	
27	2736G	EW09-SS-215-010	6	wq repl
21	2758G	EW09-SS-015-010	1	
11	2758G	EW09-SS-015-010	2	
13	2758G	EW09-SS-015-010	3	
25	2758G	EW09-SS-015-010	4	
1	2758G	EW09-SS-015-010	5	
3	2758G	EW09-SS-015-010	6	wq repl
17	2788G	CI09-SS-120-010	1	
23	2788G	CI09-SS-120-010	2	
6	2788G	CI09-SS-120-010	3	
19	2788G	CI09-SS-120-010	4	
4	2788G	CI09-SS-120-010	5	
26	2788G	CI09-SS-120-010	6	wq repl
5	2790G	CI09-SS-180-010	1	
15	2790G	CI09-SS-180-010	2	
28	2790G	CI09-SS-180-010	3	
8	2790G	CI09-SS-180-010	4	
20	2790G	CI09-SS-180-010	5	
9	2790G	CI09-SS-180-010	6	wq repl
14	2807G	control	1	
7	2807G	control	2	
16	2807G	control	3	
22	2807G	control	4	
29	2807G	control	5	
2	2807G	control	6	wq repl

Endpoints Data Entry and Calculations File

INIT=initial number
SURV=number survivors
REBUR=number survivors which reburied
MORT=number dead=INIT-SURV
NOBURY=number survivors not reburied=SURV-REBUR
TEM=total effective mortality=MORT+NOBURY

PSURV=%survival=100(SURV/INIT)
PMORT=%mortality=100(MORT/INIT)
PBURY=%reburial=100(REBUR/SURV)
PNOBURY=%survivors not reburied=100(NOBURY/SURV)
PTEM=%total effective mortality=100(TEM/INIT)

Data entry verified against laboratory bench sheets
MR
8-25-09

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	INIT	SURV	REBUR	MORT	NOBURY	TEM	PSURV	PMORT	PBURY	PNOBURY	PTEM		SURV	MORT	NOBURY	PSURV	PMORT	PBURY	PNOBURY	PTEM
1	12	2736G	EW09-SS-215-010	1	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
2	18	2736G	EW09-SS-215-010	2	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	Mean	17.4	2.6	0.0	87.0	13.0	100.0	0.0	13.0
3	10	2736G	EW09-SS-215-010	3	20	15	15	5	0	5	75.0	25.0	100.0	0.0	25.0	SD	1.5	1.5	0.0	7.6	7.6	0.0	0.0	7.6
4	24	2736G	EW09-SS-215-010	4	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	n	5	5	5	5	5	5	5	5
5	30	2736G	EW09-SS-215-010	5	20	17	17	3	0	3	85.0	15.0	100.0	0.0	15.0									
6	27	2736G	EW09-SS-215-010	6 wq repl	20																			
7	21	2758G	EW09-SS-015-010	1	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
8	11	2758G	EW09-SS-015-010	2	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	Mean	18.8	1.2	0.0	94.0	6.0	100.0	0.0	6.0
9	13	2758G	EW09-SS-015-010	3	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	SD	1.1	1.1	0.0	5.5	5.5	0.0	0.0	5.5
10	25	2758G	EW09-SS-015-010	4	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	n	5	5	5	5	5	5	5	5
11	1	2758G	EW09-SS-015-010	5	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
12	3	2758G	EW09-SS-015-010	6 wq repl	20																			
13	17	2788G	CI09-SS-120-010	1	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
14	23	2788G	CI09-SS-120-010	2	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	Mean	18.8	1.2	0.0	94.0	6.0	100.0	0.0	6.0
15	6	2788G	CI09-SS-120-010	3	20	19	19	1	0	1	95.0	5.0	100.0	0.0	5.0	SD	0.8	0.8	0.0	4.2	4.2	0.0	0.0	4.2
16	19	2788G	CI09-SS-120-010	4	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	n	5	5	5	5	5	5	5	5
17	4	2788G	CI09-SS-120-010	5	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
18	26	2788G	CI09-SS-120-010	6 wq repl	20																			
19	5	2790G	CI09-SS-180-010	1	20	17	16	3	1	4	85.0	15.0	94.1	5.9	20.0									
20	15	2790G	CI09-SS-180-010	2	20	16	16	4	0	4	80.0	20.0	100.0	0.0	20.0	Mean	15.6	4.4	0.2	78.0	22.0	98.8	1.2	23.0
21	28	2790G	CI09-SS-180-010	3	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	SD	2.1	2.1	0.4	10.4	10.4	2.6	2.6	9.7
22	8	2790G	CI09-SS-180-010	4	20	14	14	6	0	6	70.0	30.0	100.0	0.0	30.0	n	5	5	5	5	5	5	5	5
23	20	2790G	CI09-SS-180-010	5	20	13	13	7	0	7	65.0	35.0	100.0	0.0	35.0									
24	9	2790G	CI09-SS-180-010	6 wq repl	20																			
25	14	2807G	control	1	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0									
26	7	2807G	control	2	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	Mean	19.2	0.8	0.0	96.0	4.0	100.0	0.0	4.0
27	16	2807G	control	3	20	20	20	0	0	0	100.0	0.0	100.0	0.0	0.0	SD	1.1	1.1	0.0	5.5	5.5	0.0	0.0	5.5
28	22	2807G	control	4	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0	n	5	5	5	5	5	5	5	5
29	29	2807G	control	5	20	18	18	2	0	2	90.0	10.0	100.0	0.0	10.0									
30	2	2807G	control	6 wq repl	20																			

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Emergence Data File

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
1	12	2736G	EW09-SS-215-010	1	1	1			
1	12	2736G	EW09-SS-215-010	1	2	1			
1	12	2736G	EW09-SS-215-010	1	3	0			
1	12	2736G	EW09-SS-215-010	1	4	2			
1	12	2736G	EW09-SS-215-010	1	5	2			
1	12	2736G	EW09-SS-215-010	1	6	1			
1	12	2736G	EW09-SS-215-010	1	7	1			
1	12	2736G	EW09-SS-215-010	1	8	1			
1	12	2736G	EW09-SS-215-010	1	9	3			
1	12	2736G	EW09-SS-215-010	1	10	0	12		
2	18	2736G	EW09-SS-215-010	2	1	0			
2	18	2736G	EW09-SS-215-010	2	2	1			
2	18	2736G	EW09-SS-215-010	2	3	0			
2	18	2736G	EW09-SS-215-010	2	4	2			
2	18	2736G	EW09-SS-215-010	2	5	7			
2	18	2736G	EW09-SS-215-010	2	6	1			
2	18	2736G	EW09-SS-215-010	2	7	2			
2	18	2736G	EW09-SS-215-010	2	8	0			
2	18	2736G	EW09-SS-215-010	2	9	2			
2	18	2736G	EW09-SS-215-010	2	10	2	17		
3	10	2736G	EW09-SS-215-010	3	1	3			
3	10	2736G	EW09-SS-215-010	3	2	0			
3	10	2736G	EW09-SS-215-010	3	3	0			
3	10	2736G	EW09-SS-215-010	3	4	1			
3	10	2736G	EW09-SS-215-010	3	5	2			
3	10	2736G	EW09-SS-215-010	3	6	0			
3	10	2736G	EW09-SS-215-010	3	7	1			
3	10	2736G	EW09-SS-215-010	3	8	1			
3	10	2736G	EW09-SS-215-010	3	9	0			
3	10	2736G	EW09-SS-215-010	3	10	0	8		
4	24	2736G	EW09-SS-215-010	4	1	0			
4	24	2736G	EW09-SS-215-010	4	2	0			
4	24	2736G	EW09-SS-215-010	4	3	0			
4	24	2736G	EW09-SS-215-010	4	4	0			
4	24	2736G	EW09-SS-215-010	4	5	0			
4	24	2736G	EW09-SS-215-010	4	6	0			
4	24	2736G	EW09-SS-215-010	4	7	1			
4	24	2736G	EW09-SS-215-010	4	8	0			
4	24	2736G	EW09-SS-215-010	4	9	0			
4	24	2736G	EW09-SS-215-010	4	10	0	1		
5	30	2736G	EW09-SS-215-010	5	1	0			
5	30	2736G	EW09-SS-215-010	5	2	0			
5	30	2736G	EW09-SS-215-010	5	3	1		Mean	10.4
5	30	2736G	EW09-SS-215-010	5	4	4		SD	6.2
5	30	2736G	EW09-SS-215-010	5	5	1		n	5
5	30	2736G	EW09-SS-215-010	5	6	3			
5	30	2736G	EW09-SS-215-010	5	7	1			
5	30	2736G	EW09-SS-215-010	5	8	3			
5	30	2736G	EW09-SS-215-010	5	9	1			

Data entry verified against laboratory bench sheets 8-25-09

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
5	30	2736G	EW09-SS-215-010	5	10	0	14		
7	21	2758G	EW09-SS-015-010	1	1	1			
7	21	2758G	EW09-SS-015-010	1	2	0			
7	21	2758G	EW09-SS-015-010	1	3	0			
7	21	2758G	EW09-SS-015-010	1	4	0			
7	21	2758G	EW09-SS-015-010	1	5	2			
7	21	2758G	EW09-SS-015-010	1	6	3			
7	21	2758G	EW09-SS-015-010	1	7	3			
7	21	2758G	EW09-SS-015-010	1	8	2			
7	21	2758G	EW09-SS-015-010	1	9	1			
7	21	2758G	EW09-SS-015-010	1	10	2	14		
8	11	2758G	EW09-SS-015-010	2	1	3			
8	11	2758G	EW09-SS-015-010	2	2	0			
8	11	2758G	EW09-SS-015-010	2	3	3			
8	11	2758G	EW09-SS-015-010	2	4	2			
8	11	2758G	EW09-SS-015-010	2	5	2			
8	11	2758G	EW09-SS-015-010	2	6	3			
8	11	2758G	EW09-SS-015-010	2	7	1			
8	11	2758G	EW09-SS-015-010	2	8	1			
8	11	2758G	EW09-SS-015-010	2	9	1			
8	11	2758G	EW09-SS-015-010	2	10	3	19		
9	13	2758G	EW09-SS-015-010	3	1	2			
9	13	2758G	EW09-SS-015-010	3	2	2			
9	13	2758G	EW09-SS-015-010	3	3	1			
9	13	2758G	EW09-SS-015-010	3	4	0			
9	13	2758G	EW09-SS-015-010	3	5	0			
9	13	2758G	EW09-SS-015-010	3	6	0			
9	13	2758G	EW09-SS-015-010	3	7	1			
9	13	2758G	EW09-SS-015-010	3	8	0			
9	13	2758G	EW09-SS-015-010	3	9	0			
9	13	2758G	EW09-SS-015-010	3	10	2	8		
10	25	2758G	EW09-SS-015-010	4	1	0			
10	25	2758G	EW09-SS-015-010	4	2	0			
10	25	2758G	EW09-SS-015-010	4	3	0			
10	25	2758G	EW09-SS-015-010	4	4	0			
10	25	2758G	EW09-SS-015-010	4	5	0			
10	25	2758G	EW09-SS-015-010	4	6	1			
10	25	2758G	EW09-SS-015-010	4	7	1			
10	25	2758G	EW09-SS-015-010	4	8	0			
10	25	2758G	EW09-SS-015-010	4	9	0			
10	25	2758G	EW09-SS-015-010	4	10	0	2		
11	1	2758G	EW09-SS-015-010	5	1	0			
11	1	2758G	EW09-SS-015-010	5	2	0			
11	1	2758G	EW09-SS-015-010	5	3	1		Mean	10.2
11	1	2758G	EW09-SS-015-010	5	4	0		SD	6.5
11	1	2758G	EW09-SS-015-010	5	5	0		n	5
11	1	2758G	EW09-SS-015-010	5	6	0			
11	1	2758G	EW09-SS-015-010	5	7	1			
11	1	2758G	EW09-SS-015-010	5	8	1			
11	1	2758G	EW09-SS-015-010	5	9	4			
11	1	2758G	EW09-SS-015-010	5	10	1	8		

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
13	17	2788G	CI09-SS-120-010	1	1	0			
13	17	2788G	CI09-SS-120-010	1	2	0			
13	17	2788G	CI09-SS-120-010	1	3	0			
13	17	2788G	CI09-SS-120-010	1	4	0			
13	17	2788G	CI09-SS-120-010	1	5	0			
13	17	2788G	CI09-SS-120-010	1	6	0			
13	17	2788G	CI09-SS-120-010	1	7	0			
13	17	2788G	CI09-SS-120-010	1	8	0			
13	17	2788G	CI09-SS-120-010	1	9	0			
13	17	2788G	CI09-SS-120-010	1	10	0	0		
14	23	2788G	CI09-SS-120-010	2	1	0			
14	23	2788G	CI09-SS-120-010	2	2	0			
14	23	2788G	CI09-SS-120-010	2	3	0			
14	23	2788G	CI09-SS-120-010	2	4	0			
14	23	2788G	CI09-SS-120-010	2	5	0			
14	23	2788G	CI09-SS-120-010	2	6	2			
14	23	2788G	CI09-SS-120-010	2	7	0			
14	23	2788G	CI09-SS-120-010	2	8	0			
14	23	2788G	CI09-SS-120-010	2	9	0			
14	23	2788G	CI09-SS-120-010	2	10	0	2		
15	6	2788G	CI09-SS-120-010	3	1	0			
15	6	2788G	CI09-SS-120-010	3	2	0			
15	6	2788G	CI09-SS-120-010	3	3	0			
15	6	2788G	CI09-SS-120-010	3	4	0			
15	6	2788G	CI09-SS-120-010	3	5	0			
15	6	2788G	CI09-SS-120-010	3	6	0			
15	6	2788G	CI09-SS-120-010	3	7	0			
15	6	2788G	CI09-SS-120-010	3	8	0			
15	6	2788G	CI09-SS-120-010	3	9	0			
15	6	2788G	CI09-SS-120-010	3	10	0	0		
16	19	2788G	CI09-SS-120-010	4	1	0			
16	19	2788G	CI09-SS-120-010	4	2	1			
16	19	2788G	CI09-SS-120-010	4	3	0			
16	19	2788G	CI09-SS-120-010	4	4	2			
16	19	2788G	CI09-SS-120-010	4	5	3			
16	19	2788G	CI09-SS-120-010	4	6	2			
16	19	2788G	CI09-SS-120-010	4	7	2			
16	19	2788G	CI09-SS-120-010	4	8	0			
16	19	2788G	CI09-SS-120-010	4	9	0			
16	19	2788G	CI09-SS-120-010	4	10	0	10		
17	4	2788G	CI09-SS-120-010	5	1	0			
17	4	2788G	CI09-SS-120-010	5	2	0			
17	4	2788G	CI09-SS-120-010	5	3	0		Mean	2.4
17	4	2788G	CI09-SS-120-010	5	4	0		SD	4.3
17	4	2788G	CI09-SS-120-010	5	5	0		n	5
17	4	2788G	CI09-SS-120-010	5	6	0			
17	4	2788G	CI09-SS-120-010	5	7	0			
17	4	2788G	CI09-SS-120-010	5	8	0			
17	4	2788G	CI09-SS-120-010	5	9	0			
17	4	2788G	CI09-SS-120-010	5	10	0	0		
19	5	2790G	CI09-SS-180-010	1	1	0			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
19	5	2790G	CI09-SS-180-010	1	2	0			
19	5	2790G	CI09-SS-180-010	1	3	0			
19	5	2790G	CI09-SS-180-010	1	4	0			
19	5	2790G	CI09-SS-180-010	1	5	0			
19	5	2790G	CI09-SS-180-010	1	6	0			
19	5	2790G	CI09-SS-180-010	1	7	0			
19	5	2790G	CI09-SS-180-010	1	8	0			
19	5	2790G	CI09-SS-180-010	1	9	0			
19	5	2790G	CI09-SS-180-010	1	10	0	0		
20	15	2790G	CI09-SS-180-010	2	1	0			
20	15	2790G	CI09-SS-180-010	2	2	0			
20	15	2790G	CI09-SS-180-010	2	3	0			
20	15	2790G	CI09-SS-180-010	2	4	0			
20	15	2790G	CI09-SS-180-010	2	5	0			
20	15	2790G	CI09-SS-180-010	2	6	0			
20	15	2790G	CI09-SS-180-010	2	7	0			
20	15	2790G	CI09-SS-180-010	2	8	0			
20	15	2790G	CI09-SS-180-010	2	9	0			
20	15	2790G	CI09-SS-180-010	2	10	0	0		
21	28	2790G	CI09-SS-180-010	3	1	0			
21	28	2790G	CI09-SS-180-010	3	2	0			
21	28	2790G	CI09-SS-180-010	3	3	0			
21	28	2790G	CI09-SS-180-010	3	4	0			
21	28	2790G	CI09-SS-180-010	3	5	0			
21	28	2790G	CI09-SS-180-010	3	6	0			
21	28	2790G	CI09-SS-180-010	3	7	0			
21	28	2790G	CI09-SS-180-010	3	8	0			
21	28	2790G	CI09-SS-180-010	3	9	0			
21	28	2790G	CI09-SS-180-010	3	10	0	0		
22	8	2790G	CI09-SS-180-010	4	1	0			
22	8	2790G	CI09-SS-180-010	4	2	0			
22	8	2790G	CI09-SS-180-010	4	3	0			
22	8	2790G	CI09-SS-180-010	4	4	0			
22	8	2790G	CI09-SS-180-010	4	5	0			
22	8	2790G	CI09-SS-180-010	4	6	0			
22	8	2790G	CI09-SS-180-010	4	7	0			
22	8	2790G	CI09-SS-180-010	4	8	0			
22	8	2790G	CI09-SS-180-010	4	9	0			
22	8	2790G	CI09-SS-180-010	4	10	0	0		
23	20	2790G	CI09-SS-180-010	5	1	1			
23	20	2790G	CI09-SS-180-010	5	2	0			
23	20	2790G	CI09-SS-180-010	5	3	0		Mean	0.2
23	20	2790G	CI09-SS-180-010	5	4	0		SD	0.4
23	20	2790G	CI09-SS-180-010	5	5	0		n	5
23	20	2790G	CI09-SS-180-010	5	6	0			
23	20	2790G	CI09-SS-180-010	5	7	0			
23	20	2790G	CI09-SS-180-010	5	8	0			
23	20	2790G	CI09-SS-180-010	5	9	0			
23	20	2790G	CI09-SS-180-010	5	10	0	1		
25	14	2807G	control	1	1	0			
25	14	2807G	control	1	2	0			

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	EMERG	TOTAL EMERG		
25	14	2807G	control	1	3	0			
25	14	2807G	control	1	4	0			
25	14	2807G	control	1	5	0			
25	14	2807G	control	1	6	0			
25	14	2807G	control	1	7	0			
25	14	2807G	control	1	8	0			
25	14	2807G	control	1	9	0			
25	14	2807G	control	1	10	0	0		
26	7	2807G	control	2	1	0			
26	7	2807G	control	2	2	0			
26	7	2807G	control	2	3	0			
26	7	2807G	control	2	4	0			
26	7	2807G	control	2	5	0			
26	7	2807G	control	2	6	0			
26	7	2807G	control	2	7	0			
26	7	2807G	control	2	8	0			
26	7	2807G	control	2	9	0			
26	7	2807G	control	2	10	0	0		
27	16	2807G	control	3	1	0			
27	16	2807G	control	3	2	0			
27	16	2807G	control	3	3	0			
27	16	2807G	control	3	4	0			
27	16	2807G	control	3	5	0			
27	16	2807G	control	3	6	0			
27	16	2807G	control	3	7	0			
27	16	2807G	control	3	8	0			
27	16	2807G	control	3	9	0			
27	16	2807G	control	3	10	0	0		
28	22	2807G	control	4	1	1			
28	22	2807G	control	4	2	2			
28	22	2807G	control	4	3	0			
28	22	2807G	control	4	4	2			
28	22	2807G	control	4	5	2			
28	22	2807G	control	4	6	0			
28	22	2807G	control	4	7	2			
28	22	2807G	control	4	8	1			
28	22	2807G	control	4	9	2			
28	22	2807G	control	4	10	2	14		
29	29	2807G	control	5	1	0			
29	29	2807G	control	5	2	0			
29	29	2807G	control	5	3	0		Mean	2.8
29	29	2807G	control	5	4	0		SD	6.3
29	29	2807G	control	5	5	0		n	5
29	29	2807G	control	5	6	0			
29	29	2807G	control	5	7	0			
29	29	2807G	control	5	8	0			
29	29	2807G	control	5	9	0			
29	29	2807G	control	5	10	0	0		

Water Quality data entry verified against laboratory bench sheets 9-9-09 JWF 8/27/09

Water Quality Data

BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3	Interstitial pH	SAL	< or >	NH4+NH3	< or >	NH3	assumed interstitial temp.
bulk	2736G	EW09-SS-215-010												7.5	24.0		18.5		0.163	15
bulk	2758G	EW09-SS-015-010												7.6	28.5		63.6		0.678	
bulk	2788G	CI09-SS-120-010												7.9	29.5		29.9		0.627	
bulk	2790G	CI09-SS-180-010												7.3	27.0		3.0		0.016	
2	2807G	control	6	0	15.9	8.2	27.0	8.0	<0.02	<	0.1	<	0.004							
3	2758G	EW09-SS-015-010	6	0	15.9	8.1	27.5	7.9	<0.02		6.0		0.214							
9	2790G	CI09-SS-180-010	6	0	15.9	8.0	27.5	7.9	<0.02	<	0.1	<	0.003							
26	2788G	CI09-SS-120-010	6	0	15.7	8.2	28.0	7.9	<0.02		1.9		0.082							
27	2736G	EW09-SS-215-010	6	0	15.7	8.1	28.0	8.1	<0.02		2.7		0.094							
2	2807G	control	6	1				7.4												
2	2807G	control	6	1	15.9	8.1	27.5	7.8												
3	2758G	EW09-SS-015-010	6	1	15.9	8.2	27.5	8.0												
6	2788G	CI09-SS-120-010	3	1				7.1												
8	2790G	CI09-SS-180-010	4	1				7.0												
9	2790G	CI09-SS-180-010	6	1				7.1												
9	2790G	CI09-SS-180-010	6	1	15.8	8.1	28.0	7.9												
11	2758G	EW09-SS-015-010	2	1				7.2												
26	2788G	CI09-SS-120-010	6	1	15.6	8.2	27.5	8.1												
27	2736G	EW09-SS-215-010	6	1				7.3												
27	2736G	EW09-SS-215-010	6	1	15.6	8.1	28.0	7.9												
2	2807G	control	6	2	15.9	8.3	27.5	7.9												
3	2758G	EW09-SS-015-010	6	2	15.8	8.5	28.0	7.9												
9	2790G	CI09-SS-180-010	6	2	15.8	8.2	28.0	7.9												
26	2788G	CI09-SS-120-010	6	2	15.6	8.4	28.5	7.9												
27	2736G	EW09-SS-215-010	6	2	15.6	8.3	28.0	7.9												
2	2807G	control	6	3	16.0	8.2	28.0	8.0												
3	2758G	EW09-SS-015-010	6	3	15.8	8.3	28.5	7.6												
9	2790G	CI09-SS-180-010	6	3	15.8	8.2	28.0	7.8												
26	2788G	CI09-SS-120-010	6	3	15.7	8.3	28.5	7.7												
27	2736G	EW09-SS-215-010	6	3	15.7	8.3	28.5	7.5												
2	2807G	control	6	4	15.8	8.2	29.0	8.5												
3	2758G	EW09-SS-015-010	6	4	15.8	8.2	28.5	8.0												
9	2790G	CI09-SS-180-010	6	4	15.8	8.0	29.0	8.2												
26	2788G	CI09-SS-120-010	6	4	15.7	8.2	29.0	8.2												
27	2736G	EW09-SS-215-010	6	4				6.4												
27	2736G	EW09-SS-215-010	6	4	15.7	8.2	29.5	7.6												
2	2807G	control	6	5	15.8	8.3	28.5	8.0												
3	2758G	EW09-SS-015-010	6	5	15.7	8.4	28.5	7.7												
9	2790G	CI09-SS-180-010	6	5	15.7	8.2	28.5	7.8												
26	2788G	CI09-SS-120-010	6	5	15.6	8.3	29.5	7.8												
27	2736G	EW09-SS-215-010	6	5	15.5	8.4	29.0	7.6												
2	2807G	control	6	6				8.3												
2	2807G	control	6	6	15.8	8.3	28.0	8.1												

NAS BKR	CLIENT SMPL	DESCRIP	REP	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3	Interstitial pH	SAL	< or >	NH4+NH3	< or >	NH3	assumed interstitial temp.
3	2758G	EW09-SS-015-010	6	5	15.7	8.4	28.5	7.8												
9	2790G	CI09-SS-180-010	6	6	15.7	8.1	28.5	7.9												
26	2788G	CI09-SS-120-010	6	5	15.5	8.4	29.0	8.0												
27	2736G	EW09-SS-215-010	6	5	15.5	8.4	29.0	8.1												
2	2807G	control	6	7	15.9	8.2	29.0	8.0												
3	2758G	EW09-SS-015-010	6	7	15.8	8.4	28.5	7.9												
9	2790G	CI09-SS-180-010	6	7	15.7	8.1	29.0	8.2												
26	2788G	CI09-SS-120-010	6	7	15.6	8.4	29.5	8.2												
27	2736G	EW09-SS-215-010	6	7	15.6	8.4	29.5	7.6												
2	2807G	control	6	8	15.6	8.2	28.5	7.6												
3	2758G	EW09-SS-015-010	6	8	15.5	8.5	29.0	7.7												
9	2790G	CI09-SS-180-010	6	8	15.5	8.1	29.0	7.9												
26	2788G	CI09-SS-120-010	6	8	15.5	8.5	29.5	8.2												
27	2736G	EW09-SS-215-010	6	8	15.4	8.4	29.5	7.2												
2	2807G	control	6	9	15.8	8.1	28.0	8.0												
3	2758G	EW09-SS-015-010	6	9	15.8	8.6	28.5	7.9												
9	2790G	CI09-SS-180-010	6	9	15.7	8.1	29.0	7.9												
26	2788G	CI09-SS-120-010	6	9	15.5	8.5	29.0	8.2												
27	2736G	EW09-SS-215-010	6	9	15.4	8.5	28.5	7.1												
2	2807G	control	6	10	15.9	8.2	28.0	7.8	<0.02	<	0.1	<	0.004	7.6	28.0	<	0.5	<	0.005	
3	2758G	EW09-SS-015-010	6	10	15.6	8.7	28.5	7.7	<0.02		5.2		0.670	7.5	28.0		18.1		0.155	
9	2790G	CI09-SS-180-010	6	10	15.8	8.1	29.0	7.9	<0.02	<	0.1	<	0.004	7.0	28.0		1.3		0.003	
26	2788G	CI09-SS-120-010	6	10	15.7	8.7	29.5	8.4	<0.02	<	0.1		0.013	7.8	29.0		1.3		0.022	
27	2736G	EW09-SS-215-010	5	10	15.6	8.6	29.0	7.3	<0.02		2.4		0.243	7.3	28.0		6.7		0.035	
														The following interstitial value summary does not include the bulk sediment samples						
				Mean	15.7	8.3	28.5	7.8	---		---		---	7.4	28.2		---		---	
				SD	0.1	0.2	0.6	0.4	---		---		---	0.3	0.4		---		---	
				n	55	55	55	63	10		10		10	5	5		5		5	
				Min	15.4	8.0	27.0	6.4	<0.02	<	0.1	<	0.003	7.0	28.0	<	0.5	<	0.007	
				Max	16.0	8.7	29.5	8.5	<0.02		6.0		0.670	7.8	29.0		18.1		0.155	

Page 33 of 41

CHAIN-OF-CUSTODY RECORDS

Michele Redmond

From: Thai Do [ThaiD@windwardenv.com]
Sent: Friday, July 31, 2009 10:02 AM
To: mredmond@nwaquatic.com
Cc: Susan McGroddy; Helle Andersen
Subject: RE: Selection of FW bioassay stations

Hi Michele,

Please use these reference sediment IDs:

C109-SS-120-010 (20% fines) for station 15 (26.6% fines)
C109-SS-180-010 (80% fines) for station 215 (76.0% fines)

Thanks.

Thai Do
[illegible]

[illegible]
[illegible]
[illegible]: thaid@windwardenv.com

This electronic message transmission contains information that may be confidential and/or privileged work product prepared in anticipation of litigation. The information is intended to be for the use of the individual or entity named above. If you are not the intended recipient, please be aware that any disclosure, copying distribution or use of the contents of this information is prohibited. If you have received this electronic transmission in error, please notify me by telephone or by electronic mail.
Please consider the environment before printing this email.

From: Susan McGroddy
Sent: Thursday, 30 July, 2009 13:28
To: Helle Andersen; mredmond@nwaquatic.com
Cc: Thai Do
Subject: RE: Selection of FW bioassay stations

Michele,

We have selected two locations for bioassay testing for LW. Location 15 and Location 215. I have attached the grain size information. Thai will let you know which reference sediments are appropriate

Thanks.
Susie

From: Helle Andersen
Sent: Tuesday, July 28, 2009 4:18 PM
To: mredmond@nwaquatic.com
Cc: Susan McGroddy

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: EN RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: TD, SR, RB, CL

Ship to: NAS
Attn: Michele Redmond
Shipping Date: 6.23.09
Shipper: UPS
Airbill Number:
Form filled out by: C. Lorenz
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (jar tag number(s))
6.22.09	903	EW09-SS-223-010	5	Sediment	X							NAS # 27336
	1007	EW09-SS-214-010	5		X							27346
	1036	EW09-SS-213-010	5		X							27356
	1121	EW09-SS-215-010	5		X							27366
	1202	EW09-SS-018-010	5		X							27376
	1228	EW09-SS-016-010	5		X							27386
	1252	EW09-SS-022-010	5		X							27396
	1318	EW09-SS-028-010	5		X							27406
	1340	EW09-SS-039-010	5		X							27416
	1400	EW09-SS-017-010	5		X							27426
	1422	EW09-SS-026-010	5		X							27436
	1436	EW09-SS-040-010	5		X							27446
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: TIM DO	GERALD LIBSACK	Print name:	
Signature:	Company: Gary Buhler	Signature:	Company:
Company: WARDWARD	NORTHWESTERN AQUATIC SCIENCES	Company:	
Date/Time: 06.23.09/1200	Date/Time: 6-24-09 / 0945	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt:: 6-24-09	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

14 of 35 pages

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

2 OF 7

DWT:25,17,12

SHIP TO:
MICHELE REDMOND
541 265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

TRACKING #: 1Z Y34 89E 15 9281 6534

1+

BILLING: P/P

Reference#1: EW Surface Sediment

UIS 11 1 05 WXP270 90.0A 04/2009

TM

https://www.ups.com/uis/create?Action=UPDATE&Type=Ship&PRINT_ONLY=1&UISReceipt&POPUP_LEVEL... 6/23/2009

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2698

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: Thao Do

Ship to: NAS
Attn: Michele Redmond
Shipping Date: 6/24/2009
Shipper: UPS
Airbill Number:
Form filled out by: S Kotka
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (jar tag number(s))
06.23.09	0857	EW09-SS-222-010	5	Sediment	X							NAS# 27546
	0929	EW09-SS-221-010	5	"	X							27556
	1003	EW09-SS-098-010	5	"	X							27566
	1024	EW09-SS-012-010	5	"	X							27576
	1034	EW09-SS-015-010	5	"	X							27586
	1050	EW09-SS-107-010	5	"	X							27596
	1108	EW09-SS-106-010	5	"	X							27606
	1132	EW09-SS-208-010	5	"	X							27616
	1153	EW09-SS-206-010	5	"	X							27626
	1305	EW09-SS-210-010	5	"	X							27636
	1319	EW09-SS-205-010	5	"	X							27646
	1354	EW09-SS-202-010	5	"	X							27656
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Suanne Pepinger	Print name:	Print name:	
Signature:	Signature:	Signature:	
Company: Windward	Company: Northwestern Aquatic Sciences	Company:	Company:
Date/Time: 6/24/2009 0700	Date/Time: 6-25-09 / 0830	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

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Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

3 OF 7

DWT:25,17,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M. **1+**

TRACKING #: 1Z Y34 89E 15 9265 8214

BILLING: P/P

Reference#1: EW Surface Sediment

UIS 11 1.05 WXPE70 60 0A 04/2009

TM

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2709

Project/Client Name: EW RI/FS Surface Sediment (Round 2)
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: T.Do, R. Berg

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: T.DO

Shipping Date: 07.08.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							HOLD PENDING INSTRUCTIONS TO ANALYZE Comments / Instructions (Jar tag number(s))
07.07.09	1125	CI09-SS-120-010	10 L	Sediment	X			NAS# 2788G				~20% fines
↓	1440	CI09-SS-140-010	10 L	↓	X				#2789G			~40% fines
↓	1730	CI09-SS-180-010	10 L	↓	X				#2790G			~80% fines
		Total Number of Containers	30 L	Purchase Order / Statement of Work #								

1 of 1 page 39 of 41

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: THAI DO	Michele S. Redmond	Print name:	
Signature:	Company: NAS	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 07.08.09/1200	Date/Time: 7-9-09 / 08:30	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

Windward environmental LLC
200 West Mercer Street
Suite 403
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

1 OF 2

DWT:18,15,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

1+

TRACKING #: 1Z Y34 89E 15 9240 2267

BILLING: P/P

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

6.5°C

DATE 07.08.09

INITIALS TK

LAB SAMPLE
DO NOT TAMPER

DATE 07.08.09

INITIALS TK

LAB SAMPLE
DO NOT TAMPER

https://www.ups.com/uis/create?Action[illegible]ISReceipt&POPUP_LEVEL=[illegible]

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

2 OF 2

DWT:18,15,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

TRACKING #: 1Z Y34 89E 15 9485 8272

1+

BILLING: P/P

US 11 1 09 [illegible] 90 0A 04/2009

TM

5.5°C

DATE 27-08-09

INITIALS [illegible]

LAB SAMPLE
DO NOT TAMPER

DATE 27.08.09

INITIALS [illegible]

LAB SAMPLE
DO NOT TAMPER

REFERENCE TOXICANT RESULTS AND ANALYSIS

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO NAS-XXX-RA1

ACUTE TOXICITY TEST (ALL SPECIES)

reviewed

Test No. 999-2607 Client: QC Test Investigator PP 1-7 MLR 9-10-09

Test Type (rangefinding/definitive) definitive Test Length (hr) 96

Species *Eohaustorius estuarius*

STUDY MANAGEMENT

Client: QC Test

Client's Study Monitor: N/A

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. M.S. Redmond MSR

QA Officer L.K. Nemeth

1. GABaker GB 2. Yves Nakahama YN

3. Lidia R. Sandoval LRS 4. Susan Gogl SG

5. 6.

Study Schedule:

Test Beginning: 8-11-09 1045 Test Ending: 8-15-09 10:25

TEST MATERIAL

Description: Ammonia prepared from ammonium chloride; stock prepared 3-18-08. 9760 mg/L (=9.76 mg/mL) expressed as N

DILUTION WATER

Description: Yaquina Bay, Oregon, sea water

Date of Preparation/Collection: 8-9-09

Salinity (ppt) 27.0 pH 8.2

Treatments: Filterec to 0.4 µm, salinity adjusted with Milli-Q deionized water, aerated

TEST LOCATION

Test conducted in (circle one): room 1 room 2 trailer water bath other: RM #4

Randomization chart:

B	125	250	62	500	Ø	31				
A	500	62	Ø	250	31	125				

Error codes. 1) Correction of handwriting error
2) Written in wrong location; entry deleted
3) Wrong date deleted, replaced with correct date
4) Error found in measurement; measurement repeated

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2607 Client: QC Test Investigator

TEST ORGANISMS

Species: *Eohaustorius estuarius* Age: adult Size:

Source: Yaquina Bay, Oregon

If field-collected:

Date Collected: 8-7-09

Field conditions: Interstitial temperature: 15.5 Interstitial salinity: 36.0

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal. (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
8-8-09	15.3	8.2	30.0	8.1			yes	
8-9-09	15.2	8.3	28.5	8.2				
8-10-09	15.4	8.1	28.5	8.1				
8-11-09	15.3	8.2	29.0	8.2				
Mean	15.3	8.2	29.0	8.2				
S.D.	0.1	0.1	0.7	0.1				
(N)	(4)	(4)	(4)	(4)				

Photoperiod during acclimation: Constant light

TEST PROCEDURES AND CONDITIONS

Test concentrations (50% series recommended): 500, 250, 125, 62, 31, and 0 mg/L

Test chamber: 250 mL beakers Test volume: 100 mL

Replicates/treatment: 2 Organisms/treatment: 20 (10/repl)

Test water changes: None Aeration during test: None

Feeding: None.

Duration: 24-hr, 48-hr, (96-hr) Test temperature (deg.C): 15.0 +/- 1.0

Beaker placement: Stratified randomization Photoperiod: Constant light

Test salinity (ppt): 28.0 +/- 1.0

MISCELLANEOUS NOTES

Test Solution Preparation:

Test Conc. (mg/L)	mL of stock (9760 mg/L) per 200 mL	
500	10.2	Bring up to
250	5.1	200 mL with
125	2.55	dilution water,
62	1.28	then split
31	0.64	between 2
0	0	replicates

LB 8-11-09

Light intensity measurements:

Date	Location	foot-candles
8-14-09	above glass plate, under mesh	7.4

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-RA1

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2607 Client QC Test Investigator

DAILY RECORD SHEET

Day 0 (8/11/09) YR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	15.4	7.6	28.0	8.1	10	10
2. 250	15.5	7.9	27.5	8.1	10	10
3. 125	15.5	7.9	27.5	8.1	10	10
4. 62	15.5	8.0	27.5	8.1	10	10
5. 31	15.4	8.1	27.5	8.1	10	10
6. 0	15.4	8.2	27.0	8.1	10	10

Day 1 (8/12/09) YR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	15.7	7.7	27.5	7.2	6 (4d)	7 (3d)
2. 250	15.7	7.8	27.5	7.2	9 (1d)	10
3. 125	15.7	7.9	27.5	7.1	10	10
4. 62	15.8	7.9	27.5	7.0	10	10
5. 31	15.8	7.9	27.5	7.0	10	10
6. 0	15.9	8.0	27.5	7.3	10	10

Day 2 (8/13/09) YR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	15.7	7.8	28.0	Brip 7.3	Ø (6D)	3 (4D)
2. 250	15.6	7.8	29.0	7.3	9	10
3. 125	15.6	7.9	28.0	6.6	9 (1D)	10
4. 62	15.6	7.9	28.0	7.3	9 (1D)	10
5. 31	15.5	8.0	27.5	7.1	10	10
6. 0	15.5	8.1	28.5	7.4	10	10

Day 3 (8/14/09) AS

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	15.6	7.8	28.5	7.2	Replicate B Ø	Ø (3d)
2. 250	15.5	7.8	28.5	7.1	5 (4d)	6 (4d)
3. 125	15.5	7.9	28.0	7.3	9	10
4. 62	15.5	8.0	28.0	7.4	9	10
5. 31	15.5	8.0	28.0	7.2	10	10
6. 0	15.5	8.0	28.0	7.3	10	10

Day 4 (8/15/09) YR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	Survivors B
1. 500	—	—	—	—	0	0
2. 250	15.6	7.7	29.0	7.8	5	3 (3D)
3. 125	15.7	7.9	29.0	7.5	9	10
4. 62	15.6	7.9	29.0	7.5	9	10
5. 31	15.6	7.9	28.5	7.2	8 (2D)	10
6. 0	15.6	8.0	29.0	7.4	10	10
WQ: Mean	15.6	7.9	28.0	7.4		
SD	0.1	0.1	0.6	0.4		
n	29	29	29	29		

CETIS Summary Report

Report Date: 27 Aug-09 10:49 (p 1 of 1)
Test Code: 06-5143-4817/999-2607

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Batch ID:	12-6058-3759	Test Type:	Survival	Analyst:	
Start Date:	11 Aug-09 10:45	Protocol:		Diluent:	Yaquina Bay Seawater
Ending Date:	15 Aug-09 10:25	Species:	Echaustorius estuarius	Brine:	
Duration:	96h	Source:	Field Collected	Age:	

Sample ID:	19-7086-5840	Code:	757906B0	Client:	Internal Lab
Sample Date:	11 Aug-09 10:45	Material:	Ammonia as nitrogen	Project:	
Receive Date:	11 Aug-09 10:45	Source:	Reference Toxicant		
Sample Age:	N/A	Station:			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
08-3311-9835	Proportion Survived	125	250	176.8	27.3%		Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
14-9702-9670	Proportion Survived	EC50	225.7	188.8	269.8		Trimmed Spearman-Kärber

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	2	1	1	1	1	1	0	0	0.0%	0.0%
31		2	0.9	0.8472	0.9528	0.8	1	0.02582	0.1414	15.71%	10.0%
62		2	0.95	0.9236	0.9764	0.9	1	0.01291	0.07071	7.44%	5.0%
125		2	0.95	0.9236	0.9764	0.9	1	0.01291	0.07071	7.44%	5.0%
250		2	0.4	0.3472	0.4528	0.3	0.5	0.02582	0.1414	35.36%	60.0%
500		2	0	0	0	0	0	0	0		100.0%

Proportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2
0	Dilution Water	1	1
31		0.8	1
62		0.9	1
125		0.9	1
250		0.5	0.3
500		0	0

CETIS Test Data Worksheet

Report Date: 27 Aug-09 10:47 (p 1 of 1)
Test Code: 05-5143-4817/999-2607

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Start Date:	11 Aug-09 10:45	Species:	Eohaustorius estuarius	Sample Code:	757906B0
End Date:	15 Aug-09 10:25	Protocol:		Sample Source:	Reference Toxicant
Sample Date:	11 Aug-09 10:45	Material:	Ammonia as nitrogen	Sample Station:	

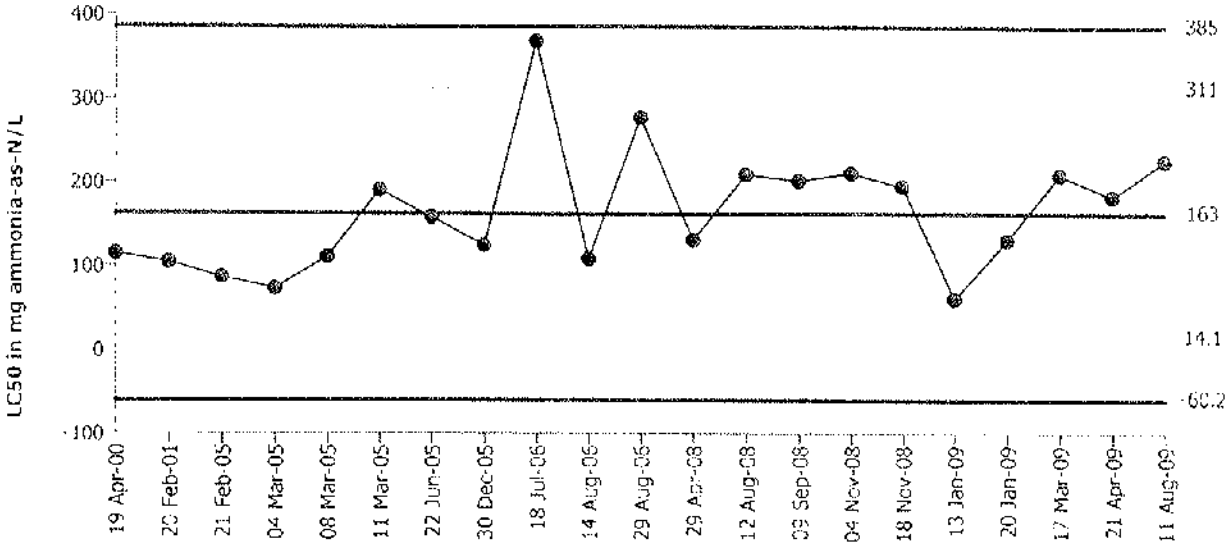
Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	10	10	10	
0	D	2	2	10	10	
31		1	5	10	8	
31		2	12	10	10	
62		1	1	10	9	
62		2	7	10	10	
125		1	8	10	9	
125		2	6	10	10	
250		1	3	10	5	
250		2	9	10	3	
500		1	11	10	0	
500		2	4	10	0	

Data entry verified against laboratory bench sheets.
MLR
8-27-09

Amphipod, Eohaustorius estuarius, acute reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Eohaustorius estuarius (Amphipod)	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Amphipod, Eohaustorius estuarius, acute reference toxicant test



Mean:	162.6	Count:	20	-2s Warning Limit:	14 08	-3s Action Limit:	-60 18
Sigma:	74.26	CV:	45 70%	+2s Warning Limit:	311.1	+3s Action Limit:	385 4

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2000	Apr	19	114.8	-47.79	-0.6435			16-2064-0490	14-1542-6174
2	2001	Feb	20	104.8	-57.84	-0.7789			01-8827-6895	16-6208-1639
3	2005		21	86.83	-75.77	-1.02			09-2612-0890	14-1988-7862
4		Mar	4	73.51	-89.09	-1 2			18-6741-9263	03-3923-4536
5			8	110.9	-51.68	-0.696			06-7346-2735	09-1676-9814
6			11	190.7	28.06	0.3779			09-4022-8352	06-3336-1149
7		Jun	22	157.9	-4.678	-0.06299			11-2691-7082	13-9495-1529
8		Dec	30	124.8	-37.78	-0.5088			07-5802-9309	05-7960-9956
9	2006	Jul	18	368.5	205.9	2.773	(+)		09-9291-1665	12-4928-9594
10		Aug	14	108.8	-53.79	-0.7243			09-2436-3006	07-0528-9135
11			29	277.6	115	1.548			18-6928-6460	08-4845-0989
12	2008	Apr	29	131	-31.56	-0.425			05-4539-2604	07-8525-2912
13		Aug	12	209.6	46.99	0.6328			01-8497-3298	02-5050-8460
14		Sep	9	201 9	39.32	0.5295			08-3162-4387	05-2476-3967
15		Nov	4	211 1	48.47	0.6528			05-2331-4280	13-4979-4657
16			18	195.4	32.76	0.4411			02-0122-0866	14-6072-4099
17	2009	Jan	13	61.01	-101.6	-1 368			10-7224-4902	18-3015-6866
18			20	131 1	-31.49	-0 4241			03-4280-4836	02-8836-7655
19		Mar	17	208.9	46.31	0.6237			08-4454-4357	07-9647-7485
20		Apr	21	183	20 37	0.2744			20-8615-9583	07-3172-5895
21		Aug	11	225.7	63 11	0 8499			05-5143-4817	14-9702-9670

MSR
8-27-09

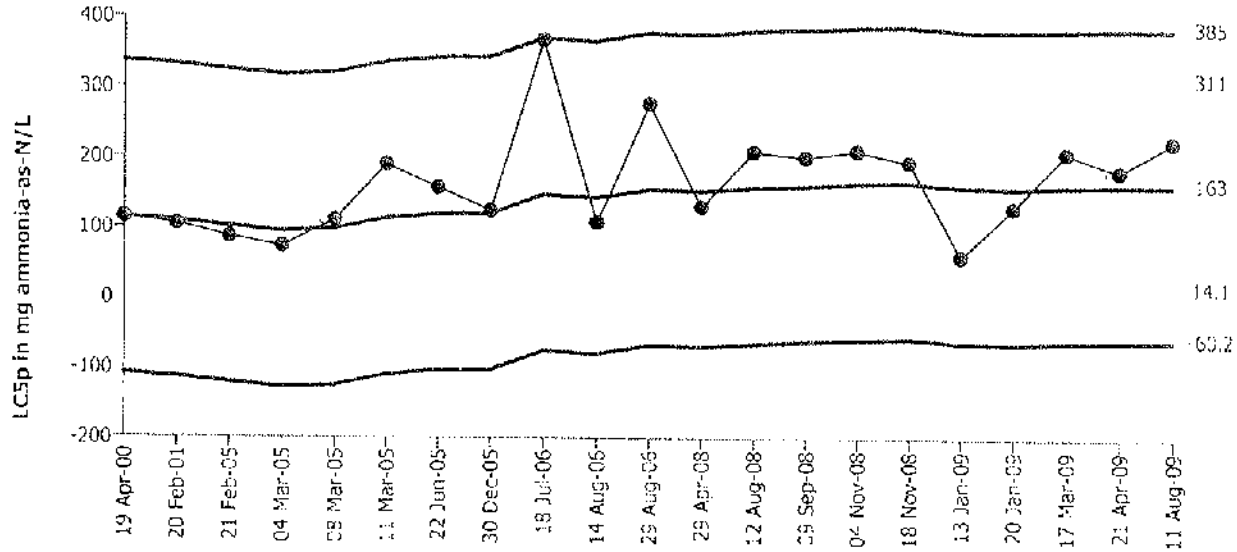
CETIS QC Plot

Report Date: 01 Sep-09 11 12 (1 of 1)

Amphipod, Eohaustorius estuarius, acute reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Eohaustorius estuarius (Amphipod)	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Amphipod, Eohaustorius estuarius, acute reference toxicant test



Mean:	162.6	Count:	20	-2s Warning Limit:	14.08	-3s Action Limit:	-60.18
Sigma:	74.26	CV:	45.70%	+2s Warning Limit:	311.1	+3s Action Limit:	385.4

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2000	Apr	19	114.8	-47.79	-0.6435			16-2064-0490	14-1542-6174
2	2001	Feb	20	104.8	-57.84	-0.7789			01-8827-6895	16-6208-1639
3	2005		21	86.83	-75.77	-1.02			09-2612-0890	14-1988-7862
4		Mar	4	73.51	-89.09	-1.2			18-6741-9263	03-3923-4536
5			8	110.9	-51.68	-0.696			06-7346-2735	09-1676-9814
6			11	190.7	28.06	0.3779			09-4022-8352	06-3336-1149
7		Jun	22	157.9	-4.678	-0.06299			11-2691-7082	13-9495-1529
8		Dec	30	124.8	-37.78	-0.5088			07-5802-9309	05-7960-9956
9	2006	Jul	18	368.5	205.9	2.773	(+)		09-9291-1665	12-4928-9594
10		Aug	14	108.8	-53.79	-0.7243			09-2436-3006	07-0528-9136
11			29	277.6	115	1.548			18-6928-0460	08-4845-0989
12	2008	Apr	29	131	-31.56	-0.425			05-4539-2604	07-8525-2912
13		Aug	12	209.6	46.99	0.6328			01-8497-3298	02-5050-8460
14		Sep	9	201.9	39.32	0.5295			08-3162-4387	05-2476-3967
15		Nov	4	211.1	48.47	0.6528			05-2331-4280	13-4979-4657
16			18	195.4	32.76	0.4411			02-0122-0866	14-6072-4099
17	2009	Jan	13	61.01	-101.6	-1.368			10-7224-4902	18-3015-6866
18			20	131.1	-31.49	-0.4241			03-4280-4836	02-8836-7655
19		Mar	17	208.9	46.31	0.6237			08-4454-4357	07-9647-7485
20		Apr	21	183	20.37	0.2744			20-8615-9583	07-3172-5855
21		Aug	11	225.7	63.11	0.8499			05-5143-4817	14-9702-9670

MER

Analyst 9-1-09 QA:

Report

of

Test No. 783-5

Juvenile *Neanthes* 20-Day Sediment Toxicity Test of Marine Sediments

Submitted to

Windward Environmental LLC
200 West Mercer St., Suite 401
Seattle, WA 98119

Submitted by

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

September 15, 2009

TOXICITY TEST REPORT

TEST IDENTIFICATION

Test No.: 783-5

Title: Juvenile *Neanthes* 20-day sediment toxicity test of marine sediments.

Protocol: NAS-XXX-NA4, June 20, 1990. Rev.4 (3-1-05). Based on: Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments (PSEP 1995), with modifications as specified by the Dredged Material Management Program (DMMP, formerly Puget Sound Dredged Disposal Analysis Program or PSDDA) and Washington State Sediment Management Standards (SMS).

STUDY MANAGEMENT

Study Sponsor: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Sponsor's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences, P.O. Box 1437, Newport, Oregon 97365.

Test Location: Newport Laboratory.

Laboratory's Study Personnel: M.S. Redmond, M.S., Proj. Mngr./ Study Dir.; L.K. Nemeth, B.A., M.B.A., QA Officer; R.S. Caldwell, Ph.D., Sr. Aq. Toxicol.; G.J. Irissarri, B.S., Aq. Toxicol.; S J. Gage, B.A., Sr.Tech.; L.P. Sandoval, B.S., Tech.; Y. Nakahama, Asst. Tech.

Study Schedule:

Test Beginning: 8-11-09, 1115 hrs.

Test Ending: 8-31-09, 1030 hrs.

Disposition of Study Records: All specimens, raw data, reports and other study records are stored according to Good Laboratory Practice regulations at Northwestern Aquatic Sciences, 3814 Yaquina Bay Rd., Newport, OR 97365.

Good Laboratory Practices: The test was conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

Statement of Quality Assurance: The test data were reviewed by the Quality Assurance Unit to assure that the study was performed in accordance with the protocol and standard operating procedures. This report is an accurate reflection of the raw data.

TEST MATERIAL

Control Sediment: Control sediment (NAS Sample #2807G) was collected from the *Eohaustorius estuarius* amphipod collection site, Yaquina Bay, Oregon, on 8-7-09. There was insufficient sample to determine interstitial salinity. The sediment was sieved through a 0.5-mm stainless steel screen and stored at 4°C in the dark.

Test Sediments: Two test sediments and two reference sediments were tested. Details follow:

NAS Sample No.	2736G	2758G
Sample Description	EW09-SS-215-010	EW09-SS-015-010
Collection Date	6-22-09	6-23-09
Receipt Date	6-24-09	6-25-09
Interstitial Salinity (‰)	24.0	28.5

NAS Sample No.	2788G	2790G
Sample Description	CI09-SS-120-010	CI09-SS-180-010
Collection Date	7-7-09	7-7-09
Receipt Date	7-9-09	7-9-09
Interstitial Salinity (‰)	29.5	27.0

Sample Storage: Samples were stored at 4°C in the dark.

Treatments: The samples were minimally homogenized by mixing with stainless steel implements.

TEST WATER

Source: Yaquina Bay, Oregon
Date(s) of Collection: 8-7-09, 8-24-09
Water Quality: Salinity 27.5‰, 28.0‰; pH 8.2, 8.0
Pretreatment: Filtered to ≤0.40 µm, salinity-adjusted with MilliQ® deionized water, aerated.

TEST ORGANISMS

Species: *Neanthes arenaceodentata,* marine polychaete worm
Age: 2-3 week post-emergence juveniles
Initial wt.: 0.93 mg
Source: Laboratory cultures at the Department of Biology, California State University, Long Beach, California. Worms were received on 8-6-09.
Acclimation: Average conditions during the five days prior to testing were: temperature, 20.8 ± 0.6°C; pH, 8.0 ± 0.5; salinity, 29.2 ± 2.4‰; dissolved oxygen, 7.0 ± 0.7 mg/L. Photoperiod was constant light.

TEST PROCEDURES AND CONDITIONS

The following is an abbreviated statement of the test procedures and a statement of the test conditions actually employed. See the test protocol (Appendix I) for a more detailed description of the test procedures used in this study.
Test Chambers: 1 L covered borosilicate glass beakers.
Test Volumes: 175 ml of test, reference, or control sediment; 950 ml total volume.
Replicates/Treatment: 5 (plus one water quality replicate)
Sediment Salinity Adjustment: None
Organisms/Treatment: 25 (5/replicate)
Water Volume Changes: One third of the seawater in each beaker was replaced every third day.
Aeration: Provided through a 1-mL glass pipette placed not closer than 2 cm from sediment, bubbled at a minimal rate (about 100 bubbles/minute) that did not disturb the sediment surface.
Feeding: Animals were fed 40 mg TetraMarine® per beaker every other day.
Acceptance Criteria: Results are valid if mean control survival is at least 90%. DMMP and SMS require control sediment mortality of ≤10% and a growth rate of >0.38 mg/individual/day.
Performance Criteria: For DMMP and SMS testing, the reference sediment mortality should be ≤20% with a growth rate of ≥80% that of the negative control sediment.
Effects Criteria: 1) survival after 20 days, 2) average individual biomass, and 3) average individual growth rate. Death is defined as no visible appendage movement or response to tactile stimulation. Missing worms are considered dead.
Water Quality and Other Test Conditions: The temperature, pH, salinity, and dissolved oxygen were measured in the overlying water of one replicate on test days 0 and 20, and on test days 3, 6, 9, 12, 15, and 18 prior to test solution renewal. Total dissolved sulfide and total ammonia-N were measured in the overlying water of the one replicate test chamber on days 0 and 20. Total ammonia-N was also measured in the overlying water of one replicate test chamber on day 3 prior to water renewal. Total soluble sulfide and total ammonia-N were measured using Hach reagents based on the methylene blue (EPA Method 376.2) and salicylate (Clin. Chim. Acta 14:403, 1996) colorimetric methods, respectively; samples were not distilled prior to analysis. Un-ionized ammonia-N was computed using "Un-ionized Ammonia Calculator", v1.0 (Dr. Landon Ross, Florida Department of Environmental Protection). The photoperiod was constant light.

DATA ANALYSIS METHODS

Percent survival, individual biomass, and individual growth rate at the end of the test were determined from the final observations according to the formulas:

Percent survival = 100 x (no. of surviving worms/initial number of worms)
Individual biomass = total dry wt. of worms/number of surviving worms weighed
Individual growth rate = (individual biomass - the initial dry wt.)/the number of test days

The means and standard deviations were then calculated for each treatment level. The statistical software employed for these calculations was Microsoft Excel 2000.

PROTOCOL DEVIATIONS

1. One salinity measurement (30.5‰) exceeded the protocol-specified range of 28.0 ± 2.0‰.
2. Water quality measurements were accidentally not taken on day 9 before water renewal. Measurements were taken on day 10 when the omission was discovered.

REFERENCE TOXICANT TEST

The reference toxicant test is a standard multi-concentration toxicity test using ammonia expressed as NH_3-N and administered as NH_3Cl, to evaluate the performance of the test organisms used in the sediment toxicity test. The performance is evaluated by comparing the results of this test with historical results obtained at the laboratory. A summary of the reference toxicant test result is given below. The reference toxicant test raw data are found in Appendix II.

Test No.: 999-2608
Reference Toxicant and Source: Ammonia as ammonium chloride, 9.76 mg ammonia as N/ml stock prepared 3-18-08
Test Date: 8-11-09
Dilution Water Used: Yaquina Bay, Oregon, seawater; 27.5‰
Result: The 96-hr LC50 was 234 mg NH_3-N/L. This result is within the laboratory's control chart warning limits (125–316 mg NH_3-N/L).

RESULTS AND DISCUSSION

Observations of water quality parameters during the test are summarized in Table 1. Individual water quality measurements are located in the raw data (Appendix II).

Except as noted above, all measurements of standard water quality parameters were within protocol-specified ranges. Dissolved sulfide was not detected in the overlying water (detection limit 0.02 mg/L). Total ammonia-N concentrations in the overlying water ranged from <0.1 mg/L to 10.0 mg/L (maximum 0.482 mg/L un-ionized ammonia).

Table 2 shows the effects of test sediment exposures on survival and growth of *Neanthes*. The test met the acceptability criterion (≥90%) for control survival; mean survival in the control was 100.0%. The individual growth rate in the controls averaged 1.13 mg/day/worm. This meets the SMS recommendation for a minimum growth rate of 0.72 mg/day/worm for *Neanthes*. The average initial weight of worms was 0.93 mg, within the recommended range of 0.5–1.0 mg. The reference sediments included in the study met the performance standard requirement that mortality in the reference sediment should be ≤20%; mean mortality was 0.0% in both reference sediments (CI09-SS-120-010 and CI09-SS-180-010). The reference sediment growth rate criterion was also met for both reference sediments. According to SMS criteria, the mean individual growth rate in the reference sediment should be ≥80% of the mean individual growth rate in the control sediment. Control growth rate was 1.13 mg/day/worm, and that in reference sediments CI09-SS-120-010and CI09-SS-180-010 was 1.16 mg/day/worm (103% of control growth rate) and 1.08 mg/day/worm (95.6% of control growth rate), respectively.

The test control acceptance criteria and reference sediment performance criteria for survival and growth were met. Positive control performance was within the laboratory's acceptance limits. It is concluded, therefore, that the test has developed fully acceptable data for use in making management decisions.

Because no statistical comparisons were performed between the test sample and the control or reference sediment, no conclusions are given regarding the toxicity of test sediments.

STUDY APPROVAL

Michelle S. Redmond 9/18/09
Project Manager/ Study Director Date

Chelsie R. Fine 9-21-09
Quality Assurance Unit Date

Sandra K. Kennedy 9/11/09
Assistant Laboratory Director Date

Table 1. Summary of overlying water quality conditions during tests of the polychaete, *Neanthes arenaceodentata*, exposed to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Temperature (°C)	20.1 ± 0.3	19.4	20.6	50
pH	8.1 ± 0.2	7.7	8.6	40
Salinity (‰)	29.3 ± 0.8	28.0	30.5	40
Dissolved oxygen (mg/L)	6.8 ± 0.5	5.7	7.5	40
Total soluble sulfide (mg/L)	---	<0.02	<0.02	10
Total ammonia-N (mg/L)	---	<0.1	10.0	15
Un-ionized ammonia (mg/L)	---	<0.005	0.482	15

Table 2. Means and standard deviations (n=5) of percent survival, individual dry weight, and individual growth rate of *Neanthes arenaceodentata* exposed for 20 days to marine sediments.

Sample description	Percent Survival (20-days)	Individual dry wt. (mg)	Individual growth rate (mg/day/worm)
Control (NAS #2807G)	100.0 ± 0.0	23.6 ± 3.7	1.13 ± 0.19
CI09-SS-120-010 (NAS #2788G)	100.0 ± 0.0	24.1 ± 2.2	1.16 ± 0.11
CI09-SS-180-010 (NAS #2790G)	100.0 ± 0.0	22.5 ± 1.4	1.08 ± 0.07
EW09-SS-215-010 (NAS #2736G)	100.0 ± 0.0	18.8 ± 2.8	0.89 ± 0.14
EW09-SS-015-010 (NAS #2758G)	100.0 ± 0.0	14.7 ± 2.4	0.69 ± 0.12

APPENDIX I

PROTOCOL

TEST PROTOCOL

JUVENILE POLYCHAETE, *NEANTHES ARENACEODENTATA*, 20-DAY SOLID PHASE SEDIMENT BIOASSAY

1. INTRODUCTION

1.1 Purpose of Study: The purpose of this study is to identify marine sediments that are toxic to a marine polychaete worm. .

1.2 Summary of Method: The 20-day static renewal test is performed using laboratory-cultured, 2-3 week post-emergence juvenile worms purchased from a supplier. Test sediments are placed in the bottom of 1-liter glass beakers used as test vessels which are then filled with clean seawater. Five replicate containers for each test sediment, reference sediment, and the control sediment, each containing 5 test organisms, are employed. During test setup, three subsamples of five worms each are randomly selected to provide an estimate of initial biomass. During the exposure period, each chamber is provided with 40 mg of food on an every-other-day basis. Every third day, one-third of the seawater in each chamber is exchanged with fresh seawater. Survival and growth are the response criteria used. The mean and standard deviation for each treatment and test endpoint are given in the final report. Between-treatment statistical comparisons may be made, where each treatment is compared to the control and/or reference sediment. This protocol is based on PSEP (1995) guidelines, PSDDA (PSDDA 1989, U.S. ACOE et al. 2000) modifications, and SMS guidelines (WDOE 2003).

2. STUDY MANAGEMENT

2.1 Sponsor's Name and Address:

_____
_____
_____
_____

2.2 Sponsor's Study Monitor:

_____

2.3 Name of Testing Laboratory:
Northwestern Aquatic Sciences
3814 Yaquina Bay Road, P.O. Box 1437
Newport, OR 97365.

2.4 Test Location: Newport Laboratory

2.5 Laboratory's Personnel to be Assigned to the Study:
Project Manager/Technical Director: _____
Qual. Assurance Officer: _____
Aquatic Toxicologist: _____
Aquatic Toxicologist: _____

2.6 Proposed Testing Schedule: Tests should begin within 2 weeks (8 weeks with samples under nitrogen for PSDDA or SMS) of sample collection. Reference toxicant test to be run concurrently.

2.7 Good Laboratory Practices: The test is conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

3. TEST MATERIAL

The test materials are marine or estuarine sediments. The collected sediments are placed in a suitable container for shipping and storage. The preferred container is a solvent and acid cleaned 1 L glass jar fitted with a TFE-lined screw cap. The jars are filled completely so that there is no air space. At the laboratory, the samples may be stored at 4°C in the dark in the original sealed containers for up to 2 weeks (8 weeks with no headspace or with samples under nitrogen for PSDDA or SMS) prior to testing. The negative control sediment is from a clean site. In addition, one or more reference sediments, clean sediments with physical characteristics similar to the test sediments, may also be employed.

4. TEST WATER

Test water is filtered Yaquina Bay seawater adjusted to a salinity of 28 ppt. The water is pumped from Yaquina Bay into a 6000 gal seasoned fiberglass reservoir from which it is supplied under pump pressure to the laboratory. Filtration is accomplished using a sand filter followed by 5 µm, 1µm, and 0.40µm cartridge filters. An alternative seawater supply of similar quality may be used.

5. TEST ORGANISMS

5.1 Species: *Neanthes arenaceodentata*

5.2 5.2. Source: *Neanthes* are obtained from laboratory cultures. California State University, Long Beach, Dept. of Biology is a source for purchasing these worms.

5.3 5.3. Laboratory Handling: Worms are received from the supplier in plastic bags containing seawater and algae (*Enteromorpha*). Upon receipt, water quality data are taken on 1 or 2 bags and all bags with worms are then placed in holding aquaria containing seawater at 20 ± 1°C, and the salinity is adjusted to 28 ± 2 ppt. Worms are generally maintained for 1-2 days prior to use in tests, but may be held longer if water changes are provided. Gentle aeration is supplied to the holding aquaria. During the holding period, organisms are fed ground TetraMarine® (approximately 0.1 g per 200-300 worms) on an every-other-day basis. If the food is not being consumed, feeding should be reduced. No water changes are required if holding time is less than 1 week.

5.4 Age at Study Initiation: 2-3 week post-emergence juveniles (0.5-1.0 mg dry weight).

6. DESCRIPTION OF TEST SYSTEM

6.1 Test Chambers and Environmental Control: Test chambers used in the toxicity test are 1000 ml glass beakers. The beakers are covered to minimize contamination and evaporation of seawater or loss of volatile compounds. Test chambers are maintained at constant temperature by partial immersion in a temperature-controlled water bath or by placement in a temperature-controlled room. Minimal aeration is supplied through a glass pipet. The aeration rate should be 150 - 300 mL/minute or approximately 100 bubbles per minute). The test is performed under continuous illumination, using ambient laboratory lighting of low to moderate intensity. SMS may require UV light for PAH-contaminated intertidal sediments.

6.2 Cleaning: All laboratory glassware, including test chambers, is cleaned as described in EPA/600/4-90/027F. New glassware and test systems are soaked 15 minutes in tap water and scrubbed with detergent (or cleaned in an automatic dishwasher); rinsed twice with tap water; carefully rinsed once with fresh, dilute (10%, V:V) hydrochloric or nitric acid to remove scale, metals, and bases; rinsed twice with deionized water; rinsed once with acetone to remove organic compounds (using a fume hood or canopy); and rinsed three times more with deionized water. Test systems and chambers are rinsed again with dilution water just before use.

7. EXPERIMENTAL DESIGN AND TEST PROCEDURES

7.1 Experimental Design: An experimental design is used consisting of exposure of test organisms to a number of test sediments, one or more reference sediments, and a control sediment. Each treatment consists of five replicate test chambers each containing 5 animals. An additional replicate containing 5 test organisms is used for daily water quality measurements. More replicates, with or without test organisms as appropriate, may be employed for periodic interstitial water quality measurements. Blind, random testing is used.

7.2 Preparation of Test Sediments: The interstitial salinity of the test, reference, and control sediments is measured. If initial interstitial salinities are not ≥20 ppt, the interstitial salinities must be adjusted as specified in the PSEP (1995) protocols.

Certain projects may require purging of excess ammonia from sediment interstitial water. PSDDA and SMS allow purging to be considered when interstitial total ammonia concentrations exceed specified limits. However, purging is allowed only by agency permission, so the decision to purge should be made by the client. Testing of purged sediments may require concurrent testing of the same sediments unpurged.

If no salinity adjustment or purging is done, sediments are used without further treatment. Each test sediment is mixed thoroughly using a non-contaminating implement, then an aliquot (175 ml) sufficient to make a 2-cm-deep layer is added to each test beaker, and the surface is smoothed. Bubbles are removed from the sediment by gently tapping each beaker against the palm of the hand. Seawater at the test temperature and salinity is carefully added into the beaker to the 750 ml mark utilizing a water dispersal technique to avoid suspending the sediment. The beakers are then placed into the water bath or constant-temperature room and covered with watchglasses. An air delivery pipet is inserted into each beaker under the watchglass. Overhead lights provide constant illumination. Water in the test beakers is aerated without disturbing the sediments. The test system is then allowed to temperature equilibrate overnight.

7.3 Beginning the Test: More worms than are needed for the bioassay are transferred to a shallow glass dish containing seawater of the test salinity and temperature. Worms are impartially distributed to a series of seawater-filled cups, each holding 5 worms. Enough cups for the test plus three additional cups are prepared. One container of 5 worms is randomly added to each replicate. Three of the cups containing worms are randomly selected and set aside. Worms from these cups are used to estimate initial total biomass. To determine initial total biomass, worms from these three cups are quickly rinsed with deionized water, placed on a preweighed aluminum pan, dried at 50°C to a constant weight, and weighed to the nearest 0.1 mg.

Once worms are added to a replicate, the number of animals that do not burrow into the test sediment within one hour is recorded. Worms not burrowed are removed and replaced with healthy worms, unless the observer believes the failure to burrow is a response to toxic material. Following addition of worms to the test chambers, additional water is added to achieve a final volume of 950 ml.

TetraMarine® is provided to each beaker (40 mg/beaker). The food is preweighed into plastic cups, wetted with bioassay test water, and rinsed into the test beakers.

7.4 Effects Criteria: Effects criteria are 1) survival after 20 days, 2) total biomass (dry weight), 3) average individual biomass (total biomass divided by the number of surviving worms), and 4) average individual growth rate.

7.5 Test Conditions: Test containers are maintained at a constant 20 ± 1°C. The test salinity is 28 ± 2 ppt. The dissolved oxygen concentration in each test container must be greater than 60% saturation (PSEP 1995) or 4.0 mg/L (PSDDA) throughout the 20-day test. Each beaker is supplied with oil-free compressed air provided at a rate of approximately 100 bubbles per minute through disposable glass pipettes. Each beaker is covered by a watchglass to minimize evaporation and the possibility of cross contamination between beakers. The test is conducted under constant illumination of moderate to low intensity.

During the 20-day exposure, one-third of the seawater in each beaker is replaced every third day. Prior to seawater replacement, water quality measurements are determined for one replicate test chamber for each test, reference, and control sediment. Water replacement is achieved by siphoning one-third of the volume of test water, then replacing it with fresh 28 ± 2 ppt test water that has been maintained at 20 ± 1 °C. Care should be taken not to disturb the sediments.

7.6 Feeding: Animals are fed 40 mg TetraMarine® per beaker on an every-other-day basis during the test.

7.7 Test Duration, Type and Frequency of Observations, and Methods: The duration of the sediment toxicity test is 20 days. The test chambers are observed daily to ensure that adequate aeration is provided and to note the general status of each chamber. The temperature of the environmental chamber should also be monitored daily. The type and frequency of observations to be made are summarized as follows:

TYPE OF OBSERVATION	TIMES OF OBSERVATION
Biological Data	
Survival	end of test
Biomass	end of test
Physical and Chemical Data	
Sediment interstitial salinity	at test beginning (bulk sediments) & end
Salinity, dissolved oxygen, pH, and temperature of overlying water (one replicate only)	day 0, day 20 and prior to partial replacement of test water every third day
Temperature in temperature beaker	daily
Ammonia and sulfides in overlying water (one replicate)	at test beginning & end; for PSDDA and SMS, on day 3 prior to seawater replacement *
Ammonia, sulfide, pH & salinity in interstitial water (optional)	for PSDDA and SMS, ammonia, pH, & salinity in bulk sediments; additional measurements as requested by client
Check air and lights	daily

*PSEP (1995) recommends ammonia-N and sulfide monitoring prior to the first and second water renewals when initial monitoring reveals >0.7 mg/L un-ionized ammonia or >5.0 mg/L sulfides.

Following the exposure period, worms from each chamber are removed from the test sediment by gently sieving the sediment through a 0.5 mm screen. Worms often are in their tubes and can be removed by gently prodding either end of the tube with a fine-point paintbrush. The number of surviving worms is recorded. Surviving worms are placed in a container of clean seawater until all chambers have been sieved. Then worms from each chamber are quickly rinsed with deionized water, placed on a pre-weighed aluminum pan, dried at 50°C to a constant weight, and weighed to the nearest 0.1 mg.

Dissolved oxygen is measured directly in test bakers using a polarographic oxygen probe calibrated according to the manufacturer's recommendations. The pH is measured using a properly calibrated pH meter with scale divisions of 0.1 pH units. Temperature is measured using a calibrated mercury thermometer or a telethermometer. Salinity is measured using a refractometer. The method used for the measurement of total ammonia-N in the overlying water and sediment porewater from sediment bioassays is based on the salicylate colorimetric method of Hach Chemical Co. and was adapted from Clin. Chim. Acta., 14: 403 (1966). The method used for the measurement of dissolved sulfide in the overlying water and sediment porewater in marine sediment bioassays is the methylene blue colorimetric method based on SM 4500-S^{2-} (Standard Methods 1995 [19th edition]). Any observed changes in sediment color or the formation of a sediment discontinuity layer is also recorded.

7.8 Criteria of Test Acceptance: For the test to be considered acceptable, mean mortality of organisms in the control treatment at the end of the test should be ≤10%

7.9 Performance criteria: For PSDDA and SMS, control sediment should have mean mortality ≤10% and target mean growth rate >0.72 mg/worm/day (failure if growth rate <0.38 mg/worm/day). Initial weight of worms should be 0.5-1.0 mg (failure if <0.25 mg). Reference sediment should have mean mortality ≤20% and mean growth rate ≥80% of the control sediment.

7.10 Reference Toxicant test: A routine reference toxicant test is run concurrently with each sediment test. This is normally a 96-hr test with cadmium chloride. PSDDA and SMS also require a water-only ammonia test when ammonia concentrations exceed specified limits.

8. DATA ANALYSIS

The mean and standard deviation are calculated for each endpoint employed (e.g. 20-day survival, 20-day total biomass, 20-day average individual biomass, and average individual growth rate) and for each treatment (i.e. test sediment). Between-treatment comparisons may be made using a Student's t-test, Wilcoxon's Two-Sample test, Mann-Whitney U test, or Rankit Analysis, where each treatment is compared to the control or the reference sediment. An arcsine-square root transformation of proportional data, and tests for normality and heterogeneity of variances, are performed prior to statistical comparisons.

9. REPORTING

A report of the test results must include the following information: name and identification of the test; the investigator and laboratory; information on the test, reference, and control sediments including the initial and final interstitial salinities; information on the source of seawater used; detailed information about the test organisms including acclimation conditions; a description of the experimental design and test chambers and other test conditions including water quality; information about any aeration that may have been required; definition of the effect criteria and other observations; unusual responses, if any, in the control treatment; 20-day survival in each exposure chamber and the mean and standard deviation for each treatment; initial total biomass (dry weight) for three groups of five worms; 20-day total biomass (dry weight) in each exposure chamber and the mean and standard deviation for each treatment; 20-day average individual biomass (dry weight) in each exposure chamber and the mean and standard deviation for each treatment; average individual growth rate in each exposure chamber and the mean and standard deviation for each treatment; 96-hour LC50 with reference toxicant; a description of data analysis methods employed and documentation of statistical test results: any unusual information about the test or deviations from procedures.

10. STUDY DESIGN ALTERATION

Amendments made to the protocol must be approved by the sponsor and study director and should include a description of the change, the reason for the change, the date the change took effect, and the dated signatures of the study director and sponsor. Any deviations in the protocol must be described and recorded in the study raw data.

11. REFERENCED PROCEDURES

Johns, D.M., T.C. Ginn, and D.R. Reish. 1990. Protocol for juvenile Neanthes sediment bioassay. Prepared for U.S. Env. Prot. Agency, Region 10 -Office of Puget Sound, Seattle, WA, 17 pp.

Puget Sound Dredged Disposal Analysis (PSDDA). 1989. Management plan report - unconfined open-water disposal of dredged material, Phase II - (north and south Puget Sound). Puget Sound Dredged Disposal Analysis, Army Corps of Engineers, Seattle, WA. (and other modifications made through the PSDDA process and Sediment Management Annual Review Meetings).

Puget Sound Estuary Program. 1995. Recommended guidelines for conducting laboratory bioassays on Puget Sound sediments. Prepared for U.S. Env. Prot. Agency, Region 10, Office of Puget Sound, Seattle, WA, and Puget Sound Water Quality Authority, Olympia, WA.

Snedecor, G.W. and W.G. Cochran. 1967. Statistical methods. Sixth Ed., The Iowa State Univ. Press. Ames, Iowa., 593 pp.

U.S. Army Corps of Engineers, Seattle District; U.S. EPA, Region 10; Washington Department of Natural Resources; Washington Department of Ecology. 2000. Dredged material evaluation and disposal procedures: a user's manual for the dredged disposal analysis (PSDDA) program.

Washington State Department of Ecology. 2003. Sediment sampling and analysis plan appendix. Publication no. 03-09-043, WDOE, Olympia, WA.

Weber, C.I. (Ed.) 1991. Methods for measuring the acute toxicity of effluents to freshwater and marine organisms (fourth edition). EPA/600/4-90/027.

12. APPROVALS

_____ for _____
Name Date

_____ for **NORTHWESTERN AQUATIC SCIENCES**
Name Date

APPENDIX II

RAW DATA

TEST DESCRIPTION, MONITORING, AND RESULTS BENCHSHEETS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

renewed

Test No. 783-5 Client Windward Investigator pg. 1-31 MSR 9-11-09

STUDY MANAGEMENT

Client: Windward Environmental, LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Client's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. M.S. Redmond MSR

QA Officer L.K. Nemeth

1. Yves Nakahama YN
2. Lidia P. Sandoval LPS
3. Susan Cafe SC
4. R.S. Caldwell
5. G.J. Irissarri GJI
6.
7.
8.

Study Schedule:

Test Beginning: 8-11-09 11:15 Test Ending: 8-31-09 10:30

TEST MATERIAL

General description (see sample logbook/chain-of-custody for details):

NAS Sample No.:	2736G	2758G	2788G	2790G	
Description:	EW09-SS-215-010	EW09-SS-015-010	CI09-SS-120-010	CI09-SS-180-010	
Collection Date:	6/22/09	6/23/09	7/7/09	7/7/09	
Receipt Date:	6/24/09	6/25/09	7/9/09	7/9/09	
Inters.Salinity (ppt):	24.0	28.5	29.5	27.0	
:					

NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					

NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					

NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					

Error codes: 1) correction of handwriting error
2) written in wrong location; entry deleted
3) wrong date deleted, replaced with correct date
4) error found in measurement; measurement repeated

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

SEDIMENT DESCRIPTIONS -- SUPPLEMENTAL NOTES

Sample No.	Description
2736G	Black sticky mud with wood chunks
2758G	dark brown to black mud with a lot of shell material
2788G	brown muddy sand
2790G	Tan sticky mud some rocks
2807G	brown sand

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

TEST WATER

Source: Yaquina Bay, Oregon, sea water

Date(s) of Collection: 8-7-09, 8-24-09 Salinity (ppt) 27.5, 28.0 pH 8.2, 8.0

Treatments: filtered to 0.4 µm, salinity-adjusted with MilliQ deionized water, aerated

TEST ORGANISMS

Species: *Neanthes arenaceodentata* Date received: ~~4/9/09~~ 8/6/09

Source: Dept. of Biology, CA State University, Long Beach, CA YMSR 9/1/09 (3)

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
8-6-09	21.9	6.9	34.0	5.7	0.19/ea of 2 tanks	Tetramarine	5L w/dilution H2O	receiving water
8-7-09	20.6	8.1	29.0	7.3			" " "	"
8-8-09	20.7	8.1	27.5	6.9			" " "	"
8-9-09	20.5	8.2	28.0	7.4			" " "	"
8-10-09	20.5	8.2	28.0	7.3	as on 8/6/09		" " "	"
8-11-09	20.4	8.2	29.0	7.4	as on 8/6/09		" " "	"
Mean	20.8	8.0	29.2	7.0				
S.D.	0.6	0.5	2.4	0.7				
(N)	(6)	(6)	(6)	(6)				

Photoperiod during acclimation: constant light

TEST PROCEDURES AND CONDITIONS

Test chambers: 1 L glass beakers covered with watchglasses

Test volumes: 175 ml of test sediment; 950 ml total volume

Replicates/treatment: (5) 5 Organisms/treatment: (25) 25

Test water changes: Every third day beginning with day 3

Aeration: yes, at least 2 cm above sediment surface Beaker placement: Total randomization

Feeding: every other day beginning with day zero Photoperiod: Constant light

Test temperature (deg.C): 20 Salinity: 28 +/- 2 ppt

Additional replicates included for water quality purposes (indicate numbers of each that apply):

1 Water quality beaker (with test organisms; may also be day 20 sacrificial beaker)

____ Day zero sacrificial beaker (no test organisms)

____ Day ____ sacrificial beaker(s) (with test organisms)

Control Sediment:

Source: Yaquina Bay, Oregon

Date collected: 8-7-09 Interstitial salinity: insufficient sample

Sieved through 0.5 -mm screen

Storage: 4°C in the dark NAS# 2807G

MISCELLANEOUS NOTES

Light intensity measurements:

Date	Location in room	foot-candles
8-14-09	beaker # 16	63.0

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator _____

Test conducted in (circle one): room 1 room 2 (trailer) water bath other: _____

Randomization chart: wall

top shelf

3	6				27	30			
2	5	→	→	→	26	29			
1	4				25	28			

end

door →

Randomization chart:

Randomization chart:

Randomization chart:

TEST SCHEDULE SUMMARY

Date	8-11-09	8-12-09	8-13-09	8-14-09	8-15-09	8-16-09	8-17-09	8-18-09	8-19-09 LBD 8-19-09	8-20-09 Y	8-21-09	8-22-09	8-23-09	8-24-09	8-25-09	8-26-09	8-27-09	8-28-09	8-29-09	8-30-09	8-31-09
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Feed	x		x		x		x		x		x		x		x		x		x		
Record WQ	x			x			x			x			x			x			x		x
Change water				x			x			x			x			x			x		
Overlying NH4,S	x			NH3																	x
Initials	YN	YN	YN	AB/mae	mae	AB	YP	YP	UPS	YP	UPS	UPS	LBD	UPS	YP	UPS	UPS	UPS	mae	YP	UPS
Porewater NH4, ppt, pH																					ppt only
Initials																					

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 0 18 III 1998 YM / 1185 / mel Temperature beaker: 19.8 deg.C

air okay? (if not, details in comments below) OK overlying ammonia sampled? Yes

water change? (every third day) — (days 0,3,20)

fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	No. not buried	Comments
1						0	
2						0	
3						0	
4						0	
* 5	19.8	8.1	28.0	7.4	<0.02	0	
6						0	
* 7	19.9	8.1	28.5	7.4	<0.02	0	
8						0	
9						0	
10						0	
11						0	
12						0	
13						0	
14						0	
* 15	19.5	8.1	28.0	7.1	<0.02	0	
* 16	19.8	8.3	28.0	7.4	<0.02	0	
17						0	
18						0	
19						0	
20						0	
21						0	
22						0	
23						0	
24						0	
25						0	
* 26	19.4	8.2	28.5	7.2	<0.02	0	
27						0	
28						0	
29						0	
30						0	

* Water quality beakers

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 1 (8/12/09) YN Temperature beaker: 20.0 deg.C

air okay? (if not, details in comments below) YES
water change? (every third day) —
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.0	—	—	—	
7	20.1	—	—	—	
15	19.7	—	—	—	
16	20.0	—	—	—	
26	19.5	—	—	—	

Day 2 (8/13/09) YN Temperature beaker: 20.9 deg.C

air okay? (if not, details in comments below) YES
water change? (every third day) —
fed? (every second day) YES

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 3 (8/14/09) [illegible]

Temperature beaker: 20.1 deg.C

air okay? (if not, details in comments below) OK
water change? (every third day) yes
fed? (every second day) —
overlying NH3 sampled (days 0,3,20)? Yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.1	8.1	28.0	6.2	
7	20.2	7.9	28.5	6.3	
15	20.0	8.3	29.0	6.6	
16	20.1	8.3	28.5	6.8	
26	19.9	8.0	28.5	6.5	

Day 4 (8/15/09) MJR

Temperature beaker: 20.2 deg C

air okay? (if not, details in comments below) yes
water change? (every third day) —
fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 5 (8/16/09) Temperature beaker. 20.3 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) —
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Day 6 (8/17/09) Temperature beaker: 20.3 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) Yes
fed? (every second day) Yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.3	8.4	28.0	5.9	
7	20.3	7.9	28.5	6.5	
15	20.1	8.6	28.0	6.7	
16	20.3	8.3	29.0	6.9	
26	19.8	8.1	28.5	6.6	

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 7 (8/18/09) YP Temperature beaker: 20.3 deg.C

air okay? (if not, details in comments below) YES
water change? (every third day) —
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Day 8 (8/19/09) LPS Temperature beaker: 20.3 deg.C

air okay? (if not, details in comments below) YES
water change? (every third day) —
fed? (every second day) YES

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.4	~~8.3~~			DO 19.09
7	20.4				
15	20.0				
16	20.3				
26	20.2				

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 9 (8 20 09) YR Temperature beaker: 20.4 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) Yes
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Day 10 (8 21 09) (BS/YR Temperature beaker: 20.3 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) —
fed? (every second day) Yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.5	8.4	28.5	5.7	
7	20.6	7.7	30.0	5.8	
15	20.5	8.2	30.0	6.2	
16	20.5	8.1	30.0	6.8	
26	20.4	7.9	30.0	6.0	

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 11 (8/22/09) GS Temperature beaker: 20.3 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) —
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Day 12 (8/23/09) GSL Temperature beaker: 20.3 deg C

air okay? (if not, details in comments below) yes
water change? (every third day) yes
fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.3	8.4	29.5	6.8	
7	20.4	7.9	30.0	7.0	
15	19.9	8.2	30.0	7.3	
16	20.3	8.3	30.0	7.5	
26	20.0	8.1	30.0	7.5	

NORTHWESTERN AQUATIC SCIENCES
PROTOCOL NO NAS-XXX-NA4
NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 13 (8/24/09) WS Temperature beaker: 19.2 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) —
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Day 14 (8/25/09) WS/WS Temperature beaker: 20.4 deg C

air okay? (if not, details in comments below) Yes
water change? (every third day) —
fed? (every second day) Yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

NORTHWESTERN AQUATIC SCIENCES
PROTOCOL NO NAS-XXX-NA4
NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 15 (8/26/09) CPS

Temperature beaker: 20.2 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) yes
fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.4	8.2	29.0	6.6	
7	20.3	7.8	30.0	6.9	
15	20.1	8.2	30.0	7.2	
16	20.2	8.1	30.0	7.4	
26	19.7	8.0	30.0	7.4	

Day 16 (8/27/09) CPS

Temperature beaker. 20.5 deg.C

air okay? (if not, details in comments below) yes
water change? (every third day) —
fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 17 (8/28/09) UPS

Temperature beaker: 20.6 deg.C

air okay? (if not, details in comments below) yes

water change? (every third day) —

fed? (every second day) —

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5					
7					
15					
16					
26					

Day 18 (8/29/09) MLR

Temperature beaker: 20.3 deg.C

air okay? (if not, details in comments below) yes

water change? (every third day) yes

fed? (every second day) yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	20.3	8.2	30.0	6.4	
7	20.4	7.9	30.0	6.8	
15	20.3	8.3	30.0	6.8	
16	20.3	8.1	30.0	7.0	
26	20.1	8.0	30.5	7.2	

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

DAILY RECORD SHEET

Day 19 (8/30/09) Temperature beaker: 20.5 deg.C

air okay? (if not, details in comments below) YES
water change? (every third day) —
fed? (every second day) —

(US 2) 8-31-09

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
5	~~20.5~~	~~8.3~~			
7	~~20.4~~	~~8.2~~			
15	~~20.1~~	~~8.2~~			
16					
26					

Day 20 (8/31/09) US Temperature beaker: 20.1 deg.C

air okay? (if not, details in comments below) Yes
water change? (every third day) —
fed? (every second day) —
overlying NH3 sampled (days 0,3,20)? yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	
5	20.5	8.3	29.5	6.4	<0.02	
7	20.4	8.2	30.0	7.2	<0.02	
15	20.1	8.2	30.0	6.6	<0.02	
16	20.1	8.2	30.0	7.0	<0.02	
26	20.2	8.1	30.0	7.1	<0.02	

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No 783-5 Client Windward Investigator

DAY 20 TEST TERMINATION SHEET

Beaker No.	Interstitial Salinity	No. of survivors	Initial	Comment	Beaker No.	Interstitial Salinity	No. of survivors	Initial	Comment
1		5	LPS						
2		5	MLR						
3		5	YN						
4		5	LPS						
5	30.0		MLR						
6		5	YN						
7	30.0		MLR						
8		5	LPS						
9		5	LPS						
10		5	YN						
11		5	YN						
12		5	LPS						
13		5	YN						
14		5	LPS						
15	30.0		MLR						
16	30.0		MLR						
17		5	LPS						
18		5	YN						
19		5	LPS						
20		5	YN						
21		5	LPS						
22		5	LPS						
23		5	YN						
24		5	YN						
25		5	LPS						
26	30.0		MLR						
27		5	LPS						
28		5	YN						
29		5	LPS						
30		5	YN						

* Water quality beakers

Test No. 783-5 Client Windward Investigator

ZERO-TIME WEIGHING DATA SHEET

Tare: Date 8-10-09 Oven temp (C.) 50 Drying time (hr.) 26 Initials [illegible]
Standard Weights: 10 mg: 10.005 100mg: 100.017

Final: Date 8-14-09 Oven temp (C.) 50 Drying time (hr.) 24 Initials [illegible]
Standard Weights: 10 mg: 10.008 100mg: 100.019

Equip. used: Oven: Blue M #2 Balance: Sartorius M3P

(Dry overnight at 50 degrees C)

Pan #	Tare wt. (mg)	Total wt. (mg)	#weighed	Comments
1	54.53	59.~~24~~ 12	5	
2	53.04	57.59	5	
3	54.85	59.59	5	

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-NA4

NEANTHES SP. 20-DAY SOLID PHASE SEDIMENT TEST

Test No. 783-5 Client Windward Investigator

WEIGHING DATA SHEET

Tare: Date 8-14-09 Standard Weights: Oven temp (C.) 50 10 mg: 10.008 Drying time (hr.) 26 100mg: 100.019 Initials MSR

Final #1: Date 9-1-09 Standard Weights: Oven temp (C.) 50 10 mg: 10.007 Drying time (hr.) 24 100mg: 100.017 Initials MSR

Final #2: Date 9-1-09 Standard Weights: Oven temp (C.) 50-51 10 mg: 10.007 Drying time (hr.) 2 100mg: 100.017 Initials MSR

Final #3: Date 9-3-09 Standard Weights: Oven temp (C.) 50 10 mg: 10.007 Drying time (hr.) 2 100mg. 100.020 Initials MSR

Equip. used: Oven Blue M #2 Balance Sartorius M3P

(Dry overnight at 50 degrees C)

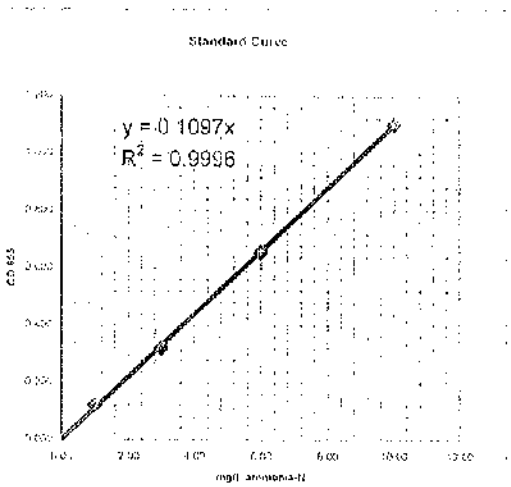
Bkr. #	Pan #	Tare wt. (mg)	Total wt. (mg) 1	2	3	no. weighed	put into pans-initials	Comments
1	1	98.04	167.45	167.26	166.90	5		
2	2	90.06	200.54	200.32	199.83	5		
3	3	87.82	143.51	143.44	143.31	5		
4	4	94.65	198.21	198.87	197.82	5		
5	5							
6	6	91.72	176.01	175.90	175.18	5		
7	7							
8	8	87.88	237.86	237.54	237.09	5		
9	9	88.57	204.31	204.04	203.66	5		
10	10	93.56	208.34	208.14	207.83	5		
11	11	88.21			167.30	5		
12	12	85.39			181.56	5		
13	13	89.29			211.93	5		
14	14	93.88			193.89	5		
15	15							
16	16							
17	17	93.66			217.84	5		
18	18	88.98			200.01	5		
19	19	90.00			195.79	5		
20	20	90.72			176.21	5		
21	21	90.83			220.63	5		
22	22	84.94			187.41	5		
23	23	87.40			204.77	5		
24	24	91.89			219.77	5		
25	25	89.26			205.48	5		
26	26							
27	27	82.44			193.96	5		
28	28	87.21			194.45	5		
29	29	82.97			156.55	5		
30	30	91.02			170.65	5		

Water quality beakers

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std.	-----	0.120	1.00
	3.0 mg/L NH_3-N Std.	-----	0.320	3.00
	6.0 mg/L NH_3-N Std.	-----	0.655	6.00
	10.0 mg/L NH_3-N Std.	-----	1.100	10.00
	3.0 mg/L spike	-----	0.326	2.97
	3.0 mg/L spike dupl.	-----	0.320	2.92
	5.0 mg/L 2nd source	-----	0.523	4.77
1.	Day 0 (8-11-09)	######		
2.	5	1	0.648	5.91
3.	7	1	0.001	ND
4.	15	1	0.328	2.99
5.	16	1	0.271	2.47
6.	26	1	0.001	ND
7.	Day 3 (8-14-09)	######		
8.	5	1	1.100	10.03
9.	7	1	0.097	0.88
10.	15	1	0.568	5.18
11.	16	1	0.450	4.10
12.	26	1	0.101	0.92
13.	Day 20 (8-31-09)	######		
14.	5	1	0.052	0.47
15.	7	1	0.004	ND
16.	15	1	0.192	1.75
17.	16	1	0.007	ND
18.	26	1	0.019	0.17
19.				
20.				
21.				
22.				
23				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
31.				
32.				
33.				
34.				
35.				
36.				



Reporting limit (mg/L) =	0.1
Recovery (%) =	98.2
Precision (RPD) =	1.86
2nd source (%) =	95.4
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-5
Test Day: 0, 3, & 20
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 9/3/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/l NH3-N Std.	-----	.120	1.00
	3.0 mg/L NH3-N Std	-----	.320	3.00
	6.0 mg/L NH3-N Std.	-----	.655	6.00
	10.0 mg/L NH3-N Std.	-----	1.10	10.00
	3.0 mg/L spike	-----	.326	
	3.0 mg/L spike dupl.	-----	.320	
	5.0 mg/L 2nd source	-----	.523	
1.	Day 0 (8-11-09)	######		
2	5	1	.648	
3	7	1	.001	
4.	15	1	.328	
5.	16	1	.271	
6.	26	1	.001	
7.	Day 3 (8-14-09)	######		
8	5	1	1.10	
9.	7	1	.097	
10.	15	1	.568	
11.	16	1	.450	
12.	26	1	.101	
13.	Day 20 (8-31-09)	######		
14.	5	1	.052	
15.	7	1	.004	
16.	15	1	.192	
17.	16	1	.007	
18.	26	1	.019	
19.				
20.				
21.				
22.				
23.				
24.				
25.				
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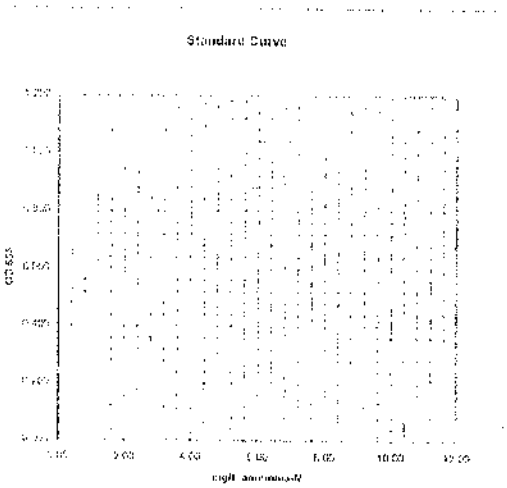
29.				
30.				
31.				
32.				
33.				
34.				
35.				
36.				



Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-5
Test Day: 0, 3, & 20
Species: *Neanthes*

Overlying water

Analyst: RSC
Date analysed: 9/3/2009

TEST DATA ANALYSIS RECORDS

Neanthes Growth Test
Randomization Key

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
11	2736G	EW09-SS-215-010	1	
27	2736G	EW09-SS-215-010	2	
12	2736G	EW09-SS-215-010	3	
22	2736G	EW09-SS-215-010	4	
30	2736G	EW09-SS-215-010	5	
15	2736G	EW09-SS-215-010	6	wq replicate
1	2758G	EW09-SS-015-010	1	
6	2758G	EW09-SS-015-010	2	
3	2758G	EW09-SS-015-010	3	
20	2758G	EW09-SS-015-010	4	
29	2758G	EW09-SS-015-010	5	
5	2758G	EW09-SS-015-010	6	wq replicate
21	2788G	CI09-SS-120-010	1	
25	2788G	CI09-SS-120-010	2	
24	2788G	CI09-SS-120-010	3	
4	2788G	CI09-SS-120-010	4	
17	2788G	CI09-SS-120-010	5	
16	2788G	CI09-SS-120-010	6	wq replicate
18	2790G	CI09-SS-180-010	1	
19	2790G	CI09-SS-180-010	2	
28	2790G	CI09-SS-180-010	3	
13	2790G	CI09-SS-180-010	4	
9	2790G	CI09-SS-180-010	5	
7	2790G	CI09-SS-180-010	6	wq replicate
2	2807G	control	1	
10	2807G	control	2	
14	2807G	control	3	
23	2807G	control	4	
8	2807G	control	5	
26	2807G	control	6	wq replicate

Endpoints Data Entry and Calculations File

BKR=beaker number (=pan number)
INIT NO =initial number of worms exposed
FINAL IW PPT=interstitial salinity in ppt on day 20
SURV=number of worms surviving after 20 days
MORT=number of worms dead after 20 days
INIT WT=mean weight of worms sampled on day zero (mg)
TARE WT=weight of pan used for that replicate on day 20 (mg)
WT COUNT=number of worms weighed at test end
FINAL WT=TARE WT + weight of worms recovered on day 20 (mg)
PSURV=% SURV=100(SURV/INIT NO.)
PMORT=%MORT=100(MORT/INIT NO.)
TWT=total biomass=FINAL-TARE
WT=individual biomass=TWT/WT COUNT
GR=individual growth rate=(WT-INIT WT)/20

INIT WT

pan#	tare wt	total wt	# weighed	individual wt
1	54.53	59.12	5	0.92
2	53.04	57.59	5	0.91
3	54.85	59.59	5	0.95
		MEAN		0.93

Data entry verified against laboratory bench sheets
WMR
9-3-09

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	INIT NO	FINAL IW PPT	SURV	MORT	INIT WT	TARE WT	WT COUNT	FINAL WT	PSURV	PMORT	TWT	WT	GR		TWT	WT	GR	PSURV	PMORT
1	11	2736G	EW09-SS-215-010	1	5		5	0	0.93	88.21	5	187.30	100.0	0.0	79.1	15.8	0.74						
2	27	2736G	EW09-SS-215-010	2	5		5	0	0.93	82.44	5	193.96	100.0	0.0	111.5	22.3	1.07	Mean	93.8	18.8	0.89	100.0	0.0
3	12	2736G	EW09-SS-215-010	3	5		5	0	0.93	85.39	5	181.58	100.0	0.0	96.2	19.2	0.92	S.D.	14.2	2.8	0.14	0.0	0.0
4	22	2736G	EW09-SS-215-010	4	5		5	0	0.93	84.94	5	187.41	100.0	0.0	102.5	20.5	0.98	n	5	5	5	5	5
5	30	2736G	EW09-SS-215-010	5	5		5	0	0.93	91.02	5	170.55	100.0	0.0	79.6	15.9	0.75						
6	15	2736G	EW09-SS-215-010	6 wq replicate	5	30.0																	
7	1	2758G	EW09-SS-015-010	1	5		5	0	0.93	98.04	5	186.93	100.0	0.0	88.9	17.8	0.84						
8	5	2758G	EW09-SS-015-010	2	5		5	0	0.93	91.72	5	175.18	100.0	0.0	83.5	16.7	0.79	Mean	73.4	14.7	0.69	100.0	0.0
9	3	2758G	EW09-SS-015-010	3	5		5	0	0.93	87.82	5	143.31	100.0	0.0	55.5	11.1	0.51	S.D.	12.1	2.4	0.12	0.0	0.0
10	20	2758G	EW09-SS-015-010	4	5		5	0	0.93	93.72	5	178.21	100.0	0.0	85.5	17.1	0.81	n	5	5	5	5	5
11	29	2758G	EW09-SS-015-010	5	5		5	0	0.93	82.97	5	156.55	100.0	0.0	73.6	14.7	0.69						
12	5	2758G	EW09-SS-015-010	6 wq replicate	5	30.0																	
13	21	2788G	CI09-SS-120-010	1	5		5	0	0.93	90.83	5	220.63	100.0	0.0	129.8	25.0	1.25						
14	25	2788G	CI09-SS-120-010	2	5		5	0	0.93	89.26	5	205.48	100.0	0.0	116.2	23.2	1.12	Mean	120.3	24.1	1.16	100.0	0.0
15	24	2788G	CI09-SS-120-010	3	5		5	0	0.93	91.89	5	219.77	100.0	0.0	127.9	25.6	1.23	S.D.	10.9	2.2	0.11	0.0	0.0
16	4	2788G	CI09-SS-120-010	4	5		5	0	0.93	94.65	5	197.52	100.0	0.0	103.2	20.6	0.99	n	5	5	5	5	5
17	17	2788G	CI09-SS-120-010	5	5		5	0	0.93	93.66	5	217.84	100.0	0.0	124.2	24.8	1.23						
18	16	2788G	CI09-SS-120-010	6 wq replicate	5	30.0																	
19	18	2790G	CI09-SS-180-010	1	5		5	0	0.93	88.98	5	200.01	100.0	0.0	111.0	22.2	1.06						
20	19	2790G	CI09-SS-180-010	2	5		5	0	0.93	90.00	5	195.79	100.0	0.0	105.8	21.2	1.01	Mean	112.4	22.5	1.08	100.0	0.0
21	28	2790G	CI09-SS-180-010	3	5		5	0	0.93	87.21	5	194.45	100.0	0.0	107.2	21.4	1.03	S.D.	6.8	1.4	0.07	0.0	0.0
22	13	2790G	CI09-SS-180-010	4	5		5	0	0.93	89.29	5	211.93	100.0	0.0	122.6	24.5	1.18	n	5	5	5	5	5
23	9	2790G	CI09-SS-180-010	5	5		5	0	0.93	88.57	5	203.66	100.0	0.0	115.1	23.0	1.10						
24	7	2790G	CI09-SS-180-010	6 wq replicate	5	30.0																	
25	2	2807G	control	1	5		5	0	0.93	90.06	5	199.83	100.0	0.0	109.8	22.0	1.05						
26	10	2807G	control	2	5		5	0	0.93	93.56	5	207.83	100.0	0.0	114.3	22.9	1.10	Mean	118.1	23.6	1.13	100.0	0.0
27	14	2807G	control	3	5		5	0	0.93	93.86	5	193.89	100.0	0.0	100.0	20.0	0.95	S.D.	18.6	3.7	0.19	0.0	0.0
28	23	2807G	control	4	5		5	0	0.93	87.43	5	204.77	100.0	0.0	117.4	23.5	1.13	n	5	5	5	5	5
29	8	2807G	control	5	5		5	0	0.93	87.88	5	237.08	100.0	0.0	149.2	29.8	1.45						
30	26	2807G	control	6 wq replicate	5	30.0																	

Water Quality Data

BKR	NAS SMPL	CLIENT DESCRIP	REPL	DAY	Overlying water TEMP	pH	SAL	DO	S	< or >	NH4+NH3	< or >	NH3
5	2758G	EW09-SS-015-010	6	0	19.8	8.1	28.0	7.4	<0.02		5.9		0.278
7	2790G	CI09-SS-180-010	6	0	19.9	8.1	28.5	7.4	<0.02	<	0.1	<	0.005
15	2736G	EW09-SS-215-010	6	0	19.5	8.1	28.0	7.1	<0.02		3.0		0.138
16	2788G	CI09-SS-120-010	6	0	19.8	8.3	28.0	7.4	<0.02		2.5		0.180
26	2807G	control	6	0	19.4	8.2	28.5	7.2	<0.02	<	0.1	<	0.006
5	2758G	EW09-SS-015-010	6	1	20.0								
7	2790G	CI09-SS-180-010	6	1	20.1								
15	2736G	EW09-SS-215-010	6	1	19.7								
16	2788G	CI09-SS-120-010	6	1	20.0								
26	2807G	control	6	1	19.5								
5	2758G	EW09-SS-015-010	6	3	20.1	8.1	28.0	6.2			10.0		0.482
7	2790G	CI09-SS-180-010	6	3	20.2	7.9	28.5	6.3			0.9		0.027
15	2736G	EW09-SS-215-010	6	3	20.0	8.3	29.0	6.6			5.2		0.380
16	2788G	CI09-SS-120-010	6	3	20.1	8.3	28.5	6.8			4.1		0.304
26	2807G	control	6	3	19.9	8.0	28.5	6.5			0.9		0.035
5	2758G	EW09-SS-015-010	6	6	20.3	8.4	28.0	5.9					
7	2790G	CI09-SS-180-010	6	6	20.3	7.9	28.5	6.5					
15	2736G	EW09-SS-215-010	6	6	20.1	8.6	28.0	6.7					
16	2788G	CI09-SS-120-010	6	6	20.3	8.3	29.0	6.9					
26	2807G	control	6	6	19.8	8.1	28.5	6.6					
5	2758G	EW09-SS-015-010	6	8	20.4								
7	2790G	CI09-SS-180-010	6	8	20.4								
15	2736G	EW09-SS-215-010	6	8	20.0								
16	2788G	CI09-SS-120-010	6	8	20.3								
26	2807G	control	6	8	20.2								
5	2758G	EW09-SS-015-010	6	10	20.5	8.4	28.5	5.7					
7	2790G	CI09-SS-180-010	6	10	20.6	7.7	30.0	5.8					
15	2736G	EW09-SS-215-010	6	10	20.5	8.2	30.0	6.2					
16	2788G	CI09-SS-120-010	6	10	20.5	8.1	30.0	6.8					
26	2807G	control	6	10	20.4	7.9	30.0	6.0					
5	2758G	EW09-SS-015-010	6	12	20.3	8.4	29.5	6.8					
7	2790G	CI09-SS-180-010	6	12	20.4	7.9	30.0	7.0					
15	2736G	EW09-SS-215-010	6	12	19.9	8.2	30.0	7.3					
16	2788G	CI09-SS-120-010	6	12	20.3	8.3	30.0	7.5					
26	2807G	control	6	12	20.0	8.1	30.0	7.5					
5	2758G	EW09-SS-015-010	6	15	20.4	8.2	29.0	6.6					
7	2790G	CI09-SS-180-010	6	15	20.3	7.8	30.0	6.9					
15	2736G	EW09-SS-215-010	6	15	20.1	8.2	30.0	7.2					
16	2788G	CI09-SS-120-010	6	15	20.2	8.1	30.0	7.4					
26	2807G	control	6	15	19.7	8.0	30.0	7.4					
5	2758G	EW09-SS-015-010	6	18	20.3	8.2	30.0	6.4					
7	2790G	CI09-SS-180-010	6	18	20.4	7.9	30.0	6.8					
15	2736G	EW09-SS-215-010	6	18	20.3	8.3	30.0	6.8					
16	2788G	CI09-SS-120-010	6	18	20.3	8.1	30.0	7.0					
26	2807G	control	6	18	20.1	8.0	30.5	7.2					
5	2758G	EW09-SS-015-010	6	20	20.5	8.3	29.5	6.4	<0.02		0.5		0.036
7	2790G	CI09-SS-180-010	6	20	20.4	8.2	30.0	7.2	<0.02	<	0.1	<	0.006
15	2736G	EW09-SS-215-010	6	20	20.1	8.2	30.0	6.6	<0.02		1.8		0.103
16	2788G	CI09-SS-120-010	6	20	20.1	8.2	30.0	7.0	<0.02	<	0.1	<	0.006
26	2807G	control	6	20	20.2	8.1	30.0	7.1	<0.02		0.2		0.008
				Mean	20.1	8.1	29.3	6.8	---		---		---
				SD	0.3	0.2	0.8	0.5	---		---		---
				n	50	40	40	40	10		15		15
				Min	19.4	7.7	28.0	5.7	<0.02	<	0.1	<	0.005
				Max	20.6	8.6	30.5	7.5	<0.02		10.0		0.482

CHAIN-OF-CUSTODY RECORDS

Michele Redmond

From: Thai Do [ThaiD@windwardenv.com]
Sent: Friday, July 31, 2009 10:02 AM
To: mredmond@nwaquatic.com
Cc: Susan McGroddy; Helle Andersen
Subject: RE: Selection of EW bioassay stations

Hi Michele,

Please use these reference sediment IDs:

CI09-SS-120-010 (20% fines) for station 15 (26.6% fines)
CI09-SS-180-010 (80% fines) for station 215 (76.0% fines)

Thanks.

Thai Do
[illegible]

[illegible]
[illegible]
thaid@windwardenv.com

This electronic message transmission contains information that may be confidential and/or privileged work product prepared in anticipation of litigation. The information is intended to be for the use of the individual or entity named above. If you are not the intended recipient, please be aware that any disclosure, copying distribution or use of the contents of this information is prohibited. If you have received this electronic transmission in error, please notify me by telephone or by electronic mail.
Please consider the environment before printing this email.

From: Susan McGroddy
Sent: Thursday, 30 July, 2009 13:28
To: Helle Andersen; mredmond@nwaquatic.com
Cc: Thai Do
Subject: RE: Selection of EW bioassay stations

Michele,

We have selected two locations for bioassay testing for EW. Location 15 and Location 215. I have attached the grain size information. Thai will let you know which reference sediments are appropriate.

Thanks.
Susie

From: Helle Andersen
Sent: Tuesday, July 28, 2009 4:18 PM
To: mredmond@nwaquatic.com
Cc: Susan McGroddy

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: TD, SR, RB, CL

Ship to: NAS
Attn: Michele Redmond
Shipping Date: 6.23.09
Shipper: UPS
Airbill Number:
Form filled out by: C. Lorenz
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (jar tag number(s))
6.22.09	903	EW09-SS-223-010	5	Sediment	X							NAS # 27336
	1007	EW09-SS-214-010	5		X							27346
	1036	EW09-SS-213-010	5		X							27356
	1121	EW09-SS-215-010	5		X							27366
	1202	EW09-SS-018-010	5		X							27376
	1228	EW09-SS-016-010	5		X							27386
	1252	EW09-SS-022-010	5		X							27396
	1318	EW09-SS-028-010	5		X							27406
	1340	EW09-SS-039-010	5		X							27416
	1400	EW09-SS-017-010	5		X							27426
	1422	EW09-SS-026-010	5		X							27436
	1436	EW09-SS-040-010	5		X							27446
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: TODD DO	Print name: [illegible]	Print name:	
Signature: [signature]	Company: [illegible] Gary Butler	Signature:	Company:
Company: WINDWARD	NORTHWESTERN AQUATIC SCIENCES	Company:	
Date/Time: 06.23.09/1200	Date/Time: 6-24-09 / 0945	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt: 6-24-09	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

HEDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

2 OF 7

DWT:25,17,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

TRACKING #: 1Z Y34 89E 15 9281 6534

1+

BILLING: P/P

Reference#1: EW Surface Sediment

UIS 11 1 05 WXHE20 90 0A 04/2009

TM

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2698

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: Thu Do

Ship to: NAS
Attn: Michele Redmond
Shipping Date: 6/24/2009
Shipper: UPS
Airbill Number:
Form filled out by: Skatka
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (Jar tag number(s))
06.23.09	0857	EW09-SS-222-010	5	Sediment	X							NAS# 27546
	0929	EW09-SS-221-010	5	"	X							27556
	1002	EW09-SS-098-010	5	"	X							27566
	1024	EW09-SS-012-010	5	"	X							27576
	1034	EW09-SS-015-010	5	"	X							27586
	1050	EW09-SS-107-010	5	"	X							27596
	1108	EW09-SS-106-010	5	"	X							27606
	1132	EW09-SS-208-010	5	"	X							27616
	1153	EW09-SS-206-010	5	"	X							27626
	1305	EW09-SS-210-010	5	"	X							27636
	1319	EW09-SS-205-010	5	"	X							27646
	1354	EW09-SS-202-010	5	"	X							27656
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Suzanne Reinger	[illegible]	Print name:	
Signature: [illegible]	Company:	Signature:	Company:
Company: Windward	Northwestern Aquatic Sciences	Company:	
Date/Time: 6/24/2009 0700	Date/Time: 6-25-09/0350	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

Page 27 of 31

Windward environmental LLC

200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

3 OF 7

DWT:25.17.12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

1+

TRACKING #: 1Z Y34 89E 15 9265 8214

BILLING: P/P

Reference#1: EW Surface Sediment

TM

Page 2 of 4

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2709

Project/Client Name: EW RI/FS Surface Sediment (Round 2)
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: J.Do, R. Berg

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: J.DO

Shipping Date: 07.08.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (jar tag number(s))
07.07.09	1125	CI09-SS-120-010	10 L	Sediment	X				NAS# 2788G			HOLD PENDING INSTRUCTIONS TO ANALYZE ~20% fines
↓	1440	CI09-SS-140-010	10 L	↓	X				#2789G			~40% fines
↓	1730	CI09-SS-180-010	10 L	↓	X				#2790G			~80% fines
		Total Number of Containers	30 L	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: THAI DO	Michele L. Redmond	Print name:	
Signature:	Company: NAS	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 07.08.09/1200	Date/Time: 7-9-09 / 08:30	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

HEIDI
206 378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

1 OF 2

DWT:18,15,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

1+

TRACKING #: 1Z Y34 89E 15 9240 2267

BILLING: P/P

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

6.5°C

DATE 07.08.09

INITIALS TK

LAB SAMPLE
DO NOT TAMPER

DATE 07.08.09

INITIALS TK

LAB SAMPLE
DO NOT TAMPER

https://www.ups.com/uis/create?Action=[illegible]&ISReceipt&POPUP_LEVEL=[illegible]

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

2 OF 2

DWT:18,15,12

SHIP TO:
MICHELE REDMOND
541 265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

1+

TRACKING #: 1Z Y34 89E 15 9485 8272

BILLING: P/P

LDS 11 1 09 WXPE79 90 0A 04/2009

TM

4.5°C

7/8/2009

DATE 07.08.09

INITIALS TPO

LAB SAMPLE
DO NOT TAMPER

DATE 07.09.09

INITIALS HC

LAB SAMPLE
DO NOT TAMPER

REFERENCE TOXICANT RESULTS AND ANALYSIS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO. NAS-XXX-____

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2608 Client: QC Test Investigator pg. 1-7 MSR (Unreviewed)

Test Type (rangefinding/definitive) definitive Test Length (hr) 0 96 9-8-09

Species *Neanthes arenaceodentata*

STUDY MANAGEMENT

Client: QC Test

Client's Study Monitor: N/A

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. M.S. Redmond MSR

QA Officer L.K. Nemeth

1. G.J. BISSARRI GJB 2. Yves Nakahama YN
3. Lidia P. Sandoval LPS 4. S. Gage
5. 6.

Study Schedule:

Test Beginning: 8-11-09 10:45 Test Ending: 8-15-09 9:15

TEST MATERIAL

Description: Ammonia prepared from ammonium chloride; stock prepared 3-18-08, 9760 mg/L (=9.76 mg/mL) expressed as N

DILUTION WATER

Description: Yaquina Bay, Oregon, sea water

Date of Preparation/Collection: 8-7-09

Salinity (ppt) 27.5 pH 8.2

Treatments: Filtered to 0.4 µm, salinity adjusted with Milli-Q deionized water, aerated

TEST LOCATION

Test conducted in (circle one): room 1 room 2 (trailer) water bath other:_____

Randomization chart:

wall

upper shelf	D				175	0	700	278	441	110		wall
	C				441	700	175	110	278	0	
	B				278	110	0	441	700	175	
	A				0	441	278	700	175	110	

door →

Error codes 1) Correction of handwriting error
2) Written in wrong location; entry deleted
3) Wrong date deleted; replaced with correct date
4) Error found in measurement, measurement repeated

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-____

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2608 Client: QC Test Investigator _____

TEST ORGANISMS

Species: *Neanthes arenaceodentata* Age: — Size: _____

Source: Dept. of Biology, CA State University, Long Beach, CA received 8/6/09

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal. (ppt)	DO (mg/L)	Feeding amount	Feeding description	Water changes	Comments
8-6-09	21.9	6.9	34.0	5.7	0.10/ea of 2 tanks	Tetramarine	50% dilution w/ DW	receiving water
8-7-09	20.6	8.1	29.0	7.3			" " "	"
8-8-09	20.7	8.1	27.5	6.9			" " "	"
8-9-09	20.5	8.2	28.0	7.4			" " "	"
8-10-09	20.5	8.2	28.0	7.3	as on	8/6/09	" " "	"
8-11-09	20.4	8.2	29.0	7.4	as on	8/6/09	" " "	"
Mean	20.8	8.0	29.2	7.0				
S.D.	0.6	0.5	2.4	0.7				
(N)	(6)	(6)	(6)	(6)				

Photoperiod during acclimation: constant light

TEST PROCEDURES AND CONDITIONS

Test concentrations (50% series recommended): 700, 441, 278, 175, 110, 0
(63% series)

Test chamber: 250 mL beakers Test volume: 100 ml

Replicates/treatment: 4 Organisms/treatment: 20 (5/repl)

Test water changes: None Aeration during test: None

Feeding: None.

Duration: 24-hr, 48-hr, (96-hr) Test temperature (deg C): 20 +/- 1

Beaker placement: Stratified randomization Photoperiod: Constant light

Salinity: 28 +/- 2 ppt

MISCELLANEOUS NOTES

Test Solution Preparation:

8-11-09 est

Test Conc. (mg/L)	mL of stock (9760 mg/L) per 400 mL	
700	28.7	Bring up to
441	18.1	400 mL with
278	11.4	dilution water,
175	7.2	then split
110	4.5	between 4
0	0	replicates

Light intensity measurements:

Date	Location in room	foot-candles
8-14-09	above glass plates	53.2

ACUTE TOXICITY TEST (ALL SPECIES)

Test No. 999-2608 Client QC Test Investigator

DAILY RECORD SHEET

Day 0 (8 11 09) YF/LPS/MSR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	20.2	7.5	29.0	7.5	5	5	5	5
2. 441	20.0	7.6	28.5	7.5	5	5	5	5
3. 278	20.2	7.7	28.5	7.5	5	5	5	5
4. 175	20.3	7.8	28.5	7.4	5	5	5	5
5. 110	20.0	7.9	28.5	7.4	5	5	5	5
6. 0	20.3	8.2	28.0	7.4	5	5	5	5

Day 1 (8 12 09) YF

Conc. (mg/L)	Temp (deg.C)	pH	Sal (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	20.0	7.5	29.0	5.7	2(3D)	0(5D)	1(4D)	0(5D)
2 441	20.1	7.6	29.0	6.8	5	2(3D)	5	4(1D)
3 278	20.0	7.7	29.0	6.9	5	5	5	5
4 175	20.3	7.9	28.0	6.9	5	5	5	5
5. 110	20.2	7.8	28.5	6.9	5	5	5	5
6. 0	20.4	8.1	28.0	6.8	5	5	5	5

Day 2 (8 13 09) YF/MSR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1 700	20.9	7.4	29.0	6.1	0 (2D)	0	0 (1D)	0
2 441	21.0	7.5	28.5	5.4	0 (5D)	0 (2D)	1 (4D)	0 (4D)
3. 278	21.0	7.7	29.0	6.5	5	5	5	5
4 175	21.1	7.9	28.0	6.6	5	5	5	5
5. 110	21.0	7.8	29.0	6.7	5	5	5	5
6. 0	21.1	8.0	28.0	6.5	5	5	5	5

Day 3 (8 14 09) YF/MSR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	—	—	—	—	0	0	0	0
* 2. 441	20.3	7.6	28.5	6.7	0	0	0 (1D)	0
3. 278	20.4	7.6	29.0	6.6	5	4 (1D)	2 (3D)	1 (4D)
4. 175	20.5	7.8	29.0	6.7	5	5	4 (1D)	5
5. 110	20.5	7.8	29.0	6.8	5	5	5	5
6 0	20.6	8.0	28.5	6.8	5	5	5	5

Day 4 (8 15 09) MSR

Conc. (mg/L)	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Survivors A	B	C	D
1. 700	—	—	—	—	0	0	0	0
2. 441	—	—	—	—	0	0	0	0
3. 278	20.4	7.4	30.5	5.5	4 (1D)	0 (4D)	0 (2D)	0 (1D)
4. 175	20.7	7.8	29.5	6.1	4 (1D)	5	4	5
5. 110	20.4	7.7	30.5	6.5	5	5	5	5
6. 0	20.6	8.1	28.0	6.5	5	4 (1M)	5	5

WQ				
Mean	20.5	7.8	28.8	6.7
SD	0.4	0.2	0.7	0.6
n	27	27	27	27

* B. Rep WQ

CETIS Summary Report

Report Date: 01 Sep-09 11:06 (p 1 of 1)
Test Code: 11-4118-4822/999-2608

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Batch ID:	15-6057-1265	Test Type:	Survival	Analyst:	
Start Date:	11 Aug-09 10:45	Protocol:		Diluent:	Yaquina Bay Seawater
Ending Date:	15 Aug-09 09:15	Species:	Neanthes arenaceodentata	Brine:	
Duration:	94h	Source:	California State U, Long Beach	Age:	

Sample ID:	19-2506-7762	Code:	72BE33F2	Client:	Internal Lab
Sample Date:	11 Aug-09 10:45	Material:	Ammonia as nitrogen	Project:	
Receive Date:	11 Aug-09 10:45	Source:	Reference Toxicant		
Sample Age:	N/A	Station:			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
08-3352-8563	Proportion Survived	175	278	220.6	35.4%		Steel Many-One Rank Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
13-2892-7741	Proportion Survived	EC50	234	211.7	258.6		Spearman-Kärber

Proportion Survived Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	0.95	0.9127	0.9873	0.8	1	0.01826	0.1	10.53%	0.0%
110		4	1	1	1	1	1	0	0	0.0%	-5.26%
175		4	0.9	0.8569	0.9431	0.8	1	0.02108	0.1155	12.83%	5.26%
278		4	0.2	0.05064	0.3494	0	0.8	0.07303	0.4	200.0%	78.95%
441		4	0	0	0	0	0	0	0		100.0%
700		4	0	0	0	0	0	0	0		100.0%

Proportion Survived Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	1	0.8	1	1
110		1	1	1	1
175		0.8	1	0.8	1
278		0.8	0	0	0
441		0	0	0	0
700		0	0	0	0

CETIS Test Data Worksheet

Report Date: 01 Sep-09 11:03 (p 1 of 1)
Test Code: 11-4118-4822/999-2608

Reference Toxicant 96-h Acute Survival Test — Northwestern Aquatic Sciences

Start Date:	11 Aug-09 10:45	Species:	Neanthes arenaceodentata	Sample Code:	72BF33F2
End Date:	15 Aug-09 09:15	Protocol:		Sample Source:	Reference Toxicant
Sample Date:	11 Aug-09 10:45	Material:	Ammonia as nitrogen	Sample Station:	

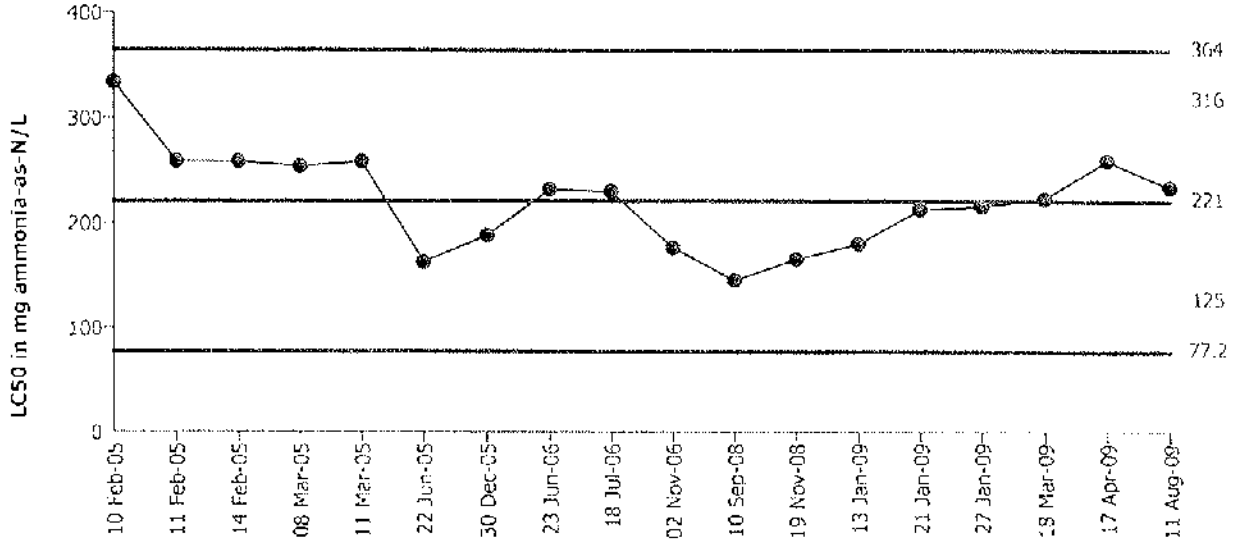
Conc-mg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	7	5	5	
0	D	2	17	5	4	
0	D	3	2	5	5	
0	D	4	18	5	5	
110		1	11	5	5	
110		2	6	5	5	
110		3	9	5	5	
110		4	8	5	5	
175		1	3	5	4	
175		2	5	5	5	
175		3	12	5	4	
175		4	14	5	5	
278		1	16	5	4	
278		2	22	5	0	
278		3	10	5	0	
278		4	4	5	0	
441		1	24	5	0	
441		2	21	5	0	
441		3	13	5	0	
441		4	19	5	0	
700		1	1	5	0	
700		2	20	5	0	
700		3	23	5	0	
700		4	15	5	0	

Data entry verified against laboratory bench sheets
MSR
9-1-09

Polychaete worm, N. arenaceodentata, acute reference toxicant test Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Neanthes arenaceodentata (Polycha	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Polychaete worm, N. arenaceodentata, acute reference toxicant test



Mean:	220.7	Count:	17	-2s Warning Limit:	125 1	-3s Action Limit:	77.24
Sigma:	47 82	CV:	21 70%	+2s Warning Limit:	316.3	+3s Action Limit:	364 2

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2005	Feb	10	333.8	113 1	2 365	(+)		07-2142-2429	14-4996-1630
2			11	258 1	37 42	0 7825			09-7820-5859	15-2821-6614
3			14	258.1	37.42	0.7825			10-4039-9251	09-1851-7488
4		Mar	8	253.5	32.8	0.6859			07-7871-6246	18-8368-7756
5			11	258.1	37.42	0.7825			14-8657-5991	03-1667-0035
6		Jun	22	162.6	-58.08	-1.215			17-9049-4827	04-4446-2090
7		Dec	30	188 2	-32.54	-0.6804			09-3229-1974	06-9837-0860
8	2006	Jun	23	231.8	11.08	0.2317			02-7771-3278	18-1187-0488
9		Jul	18	230	9.262	0.1937			15-3651-0178	09-1838-8420
10		Nov	2	176 5	-44 18	-0.9239			03-6247-3723	09-5744-6640
11	2008	Sep	10	145.4	-75.3	-1.575			07-3790-0013	06-3902-8512
12		Nov	19	165 6	-55.08	-1.152			14-5853-1662	10-8216-3432
13	2009	Jan	13	180.2	-40 49	-0.8467			08-6593-0729	04-9197-1402
14			21	212 8	-7.859	-0.1643			00-3690-9044	14-7485-7397
15			27	215.5	-5.186	-0.1085			09-4103-2034	16-3083-3739
16		Mar	18	223	2.267	0.04782			08-8400-8308	09-7188-0177
17		Apr	17	259.3	38.59	0.807			13-1727-4467	09-2424-6010
18		Aug	11	234	13.3	0.2782			11-4118-4822	13-2892-7741

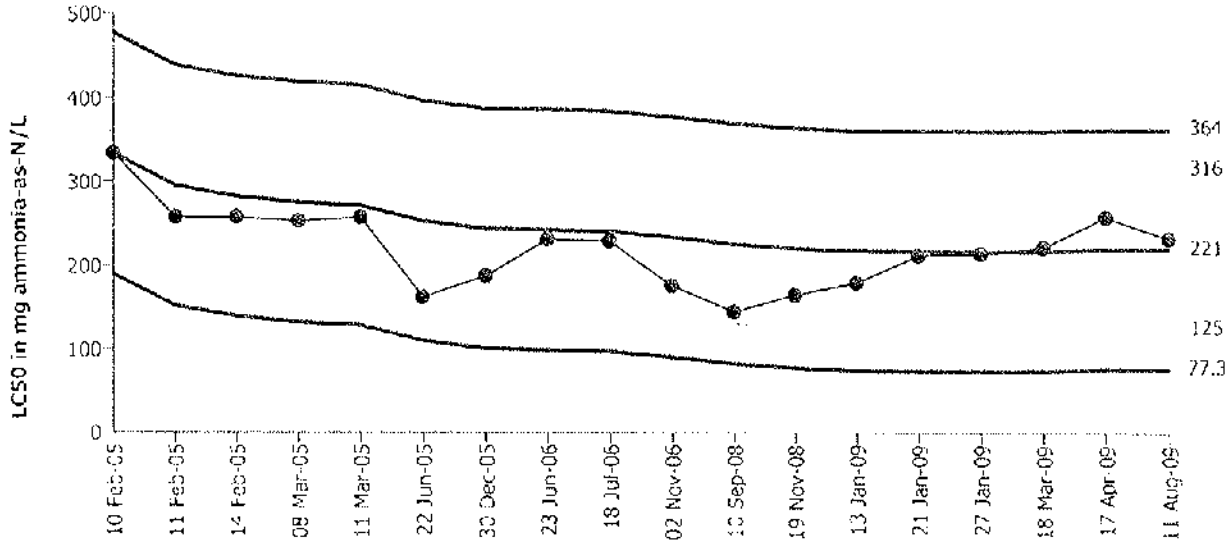
Msk

Analyst 9-1-09 QA _____

Polychaete worm, N. arenaceodentata, acute reference toxicant test — Northwestern Aquatic Sciences

Test Type:	Survival	Organism:	Neanthes arenaceodentata (Polycha	Material:	Ammonia as nitrogen
Protocol:	All Protocols	Endpoint:	Proportion Survived	Source:	Reference Toxicant-REF

Polychaete worm, N. arenaceodentata, acute reference toxicant test



Mean:	220.7	Count:	17	-2s Warning Limit:	125.1	-3s Action Limit:	77.28
Sigma:	47.82	CV:	21.70%	+2s Warning Limit:	316.4	+3s Action Limit:	364.2

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2005	Feb	10	333.8	113.1	2.365	(+)		07-2142-2429	14-4996-1630
2			11	258.1	37.42	0.7825			09-7820-5859	15-2821-6614
3			14	258.1	37.42	0.7825			10-4039-9251	09-1851-7488
4		Mar	8	253.5	32.8	0.6859			07-7871-6246	18-8368-7756
5			11	258.1	37.42	0.7825			14-8657-5991	03-1667-0035
6		Jun	22	162.6	-58.08	-1.215			17-9049-4827	04-4446-2090
7		Dec	30	188.2	-32.54	-0.6804			09-3229-1974	05-9837-0860
8	2006	Jun	23	231.8	11.08	0.2317			02-7771-3278	18-1187-0488
9		Jul	18	230	9.262	0.1937			15-3651-0178	09-1838-8420
10		Nov	2	176.5	-44.18	-0.9239			03-6247-3723	09-5744-6640
11	2008	Sep	10	145.4	-75.3	-1.575			07-3790-0013	08-3902-8512
12		Nov	19	165.6	-55.08	-1.152			14-6853-1662	10-8216-3432
13	2009	Jan	13	180.2	-40.49	-0.8467			08-6593-0729	04-9197-1402
14			21	212.8	-7.859	-0.1643			00-3690-9044	14-7485-7397
15			27	215.5	-5.186	-0.1085			09-4103-2034	16-3083-3739
16		Mar	18	223	2.287	0.04782			08-8400-8308	09-7188-0177
17		Apr	17	259.3	38.59	0.807			13-1727-4467	09-2424-6010
18		Aug	11	234	13.3	0.2782			11-4118-4822	13-2892-7741

MSR 9-1-09

Report

of

Test No. 783-6

Larval Sediment Toxicity Test with
Crassostrea gigas

Submitted to

Windward Environmental LLC
200 West Mercer St., Suite 401
Seattle, WA 98119

Submitted by

Northwestern Aquatic Sciences
3814 Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

September 15, 2009

TOXICITY TEST REPORT

TEST IDENTIFICATION

Test No.: 783-6

Title: *Crassostrea gigas* larval sediment toxicity test of marine sediments.

Protocol: NAS-XXX-CG4/MG4, June 20, 1990. Rev. 2, Feb.10, 1997. Based on: Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments (PSEP 1995), with modifications as specified by the Dredged Material Management Program (DMMP, formerly Puget Sound Dredged Disposal Analysis Program or PSDDA) and Washington State Sediment Management Standards (SMS).

STUDY MANAGEMENT

Study Sponsor: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119

Sponsor's Study Monitor: Ms. Helle Andersen

Testing Laboratory: Northwestern Aquatic Sciences, P.O. Box 1437, Newport, Oregon 97365.

Test Location: Newport Laboratory

Laboratory's Study Personnel: M.S. Redmond, M.S., Proj. Mngr.; G.J. Irissarri, B.S., Study Dir.; L.K. Nemeth, B.A., M.B.A., QA Officer; R.S. Caldwell, Ph.D., Sr. Aq. Toxicol.; S. Gage, B.A., Sr. Tech.; L.P. Sandoval, B.S., Tech.; Y. Nakabama, Asst. Tech.

Study Schedule:

Test Beginning: 8-12-09, 1450 hrs.

Test Ending: 8-14-09, 1615 hrs.

Disposition of Study Records: All specimens, raw data, reports and other study records are stored according to Good Laboratory Practice regulations at Northwestern Aquatic Sciences, 3814 Yaquina Bay Rd., Newport, OR 97365.

Good Laboratory Practices: The test was conducted following the principles of Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

Statement of Quality Assurance: The test data were reviewed by the Quality Assurance Unit to assure that the study was performed in accordance with the protocol and standard operating procedures. This report is an accurate reflection of the raw data.

TEST MATERIAL

Test Sediments: Two test sediments and two reference sediments were tested. Details follow:

NAS Sample No.	2736G	2758G
Sample Description	EW09-SS-215-010	EW09-SS-015-010
Collection Date	6-22-09	6-23-09
Receipt Date	6-24-09	6-25-09
Interstitial Salinity (‰)	24.0	28.5

NAS Sample No.	2788G	2790G
Sample Description	CI09-SS-120-010	CI09-SS-180-010
Collection Date	7-7-09	7-7-09
Receipt Date	7-9-09	7-9-09
Interstitial Salinity (‰)	29.5	27.0

Sample Storage: Samples were stored at 4°C in the dark.

Treatments: The samples were minimally homogenized by mixing with stainless steel implements.

TEST WATER

Source: Yaquina Bay, Oregon

Date of Collection: 8-11-09

Water Quality: Salinity 28.0‰, pH 8.1

Pretreatment: Filtered to ≤0.40 μm, salinity-adjusted with MilliQ deionized water, aerated.

TEST ORGANISMS

Species: *Crassostrea gigas*
Age: 0.3 hrs post-fertilization
Source: Oysters were purchased from Oregon Oyster Farm, Inc., Newport, Oregon, and received on 8-12-09.
Acclimation: Adult animals were spawned upon receipt.
Source of Gametes: 3 females, 4 males

TEST PROCEDURES AND CONDITIONS

The following is an abbreviated statement of the test procedures and a statement of the test conditions actually employed. See the test protocol (Appendix I) for a more detailed description of the test procedures used in this study.

Test Chambers: 1 L covered borosilicate glass beakers
Test Volumes: 18 g of test or reference sediment with 900 ml of test water added. Sediment was allowed to settle for the normal period of 4 hours as specified in the protocol.
Replicates/Treatment: 5 (plus a 6th water quality replicate).
Sediment Salinity Adjustment: None required.
Initial Concentration of Test Organisms: 26.8/ml
Water volume changes per 24 hours: None
Volume of Subsamples Taken for Counting: 10 ml
Aeration: Provided through a 1-mL glass pipette placed not closer than 2 cm from sediment, bubbled at a minimal rate (about 100 bubbles/minute) that did not disturb the sediment.
Feeding: None
Acceptance Criteria: The percent normal larvae in the seawater control must be ≥70% at the end of the test.
Performance Criteria: For DMMP projects, the combined mortality and abnormality in the reference sediments must be ≤35% of the seawater control value. SMS projects do not have a specified reference performance criterion.
Effects Criteria: The effects criteria used were: 1) mortality; 2) abnormal development to the fully-shelled stage; and 3) the combined mortality/abnormality endpoint. Normal development is defined as transformation to the fully shelled, straight-hinged, D-shaped prodissoconch I stage. Data collected were: 1) the initial embryo density; 2) the number of abnormal larvae observed, and 3) the number of normal larvae observed. The results were expressed as: 1) percent abnormality; 2) percent mortality; 3) combined percent mortality and abnormality; and 4) normalized (to the seawater control) a) percent mortality and b) combined percent mortality and abnormality.
Water Quality and Other Test Conditions: The temperature, pH, salinity, and dissolved oxygen were measured in the water quality replicate test chamber daily. Total soluble sulfide and total ammonia-N were measured in the overlying water of the water quality replicate test chamber on days 0 and 2. Total soluble sulfide and total ammonia-N were measured using Hach reagents based on the methylene blue (EPA Method 376.2) and salicylate (Clin. Chim. Acta 14:403, 1996) colorimetric methods, respectively; samples were not distilled prior to analysis. The photoperiod was 14:10, L:D.

DATA ANALYSIS METHODS

All three standard endpoints, percent abnormal, percent combined mortality/abnormality, and percent mortality have occasionally been computed both with, and without, normalization for the seawater control. Endpoints in this report have been computed according to the following formulas:

PABN (Percent Abnormality) = 100*(A/T)
PABND (Combined Percent Mortality/Abnormality) = 100*((I-N)/I)
PMORT (Percent Mortality) = 100*((I-T)/I)
NPM (Normalized Percent Mortality) = 100*(1-(T/TS))
NCMA (Normalized Combined Percent Mortality/Abnormality) = 100*(1-(N/NS))

where the following are counts per 10 ml subsample:

N = normal larvae counted
A = abnormal larvae counted
T = N+A (total larvae counted)

I = number of inoculated embryos (from average of zero time counts)
TS = average of total larvae counted in seawater controls
NS = average of normal larvae counted in seawater controls

The means and standard deviations were then calculated for each treatment level. The statistical software employed for these calculations was Microsoft Excel 2000.

PROTOCOL DEVIATIONS

None

REFERENCE TOXICANT TEST

The routine reference toxicant test is a standard multi-concentration toxicity test using cadmium as $CdCl_2 \bullet 2\frac{1}{2}H_2O$ to evaluate the performance of the test organisms used in the sediment toxicity test. The performance is evaluated by comparing the results of this test with historical results obtained at the laboratory. A summary of the reference toxicant test result is given below. The reference toxicant test raw data are found in Appendix II. The reference toxicant test is conducted following EPA/600/R-95/136 (Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, August 1995).

Test No.: 999-2604
Reference Toxicant and Source: cadmium as $CdCl_2 \bullet 2\frac{1}{2}H_2O$, Sigma-Aldrich Lot #12422KB, 1.0 mg/mL stock prepared 1/11/08
Test Date: 8-12-09
Dilution Water Used: Yaquina Bay, Oregon, seawater at 30.0‰
Result: 48-hr EC50, 1.14 mg Cd/L. This result is within the laboratory's control chart warning limits (0.04 to 2.04 mg Cd/L).

RESULTS AND DISCUSSION

Observations of water quality parameters during the test are summarized in Table 1. Individual water quality measurements are located in the raw data (Appendix II). All measurements of standard water quality parameters were within protocol-specified ranges (Table 1). Total soluble sulfide was not detected (detection limit 0.02 mg/L) in the overlying water. Total ammonia-N in the overlying water ranged from <0.1 to 0.6 mg/L.

Means and standard deviations of the number normal and the normalized combined percent mortality and abnormality (NCMA) endpoint for sediments are summarized in Table 2. Detailed data organized by sample and replicate, including the larval counts, for all calculated endpoints are given in Appendix II. Five replicate subsamples were recounted by a second investigator (QC counts) as a check on the acceptability of the initial counts (Appendix II). The QC counts were close (coefficients of variation from 1 to 3 for counts of normal larvae) to the initial counts and were considered acceptable.

The test met the control acceptance criterion of ≥70% normal in the seawater control; the control percent normality was 90.7%. Because the control acceptance criterion was met, and the positive control result was within limits, it is concluded that the test has developed fully acceptable data for use in making management decisions.

Although SMS does not have a specific reference sediment performance criterion, the DMMP criterion is sometimes applied. The DMMP criterion specifies that the combined mortality and abnormality in the reference sediment be ≤35% of the seawater control value. Seawater-control-normalized combined mortality and abnormality in reference sediments CI09-SS-120-010 and CI09-SS-180-010 was 15.6% and 25.7%, respectively, which meets the DMMP criterion.

Because no statistical comparisons were performed between the test sample and the control or reference sediment, no conclusions are given regarding the toxicity of test sediments.

STUDY APPROVAL

Michele L. Redmond 9/18/09
Project Manager Date

Study Director 9-18-09
Date

Linda K. Kenoth 9/15/09
Assistant Laboratory Director Date

Julie R. Fine 9-21-09
Quality Assurance Unit Date

Table 1. Summary of water quality conditions during the tests of oyster, *Crassostrea gigas*, larvae exposed to marine sediments.

Parameter	Mean ± SD	Minimum	Maximum	N
Temperature (°C)	19.8 ± 0.6	19.0	20.9	15
pH	8.1 ± 0.1	7.9	8.1	15
Salinity (‰)	28.8 ± 0.3	28.5	29.0	15
Dissolved oxygen (mg/L)	7.2 ± 0.3	6.5	7.6	15
Total soluble sulfide (mg/L)	---	<0.02	<0.02	10
Total ammonia-N (mg/L)	---	<0.1	0.6	10

Table 2. Means and standard deviations (n=5) of number normal larvae and percent NCMA (combined mortality and abnormality, normalized to the seawater control) of oyster, *Crassostrea gigas*, larvae exposed to marine sediments.

Sample Description	Number normal	Normalized combined percent mortality & abnormality (NCMA)
Seawater control	243 ± 25	0.0 ± 10.2
CI09-SS-120-010 (NAS #2788G)	205 ± 15	15.6 ± 6.3
CI09-SS-180-010 (NAS #2790G)	181 ± 22	25.7 ± 9.2
EW09-SS-215-010 (NAS #2736G)	195 ± 41	19.9 ± 16.7
EW09-SS-015-010 (NAS #2758G)	210 ± 15	13.6 ± 6.1

APPENDIX 1

PROTOCOL

TEST PROTOCOL

BIVALVE LARVAL SEDIMENT BIOASSAY

1. INTRODUCTION:

1.1 Purpose of Study: The purpose of this study is to identify test sediments that are toxic to bivalve larvae.

1.2 Summary of Method: The 48- to 60-hr static test is performed using newly fertilized embryos of the Pacific oyster, *Crassostrea gigas* or blue mussel, *Mytilus* sp. Eighteen grams of test sediment suspended in 900 mL of test water are vigorously mixed for 10 sec in the 1 L glass test vessels to produce the test medium. After 4 hr, the test containers are inoculated with <2-hr-old embryos at a level sufficient to yield a final concentration of 20-40 per ml. Five replicates are used for each treatment, reference, and control sediment (A sixth replicate is used only for water quality measurements). Mortality, abnormal development, and combined mortality/abnormality during exposure are the response criteria used. The mean ± S.D. for each treatment and test endpoint is given in the final report. Between-treatment comparisons may be made with Student's t-test, or by using an analysis of variance with an appropriate post-hoc test.

2. STUDY MANAGEMENT:

2.1 Sponsor's Name and Address:

_____

_____

_____

2.2 Sponsor's Study Monitor:

_____

2.3 Name of Testing Laboratory:
Northwestern Aquatic Sciences
Yaquina Bay Road
P.O. Box 1437
Newport, OR 97365

2.4 Test Location: _____

2.5 Laboratory's Personnel to be Assigned to the Study:
Project Manager/Technical Director: _____
Qual. Assurance Officer: _____
Aquatic Biologist: _____
Aquatic Biologist: _____

2.6 Proposed Testing Schedule: Tests to begin within 2 weeks (8 weeks if held under nitrogen for PSDDA) of sample collection. Reference toxicant test to be run concurrently.

2.7 Good Laboratory Practices: Tests are conducted according to Good Laboratory Practices (GLP) as defined in the EPA/TSCA Good Laboratory Practice regulations revised August 17, 1989 (40 CFR Part 792).

3. TEST MATERIAL

The test materials are marine sediments. The collected sediments are placed in solvent and acid cleaned 1 L glass jars fitted with TFE-lined screw caps. Samples are stored at 4°C in the dark for up to 14 days. For PSDDA testing, the samples may be stored under nitrogen at 4°C in the dark in the original sealed containers for up to 8 weeks prior to testing. In addition to the test sediments, one or more reference sediments (a clean sediment with physical characteristics similar to the test sediments) must be employed. A second control sediment from a clean site may also be used (optional).

4. TEST WATER

Test water is filtered Yaquina Bay seawater adjusted to a salinity of 28 ppt. The water is pumped daily from Yaquina Bay into a 6000 gal seasoned fiberglass reservoir from which it is supplied under pump pressure to the laboratory. Filtration is accomplished using a sand filter followed by a medium porosity (10-25 um) cartridge filter, then a <0.45 um filter. An alternative seawater supply of similar quality may be used. The use of sterile seawater may be desirable.

5. TEST ORGANISMS

5.1 Species: Pacific oyster, *Crassostrea gigas* or blue mussel *Mytilus* sp.

5.2 Source: Adult oysters are purchased from Oregon Oyster Co., Newport, OR, a commercial grower. Blue mussels are purchased from a commercial supplier such as Carlsbad Aquafarms, Carlsbad, CA.

5.3 Age at Study Initiation: Less than two-hour-old embryos.

5.4 Conditioning/Acclimation of Adults: Adult bivalves are conditioned/acclimated by holding for up to eight weeks in seasoned fiberglass water trays supplied with a minimum of 1 L/min of unfiltered Yaquina Bay, OR water (22-32 ppt) at a temperature of approximately 18-22°C (14-18°C for mussels). Supplemental feeding with cultured algae may be desirable. A 14 hour/10 hour light-dark photoperiod is employed.

5.5 Spawning and Fertilization: Adult bivalves are cleaned by brushing and placed into spawning trays supplied with seawater. The bivalves are spawned by gradually increasing the water temperature to 5-10°C above the conditioning temperature over approximately a one hour period. Sperm from a sacrificed male may be added to the spawning tray to aid stimulation of natural spawning. If spawning does not occur, the water is cooled and the cycle is repeated. Bivalves that begin spawning are rinsed and isolated in clean sterile seawater for collection of gametes.

Eggs from two or more females are fertilized by addition of sperm from two or more males at a concentration of 10^5 to 10^7/ml. After fertilization, the embryo density is adjusted to approximately 2000-4000/ml by dilution with 28 ppt seawater. Embryos are kept suspended by frequent gentle agitation with a perforated plunger and the temperature is maintained at test temperature. The quality of the embryos is verified before testing by microscopic examination. Less than 2-hr-old embryos are used in the test.

6. DESCRIPTION OF TEST SYSTEM

6.1 Test Chambers and Environmental Control: Test chambers used in the toxicity test are covered 1 L glass beakers. Test chambers are maintained at constant temperature by partial immersion in a temperature-controlled water bath or placement in a temperature-controlled environmental chamber. Aeration is generally recommended but not required by PSEP unless dissolved oxygen falls below 60% saturation. Aeration is required for PSDDA. The test is performed under a 14:10 L:D photoperiod with illumination supplied by fluorescent lamps.

6.2 Cleaning: All laboratory glassware, including test chambers, is cleaned as described in EPA/600/4-90/027. (NAS SOP No. G-1.) New glassware and test systems are soaked 15 minutes in tap water and scrubbed with detergent (or cleaned in automatic dishwasher); rinsed twice with tap water; carefully rinsed once with fresh, dilute (10%, V:V) hydrochloric or nitric acid to remove scale, metals, and bases; rinsed twice with deionized water; rinsed once with acetone to remove organic compounds (using a fume hood or canopy); and rinsed three times with deionized water. Test systems and chambers are rinsed again with dilution water just before use.

7. EXPERIMENTAL DESIGN AND TEST PROCEDURES

7.1 Experimental Design: The experimental design consists of exposure of bivalve embryos to a number of test sediments, one or more reference sediments, a clean sand control sediment (optional), and a no-sediment (seawater) control. Each treatment consists of five replicate test containers, each containing from 20,000 to 40,000 bivalve embryos. A sixth replicate series is used for water quality measurements. Complete randomization of test containers is used.

7.2 Test Procedure: Eighteen grams of test or control sediment is added to the appropriate 1 L test container and the test water is added to a final volume of 900 mL. The containers are vigorously mixed for 10 seconds and then allowed to settle for 4 hr. Each test vessel is then inoculated with 20,000 to 40,000 <2-hr-old bivalve embryos (~ 1 ml of embryo stock). The embryos are incubated at 20 ± 1 °C for oysters (16 ± 1°C for mussels) for 48-60 h to permit development into normal prodissoconch I stage larvae. Immediately after inoculation of the test vessels with embryos, 10 ml aliquots are removed from each of the five no-sediment control replicates and preserved in 5% buffered formalin. These are counted at a later date to establish the average initial embryo concentration.

The test is terminated after 48-60 hr by carefully decanting the supernatant liquid into a 1000 ml beaker. Ten milliliter aliquots are then taken from each beaker, placed into a 30 ml glass vial, and preserved in 5% buffered formalin. The beaker contents are gently agitated using a perforated plastic plunger at the time of aliquot removal to ensure that the aliquots accurately reflect the embryo/larval concentration of the entire test vessel. Larvae are subsequently counted in the 30 ml vials using an inverted compound microscope to determine the total number of larvae and the number failing to develop a complete shell; these data are used for calculating the percent mortality, percent abnormality, and percent combined mortality and abnormality (percent abnormal/dead). Approximately 10% of the samples may be counted by a second investigator as a QA/QC measure.

7.3 Effect Criteria: Effect criteria are: 1) mortality of the embryos, and 2) abnormal development (failure to produce completely developed shells). A third effect expression is a combination of these two, percent abnormal/dead. This is functionally equivalent to percent normal.

The initial number of embryos are determined by averaging the counts of all eggs in initial subsamples of the five seawater control test containers. Live abnormal larvae are those observed at 48-60 hr in which a fully shelled, straight-hinged, D-shaped prodissoconch I stage has been reached.

7.4 Test Conditions: The test exposure duration is 48-60 h. The test temperature is 20 ± 1°C for oysters and 16 ± 1°C for mussels. The salinity is 28 ± 1 ppt. The photoperiod is a 14:10 hr, L:D cycle of fluorescent light. Aeration is not required for PSEP unless dissolved oxygen falls below 60% saturation; aeration is required for PSDDA (dissolved oxygen must be maintained at ≥ 4 mg/L). Test chambers are 1 L glass beakers held in a controlled temperature environment.

7.5 Feeding: Embryos are not fed during the test.

7.6 Test Duration, Type and Frequency of Observations, and Methods: The test duration is 48-60 hours. The type and frequency of observations to be made during the test are summarized as follows:

TYPE OF OBSERVATION	TIMES OF OBSERVATION
Biological Data	
Mortality and abnormal development	End of test (at 48-60 hours)
Physical and Chemical Data	
Temperature, dissolved oxygen, salinity, & pH	Daily in water quality beakers
Ammonia-N and sulfide	Beginning & end of test in water quality beakers

Temperature is measured with a calibrated mercury thermometer or telethermometer. Dissolved oxygen is directly measured in test vessels using a polarographic oxygen probe calibrated according to the

manufacturer's recommendations. Salinity is measured using a refractometer. The pH is measured with a pH probe and a calibrated meter with scale divisions of 0.1 pH units. Ammonia-N is measured using the HACH Model FF-3 test kit (ammonia-N detection limit 0.1 mg/L). Sulfide is measured using the HACH Hydrogen Sulfide Test Kit Model HS-WR (sulfide detection limit 0.01 mg/L).

7.7 Criteria of Test Acceptance: The test results are acceptable if at least 70% of the seawater control larvae achieve a normal,D-shaped prodissoconch I stage. Also, for PSDDA, effects in the reference sediments must be ≤ 35% over the seawater control.

8. DATA ANALYSIS METHODS

Prior to issuance of the July 1995 revision of the PSEP recommended guidelines for conducting laboratory bioassays, no specific guidance was given for the computation of endpoints. All three standard endpoints, percent abnormal, percent combined mortality/abnormality, and percent mortality have occasionally been computed both with, and without, normalization for the seawater control. In order to be consistent with what we assume to be the PSAMP format, all endpoints given in reports are usually the non-normalized endpoints. In addition, normalized percent mortality (NPM), and normalized combined mortality/abnormality (NCMA) are computed and are included in the raw data computer printouts. The formulas employed for each of these computations are as follows:

PABN (Percent Abnormality) = 100*(A/T)
PABND (Combined Percent Mortality/Abnormality) = 100*((I-N)/I)
PMORT (Percent Mortality) = 100*((I-T)/I)
NPM (Normalized Percent Mortality) = 100*(1-(T/TS))
NCMA (Normalized Combined Percent Mortality/Abnormality) = 100*(1-(N/NS))

where the following are counts per 10 ml subsample:

N = normal larvae counted
A = abnormal larvae counted
T = N+A (total larvae counted)
I = number of inoculated embryos (from average of zero time counts)
TS = average of total larvae counted in seawater controls
NS = average of normal larvae counted in seawater controls

Other endpoints may be computed at client request.

The means and standard deviation are then calculated for each treatment level. Between-treatment comparisons for each biological endpoint may be made using a t-test or a one-way analysis of variance F test (Snedecor and Cochran 1967). An arcsine square root data transformation is required for proportional data.

9. REPORTING

A standard NAS report of the test results must include the following information: name and identification of the test; the investigator and laboratory; sediment holding temperature data; information on the test sediment including the interstitial salinity; information on the source of seawater used; detailed information about the test organisms including acclimation conditions; a description of the experimental design and test chambers and other test conditions including water quality; information about any aeration that may have been required; definition of the effect criteria and other observations; unusual responses, if any, in the control treatment; individual replicate and mean and S.D. data for larval mortality after 48-60 hr; individual replicate and mean and S.D. data for larval abnormalities after 48-60 hr; individual replicate and mean and S.D. data for combined abnormality and mortality; 48-hr LC50 and EC50 with reference toxicant; a description of data analysis methods and documentation of statistical test results; any unusual information about the test or deviations from procedures.

10. STUDY DESIGN ALTERATION

Amendments made to the protocol must be approved by the sponsor and study director and should include a description of the change, the reason for the change, the date the change took effect, and the dated signatures of

APPENDIX II

RAW DATA

TEST DESCRIPTION, MONITORING, AND RESULTS BENCHSHEETS

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-CG/MG4
NAS-XXX-SP/DE4

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-6 Client Windward Investigator reviewed pg. 1-21 MR 9/8/09

STUDY MANAGEMENT

Client: Windward Environmental LLC, 200 West Mercer St., Suite 401, Seattle, WA 98119
Client's Study Monitor: Ms. Helle Andersen
Testing Laboratory: Northwestern Aquatic Sciences
Test Location: Newport Laboratory
Laboratory's Study Personnel:
Proj. Man./Study Dir. M.S. Redmond MR/G.J. Irissarri GJI
QA Officer L.K. Nemeth
1. Lidia P. Sandoval LPS 2. Susan Gage SG
3. Yves MaGalina YM 4. R.S. Caldwell
5. 6.

Study Schedule:
Test Beginning: 8-12-09 1450 Test Ending: 8-14-09 1615

TEST MATERIAL

General description (see sample logbook/chain-of-custody for details):

NAS Sample No.:	2736G	2758G	2788G	2790G	
Description:	EW09-SS-215-010	EW09-SS-015-010	CI09-SS-120-010	CI09-SS-180-010	
Collection Date:	6/22/09	6/23/09	7/7/09	7/7/09	
Receipt Date:	6/24/09	6/25/09	7/9/09	7/9/09	
Inters.Salinity (ppt):	24.0	28.5	29.5	27.0	
:					
NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					
NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					
NAS Sample No.:					
Description:					
Collection Date:					
Receipt Date:					
Inters.Salinity (ppt):					
:					

Error codes: 1) correction of handwriting error
2) written in wrong location; entry deleted
3) wrong date deleted, replaced with correct date
4) error found in measurement; measurement repeated

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-CG/MG4
NAS-XXX-SP/DE4

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-6 Client Windward Investigator

SEDIMENT DESCRIPTIONS -- SUPPLEMENTAL NOTES

Sample No.	Description
2736G	black sticky mud with wood chunks
2758G	dark brown to black mud with a lot of shell material
2788G	brown muddy sand
2790G	tan sticky mud, some rocks

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-6 Client Windward Investigator

TEST ORGANISMS

Species: ~~Mytilus galloprovincialis~~ Crassostrea gigas Date Received: 8-12-09
Source: Oregon Oyster Farm, Newport, OR

Acclimation Data:

Date	Temp. (deg.C)	pH	Sal (ppt)	DO (mg/L)	Comments
	Adult animals were spawned				
	upon receipt				
Mean					
S.D.					
(N)					

Photoperiod during acclimation:

TEST WATER

Source: Yaquina Bay, Oregon, sea water
Date of Collection: 8-11-09 Salinity (ppt) 28.0 pH 8.1
Treatments: filtered to 0.4 µm, salinity-adjusted with MilliQ deionized water, aerated

SPAWNING AND GAMETE HANDLING

Spawning: Initial: 1230 AM/PM Final: 1315 AM/PM Fertilization: 1430 AM/PM
Number of organisms used: females: 3 males: 4
Egg Dilution (1 ml diluted to 500 ml):
Count/ml of dilution: 1. 55 2. 48 3. 47 Mean: 50
Dilution factor = DF (mean x 500/25,000) = 1.0

TEST PROCEDURES AND CONDITIONS

Test chambers: 1 L glass beakers covered with watchglasses
Test volumes: 18 g of test sediment; 900 ml of test water
Replicates/treatment: (5) 5 Organisms/treatment: (20-40/ml) 26.8
Use 6th replicate/test sediment for water quality and development assessment beaker
Test water changes: None Aeration: yes Feeding: none Photoperiod: 14L:10D
Test temperature (deg.C): mussels 16, oysters 20, echinoderms 15
Beaker placement: Total randomization
Larval stock (20,000-40,000/ml) inoculation volume: 1.0 ml; <2-hr old
Subsample size for counting: 10 ml

MISCELLANEOUS NOTES

Light intensity measurements:

Date	Location in room	foot-candles
8-14-09	beaker #13	23.9

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-6 Client Windward Investigator _____

Test conducted in (circle one): room 1 room 2 (trailer) water bath other: _____

Randomization chart:

	Beakers arranged in numerical order								
	on shelf, 3 deep.								

Randomization chart:

Randomization chart:

Randomization chart:

Randomization chart:

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-CG/MG4
NAS-XXX-SP/DE4

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-6 Client Windward Investigator

WATER QUALITY RECORD

Day 0 (8/12/09 LPS/18)

overlying NH3 sampled? Yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	Comments
7	19.1	7.9	28.5	7.5	<0.02	
14	19.0	8.1	29.0	7.5	<0.02	
15	19.0	8.1	28.5	7.1	<0.02	
16	19.1	8.1	29.0	7.6	<0.02	
30	19.2	8.1	29.0	7.5 6.5	<0.02	

Day 1 (8/13/09 YP)

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	Comments
7	20.9	8.0	28.5	7.0	
14	20.3	8.0	29.0	7.1	
15	20.3	8.1	28.5	7.3	
16	20.4	8.1	29.0	7.1	
30	20.8	8.0	29.0	7.3	

Day 2 (8/14/09 18)

overlying NH3 sampled? Yes

Beaker No.	Temp. (deg.C)	pH	Sal. (ppt)	DO (ppm)	S (mg/L)	Comments
7	20.0	8.0	28.5	7.1	<0.02	
14	19.7	8.1	29.0	7.1	<0.02	
15	19.7	8.1	28.5	7.2	<0.02	
16	20.0	8.1	29.0	7.3	<0.02	
30	20.1	8.1	29.0	6.8	<0.02	

NORTHWESTERN AQUATIC SCIENCES

PROTOCOL NO. NAS-XXX-CG/MG4
NAS-XXX-SP/DE4

SEDIMENT LARVAL TEST BASED ON PSEP PROTOCOLS

Test No. 783-6 Client Windward Investigator

LARVAL COUNT DATA

8-28-09 AJ

Beaker no.	Response N	Response A
1	160	30
2	230	10
3	159	25
4	206	48
5	228	12
6	214	10
7	—	—
8	224	8
9	202	9
10	214	1
11	213	1
12	225	8
13	214	6
14	—	—
15	—	—
16	—	—
17	223	1
18	221	1
19	205	23
20	263	15
21	176	82
22	192	13
23	222	14
24	186	7
25	175	13
26	212	14
27	186	22
28	276	21
29	128	57
30		

Beaker no.	Response N	Response A

Beaker no.	Response N	Response A
	Zero Trial	
2	264	
8	285	
20	265	
23	275	
28	253	
QC COUNTS 9-9-09 AJ		
3	152	39
5	232	10
12	221	13
24	178	11
26	205	10

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH_3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH_3-N Std	-----	0.120	1.00
	3.0 mg/L NH_3-N Std.	-----	0.320	3.00
	6.0 mg/L NH_3-N Std.	-----	0.655	6.00
	10.0 mg/L NH_3-N Std.	-----	1.100	10.00
	3.0 mg/L spike	-----	0.326	2.97
	3.0 mg/L spike dupl.	-----	0.320	2.92
	5.0 mg/L 2nd source	-----	0.523	4.77
1.	Day 0 (8-12-09)	######		
2.	7	1	0.005	ND
3.	14	1	0.005	ND
4.	15	1	0.063	0.57
5.	16	1	0.000	ND
6.	30	1	0.040	0.36
7.	Day 2 (8-14-09)	######		
8.	7	1	0.010	ND
9.	14	1	0.000	ND
10.	15	1	0.047	0.43
11.	16	1	0.010	ND
12	30	1	0.020	0.18
13.				
14				
15.				
16.				
17.				
18.				
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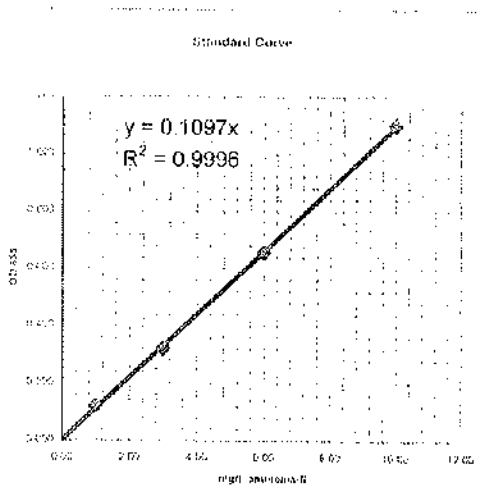

Reporting limit (mg/L) =	0.1
Recovery (%) =	98.2
Precision (RPD) =	1.86
2nd source (%) =	95.4
Sample volume (ml):	0.50
Dilution factor	1

Sample Set Description:

Test No.: 783-6
Test Day: 0 & 2
Species: *Crassostrea*

Overlying water

Analyst: RSC
Date analysed: 9/3/2009

Total Ammonia-N in Water: Computation Worksheet
Salicylate Method (SOP #5492)

Result

	Sample description	Dilution factor	OD655	NH3-N (mg/L)
	Blank	-----	-----	-----
	1.0 mg/L NH3-N Std.	-----	.120	1.00
	3.0 mg/L NH3-N Std.	-----	.320	3.00
	6.0 mg/L NH3-N Std.	-----	.655	6.00
	10.0 mg/L NH3-N Std.	-----	1.10	10.00
	3.0 mg/L spike	-----	.326	
	3.0 mg/L spike dupl.	-----	.320	
	5.0 mg/L 2nd source	-----	.523	
1	Day 0 (8-12-09)	######		
2.	7	1	.005	
3.	14	1	.005	
4.	15	1	.063	
5.	16	1	.000	
6.	30	1	.040	
7.	Day 2 (8-14-09)	######		
8.	7	1	.010	
9.	14	1	.000	
10.	15	1	.047	
11.	16	1	.010	
12.	30	1	.020	
13.				
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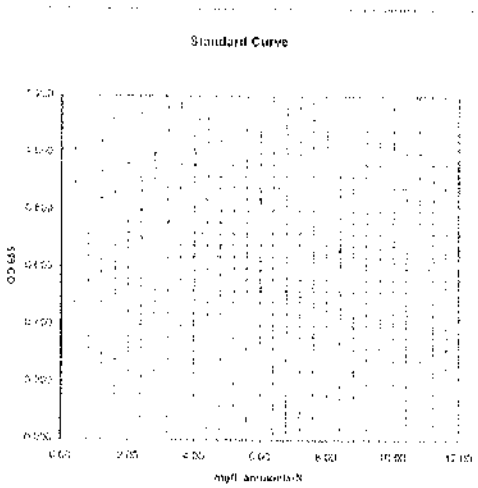
36				



Reporting limit (mg/L) = 0.1

Recovery (%) = #VALUE!
Precision (RPD) = #VALUE!
2nd source (%) = #VALUE!

Sample volume (ml): 0.50
Dilution factor 1

Sample Set Description:
Test No.: 783-6
Test Day: 0 & 2
Species: *Crassostrea*

Overlying water

Analyst: RSC
Date analysed: 9/3/2009

TEST DATA ANALYSIS RECORDS

Larval Sediment Test
Randomization Key

BKR	NAS SMPL	CLIENT DESCRIP	REPL	
20	swcontrol	swcontrol	1	
2	swcontrol	swcontrol	2	
8	swcontrol	swcontrol	3	
23	swcontrol	swcontrol	4	
28	swcontrol	swcontrol	5	
16	swcontrol	swcontrol	6	wq replicate
19	2736G	EW09-SS-215-010	1	
27	2736G	EW09-SS-215-010	2	
5	2736G	EW09-SS-215-010	3	
29	2736G	EW09-SS-215-010	4	
17	2736G	EW09-SS-215-010	5	
30	2736G	EW09-SS-215-010	6	wq replicate
26	2758G	EW09-SS-015-010	1	
12	2758G	EW09-SS-015-010	2	
13	2758G	EW09-SS-015-010	3	
6	2758G	EW09-SS-015-010	4	
25	2758G	EW09-SS-015-010	5	
15	2758G	EW09-SS-015-010	6	wq replicate
11	2788G	CI09-SS-120-010	1	
22	2788G	CI09-SS-120-010	2	
10	2788G	CI09-SS-120-010	3	
24	2788G	CI09-SS-120-010	4	
18	2788G	CI09-SS-120-010	5	
14	2788G	CI09-SS-120-010	6	wq replicate
9	2790G	CI09-SS-180-010	1	
1	2790G	CI09-SS-180-010	2	
4	2790G	CI09-SS-180-010	3	
21	2790G	CI09-SS-180-010	4	
3	2790G	CI09-SS-180-010	5	
7	2790G	CI09-SS-180-010	6	wq replicate

Endpoints Data Entry and Calculations File

BKR=beaker number
INIT=number of inoculated embryos (from average of zero-time counts)
NORM=number normal
ABN=number abnormal
TOTAL=NORM+ABN
PMORT=percent mortality=100((INIT-TOTAL)/INIT)
PABN=percent abnormality=100(ABN/TOTAL)
PABND=combined percent mortality and abnormality=100((INIT-NORM)/INIT)
NPM=normalized percent mortality=100(1-(TOTAL/TS)),
where TS=average of total larvae counted in seawater controls
NCMA=normalized combined percent mortality and abnormality=100(1-(NORM/NS)),
where NS=average of normal larvae counted in seawater controls

zero counts	
a	264
b	283
c	265
d	275
e	253
Mean =	268

Data entry verified against laboratory bench sheets MSL 9-8-09

NS (mean normal)	TS (mean total)
243.0	256.6

%normal in SW cont relative to INIT
90.7

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL	INIT	NORM	ABN	TOTAL	PMORT	PABN	PABND	NPM	NCMA
1	20	swcontrol	swcontrol	1	268	263	15	278	-3.7	5.4	1.9	-8.3	-8.2
2	2	swcontrol	swcontrol	2	268	230	10	240	10.4	4.2	14.2	6.5	5.3
3	8	swcontrol	swcontrol	3	268	224	8	232	13.4	3.4	16.4	9.6	7.8
4	23	swcontrol	swcontrol	4	268	222	14	236	11.9	5.9	17.2	8.0	8.6
5	28	swcontrol	swcontrol	5	268	275	21	297	-10.8	7.1	-3.0	-15.7	-13.6
6	16	swcontrol	swcontrol	6 wq replicate	268								
7	19	2736G	EW09-SS-215-010	1	268	208	23	231	13.8	10.0	22.4	10.0	14.4
8	27	2736G	EW09-SS-215-010	2	268	185	22	208	22.4	10.6	30.6	18.9	23.5
9	5	2736G	EW09-SS-215-010	3	268	228	12	240	10.4	5.0	14.9	6.5	5.2
10	29	2736G	EW09-SS-215-010	4	268	128	57	185	31.0	30.8	52.2	27.9	47.3
11	17	2736G	EW09-SS-215-010	5	268	223	1	224	16.4	0.4	16.8	12.7	8.2
12	30	2736G	EW09-SS-215-010	6 wq replicate	268								
13	26	2758G	EW09-SS-015-010	1	268	212	14	226	15.7	6.2	20.9	11.9	12.8
14	12	2758G	EW09-SS-015-010	2	268	225	8	233	13.1	3.4	16.0	9.2	7.4
15	13	2758G	EW09-SS-015-010	3	268	214	6	220	17.9	2.7	20.1	14.3	11.9
16	6	2758G	EW09-SS-015-010	4	268	214	10	224	16.4	4.5	20.1	12.7	11.9
17	25	2758G	EW09-SS-015-010	5	268	185	13	198	26.1	6.6	31.0	22.8	23.9
18	15	2758G	EW09-SS-015-010	6 wq replicate	268								

	NORM	PMORT	PABN	PABND	NPM	NCMA
Mean	243.0	4.3	5.2	9.3	0.0	0.0
S.D.	24.8	10.9	1.4	9.3	11.4	10.2
n	5	5	5	5	5	5
Mean	194.6	18.8	11.4	27.4	15.2	19.9
S.D.	40.7	8.1	11.6	15.2	8.4	16.7
n	5	5	5	5	5	5
Mean	210.0	17.8	4.7	21.6	14.2	13.6
S.D.	14.9	5.0	1.7	5.6	5.2	6.1
n	5	5	5	5	5	5

INDEX	BKR	NAS SMPL	CLIENT DESCRIP	REPL		INIT	NORM	ABN	TOTAL	PMORT	PABN	PABND	NPM	NCMA		NORM	PMORT	PABN	PABND	NPM	NCMA
19	11	2788G	CI09-SS-120-010	1		268	213	1	214	20.1	0.5	20.5	16.6	12.3							
20	22	2788G	CI09-SS-120-010	2		268	192	13	205	23.5	6.3	28.4	20.1	21.0	Mean	205.2	21.7	2.3	23.4	18.2	15.6
21	10	2788G	CI09-SS-120-010	3		268	214	1	215	19.8	0.5	20.1	16.2	11.9	S.D.	15.3	4.2	2.7	5.7	4.4	6.3
22	24	2788G	CI09-SS-120-010	4		268	186	7	193	28.0	3.6	30.6	24.6	23.5	n	5	5	5	5	5	5
23	18	2788G	CI09-SS-120-010	5		268	221	1	222	17.2	0.5	17.5	13.5	9.1							
24	14	2788G	CI09-SS-120-010	6	wq replicate	268															
25	9	2790G	CI09-SS-180-010	1		268	202	9	211	21.3	4.3	24.6	17.8	16.9							
26	1	2790G	CI09-SS-180-010	2		268	150	30	180	29.1	15.8	40.3	26.0	34.2	Mean	180.6	18.1	16.9	32.6	14.5	25.7
27	4	2790G	CI09-SS-180-010	3		268	206	48	254	5.2	18.9	23.1	1.0	15.2	S.D.	22.4	13.0	10.0	8.4	13.6	9.2
28	21	2790G	CI09-SS-180-010	4		268	176	82	258	3.7	31.8	34.3	-0.5	27.6	n	5	5	5	5	5	5
29	3	2790G	CI09-SS-180-010	5		268	159	25	184	31.3	13.6	40.7	28.3	34.6							
30	7	2790G	CI09-SS-180-010	6	wq replicate	268															

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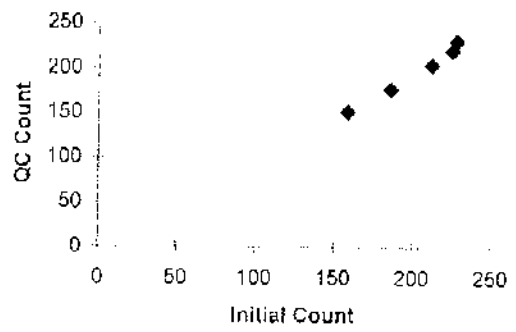
Comparison of Initial Counts and QC Counts

Beaker No.	Normal Larvae				
	Initial Count		QC Count		
	Normal	Abnormal	Normal	Abnormal	cv(normal)
3	159	25	152	39	3
5	228	12	232	10	1
12	225	8	221	13	1
24	186	7	178	11	3
26	212	14	205	10	2



Intercept	-26.37713
Slope	1.108798
r square	0.986624

Water Quality Data File

BKR	NAS SMPL	CLIENT DESCRIP	REPI	DAY	TEMP	pH	SAL	DO	S	NH3
7	2790G	CI09-SS-180-010	6	0	19.1	7.9	28.5	7.5	<0.02	<0.1
14	2788G	CI09-SS-120-010	6	0	19.0	8.1	29.0	7.5	<0.02	<0.1
15	2758G	EW09-SS-015-010	6	0	19.0	8.1	28.5	7.1	<0.02	0.6
16	swcontrol	swcontrol	6	0	19.1	8.1	29.0	7.6	<0.02	<0.1
30	2736G	EW09-SS-215-010	6	0	19.2	8.1	29.0	6.5	<0.02	0.4
7	2790G	CI09-SS-180-010	6	1	20.9	8.0	28.5	7.0		
14	2788G	CI09-SS-120-010	6	1	20.3	8.0	29.0	7.1		
15	2758G	EW09-SS-015-010	6	1	20.3	8.1	28.5	7.3		
16	swcontrol	swcontrol	6	1	20.4	8.1	29.0	7.1		
30	2736G	EW09-SS-215-010	6	1	20.8	8.0	29.0	7.3		
7	2790G	CI09-SS-180-010	6	2	20.0	8.0	28.5	7.1	<0.02	<0.1
14	2788G	CI09-SS-120-010	6	2	19.7	8.1	29.0	7.1	<0.02	<0.1
15	2758G	EW09-SS-015-010	6	2	19.7	8.1	28.5	7.2	<0.02	0.4
16	swcontrol	swcontrol	6	2	20.0	8.1	29.0	7.3	<0.02	<0.1
30	2736G	EW09-SS-215-010	6	2	20.1	8.1	29.0	6.8	<0.02	0.2
				Mean	19.8	8.1	28.8	7.2	---	---
				SD	0.6	0.1	0.3	0.3	---	---
				n	15	15	15	15	10	10
				Min	19.0	7.9	28.5	6.5	<0.02	<0.1
				Max	20.9	8.1	29.0	7.6	<0.02	0.6

Data entry verified against laboratory bench sheets 9-14-09 SMF

CHAIN-OF-CUSTODY RECORDS

Michele Redmond

From: Thai Do [ThaiD@windwardenv.com]
Sent: Friday, July 31, 2009 10:02 AM
To: mredmond@nwaquatic.com
Cc: Susan McGroddy; Helle Andersen
Subject: RE: Selection of EW bioassay stations

Hi Michele,

Please use these reference sediment IDs:

CI09-SS-120-010 (20% fines) for station 15 (26.6% fines)
CI09-SS-180-010 (80% fines) for station 215 (76.0% fines)

Thanks.

Thai Do
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]
[illegible]
[illegible] thaid@windwardenv.com

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Please consider the environment before printing this email.

From: Susan McGroddy
Sent: Thursday, 30 July, 2009 13:28
To: Helle Andersen; mredmond@nwaquatic.com
Cc: Thai Do
Subject: RE: Selection of EW bioassay stations

Michele,

We have selected two locations for bioassay testing for EW. Location 15 and Location 215. I have attached the grain size information. Thai will let you know which reference sediments are appropriate.

Thanks.
Susie

From: Helle Andersen
Sent: Tuesday, July 28, 2009 4:18 PM
To: mredmond@nwaquatic.com
Cc: Susan McGroddy

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09 46
Contact Name: Helle Andersen
Sampled By: TD, SR, RB, CL

Ship to: NAS
Attn: Michele Richmond
Shipping Date: 6.22.09
Shipper: UPS
Airbill Number:
Form filled out by: C. Lorenz
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (Jar tag number(s))
6.22.09	903	EW09-SS-223-010	5	Sediment	X							NAS* 27336
	1007	EW09-SS-214-010	5		X							27346
	1036	EW09-SS-213-010	5		X							27356
	1121	EW09-SS-215-010	5		X							27366
	1202	EW09-SS-018-010	5		X							27376
	1228	EW09-SS-016-010	5		X							27386
	1252	EW09-SS-022-010	5		X							27396
	1318	EW09-SS-028-010	5		X							27406
	1340	EW09-SS-039-010	5		X							27416
	1400	EW09-SS-017-010	5		X							27426
	1422	EW09-SS-026-010	5		X							27436
	1436	EW09-SS-040-010	5		X							27446
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: TIM DO	Michelle Richmond	Print name:	
Signature:	Company: GOLDER ASSOCIATES / Gary Butler	Signature:	Company:
Company: WINDWARD	NORTHWESTERN AQUATIC SCIENCES	Company:	
Date/Time: 06.23.09/1200	Date/Time: 6-24-09 / 0945	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt:: 6-24-09	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

2 OF 7

DWT:25,17,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

TRACKING #: 1Z Y34 89E 15 9281 6534

1+

BILLING: P/P

Reference#1: EW Surface Sediment

UPS 11 1 05 WXPE20 98 DA 04/2009

TM

https://www.ups.com/uis/create?Action=Print&Form=FOR USE IN SHIPPING ONLY&UISReceipt&POPUP_LEVEL... 6/23/2009

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2698

Project/Client Name: EW 21/PS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: Thao Do

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: S. Kotka

Shipping Date: 6/24/2009
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (lar tag number(s))
06.23.09	0857	EW09-SS-222-010	5	Sediment	X							NAS# 27546
6	0929	EW09-SS-221-010	5	"	X							27556
	1002	EW09-SS-098-010	5	"	X							27566
	1024	EW09-SS-012-010	5	"	X							27526
	1034	EW09-SS-015-010	5	"	X							27536
	1050	EW09-SS-107-010	5	"	X							27596
	1108	EW09-SS-106-010	5	"	X							27606
	1132	EW09-SS-208-010	5	"	X							27616
	1153	EW09-SS-206-010	5	"	X							27626
	1305	EW09-SS-210-010	5	"	X							27636
	1319	EW09-SS-205-010	5	"	X							27646
	1354	EW09-SS-202-010	5	"	X							27656
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Suzanne Reginger	Gary Bell	Print name:	
Signature:	Company:	Signature:	Company:
Company: Windward	NORTHWESTERN ANALYTICAL SERVICES	Company:	
Date/Time: 6/24/2009 0700	Date/Time: 6-25-09 / 0830	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

12 of 17 pcs

HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

3 OF 7

DWT:25,17,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

1+

TRACKING #: 1Z Y34 89E 15 9265 8214

BILLING: P/P

Reference#1: BW Surface Sediment

TM

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2709

Project/Client Name: EW RI/FS Surface Sediment (Round 2)
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: T.Do, R. Berg

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: T.DO

Shipping Date: 07.08.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOX/CHEM							HOLD PENDING INSTRUCTIONS TO ANALYZE Comments / Instructions (Jar tag number(s))
07.07.09	1125	CI09-SS-120-010	10 L	Sediment	X				NAS# 27886			~20% fines
↓	1440	CI09-SS-140-010	10 L	↓	X					#27896		~40% fines
↓	1730	CI09-SS-180-010	10 L	↓	X					#27906		~80% fines
		Total Number of Containers	30 L	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: TIAN DO	Michele L. Redmond	Print name:	
Signature:	Company: NAS	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 07.08.09/1200	Date/Time: 7-9-09 / 08:30	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

Page 19 of 31

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

HEIDI
206 378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

1 OF 2

DWT:18,15,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

1+

TRACKING #: 1Z Y34 89E 15 9240 2267

BILLING: P/P

UPS Internet Shipping: Shipment Label

FOR UPS SHIPPING ONLY

6.5°C

DATE 07.08.09

INITIALS

LAB SAMPLE
DO NOT TAMPER

DATE 07.08.09

INITIALS

LAB SAMPLE
DO NOT TAMPER

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HEIDI
206-378-1364
WINDWARD ENVIRONMENTAL LLC
200 W MERCER STREET
SEATTLE WA 98119

40 LBS

2 OF 2

DWT:18,15,12

SHIP TO:
MICHELE REDMOND
541-265-7225
NORTHWESTERN AQUATIC SCIENCES
3814 YAQUINA BAY ROAD
NEWPORT OR 97365-9639

OR 973 2-01

UPS EARLY A.M.

TRACKING #: 1Z Y34 89E 15 9485 8272

1+

BILLING: P/P

UPS 11 1 05 WXI1270 99 0A 06/2006

TM

4.5°C

7/8/2009

DATE 07.08.09

INITIALS

LAB SAMPLE
DO NOT TAMPER

DATE 07.08.09

INITIALS

LAB SAMPLE
DO NOT TAMPER

REFERENCE TOXICANT RESULTS AND ANALYSIS

NORTHWESTERN AQUATIC SCIENCES PROTOCOL NO NAS-XXX-CG/MG2

BIVALVE LARVAL TEST BASED ON EPA/600/R-95/136

reviewed

Test No. 999-2604 Client QC Test Investigator pgs. 1-9 [illegible] 9-18-09

STUDY MANAGEMENT

Client: QC Test

Client's Study Monitor: QC Test

Testing Laboratory: Northwestern Aquatic Sciences

Test Location: Newport Laboratory

Laboratory's Study Personnel:

Proj. Man./Study Dir. G.J. Irissarri [illegible]

QA Officer L.K. Nemeth

1 Susan Cogl [illegible] 2 Yves Nakahama [illegible]

3 M.S. Redmond [illegible] 4

Study Schedule

Test Beginning 8-12-09 1515 Test Ending 8-14-09 1615

TEST MATERIAL

Description: Cadmium as $CdCl_2 \cdot 2.5H_2O$ (1.0 mg/ml) Stock Prepared: 1-11-08)

NAS Sample No. Sigma-Aldrich Lot No. 12422KB

Date of Collection:				
Date of Receipt:				
Temperature (deg C):				
Dissolved oxygen (mg/L):				
pH:				
Conductivity (umhos/cm):				
Hardness (mg/L):				
Alkalinity (mg/L):				
Salinity (ppt):				
Total chlorine (mg/L):				
Total ammonia-N (mg/L):				

DILUTION WATER

Description: Yaquina Bay, OR

Date of Collection: 8-11-09 Salinity (ppt) 30.0 pH 8.2

Treatments: Aerated, filtered to 0.4 um, salinity adjusted with Milli-Q® deionized water

TEST ORGANISMS

Species *Crassostrea gigas* Date Received: 8-12-09

Source Oregon Oyster Farm, Inc., ~~Oregon~~ Newport, OR [illegible] 9-10-09

Acclimation Data:

Date	Temp (deg.C)	pH	Sal (ppt)	D.O. (mg/L)	Comments
					~~Held outside in trays of flowing seawater~~ [illegible] 9-10-09
	Adult animals were acclimated upon receipt.				
Mean					
S.D.					
(N)					

Photoperiod during acclimation Outdoor ambient conditions

Error codes 1) correction of handwriting error
2) written in wrong location, entry deleted
3) wrong date deleted, replaced with correct date
4) error found in measurement, measurement repeated

Revised 12-7-01

Test No 999-2604 Client QC Test Investigator

SPAWNING AND GAMETE HANDLING

Spawning: Initial: 1120 AM/PM Final: 1315 AM/PM Fertilization: 1430 AM/PM
Number of organisms used: females: 3 males 4
Egg Dilution (1 ml diluted to 100 ml).
Count/ml of dilution 1 55 2. 48 3. 47 Mean: 50
Dilution factor = DF (mean x 100/2500) = 1.0

TEST PROCEDURES AND CONDITIONS

Test concentrations (50% series recommended) 10, 5, 2, 1, 0.5, 0.2 and 0 mg/L

Test chamber 30 ml glass vials Test volume: 10 ml Replicates/treatment (4) 4
Organisms/ml (15-30) 23.8 Test water changes None Aeration during test None
Feeding None Photoperiod 16L 8D Salinity 30 +/- 2 ppt
Temperature 20 +/- 1 C, oysters, 16 +/- 1 C, mussels Beaker placement Stratified randomization

RANDOMIZATION CHART

A	1	5	0.2	0.5	0	10	2			
B	0.2	0	10	2	1	5	0.5			
C	10	2	0.2	1	0.5	0	5			
D	0	2	0.5	5	10	1	0.2			

PREPARATION OF TEST SOLUTIONS

This test uses a brine control _____, a salinity control _____
If a brine control is used follow SOP #6208 to prepare test solutions
Date of brine preparation _____, brine salinity (ppt) _____
Source of seawater Yaquina Bay, Oregon

$$VB = VE \frac{(TS - SE)}{(SB - TS)} = VE \frac{(\quad - \quad)}{(\quad - \quad)} = VE (\quad)$$

Where
VB=volume brine
VE=volume effluent
SB=salinity of brine
SE=salinity of effluent
TS=target salinity

In making up either a brine control or a salinity control, use salinity-adjusted deionized water in place of the effluent

8-12-09
GJ

Test Conc (Cd, mg/L)	ml of concentrated stock (ml/100 ml)	Dilution water (ml/100mL)
10	1.00	Brought up to 100 ml
5	0.50	final volume with
2	0.20	dilution water
1	0.10	
0.5	0.05	
0.2	0.02	
0	0	

Test No 999-2604 Client QC Test Investigator

WATER QUALITY DATA

Conc (mg/L)	Date: 8-12-09 initials AF Temp. (deg.C)	pH	Sal (ppt)	DO (mg/L)	Date: 8-14-09 initials AF Temp (deg.C)	pH	Sal. (ppt)	DO (mg/L)
10	20.4	8.2	30.0	7.8	20.3	8.2	29.5	7.3
5	20.4	8.2	30.0	7.8	20.4	8.2	30.0	7.3
2	20.3	8.2	30.0	7.8	20.4	8.2	30.0	7.5
1	20.3	8.2	30.0	7.8	20.4	8.2	30.0	7.6
0.5	20.4	8.2	30.0	7.8	20.4	8.2	30.0	7.5
0.2	20.5	8.2	30.0	7.8	20.4	8.2	30.0	7.4
Control	20.5	8.2	30.0	7.8	20.4	8.2	30.0	7.4
Brine control	---	---		---	---	---	---	---

WATER QUALITY:

	Mean	SD	N
Temperature (°C)	20.4	0.1	14
pH	8.2	0.0	14
Salinity (ppt)	30.0	0.1	14
DO (mg/L)	7.6	0.2	14

ROOM TEMPERATURE (°C):

Day 0: 19.1 Day 0: 20.5
Day 1: 20.9 Day 1: 20.8
Day 2: 20.0 Day 2: 20.4

LARVAL COUNT DATA

8-28-09 AF

Conc (mg/L)	Replicate 1 N	Replicate 1 A	Replicate 2 N	Replicate 2 A	Replicate 3 N	Replicate 3 A	Replicate 4 N	Replicate 4 A
10	Ø	153	Ø	106	Ø	154	Ø	102
5	Ø	119	Ø	195	Ø	136	Ø	146
2	12	141	19	153	15	139	12	154
1	213	35	177	37	139	45	148	54
0.5	123	32	155	10	166	10	221	15
0.2	175	8	195	8	173	6	242	8
Control	258	18	201	14	180	9	207	8
Brine control	---	---	---	---	---	---	---	---
Zero time	235	259	217	222	255	238	--	--

Zero time Mean 238 SD 17 N 6 CV=(sd/mean)x100 7.1%

Remarks

Bivalve Larval Survival and Development Test-Proportion Alive

Start Date:	8/12/09 15:15	Test ID:	999-2604	Sample ID:	REF-Ref Toxicant
End Date:	8/14/09 16:15	Lab ID:	ORNAS-Northwestern Aquati	Sample Type:	CDCL-Cadmium chloride
Sample Date:		Protocol:	ASTM 87	Test Species:	CG-Crassostrea gigas
Comments:					

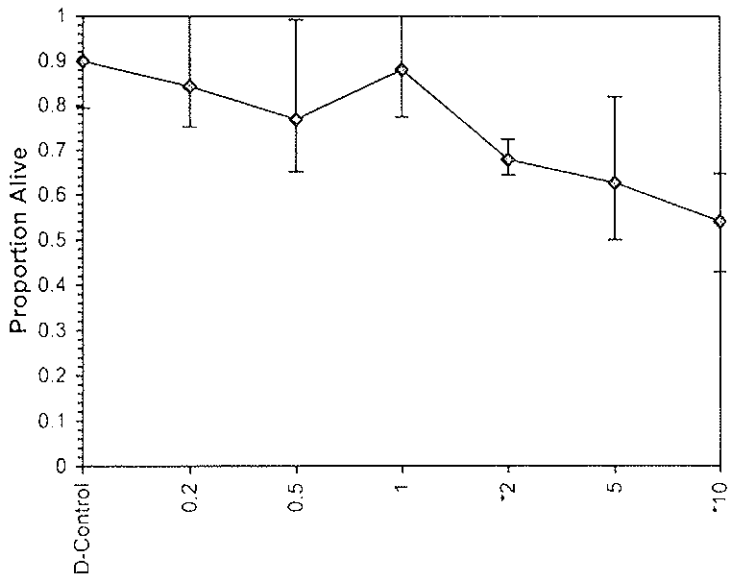
Conc-mg/L	1	2	3	4
D-Control	1.0000	0.9034	0.7941	0.9034
0.2	0.7689	0.8529	0.7521	1.0000
0.5	0.6513	0.6933	0.7395	0.9916
1	1.0000	0.8992	0.7731	0.8487
2	0.6429	0.7227	0.6471	0.6975
5	0.5000	0.8193	0.5714	0.6134
10	0.6429	0.4454	0.6471	0.4286

			Transform: Arcsin Square Root					Rank	1-Tailed		
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical		
D-Control	0.9002	1.0000	1.2869	1.0998	1.5384	14.209	4			95	952
0.2	0.8435	0.9370	1.2086	1.0496	1.5384	18.771	4	14.50	10.00	149	952
0.5	0.7689	0.8541	1.1093	0.9391	1.4790	22.501	4	13.00	10.00	220	952
1	0.8803	0.9778	1.2579	1.0743	1.5384	15.897	4	15.50	10.00	114	952
*2	0.6775	0.7526	0.9674	0.9303	1.0162	4.334	4	10.00	10.00	307	952
5	0.6261	0.6954	0.9185	0.7854	1.1318	16.309	4	11.00	10.00	356	952
*10	0.5410	0.6009	0.8273	0.7137	0.9347	14.699	4	10.00	10.00	437	952

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.87871	0.896	1.04059	0.16294
Bartlett's Test indicates equal variances (p = 0.31)	7.15573	16.8119		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	5	10	7.07107	

Dose-Response Plot



LC50 > 10 mg/L, by data inspection
MSR
9-10-09

Bivalve Larval Survival and Development Test-Proportion Normal

Start Date:	8/12/09 15:15	Test ID:	999-2604	Sample ID:	REF-Ref Toxicant
End Date:	8/14/09 16:15	Lab ID:	ORNAS-Northwestern Aquati	Sample Type:	CDCL-Cadmium chloride
Sample Date:		Protocol:	ASTM 87	Test Species:	CG-Crassostrea gigas
Comments:					

Conc-mg/L	1	2	3	4
D-Control	1.0000	0.8445	0.7563	0.8697
0.2	0.7353	0.8193	0.7269	1.0000
0.5	0.5168	0.6513	0.6975	0.9286
1	0.8950	0.7437	0.5840	0.6218
2	0.0504	0.0798	0.0630	0.0504
5	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000

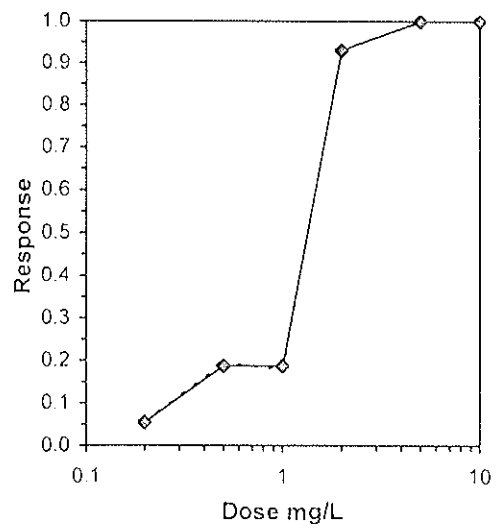
			Transform: Arcsin Square Root					Rank	1-Tailed		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical		Resp	Number
D-Control	0.8676	1.0000	1.2400	1.0545	1.5384	16.818	4				126	952
0.2	0.8204	0.9455	1.1804	1.0209	1.5384	20.663	4	14.50	10.00		171	952
0.5	0.6985	0.8051	1.0075	0.8022	1.3002	20.891	4	13.00	10.00		287	952
1	0.7111	0.8196	1.0148	0.8698	1.2407	16.490	4	13.00	10.00		275	952
*2	0.0609	0.0702	0.2483	0.2265	0.2864	11.481	4	10.00	10.00		894	952
*5	0.0000	0.0000	0.0324	0.0324	0.0324	0.000	4	10.00	10.00		952	952
*10	0.0000	0.0000	0.0324	0.0324	0.0324	0.000	4	10.00	10.00		952	952

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.84295	0.896	1.18828	1.3561
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	1	2	1.41421	

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%			
5.0%			
10.0%	1.2059	1.1665	1.2466
20.0%	1.3387	1.3186	1.3592
Auto-5.4%	1.1396	1.1030	1.1773



Bivalve Larval Survival and Development Test-Proportion Normal

Start Date:	8/12/09 15:15	Test ID:	999-2604	Sample ID:	REF-Ref Toxicant
End Date:	8/14/09 16:15	Lab ID:	ORNAS-Northwestern Aquati	Sample Type:	CDCL-Cadmium chloride
Sample Date:		Protocol:	ASTM 87	Test Species:	CG-Crassostrea gigas
Comments:					

Conc-mg/L	1	2	3	4
D-Control	1.0000	0.8445	0.7563	0.8697
0.2	0.7353	0.8193	0.7269	1.0000
0.5	0.5168	0.6513	0.6975	0.9286
1	0.8950	0.7437	0.5840	0.6218
2	0.0504	0.0798	0.0630	0.0504
5	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root						1-Tailed		Isotonic	
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	0.8676	1.0000	1.2400	1.0545	1.5384	16.818	4				0.8676	1.0000
0.2	0.8204	0.9455	1.1804	1.0209	1.5384	20.663	4	0.449	2.360	0.3132	0.8204	0.9455
0.5	0.6985	0.8051	1.0075	0.8022	1.3002	20.891	4	1.752	2.360	0.3132	0.7048	0.8123
1	0.7111	0.8196	1.0148	0.8698	1.2407	16.490	4	1.697	2.360	0.3132	0.7048	0.8123
*2	0.0609	0.0702	0.2483	0.2265	0.2864	11.481	4	7.473	2.360	0.3132	0.0609	0.0702
5	0.0000	0.0000	0.0324	0.0324	0.0324	0.000	4				0.0000	0.0000
10	0.0000	0.0000	0.0324	0.0324	0.0324	0.000	4				0.0000	0.0000

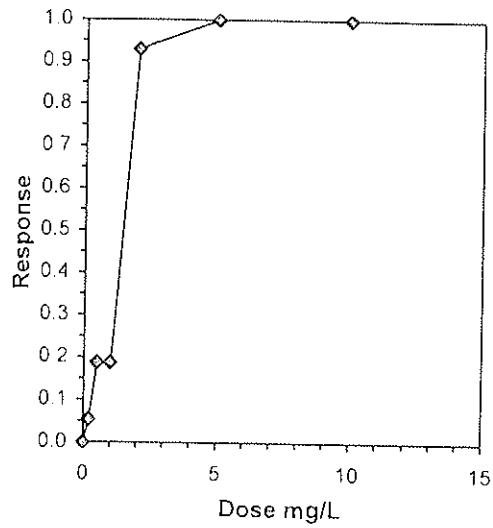
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.86966	0.868	1.02846	0.1107
Bartlett's Test indicates equal variances (p = 0.09)	8.03083	13.2767		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	1	2	1.41421		0.25495	0.28502	0.63635	0.03522	1.3E-05	4, 15

Linear Interpolation (200 Resamples)

Point	mg/L	SD	95% CL(Exp)		Skew
IC05*	0.1836	0.1607	0.0000	0.8199	2.1404
IC10	0.3025	0.2284	0.0000	1.4684	1.4886
IC15	0.4152	0.3066	0.0000	1.4948	0.7011
IC20	1.0166	0.3237	0.0000	1.2278	-0.1886
IC25	1.0840	0.2709	0.0000	1.2813	-1.0508
IC40	1.2861	0.0693	1.0258	1.4419	-0.1417
IC50	1.4209	0.0568	1.2047	1.5489	-0.1530

* indicates IC estimate less than the lowest concentration



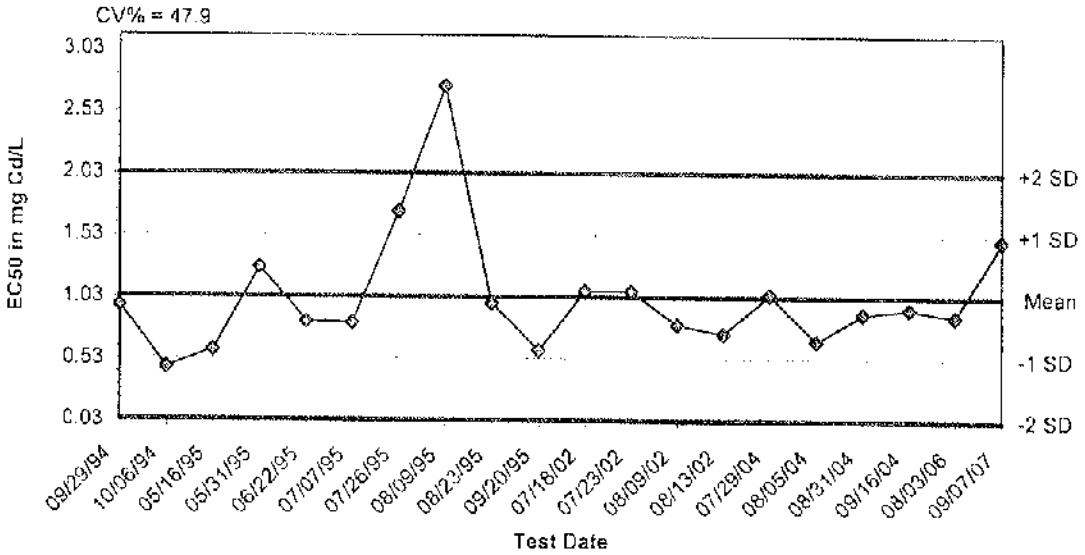
Test: BV-Bivalve Larval Survival and Development Test
Species: CG-Crassostrea gigas
Sample ID: REF-Ref Toxicant
Start Date: 8/12/09 15:15 End Date: 8/14/09 16:15

Test ID: 999-2604
Protocol: ASTM 87
Sample Type: CDCL-Cadmium chloride
Lab ID: ORNAS-Northwestern Aquatic Sciences

Pos	ID	Rep	Group	Initial Density	Final Density	Total Counted	Number Normal	Notes
	1	1	D-Control	238	276	238	258	
	2	2	D-Control	238	215	238	201	
	3	3	D-Control	238	189	238	180	
	4	4	D-Control	238	215	238	207	
	5	1	0.200	238	183	238	175	
	6	2	0.200	238	203	238	195	
	7	3	0.200	238	179	238	173	
	8	4	0.200	238	250	238	242	
	9	1	0.500	238	155	238	123	
	10	2	0.500	238	165	238	155	
	11	3	0.500	238	176	238	166	
	12	4	0.500	238	236	238	221	
	13	1	1.000	238	248	238	213	
	14	2	1.000	238	214	238	177	
	15	3	1.000	238	184	238	139	
	16	4	1.000	238	202	238	148	
	17	1	2.000	238	153	238	12	
	18	2	2.000	238	172	238	19	
	19	3	2.000	238	154	238	15	
	20	4	2.000	238	166	238	12	
	21	1	5.000	238	119	238	0	
	22	2	5.000	238	195	238	0	
	23	3	5.000	238	136	238	0	
	24	4	5.000	238	146	238	0	
	25	1	10.000	238	153	238	0	
	26	2	10.000	238	106	238	0	
	27	3	10.000	238	154	238	0	
	28	4	10.000	238	102	238	0	

Comments: Data entry verified against laboratory bench sheets.
[illegible]
9-10-09

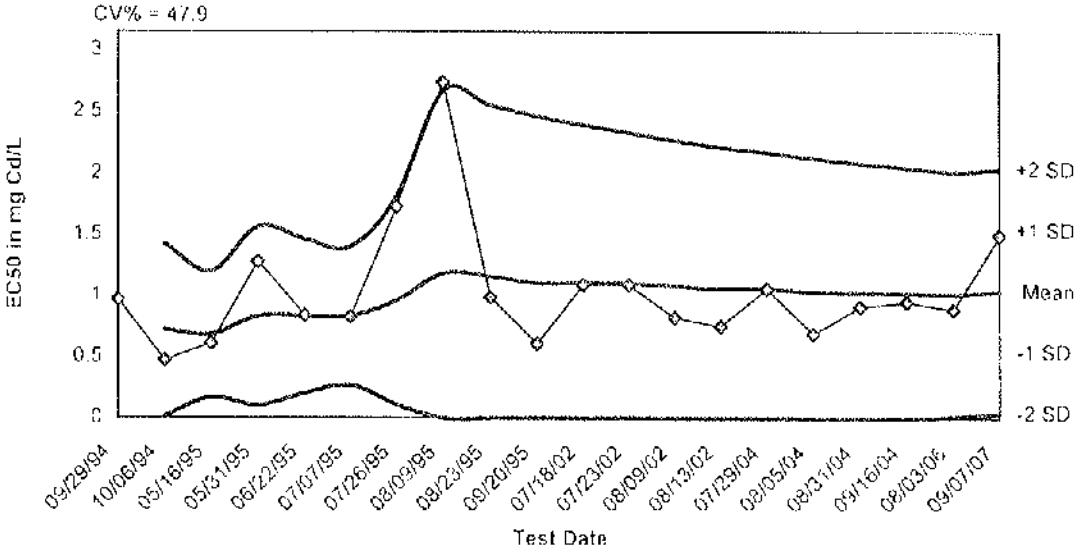
Oyster, Crassostrea gigas, larval reference toxicant test - last 20 points



Dates	Values	Mean	-1 SD	-2 SD	+1 SD	+2 SD
09/29/94	0.9700	1.0410	0.5421	0.0432	1.5399	2.0388
10/06/94	0.4700	1.0410	0.5421	0.0432	1.5399	2.0388
05/16/95	0.6100	1.0410	0.5421	0.0432	1.5399	2.0388
05/31/95	1.2800	1.0410	0.5421	0.0432	1.5399	2.0388
06/22/95	0.8400	1.0410	0.5421	0.0432	1.5399	2.0388
07/07/95	0.8300	1.0410	0.5421	0.0432	1.5399	2.0388
07/26/95	1.7300	1.0410	0.5421	0.0432	1.5399	2.0388
08/09/95	2.7400	1.0410	0.5421	0.0432	1.5399	2.0388
08/23/95	0.9900	1.0410	0.5421	0.0432	1.5399	2.0388
09/20/95	0.6100	1.0410	0.5421	0.0432	1.5399	2.0388
07/18/02	1.0900	1.0410	0.5421	0.0432	1.5399	2.0388
07/23/02	1.0900	1.0410	0.5421	0.0432	1.5399	2.0388
08/09/02	0.8200	1.0410	0.5421	0.0432	1.5399	2.0388
08/13/02	0.7500	1.0410	0.5421	0.0432	1.5399	2.0388
07/29/04	1.0600	1.0410	0.5421	0.0432	1.5399	2.0388
08/05/04	0.6900	1.0410	0.5421	0.0432	1.5399	2.0388
08/31/04	0.9100	1.0410	0.5421	0.0432	1.5399	2.0388
09/16/04	0.9500	1.0410	0.5421	0.0432	1.5399	2.0388
08/03/06	0.8900	1.0410	0.5421	0.0432	1.5399	2.0388
09/07/07	1.5000	1.0410	0.5421	0.0432	1.5399	2.0388

9-20-07

Oyster, Crassostrea giga, larval reference toxicant test



Dates	Values	Mean	-1 SD	-2 SD	+1 SD	+2 SD
09/29/94	0.9700					
10/06/94	0.4700	0.7200	0.3664	0.0129	1.0736	1.4271
05/16/95	0.6100	0.6833	0.4254	0.1675	0.9413	1.1992
05/31/95	1.2800	0.8325	0.4673	0.1021	1.1977	1.5629
06/22/95	0.8400	0.8340	0.5177	0.2014	1.1503	1.4666
07/07/95	0.8300	0.8333	0.5504	0.2676	1.1162	1.3991
07/26/95	1.7300	0.9614	0.5353	0.1093	1.3875	1.8136
08/09/95	2.7400	1.1838	0.4414	0.0000	1.9261	2.6684
08/23/95	0.9900	1.1622	0.4649	0.0000	1.8596	2.5570
09/20/95	0.6100	1.1070	0.4267	0.0000	1.7873	2.4676
07/18/02	1.0900	1.1055	0.4601	0.0000	1.7508	2.3962
07/23/02	1.0900	1.1042	0.4888	0.0000	1.7195	2.3349
08/09/02	0.8200	1.0823	0.4879	0.0000	1.6767	2.2711
08/13/02	0.7500	1.0586	0.4806	0.0000	1.6365	2.2145
07/29/04	1.0600	1.0587	0.5017	0.0000	1.6156	2.1725
08/05/04	0.6900	1.0356	0.4897	0.0000	1.5815	2.1274
08/31/04	0.9100	1.0282	0.4988	0.0000	1.5577	2.0871
09/16/04	0.9500	1.0239	0.5099	0.0000	1.5378	2.0518
08/03/06	0.8900	1.0168	0.5104	0.0160	1.5173	2.0177
09/07/07	1.5000	1.0410	0.5421	0.0432	1.5399	2.0388

msh
9-10-09

APPENDIX E

Collection Forms and Field Notes

Round 1 Sampling

3/1/09 A. Rodriguez

0830 Depart office & head to Alki

0845 Arrive at Alki boat ramp & begin to unload supplies onto boat

Field crew Angelita Rodriguez (ww)
Sarah Fowler (ww)
Thai Do (ww)
David Gillingham (Anchor/QEA)
Dave Mullins (Boat Operator)

0915 Head to East Waterway

Weather: Partly cloudy, sunshine, 40's

Objective: Begin surface sediment sampling, Round 1

0933 Complete Health & Safety meeting

0940 Arrive at EW-SS220

Grab #1, rock caught in the jaws; unacceptable grab

0947 Grab #2, penetration depth = 7 cm; unacceptable grab

0952 Grab #3, Washout; unacceptable grab

0956 Grab #4, acceptable grab; need more volume

1008 Grab #5, misfire

1012 Grab #6, penetration depth = 4 cm; reject

1015 Grab #7, penetration depth = 5 cm, reject

1018 Grab #8, pentetration depth = 3 cm, reject

3/1/09 A. Rodriguez

Location EW-SS220 CONT'D

1024 Grab #9, pentetration depth = 11 cm acceptable grab

1040 Complete sediment processing @ EW-SS220

1041 Arrive @ EW-SS218

Grab #1, penetration depth = 5 cm; unacceptable grab

1043 Grab #2, same as grab #1

1047 Grab #3, pentetration depth = 5 cm; unacceptable grab

1051 Grab #4, Van Veen got hung up

1054 Grab #5, pentetration depth = 6 cm; unacceptable grab

1059 Grab #6, pentetration depth = 5 cm; unacceptable grab

1104 Grab #7, pentetration depth = 8.5 cm, need more volume

1112 Grab #8, penetration depth = 8.5 cm

1125 Complete sediment processing at EW-SS218

1127 Arrive @ EW-SS217

1128 Grab #1, penetration depth = 7 cm; unacceptable grab

3/1/09 A. Rodriguez

Location EW-SS-217 CONT'D

1130 Grab #2, pentetration depth = 11cm; acceptable grab

1145 Grab #3, pentetration depth = 11cm; acceptable grab

1200 Complete sediment processing at EW-SS-217

1200 - 1216 Lunch

1217 Head to EW-SS-216

1221 Arrive @ EW-SS-216
Grab #1, pentetration depth = 11cm
Need more volume

1229 Grab #2, penetration depth = 12cm

1247 Complete sediment processing at EW-SS-216; lab QC sample taken

1248 Head to EW-SS-207

1251 Grab #1, misfire

1254 Grab #2, misfire

1256 Grab #3, penetration depth = 11cm acceptable grab

1311 Complete sediment processing at EW-SS-207

1314 Arrive @ EW-SS-204

1315 Grab #1, penetration depth = 13cm acceptable grab

3/1/09 A. Rodriguez

1329 Complete sediment processing at EW-SS-204

1333 Arrive at EW-SS-202
Grab #1, penetration depth = 6cm unacceptable grab

1338 Grab #2, rock caught in the jaws reject

1340 Grab #3, too washed out on top unacceptable grab

1344 Grab #4, rock in the jaws - reject

1347 Grab #5, Van Veen rolled & got hung up

1349 Grab #6, penetration depth = 11cm acceptable grab

1405 Complete sediment processing at EW-SS-202

1406 Head to EW-SS-200

1410 Grab #1, penetration depth = 17cm acceptable grab
Field duplicate taken EW09-SS-300-010

1430 Complete sediment processing at EW-SS200

1435 Arrive at EW-SS130
Grab #1, penetration depth = 16cm

1450 Complete processing at EW-SS130

3/1/09 A. Rodriguez

1453 Arrive at EW-SS129
Grab #1, penetration depth = 16cm
Acceptable grab
1500 Complete processing EW-SS129
sediment samples
1511 Arrive at EW-SS127
1512 Grab #1, penetration depth = 13cm
Acceptable grab
1529 Complete sediment processing
at EW-SS127
1530 Arrive at EW-SS122
Grab #1, penetration depth = 13cm
acceptable grab
Complete processing sed samples
at EW-SS122
1549 Arrive at EW-SS119
1554 Grab #1, penetration depth = 15cm
Acceptable grab
1605 Complete sed processing at EW-SS119
1609 Arrive at EW-SS120
1611 Grab #1, unacceptable grab
1615 Grab #2, acceptable grab
1630 Complete sed processing at EW-SS120
Head to EW-SS132

3/1/09 A. Rodriguez, T. D.

1633 Arrive at EW-SS132
1636 Grab #1, acceptable grab
1650 Complete sed processing at EW-SS132
1655 Head back to Alki boatramp
1705 Arrive at Alki boatramp, offload
supplies, samples.
1715 Depart ~~[illegible]~~ Alki. End of
field day

T. D.
03.01.09

3/2/09 A. Rodriguez

0730 Depart office for Alki boatramp
0745 Arrive at the Alki boatramp & load up supplies
Field crew: Thui Do (WW)
Sarah Fowler (WW)
Angelita Rodriguez (WW)
David Gillingham (Anchor/QEA)
Mullins Guide Service
Weather: Partly cloudy, light wind, 50's

0815 Head to EW-SS116
0823 Arrive at EW-SS116
0829 Grab #1, acceptable grab & field duplicate taken EW09-SS501-010
0854 Complete sediment processing at EW-SS116
0855 Head to EW-SS113
0900 Arrive at EW-SS113
0901 Grab #1, insufficient penetration depth of 7cm; unacceptable grab
0904 Grab #2, Van Veen got hung up; reject
0906 Grab #3, acceptable grab w/penetration depth = 11cm; extra volume collected for lab QC

3/2/09 A. Rodriguez

0927 Complete sediment processing at EW-SS113
0933 Arrive at EW-SS111
Grab #1, acceptable grab w/penetration depth = 11cm; need more volume
0948 Grab #2, Van Veen got hung up; reject
0952 Grab #3, Empty; reject
0956 Grab #4, acceptable grab w/penetration depth = 11cm
1009 Complete sediment processing at EW-SS111
1010 Head to EW-SS109
1014 Arrive at EW-SS109
Grab #1, acceptable grab w/penetration depth = 16cm
1031 Complete sediment processing at EW-SS109
Head to EW-SS104
1036 Grab #1, acceptable grab w/penetration depth = 16cm
Tad called to inform the field work to stop field sampling b/c the Port of Seattle (Doug Hotchkiss) does not feel comfortable conducting the field effort with the approved contract.

3/2/09 A. Rodriguez

1045 In addition, Anchor (Dan Berlin) called to relay the same message & confirm the field crew has been re-called from the field.
Tad (WW) also will call Eric Parker's boat to inform Joanna (WW)

1053 Complete sediment processing at EW-SS104

1115 Tad directs the field crew to stand down for the rest of day & to leave the field equipment & supplies on the boat because the field effort may re-start as soon as Tuesday, (3/3/09) per Doug Hotchkiss (POS)

1120 Joanna was given the same message

1128 Head back to Alki boat ramp

1145 Depart the Alki boat ramp w/ field samples

1200 Arrive at the ~~field~~ office, end of the field day

3/2/09

03/4/09 A. Rodriguez

0730 Depart office for Alki boat ramp

0745 Arrive at Alki boatramp & load boat w/supplies
Field crew: Thai Do (WW)
Chelsea Lorenz (WW)
Angelita Rodriguez (WW)
David Gillingham (Anchor/QEA)
Dave Mullins (Boat operator)
Weather: Overcast, light wind, 40's

0804 Conduct rinsate sample: EW09-SS-102-RB
Head to EW-SS102

0820 Give stainless steel funnel to Eric Parker's boat for rinsate samples

0843 Arrive at EW-SS102
Grab #1, acceptable grab; collect field duplicate EW09-SS302

0905 Complete sediment processing at EW09-SS102

0909 Arrive at EW09-SS036
Grab #1, acceptable grab; extra volume collected for lab QC

0924 Complete sediment processing at EW-SS036

0930 Arrive at EW09-SS034

3/4/09 A. Rodriguez

0930 Grab #1, acceptable grab EW-SS034
0943 Complete sediment processing at EW-SS-034
0949 Arrive at EW-SS035
Grab #1, unacceptable grab; Van Veen got hung up.
0951 Grab #2, same as grab #1
0953 Grab #3, acceptable grab
1009 Complete sediment processing at EW-SS035
1015 Arrive at EW-SS033
Grab #1, acceptable grab
1029 Complete sediment processing at EW09-SS033
1034 Arrive at EW-SS032
Grab #1, acceptable grab
1050 Complete sediment processing at EW-SS032
1054 Arrive at EW-SS031
Grab #1, acceptable grab
1106 Complete sediment processing at EW-SS031
1114 Arrive at EW-SS-030
Grab #1, acceptable grab
1127 Complete sediment processing at EW-SS-030

3/4/09 A. Rodriguez

1137 Arrive at EW-SS029
Grab #1, acceptable grab
1153 Complete sediment processing at EW-SS029
1156 Arrive at EW-SS025
Grab #1, acceptable grab
1210 Complete sediment processing at EW-SS025.
Head to Jack Perry Park to pick up supplies from Sarah Fowler (ACE)
1230 Sarah arrives w/supplies; lunch & bathroom break
1255 Head to EW-SS024
1300 Arrive at EW-SS024
Grab #1, acceptable grab
1312 Complete sediment processing at EW-SS024
1316 Arrive at EW-SS023
Grab #1; misfire - reject
1322 Grab #2; acceptable grab
1336 Complete sediment processing at EW-SS023
1343 Arrive at EW-SS021; a barge is occupying the sample location so we head to EW-SS020

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1345 Arrive at EW-SS020
Grab #1, Van Veen got hung up; reject
1347 Grab #2, " ; reject
1349 Grab #3, " ; reject
1350 Grab #4, acceptable grab
1415 Head to EW-SS013
1430 Arrive at EW-SS013
Grab #1, water depth is very shallow (4.5m) & observe a sheen on the water surface; need more volume; also a noticable petroleum odor at the sample location.
1440 * Grab #2, acceptable grab
1456 Arrive at EW-SS011; under Spokane Bridge
Grab #1, Van Veen got hung up
1458 Grab #2, unacceptable grab w/ pentetration depth of 5cm; observe a sheen on water surface
NOTE * ~~Not~~ Susie McGroddy calls for field duplicate sample information.
1459 Grab #3, rock was caught in the jaws.
1502 Grab #4, acceptable grab w/ penetration depth of 11cm but need more volume.
1510 Grab #5, acceptable grab
1520 Complete sediment processing at EW-SS011

3/4/09 A. Rodriguez

1523 Arrive at EW-SS008; observe a sheen on the surface of the water
1526 Grab #1, acceptable grab
1539 Complete sediment processing at EW-SS008
1544 Arrive at EW-SS005
Grab #1, unacceptable grab, washout
1547 Grab #2, unacceptable grab, wood caught in the jaws & washed out.
1549 Grab #3; acceptable grab w/ penetration depth of 11cm but need more volume
1554 Grab #4, unacceptable grab b/c of low recovery (8cm)
1556 Grab #5, unacceptable grab b/c a sea star was caught in the jaws.
1559 Grab #6, unacceptable grab b/c the sample was washed out.
1601 Grab #7, acceptable grab
1611 Complete sediment processing at EW-SS003
1614 Arrive at EW-SS003
Grab #1, washed out, unacceptable grab
1617 Grab #2, " "

3/4/09 A. Rodriguez

EW-SS003 CONT'D

1619 Grab #3, unacceptable grab b/c it was washed out

1625 Grab #4, ~~##~~ acceptable grab but need more volume

1630 Grab #5, acceptable grab; sea star in the jaws

1641 Complete sediment processing at EW-SS003

1644 Arrive at EW-SS001; Grab #1, acceptable grab

1700 Complete sediment processing at EW-SS001 and head back to Alki beach

1715 Arrive at Alki beach and off load samples

1730 Depart Alki boatramp: end of field day

Angelita RB
3/4/09

03.05.09 T. Do

0830 Arrive at Alki boat ramp w/supplies.
Field crew: Chelsea Lorenz, Sarah Fowler, Thai Do } WW
David Gillingham (Anchor)
Dave Mullins (boat captain)
Weather: hi 30's, light rain.

0845 Head to EW; Health/Safety briefing.

0900 Pick up supplies from Kathleen (at Jack Perry Access Park)

0915 Meet up with Jenny Bierning and RSS crew to take diver-collected sample.

0921 Head to EW-SS021 to see if barge is still in the way

0925 Barge in way.

0930 Head to EW-SS014.

0938 Collect rinsate blank EW-SS014-RB

0955 Grab #1, acceptable grab

1010 Complete processing at EW-SS014

1012 Head to EW-SS019

1017 Grab #1, acceptable grab

1028 Complete processing at EW-SS019

03.05.09 T.D.

1029 Head to EW09-SS501
1034 Grab #1, acceptable grab
1040 Complete processing EW09-SS501
1043 Head to EW09-SS502
1047 Grab #1, acceptable grab
1055 Complete processing EW09-SS502
1058 Head to EW09-SS503
1100 Grab #1, acceptable grab
1105 Complete processing EW09-SS503
1111 Head to EW09-SS504
1113 Grab #1, acceptable grab
1119 Complete processing EW09-SS504
1123 Head to EW09-SS505
1126 Grab #1, acceptable grab
1130 Complete processing at EW09-SS505
1135 Head to EW09-SS506
1137 Grab #1, acceptable grab
1142 Complete processing at EW09-SS506
1144 Head to EW09-SS507
1147 Grab #1, acceptable grab
1150 Complete processing at EW09-SS507
1153 Head to EW09-SS508
1156 Grab #1, misfire - hung up.
1158 Grab #2, misfire - hung up.

03.05.09 T.D.

1200 Grab #3, acceptable grab
1204 Complete processing EW09-SS508
1206 Head to EW09-SS521 to see if tug & barge has moved
1234 Grab #1, washed out
1237 Grab #2, rocks in jaws
1239 Grab #3, rocks in jaws
1241 Grab #4, rocks in jaws
1242 Grab #5, rocks in jaws
1245 Grab #6, rocks in jaws
1249 Grab #7, rocks in jaws
1251 Grab #8, acceptable grab (on one side) need another grab.
1257 Grab #9, acceptable grab, complete proc.
1310 Lunch break
1340 Head to EW09-SS509
1343 Grab #1, acceptable grab
1348 Complete processing EW09-SS509
1352 Head to EW09-SS510
1355 Grab #1, acceptable grab
1400 Complete processing EW09-SS510
1402 Head to EW09-SS511
1404 Grab #1, acceptable grab
1408 Complete processing EW09-SS511

03.05.09 T.D.

1409 Head to EW09-SS512
1411 Grab #1, unacceptable (hung-up)
1414 Grab #2, acceptable grab
1419 Complete processing EW09-SS512
1421 Head to EW09-SS513
1423 Grab #1, acceptable grab
1428 Complete processing EW09-SS513
1430 Head to EW09-SS514
1432 Grab #1, acceptable grab
1435 Complete processing EW09-SS514
1439 Head to EW09-SS515
1440 Grab #1, acceptable grab
1444 Complete processing EW09-SS515
1446 Head to EW09-SS516
1448 Grab #1, unacceptable grab (hung-up)
1450 Grab #2, acceptable grab
1455 Complete processing EW09-SS516
1457 Head to EW09-SS517
1459 Grab #1, acceptable grab
TD 1503 Complete processing EW09-SS51~~8~~7 TD
TD 1505 Head to EW09-SS51~~8~~9 TD
1514 Grab #1, unacceptable grab (hung-up)
1516 Grab #2, acceptable grab
1519 Complete processing EW09-SS519

03.05.09 T.D.

1521 Head to EW09-SS520
1525 Grab #1, acceptable grab
1530 Complete processing EW09-SS520
1532 Head back to Alki boat ramp
1548 Arrive at Alki boat ramp. Offload supplies/samples.
1600 Depart Alki. End of field day

T.D.
03.05.09

03.06.09 TDO

0745 Arrive at Alki boat ramp w/supplies.
Field crew: Chelsea Lorenz } WW
Jenny Buening
Thai Do
David Gillingham (Anchor)
Dave Mullins (boat operator)
Weather: sun, 40s
0815 Depart for EW; Health & Safety briefing
0825 Arrive in EW, head to EW09-SS518
0836 Grab #1, acceptable grab
0841 Complete processing EW09-SS518
0844 Head to EW09-SS535
0847 Grab #1, acceptable grab
0852 Complete processing EW09-SS535
0856 Head to EW09-SS521
0900 Grab #1, acceptable grab
0905 Complete processing EW09-SS521
0907 Head to EW09-SS536
0908 Grab #1, unaccepted - hung-up
0909 Grab #2, acceptable grab
0914 Complete processing EW09-SS536
0916 Head to EW09-SS522
0918 Grab #1, acceptable grab
0920 Complete processing EW09-SS522

03.06.09 TDO.

0924 Head to EW09-SS523
0926 Grab #1, unaccepted - hung up.
0928 Grab #2, acceptable grab
0932 Complete processing at EW09-SS523 TDO
0934 Head to EW09-SS524
0936 Grab #1, acceptable grab
0939 Complete processing at EW09-SS524 TDO
0941 Head to EW09-SS525
0944 Grab #1, unaccepted - hung up.
0946 Grab #2, unaccepted - low recovery
0949 Grab #3, acceptable grab
0952 Complete processing at EW09-SS525
0955 Head to EW09-SS537
0957 Grab #1, acceptable grab
1001 Complete processing at EW09-SS537
1005 Head to EW09-SS538
1008 Grab #1, acceptable grab.
1010 Complete processing at EW09-SS538
1012 Head to EW09-SS526
1015 Grab #1, unaccepted - hung up.
1017 Grab #2, unaccepted - hung up
1020 Grab #3, acceptable grab
1023 Complete processing at EW09-SS526
1025 Head to EW09-SS527

03.06.09 T.Do

1028 Grab #1, acceptable grab
1032 Complete processing at EW09-SS527
1034 Head to EW09-SS533
1037 Grab #1, unaccepted - low recovery
1039 Grab #2, unaccepted - low recovery
1042 Grab #3, unaccepted - low recovery
1047 Grab #4, acceptable grab (one side)
1053 Complete processing at EW09-SS533
1055 Head to EW09-SS534
1057 Grab #1, unaccepted - low recovery, rocks in jaws
1100 Grab #2, unaccepted - low recovery, rocks in jaws
1105 Grab #3, acceptable grab (one side)
1110 Head back to Alki ~~[illegible]~~ boat ramp.
Round 1 stations completed.
1130 Arrive at Alki boat ramp. Offload equipment and samples.
1145 Depart Alki, end of field day

T.Do
03.06.09

03.12.09 T.Do

1145 Arrive at Horsehead Bay Community boat launch (Carr Inlet)
Crew: Thai Do
Weather: 40's, sun
Wait for Sharon Hinz (Gravity Env. - boat and operator) to arrive.
Prep sample jars and supplies and paperwork.
1245 Sharon arrives. Launch boat.
1300 Head to Carr Inlet.
1315 Arrive at station 1
1320 Grab #1, confirmed ~20% fines via sieve test, accept grab.
Need multiple grabs (using petit ponar)
Total of 10 grabs required.
1520 Completed processing at station 1
Sample CI09-SS-020-010
1525 Move to station 2 to look for 60% or 80% fines.
1530 Arrive at station 2
1532 Grab #1, only 35-40% fines
move away to avoid shell hash area and get more fines.
1542 Grab #2-#3, ~50% fines. Move off ~100ft.

03.12.09 T.D.

1600 Grab #4, accept: ~60% fines confirmed via sieve.
Need multiple grabs
Total of 18 grabs required
1630 Completed processing at Station 2
Sample CI09-SS-060-010
1639 Move to station 3 to look for 80% fines
1655 Arrive at station 3
1700 Grab #1 no good - low fines. Move to new location.
1830 Grab # 1 - 80-85% fines confirmed via sieve test, accept grab
Need multiple grabs
Total of 12 grabs required
1900 Completed processing at station 3
Sample CI09-SS-080-010
1910 Head back to boat launch
1920 Arrive boat launch, offload supplies/samples
1945 Depart boat launch. End of field day

T.D.
03.12.09

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Partly cloudy, sunshine, wind

Sampling Method: Van Veen Crew: AR, TD, SF

GRAB DATA	Location ID: EW09-SS-220			
Latitude: ~~47 35 51.507 140~~		Longitude: ~~122 20. 61.50460~~		Lat: 47 35.512350 Long 122 20.614 35
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0942	19	NA	N	Rock in the jaws
0947/0952	19 1/19	7 /NA	N /N	Washout
0956	19.5	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-220-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	Organic debris, shell fragments, worms
sand (F M C)	brown	moderate	other:	
silt trace	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-220			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1008/1012	19/18.8	NA/4	N/N	MOFIRE
1015/1018	19.3 ~~19.8~~/19	5/3	N/N	
1024	19	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-220-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Cloudy, rain, wind

Sampling Method: Van Veen Crew: AR, TD, SF

GRAB DATA	Location ID: EW09-SS-218			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1041 / 1043	15.5 / 18.2	5 / 5	N / N	
1047 / 1051	18.5 / 18.1	5 / NA	N / N	Van Veen hung up
1054 / 1059	18.2 / 15	6 / 5	N / N	
SAMPLE DATA	Sample ID: EW09-SS-218-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-218			
Latitude: 47.35474		Longitude: 122 20.690		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1104	18	8.5	Y	Need add'l volume
1112	18	8.5	Y	
SAMPLE DATA	Sample ID: EW09-SS- -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Organic debris, shell fragments, worms
silt trace	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Overcast, wind

Sampling Method: Van Veen Crew: AR, TD, SF

GRAB DATA	Location ID: EW09-SS- 217			
Latitude: 47 35.4639		Longitude: 122 20.7300		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1128	17	7	N	
1130	17	11	Y	
1145	17	11	Y	
SAMPLE DATA	Sample ID: EW09-SS-217-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Organic debris, shell fragments, worms
gravel Trace	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt Trace	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-216			
Latitude: 47 35.431		Longitude: 122 20.595		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1221	13.5	11	Y	
1229	13.5	12	Y	
SAMPLE DATA	Sample ID: EW09-SS-216-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Isolated pockets of sheen, worms, trace organic debris
gravel	drab olive	slight	petroleum	Lab QC sample taken
sand (F M C)	brown	moderate	other:	
silt Trace	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Overcast, wind

Sampling Method: Van Veen Crew: TD, AP, SF

GRAB DATA	Location ID: EW09-SS-207			
Latitude: 47 35.35207		Longitude: 122 20.75601		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1251 / 1254	16.8 / 16.3	NA / NA	N / N	Misfire
1256	16.8	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-207-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	Trace wood debris, shell fragments
gravel	drab olive	slight / petroleum	
sand (F/M/C)	brown	moderate / other:	
silt Trace	gray	strong	
clay	black		

GRAB DATA	Location ID: EW09-SS-204			
Latitude: 47 35.30357		Longitude: 122 20.60375		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1215	12.8	13	Y	

SAMPLE DATA	Sample ID: EW09-SS-204-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	Isolated pockets of sheen, plant debris
gravel	drab olive	slight / petroleum	
sand (F/M/C)	brown	moderate / other:	
silt	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Overcast, light rain

Sampling Method: Van Veen Crew: TO, AR, SF

GRAB DATA	Location ID: EW09-SS-202			
Latitude: 47 35.22987		Longitude: 122 20.75849		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1333/1338	15.5/15.5	6/NA	N/N	Rock caught in the jaws
1340/1344	15.6/15.3	11/NA	N/N	Too washed out on top; rock in jaws
1347/1349	14.5/15.7	NA/11	N/Y	Van Veen got hung up

SAMPLE DATA	Sample ID: EW09-SS-202-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Isolated pockets of sheen, worms
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt trace	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-200			
Latitude: 47 35.22966		Longitude: 122 20.59521		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1410	10.8	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-200-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Worms and pockets of sheen, plant debris
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	Field duplicate taken EW09-SS-300-D10
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Rain

Sampling Method: Van Veen Crew: TD, AR, SF

GRAB DATA	Location ID: EW09-SS- 130			
Latitude: 47 35.1766		Longitude: 122 20.7300		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1435	16.3	16	Y	

SAMPLE DATA	Sample ID: EW09-SS- 130 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Trace organic debris, plant debris and worm tubes; Isolated pockets of sheen
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 129			
Latitude: 47 35.17447		Longitude: 122 20.57405		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1453	10	12	Y	

SAMPLE DATA	Sample ID: EW09-SS- 129 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Plant debris, worms
gravel	drab olive	slight	petroleum	
sand (F/M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Overcast, rain, light wind

Sampling Method: Van Veen Crew: TD, AR, SF

GRAB DATA	Location ID: EW09-SS-~~129~~ 127 (AR)			
Latitude: 47 35.~~4774~~307		Longitude: 122 20.69139		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1512	17.7	13	Y	
SAMPLE DATA	Sample ID: EW09-SS-~~129~~ 127 (AR) -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	Worms, worm tubes, plant debris, shell fragments
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 122			
Latitude: 47.35.035808		Longitude: 122 20.74567		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1530	16.1	13	Y	
SAMPLE DATA	Sample ID: EW09-SS- 122 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M/C) Trace	brown	moderate	other:	Worms, worm tubes, plant debris
silt Trace	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Overcast, rain, wind

Sampling Method: Van Veen Crew: TD, AR, SF

GRAB DATA	Location ID: EW09-SS- 119			
Latitude: 47 35. 976 95673		Longitude: 122 20. 65901		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1554	16.5	15	Y	

SAMPLE DATA	Sample ID: EW09-SS- 119 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Shell fragments, worm tubes, broken glass
sand (F/M/C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 120			
Latitude: 47 35. 982 27		Longitude: 122 20. 72713		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1611	17.4	5	N	
1615	17.6	13	Y	

SAMPLE DATA	Sample ID: EW09-SS- 120 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel Trace	drab olive	slight	petroleum	Worms, shell fragments, worm tubes, plant debris
sand (F/M/C)	brown	moderate	other:	
silt Trace	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/1/09 Weather: Overcast, rain, wind

Sampling Method: Van Veen Crew: TD, SF, AR

GRAB DATA	Location ID: EW09-SS-132			
Latitude: 4735.8774		Longitude: 122 20.7574		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1636	16.8	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-132-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C) Trace	brown	moderate	other:	Worms, worm tubes, shell fragments
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-~~005~~ 010			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09-SS-~~005~~ 010-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/2/09 Weather: Partly cloudy, sunshine, light wind

Sampling Method: Van Veen Crew: TD, SE, AR

GRAB DATA	Location ID: EW09-SS-116			
Latitude: 47 ~~35~~34. ~~7891~~ 88676		Longitude: 122 20. ~~5896~~ 72480		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0829	19.8	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-116 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Worms, worm tubes, trace plant debris
sand (F M C)	brown	moderate	other:	
silt	gray dark	strong		Field duplicate taken 30 AR EW09 SS301
clay	black			

GRAB DATA	Location ID: EW09-SS-113			
Latitude: 47 ~~35~~34. 78881		Longitude: 122 20. 58967		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0901/0904	14.2/NA	7/NA	N/N	Van Veen was hung up
0906	14.5	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-113 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel Trace	drab olive	slight	petroleum	Worms, trace plant debris;
sand (F M C)	brown	moderate	other:	
silt	gray	strong		Extra volume for lab QC
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/2/09 Weather: Partly cloudy, sunshine, wind

Sampling Method: Van Veen Crew: AR, TP, SF

GRAB DATA	Location ID: EW09-SS-111			
Latitude: 47 ~~35~~ 34.76734		Longitude: 122 20.73514		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0933	19.8	11	Y	
0948/0952	19.6	NA/NA	N/N	Van Veen got hung up; Empty
0956	19.6	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-111-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C) Trace	brown	moderate	other:	Trace organics, wood debris
silt Trace	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-109			
Latitude: 47 ~~35~~ 34.750107		Longitude: 122 20.51500		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1014	10	16	Y	

SAMPLE DATA	Sample ID: EW09-SS-109-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Worms, plant debris
silt	gray dark	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/2/09 Weather: Partly cloudy, sunshine

Sampling Method: Van Veen Crew: AR, TD, SF

GRAB DATA	Location ID: EW09-SS- 104			
Latitude: 47.~~35~~ 31.69501		Longitude: 122 20.45088		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1036	8.5	16	Y	
SAMPLE DATA	Sample ID: EW09-SS- -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel Trace	drab olive	slight	petroleum	Shell fragments, worms
sand (F M C)	brown	moderate	other:	
silt Trace	gray dark	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
SAMPLE DATA	Sample ID: EW09-SS- -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, light wind

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS- 102			
Latitude: 47 35 57.831		Longitude: 122 20 3456		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0843	19.3	15	Y	

SAMPLE DATA	Sample ID: EW09-SS- 102 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Isolated pockets of sheen, trace plant debris
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		Field duplicate taken. EW09-SS-102-010
clay	black			

Rinsate blank taken @ 804: EW09-SS-102-RB

GRAB DATA	Location ID: EW09-SS- 036			
Latitude: 47.57663		Longitude: 122.3447		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0909	16.2	17	Y	

SAMPLE DATA	Sample ID: EW09-SS- 036 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Worms (trace)
silt	gray	strong		Extra volume collected for lab QC
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, light wind

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS- 034			
Latitude: 47.57614		Longitude: 122.34332		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0930	18	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-034 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Trace worms
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- ~~35~~ 035 (RD)			
Latitude: 47.57643		Longitude: 122.34597		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0949 \ 0951	NA / NA	NA / NA	N / N	Van Veen got hung up
0953	15.6	16	Y	

SAMPLE DATA	Sample ID: EW09-SS035 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Trace worm tubes, worms and plant debris
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, light wind, light rain

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS-033			
Latitude: 47.57599		Longitude: 122.34561		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1015	15.3	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-033-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Worms, worm tubes
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-032			
Latitude: 47.57579		Longitude: 122.34457		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1034	16.3	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-032-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Worms
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, light rain

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS-031			
Latitude: 47.57543		Longitude: 122.34306		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1054	17.3	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-031-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Worms
sand (F M C) trace	brown	moderate	other:	Isolated pockets of sheen
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-030			
Latitude: 47.57501		Longitude: 122.34418		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1114	16	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-030-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Worms, worm tubes, plant debris
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, light wind

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS-029			
Latitude: 47.57490		Longitude: 122.34544		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1137	14	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-029-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Worms
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-025			
Latitude: 47.57406		Longitude: 122.34555		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1156	9.7	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-025-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Worms
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, light wind

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS-024			
Latitude: 47 57406		Longitude: 122.34457		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1300	13.5	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-024-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C) trace	brown	moderate	other:	Worms, worm tubes, trace wood debris
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-023			
Latitude: 47 ~~53 19~~ 57379		Longitude: 122.34321		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1316	9.2	NA	N	Misfire
1322	15.1	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-023-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Worms, Isolated pockets of sheen
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, light wind

Sampling Method: Van Veen Crew: TP, CL, AR

GRAB DATA	Location ID: EW09-SS-020			
Latitude: 47.57341		Longitude: 122.34380		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1345/1347	NA/NA	NA/NA	N/N	Van Veen got hung up.
(AM) ~~1347~~ 1349	NA	NA	N	"
1350	9.5	13	Y	
SAMPLE DATA	Sample ID: EW09-SS-020-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Shell fragments, worms, wood debris, isolated pockets of sheen
sand (F M C)	brown	moderate	other:	
silt	gray dark	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-013			
Latitude: 47.57189		Longitude: 122.34583		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1430	4.5	11	Y	Need more volume
1440	4.5	11	Y	
SAMPLE DATA	Sample ID: EW09-SS-013010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel Trace	drab olive	slight	petroleum	Isolated pockets of sheen, clams, mussels, shell fragments, worms, sea star, gunnel, wood debris, fishing line
sand (F M C)	brown	moderate	other:	
silt Trace	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Partly cloudy, light wind

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS-011			
Latitude: 47.57137		Longitude: 122.34578		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1456/1458	NA/NA	NA/5	N/N	Van Veen got hung up.
1459/1502	NA/2	NA/11	N/Y	Rock caught in the jaws
1510	2	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-011-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Worms, worm tubes, shell fragments, wood debris, isolated pockets of sheen
silt	gray dark	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-008			
Latitude: 47.57100		Longitude: 122.34652		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1526	1.5	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-008-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Worms, worm tubes
silt	gray dark	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Partly cloudy, light wind

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS- 005			
Latitude: 47.57031		Longitude: 122.34585		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1544/1547	6.6/8	3/NA	N/N	Wash out, wood caught in jaws
1549/1554	8/8	11/8	Y/N	Need more volume
1556/1559	8/8	NA/NA	N/N	Sea star caught in jaws, wash out
SAMPLE DATA	Sample ID: EW09-SS- 009-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	Shell fragments, worms, wood debris
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 005			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1601	8	11	Y	
SAMPLE DATA	Sample ID: EW09-SS- -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: Overcast, Windy

Sampling Method: Van Veen Crew: TD, CL, AR

GRAB DATA	Location ID: EW09-SS- 003			
Latitude: 47.56992		Longitude: 122.34586		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1614/1617	6.6/6.6	NA/NA	N/N	washout
1619	6.6	NA	N	washout
1625/1630	6.6/6.6	14/13	Y/Y	

SAMPLE DATA	Sample ID: EW09-SS- 003-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell fragments, worms, wood debris
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 001			
Latitude: 47.56965		Longitude: 122.34598		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1644	5.6	15	Y	

SAMPLE DATA	Sample ID: EW09-SS- 001-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Plant debris, worms, algae
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: light rain, low 30s

Sampling Method: VanVeen Crew: SF, CL, TD

GRAB DATA	Location ID: EW09-SS-014			
Latitude: 47.57196		Longitude: 122.34485		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0955	6.2	13	Y	

SAMPLE DATA	Sample ID: EW09-SS-014-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Rinsate blank EW09-SS014-RB20336.
gravel	drab olive	slight	petroleum	isolated sheen pockets
sand (F M C)	brown	moderate	other:	worm tubes
silt	gray	strong		shell fragments
clay	black			

GRAB DATA	Location ID: EW09-SS-019			
Latitude: 47.57317		Longitude: 122.34428		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1017	14.8	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-019-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	wood debris, creosote, plant debris
gravel	drab olive	slight	petroleum	worm tubes, worms
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 08.05.09 Weather: light rain, lo 30s

Sampling Method: Van Veen Crew: CL, SF, TD

GRAB DATA	Location ID: EW09-SS-501			
Latitude: 47.57444		Longitude: 122.34508		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1034	15.3	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-501-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-502			
Latitude: 47.57524		Longitude: 122.34508		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1047	15.1	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-502-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel trace	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: light rain, low 40s

Sampling Method: Van Veen Crew: CL, SF, TD

GRAB DATA	Location ID: EW09-SS-503			
Latitude: 47.57651		Longitude: 122.74518		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1100	15.2	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-503-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	
sand (tr. F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-504			
Latitude: 47.57717		Longitude: 122.34498		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1113	18.7	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-504-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	tr. plant debris
gravel	drab olive	slight	petroleum	
sand (tr. F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: light rain, low 40s

Sampling Method: Van Veen Crew: CL, SF, TD

GRAB DATA	Location ID: EW09-SS-505			
Latitude: 47.57722		Longitude: 122.34380		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1126	19.0	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-505010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	
gravel	drab olive	slight	
sand (F M C) tr	brown	moderate	
silt	gray	strong	
clay	black		
		H_2S	
		petroleum	
		other:	

GRAB DATA	Location ID: EW09-SS-506			
Latitude: 47.57778		Longitude: 122.34437		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1137	18.7	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-506010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	
gravel	drab olive	slight	
sand (F M C)	brown	moderate	
silt	gray	strong	
clay	black		
		H_2S	
		petroleum	
		other:	

worms, isolated sheen

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast, light rain, low 40's

Sampling Method: Van Veen Crew: CL, SF, TP

GRAB DATA	Location ID: EW09-SS-507			
Latitude: 47.57792		Longitude: 122.34362		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1147	18.4	13.5	Y	

SAMPLE DATA	Sample ID: EW09-SS-507-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, isolated sheen
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-508			
Latitude: 47.57872		Longitude: 122.34517		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1156	—	—	N	HUNG UP
1158	—	—	N	HUNG UP
1200	18.8	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-508-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt, tr.	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast ~~[illegible]~~ 10 40s

Sampling Method: Van Veen Crew: CL, SF, TD

GRAB DATA	Location ID: EW09-SS- 021			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1234	10.9	—	N	WASHED OUT
1237/1239	~~[illegible]~~/	7/Ø	N/N	—/ROCK IN JAWS
1241/1242	—/	Ø/	N/	ROCK IN JAWS
SAMPLE DATA	Sample ID: EW09-SS- 021 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 021			
Latitude: 47.57344		Longitude: 122.34504		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1245/1247	—	— —	N/N	Rocks in jaws
1251/1257	11.2/11.0	11/11	Y/Y	only one side/
SAMPLE DATA	Sample ID: EW09-SS-021-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	sheen, worms, algae, plant debris, shell fragments, worm tubes
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

WindWard environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast, low 40s

Sampling Method: Van Veen Crew: CC, TD, SF

GRAB DATA	Location ID: EW09-SS- 509			
Latitude: 47.57880		Longitude: 122.34124		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1343	13.3	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-509-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 510			
Latitude: 47.57890		Longitude: 122.34411		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1355	17.2	15	Y	

SAMPLE DATA	Sample ID: EW09-SS- 510-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	plant debris
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast, low 40s

Sampling Method: Van Veen Crew: CL, SF, TD

GRAB DATA	Location ID: EW09-SS- 511			
Latitude: 47.57932		Longitude: 122.34233		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1404	11.0	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-511-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 512			
Latitude: 47.59747		Longitude: 122.34197		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1411	—	—	N	HUNG UP
1414	14.3	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-512-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast, low 40s

Sampling Method: Van Veen Crew: CL, SF, TD

GRAB DATA	Location ID: EW09-SS-513			
Latitude: 47.579776		Longitude: 122.34506		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1423	17.4	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-513-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-514			
Latitude: 47.580004		Longitude: 122.34394		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1432	17.0	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-514-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Worms
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast, low clds

Sampling Method: Van Veen Crew: CL, SF, TD

GRAB DATA	Location ID: EW09-SS- 515			
Latitude: 47.58075		Longitude: 122.34407		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1440	17.4	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-515-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes, algae
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 516			
Latitude: 47.58085		Longitude: 122.34552		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1448	—	—	N	HUNG UP
1450	17.3	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-516-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worm
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast, low 40s

Sampling Method: Van Veen Crew: CL, SE, TD

GRAB DATA	Location ID: EW09-SS-517			
Latitude: 47.58189		Longitude: 122.34399		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1459	16.7	17	X	

SAMPLE DATA	Sample ID: EW09-SS-517-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-~~518~~ 519			
Latitude: 47.582844		Longitude: 122.34372		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1514	—	—	N	HUNG UP
1516	16.5	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-~~518~~ 519-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	isolated sheen
gravel	drab olive	slight	petroleum	
sand (F/M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.05.09 Weather: overcast, low 40s

Sampling Method: Van Veen Crew: SF, CL, TD

GRAB DATA	Location ID: EW09-SS- 510			
Latitude: 47.584405		Longitude: 122.34513		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1525	~~10.0~~ 16.0	14.5	Y	

SAMPLE DATA	Sample ID: EW09-SS- 510-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	
gravel	drab olive	slight	H_2S
sand (F M C)	brown	moderate	petroleum
silt	gray	strong	other:
clay	black		

GRAB DATA	Location ID: EW09-SS-			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09-SS- -010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.06.09 Weather: 40's, sun

Sampling Method: Van Veen Crew: CL, JB, TD

GRAB DATA	Location ID: EW09-SS- 518			
Latitude: 47.58208		Longitude: 122.34554		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0836	18.7	13	Y	

SAMPLE DATA	Sample ID: EW09-SS- 518-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worm tubes, worms
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 535			
Latitude: 47.58090		Longitude: 122.34473		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0847	18.2	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-535-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

WindWard environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.06.09 Weather: 40s, sun

Sampling Method: Van Veen Crew: CL, JB, TD

GRAB DATA	Location ID: EW09-SS-521			
Latitude: 47.58501		Longitude: 122.34386		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0900	19.2	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-521-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	wood debris
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-536			
Latitude: 47.58502		Longitude: 122.34540		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0908	18.6	—	N	hung up
0909	18.6	13	Y	

SAMPLE DATA	Sample ID: EW09-SS-536-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.06.09 Weather: sun, 40s

Sampling Method: Van Veen Crew: CL, JB, TD

GRAB DATA	Location ID: EW09-SS-522			
Latitude: 47.596012		Longitude: 122.343345		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0918	17.3	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-522-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-523			
Latitude: 47.596696		Longitude: 122.343889		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0926	18.5	—	N	HOLD UP
0928	18.5	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-523010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	isolated sheen pockets
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 08.06.09 Weather: Sun, 40s

Sampling Method: Van Veen Crew: CL, JB, TD

GRAB DATA	Location ID: EW09-SS- 524			
Latitude: 47.58778		Longitude: 122.34434		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0936	18.6	11	Y	
SAMPLE DATA	Sample ID: EW09-SS-524-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) worms, worm tubes
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 525			
Latitude: 47.58938		Longitude: 122.34449		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0944	18.5	—	N	HUNG UP
0946	18.6	10	N	
0949	18.6	11	Y	
SAMPLE DATA	Sample ID: EW09-SS-525-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) worms, worm tubes shell frags.
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.06.09 Weather: Sun, 40s

Sampling Method: Van Veen Crew: CL, JB, DD

GRAB DATA	Location ID: EW09-SS-537			
Latitude: 47.58783		Longitude: 122.34322		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0957	13.7	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-537-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) worms, worm tubes
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-538			
Latitude: 47.58899		Longitude: 122.34372		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1008	18.1	11.5	Y	

SAMPLE DATA	Sample ID: EW09-SS-538-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) worms, worm tubes
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.09.09 Weather: SUN, 40s

Sampling Method: Van Veen Crew: CL, JB, TD

GRAB DATA	Location ID: EW09-SS-526			
Latitude: 47.58898		Longitude: 122.34505		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1015/1017	19.9	—	N/N	HUNG UP / HUNG UP
1020	19.6	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-526-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-527			
Latitude: 47.58983		Longitude: 122.34504		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1028	19.6	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-527-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.06.09 Weather: Sun, 40s

Sampling Method: Van Veen Crew: CL, JB, TD

GRAB DATA	Location ID: EW09-SS-533			
Latitude: 47.59064		Longitude: 122.34504		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1037/1039	—	9/8	N/N	
1042	—	6	N	
1047	21.5	11	Y	good on one side, enough vol.

SAMPLE DATA	Sample ID: EW09-SS-533-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-534			
Latitude: 47.59106		Longitude: 122.34403		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1057	18.3	6	N	ROCKS IN JAWS, WASHED OUT
1100	—	6	N	rocks in jaws
1105	18.3	11	Y	one side good, enough vol

SAMPLE DATA	Sample ID: EW09-SS-534-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt hr.	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.: ~~08-08-239-43~~ 112

Date: 3/2/09 Weather: sunny + partly cloudy

Sampling Method: diver-hand cores Crew: J. Flover, Eric Parker

GRAB DATA	Location ID: EW09-SS-027			
Latitude:		Longitude:		
Grab time	Bottom depth (m) ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1050	35	10	Y	On station - 50 ft in (east) of apprm pier face

SAMPLE DATA	Sample ID: EW09-SS-027-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell fragments, + several worms
gravel - trace	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09-SS- -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: cloudy

Sampling Method: diver hand cores Crew: K. Hurley, E. Parker

GRAB DATA	Location ID: EW09-SS-038			
Latitude:		Longitude:		
Grab time	Bottom depth (m) ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0950-0930	41'	10	Y	on station 28ft in
				from pier (EAST)

SAMPLE DATA	Sample ID: EW09-SS-038 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Small worms
gravel	drab olive	slight	petroleum	slight sheen.
sand (F M C)	brown	moderate	other:	Shell fragments
silt	gray	strong		Rinsate blank EW09-SS-038-RB
clay	black			taken @ 0920

GRAB DATA	Location ID: EW09-SS- 100			
Latitude:		Longitude:		
Grab time	Bottom depth (m) ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1030	40	10	Y	on-station 55ft in
				from boat (WEST)

SAMPLE DATA	Sample ID: EW09-SS- 100-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	Worms, shell fragments
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: cloudy + cool

Sampling Method: driven hand core Crew: K. Hurley, E. Parker

GRAB DATA	Location ID: EW09-SS- 101			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1101	41	10	Y	station 10ft from
				boat location (EAST)

SAMPLE DATA	Sample ID: EW09-SS- 101 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell fragments
gravel	drab olive	slight	petroleum	sheen.
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 110			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1144	27	10	Y	Station located 45ft
				East-NE from boat loc.

SAMPLE DATA	Sample ID: EW09-SS- 110 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Worms, worm tubes,
gravel	drab olive	slight	petroleum	shell fragments.
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: cloudy + cool

Sampling Method: Dive hand corer Crew: K. Hurley, E. Parker

GRAB DATA	Location ID: EW09-SS- 114			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1247	31	10	Y	Station 40 ft offset (west)

SAMPLE DATA	Sample ID: EW09-SS- 114 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worm tubes
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 117			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1328	25	10	Y	station offset is 40 ft (East)

SAMPLE DATA	Sample ID: EW09-SS- 117 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes
gravel	drab olive	slight	petroleum	pocket sheen
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/4/09 Weather: partly cloudy w/ sunbreaks

Sampling Method: Diver hand corer Crew: K. Hurley, E. Parker

GRAB DATA	Location ID: EW09-SS- 211			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1415	33	10	Y	35 ft offset under pier (west)

SAMPLE DATA	Sample ID: EW09-SS-211 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell fragments, worms, cobble
gravel	drab olive	slight	petroleum	
sand (F/M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS- 219			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1449	27	10	Y	Offset from station is 30 ft East.

SAMPLE DATA	Sample ID: EW09-SS-219 -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none, SKH	H_2S	Shell fragments
gravel	drab olive	slight	petroleum	worms
sand (F/M/C)	brown	moderate	other:	Sheen
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 3/5/09 Weather: overcast, light rain

Sampling Method: diver hand cores Crew: J. Buening, E. Parker

GRAB DATA	Location ID: EW09-SS- 126			
Latitude:		Longitude:		
Grab time	Bottom depth (m) ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
08:55	33	10	Y	45 ft offset under pier to west.

SAMPLE DATA	Sample ID: EW09-SS- 126 -010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worm tubes, shell fragments
gravel – small amt.	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09-SS- -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.12.09 Weather: sun, 40s

Sampling Method: ~~Petite~~ Ponar grab Crew: T-Dz

GRAB DATA	Location ID: ~~EW~~ CI 09-SS-080			
Latitude: 47.31956		Longitude: 122.68594		
Grab time	Bottom depth (m) ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1830	50	10	Y	50-85% fines

SAMPLE DATA	Sample ID: ~~EW~~ CI 09-SS-080-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worm tubes, worms, tube worms, shell frags, algae
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt - trace	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09-SS- -010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment (Rd. 1) Project no.:

Date: 03.12.09 Weather: sun, 40s

Sampling Method: ~~Ponar~~ Van Veen grab Crew: TD

GRAB DATA	Location ID: ~~EW~~ CI 09-SS-020			
Latitude: 47.31218		Longitude: 122.68843		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1320	50	10	Y	~20% fines (sand)

SAMPLE DATA	Sample ID: ~~EW~~ CI 09-SS-020-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms, worm tubes, snails, shrimp, tr. org. matter
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt trace	gray	strong		
clay	black			

GRAB DATA	Location ID: ~~EW~~ CI 09-SS-060			
Latitude: 47.31857		Longitude: 122.68811		
Grab time	Bottom depth ~~(m)~~ ft	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1600	23	10	Y	~60% fines (sand)

SAMPLE DATA	Sample ID: ~~EW~~ CI 09-SS-060-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash, worms, worm tubes
gravel	drab olive	slight	petroleum	shrimp tr. org. matter
sand (F M C)	brown	moderate	other:	
silt trace	gray	strong		
clay	black			

PROTOCOL MODIFICATION FORM

Project Name and Number: 09·08·09·46

Material to be Sampled: surface sediment

Measurement Parameter: Minimum acceptable sediment grab penetration depth.

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

One of the sediment acceptance criteria is "a penetration of at least 11 cm has been achieved (BAPP - Windward 2009)

Reason for Change in Field Procedure or Analysis Variation:

Six prior attempts could not recover >11 cm of sediment due to coarse sand and gravel, and marine life (~~[illegible]~~ TPO Kelp attached to cobble) at location EW09-SS-21B.

Variation from Field or Analytical Procedure: Sediment was accepted from two grabs that penetrated 8.5 cm, the highest penetration depths achieved

Special Equipment, Materials or Personnel Required: none.

Initiator's Name: [signature] Date: 03.01.09

Project Officer: [signature] Date: 4/16/09

QA Officer: [signature] Date: 4/16/09

Round 2 Sampling

03.12.09 T.Do

1600 Grab #4, accept: ~60% fines confirmed via sieve.
Need multiple grabs
Total of 18 grabs required
1630 Completed processing at station 2
Sample CI09-SS-060-010
1639 Move to station 3 to look for 80% fines
1655 Arrive at station 3
1700 Grab #1 no good - low fines. Move to new location.
1830 Grab # 1 - 80-85% fines confirmed via sieve test; accept grab
Need multiple grabs
Total of 12 grabs required
1900 Completed processing at station 3
Sample CI09-SS-080-010
1910 Head back to boat launch
1920 Arrive boat launch, offload supplies/samples
1945 Depart boat launch. End of field day

T.Do
03.12.09

6.22.09 C.Lorenz

8:00 Arrive at Alki Marina/boat launch & begin to unload supplies on to boat
Field Crew: Chelsea Lorenz, Thai Do, Rick Berg, Suzanne Replinger } UW
Dave Mullins (boat operator)
8:15 Health & Safety brief
Weather: overcast & cloudy, 60s
8:25 Head to East Waterway Station 223
8:40 Arrive at Station 223
854 Grab #1 no good - low recovery
859 Grab #2 unacceptable (cobble, stones)
903 Grab #3 acceptable grab
912 Grab #4 acceptable grab
920 Grab #5 acceptabe grab
926 Grab #6 unacceptable - hung up
928 Grab #7 " hung up
930 Grab #8 acceptable
940 Called Coast Guard to enter Slip 36
945 Arrive at Station EW09-SS-531
950 Grab #1 unacceptable - did not deploy
952 Grab #2 " - hung up

6.22.09 C. Lorentz

954 Grab #3 unacceptable - misfire
955 Grab #4 acceptable
1002 Joe Goulet from EPA called, discussed benthic sampling event
1006 Arrive at Station EW09-SS-214
1007 Grab #1 acceptable
1020 Arrive @ station EW09-SS-532
1022 Grab #1 unacceptable - misfire
1027 Grab #2 acceptable
1036 Arrive @ station EW09-SS-213
Grab #1 acceptable
1047 Arrive @ Station EW09-SS-529
Grab #1 acceptable
1056 Arrive @ Station EW09-SS-528
1057 Grab #1 acceptable
1107 Arrive @ Station EW09-SS-530
1108 Grab #1 acceptable (1 blenny in grab)
1115 Arrive @ station EW09-SS-215
1117 Grab #1 unacceptable - misfire
1118 Grab #2 " - rope in mouth
1121 Grab #3 acceptable
1134 Complete processing & leave Coast Guard Slip 36
1135 Lunch Break

6.22.09 C. Lorentz

1200 Arrive @ Station EW09-SS-018
TD & SR depart boat, on shore to hand sample station
1202 Collected Sample
1220 finish processing, heading to Station 016
1224 Arrive @ Station EW09-SS-016
TD & SR depart to collect sample on shore by hand
1228 Collected Sample
1246 Arrive @ Station EW09-SS-022
1249 Grab #1 unacceptable - rock in jaw
1251 Grab #2 unacceptable
1252 Grab #3 acceptable
13:00 Grab #4 acceptable
1317 Arrive @ Station EW09-SS-028
1318 Grab #1 acceptable
collected field duplicate EW09-SS-303-010
1337 Arrive @ Station EW09-SS-039 ↳barge in way
Grab #1 unacceptable
1340 Grab #2 acceptable
Collected extra volume for Lab QC MS/MSD

6.22.09 C. Lorenz

1356 Arrive @ Station EW09-SS-017
1400 Grab #1 acceptable
1415 Arrive @ Station EW09-SS-015
leave 015, needs low tide & hand collection to sample
14:18 Arrive @ Station EW09-SS-026
1422 Grab #1 acceptable grab
1435 Arrive @ Station EW09-SS-040
1436 Grab #1 acceptable grab
Collected extra volume for lab QC MS/MSD
1455 Arrive @ Station EW09-SS-037
1459 Grab #1 acceptable grab
~~1514~~ Arrive @ Station EW09-SS-103
1515 Grab #1 acceptable grab
1530 Arrive @ Station EW09-SS-105
1532 Grab #1 acceptable grab
collected field duplicate EW09-SS-304-010
1549 Arrive @ Station EW09-SS-112
1550 Grab #1 acceptable
1608 Arrive @ Station EW09-SS-115
1610 Grab #1 acceptable
1623 Arrive @ Station EW09-SS-133

6.22.09 C. Lorenz

1624 Grab #1 unacceptable
1626 Grab #2 acceptable
1641 Arrive @ Station EW09-SS-108
1642 Grab #1 acceptable
Arrive @ Station EW09-SS-118
1658 Grab #1 unacceptable - missfire
1701 Grab #2 acceptable
1716 Arrive @ Station ~~121~~ EW09-SS-121
Grab #1 acceptable
1725 Motor back to Alki boat launch
1730 Arrive at Alki, unload
1745 END of Day

C. Lorenz 6.22.09

S. Katka

6/23/09

Rd 2 East Waterway Sediment Sampling - day 2

Weather: sunny, no wind

Crew: Rick Berg
Thai Do
Sarah Fowler
Shannon Katka
} WW
Dave Mullins - Mullins Guide

0800 Health + Safety debriefing

0845 Meet at Alki boat launch

0811 Rinsate sample
EW09-SS-222-RB

0833 - Begin sampling EW09-SS-222
Grab #1 - did not close
0840 - had to repair van Veen cover
0844 Grab #2 - underpenetration
0850 Grab #3 - underpenetration

06.23.09 S. Kutka

EW09-SS-222

0853 Grab Attempt #4 - did not trigger

0857 Grab Attempt #5 - ~~gr~~ grab successful need add'l sed.

0903 Grab Attempt #6 - grab successful.
Need add'l sediment

0907 - Grab Attempt #7 - grab successful
finish sampling station

0924 EW09-SS-221 - Grab #1 - underpen.

0929 Grab #2 - successful

0934 Grab #3 - did not trigger

0936 Grab #4 - successful

1003 EW09-SS-~~012~~ 009 - Grab #1 - successful grab

1024 EW09-SS-012 - Grab #1 - successful grab

1034 EW09-SS-015 - Grab sampled
by hand

1050 EW09-SS-107 - Grab sampled
by hand

1108 EW09-SS-106 - Grab sampled by hand

06.23.09 S. Kutka

1124 EW09-SS-208 - Grab sampled by hand
unable to sample. - all gravel
communication b/w T. Do + Susie
McGroddy - decided to move
sample location out so that
could be collected w/ a Van
Veen.

EW09-SS-208

1132 Van Veen attempted - grab #1
successful grab
took duplicate sample -
~~EW09-305~~ - EW09-SS-305-010

1153 EW09-SS-206
unable to sample on intertidal
target location due to rip rap
sampled using Van Veen

1153 Grab #1 successful; add'l grab
taken for add'l MS/MSD sed

1200 Grab #2 - underpen

1203 Grab #3 - successful grab

~~1~~1205 Break for lunch / ~~the~~ hand off samples
for hand delivery

06.23.09 S. Katka

1251 - Rinsate blank
EW09-SS-210-RB

1305 EW09-SS-210 - Grab #1
successful - able to sample off very end of barge b/c barge right over target

1319 EW09-SS-205 - Grab #1
successful grab

1332 EW09-SS-203 - Grab #1
caught on rope - have to cut off rope from Van Veen jaws.
unsuccessful grab.

Had to tighten up van Veen winch

1348 Grab #2 - undepen; rocks caught in jaws
1351 Grab #3 - 3 cm - underpen.
1354 Grab #4 - took sample
1402 - Grab #5 - took sample

06.23.09 S Katka

1415 EW09-SS-212 - 1st grab - successful
1422 2nd grab - didn't trigger need additional sed.
1424 grab #3 - ~~[illegible]~~ successful grab.

1436 EW09-SS-209 - Grab #1 - successful

1459 EW09-SS-201 - Grab #1 - didn't trigger
1502 Grab #2 - successful, need add'l sed.
1509 Grab #3 - grab successful

1523 EW09-SS134 - Grab #1 - didn't trigger
1526 Grab #2 - didn't trigger
1538 Grab #3 - successful grab

1545 EW09-SS131 - Grab #1 - successful grab

1601 EW09-SS~~#~~128 - Grab #1 - wash out
1604 Grab #2 - ~~washout~~ underpen.
1608 Grab #3 - successful grab

1624 EW09-SS-125 - Grab #1
successful grab

1643 EW09SS-124 - Grab #1 - didn't trigger

06.23.09 S. Katka

EW09-SS-124-010 con't

1645 Grab #2 - didn't trigger

1648 Grab #3 - acceptable grab

1702 EW09-SS-123-010 - successful grab

1710 end of sampling - start shuttling back to Alki boat launch

1725 Alki boat launch; unload end of sampling day

S Katka 1725 06.23.09

06.24.09 S. Katka

Rd 2 East Waterway Sediment Sampling - day 3

weather sunny, no wind

crew Rick Berg
~~Thar Be~~ Shannon Katka } Windward
Sarah Fowler
Chelsea Lorenz
~~Sho~~ Dave Mullins - Mullins Guide

0750 - Meet at Harbor Island Marina

Decon, set up

0804 Rinsate sample

0819 EW09-SS002-010 - Grab #1 - rock in jaws

0821 Grab #2 - no sediment
decide to move on to next sample ~~to get~~ and wait for tide to go lower to get sample at SS-02.

0828 EW09-SS-004 - Grab #1 - washout
0830 Grab #2 - Washout
0832 Grab #3 - washout
Decide to go to next location and wait until tide goes out to sample by hand

0839 EW09-SS-006 Grab #1 - washout
0842 Grab #2 didn't trigger
0843 Grab #3 didn't trigger
Decided to wait until tide goes out a bit. b/c unable to hit target locations with Van Veen w/out hitting rip rap

0855 Communication w/ Susie McGroddy + Shannon Kutka regarding status of sampling and that we're waiting for the tide to go out and sample by hand.

Pull up to H1 Marina to wait.

0940 Scoped out sampling locations

1010 EW09-SS-002 - Grab #3
Sampled on shore by hand. Target location was ~~on~~ up from the sandy intertidal area in the riprap, so we sampled ~~b~~ just below the riprap where the intertidal beach begins

1027 Scoped out locations for EW09-SS-007 and EW09-SS-010
Unable to park boat for sampling - will access by foot after sampling EW09-SS-04 and EW09-SS-06

1035 EW09-SS-004 - Sampled by hand

1057 EW09-SS-006 - sampled by hand

1115 Unload boat - will sample last two locations by hand

1140 EW09-SS-007-010
47.57100
122.34480

 06.24.09 S. Katka

sampled location EW09-SS-07
at pt closest from target in
the intertidal sediment. Target
location was located up shoreline
on rip rap. Hard to get solid
coordinates w/ roadway above

1215 EW09-SS10-010
Target 47.571368
122.344595
Actual 47.57133 - 20' N of
122.34542
Estimated in field to get at target
location at closest location where
intertidal sediment was present
(same as last location

1240 - finish sampling at Hi Mamma
end of field day

1240 06.24.09
S Katka

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM (R2)

Project Name: EW Surface Sediment Sampling Project no.: 09-08-09-46

Date: 6.22.09 Weather: cloudy

Sampling Method: Van Veen (double) Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-223			
Latitude: 47.592232		Longitude: 122.34308		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
854	16	N/A	N	
859	16	N/A	N	(cobble)
903/912	16.2	7	Y	

SAMPLE DATA	Sample ID: EW09-SS-223-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	trace worms, barnacles
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-223			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
920	16.2	7	Y	
926/928	↓	N/A	N	
930		7	Y	

SAMPLE DATA	Sample ID: EW-09-SS-223-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 09-08-09-46
Date: 6.22.09
Weather: partly cloudy
Sampling Method: Van Veen (double)
Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-531			
Latitude: 47.59048		Longitude: 122.34250		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
950/952/954	12.6	N/A	N	
955	12.6	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-531-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	worms
silt	gray dark	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-214			
Latitude: 47.59025		Longitude: 122.34215		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1007	11.9	16	Y	

SAMPLE DATA	Sample ID: EW09-SS-214-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	worms
silt	gray	strong		isolated sheen
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Double Van Veen Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-532			
Latitude: 47.59057		Longitude: 122.34138		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1022	12.4	N/A	N	
1027	12.4	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-532-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	shell fragments, worms
gravel	drab olive	slight / petroleum	
sand (F M C)	brown	moderate / other:	
silt	gray dark	strong	
clay	black		

GRAB DATA	Location ID: EW09-SS-213			
Latitude: 47.59012		Longitude: 122.34124		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1036	10.8	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-213-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	worms, shell fragments
gravel	drab olive	slight / petroleum	
sand (F M C)	brown	moderate / other:	
silt	gray dark	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Double Van Veen Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-529			
Latitude: 47.59031		Longitude: 122.34071		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1047	12.2	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-529-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	worms, shell fragments
clay	black		

GRAB DATA	Location ID: EW09-SS-528			
Latitude: 47.59081		Longitude: 122.33987 — shipmway		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1057	12	13	Y	

SAMPLE DATA	Sample ID: EW09-SS-528-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray dark	strong	worms, small amount of wood debris
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: ~~EW09~~ EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Double Van Veen Crew: TD, RB, SR, CL

GRAB DATA	Location ID: EW09-SS-530			
Latitude: 47.59051		Longitude: 122.33914		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
~~8~~1109	10.1	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-530-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray dark	strong	lots of worms & worm tubes, trace shell fragments, blenny (fish)
clay	black		

GRAB DATA	Location ID: EW09-SS-215			
Latitude: 47.59033		Longitude: 122.33871		
Grab time a 1118	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1117/~~1120~~	10	N/A	N	
1121	10	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-215-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel (trace)	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt (trace)	gray dark	strong	wood debris, worms, shell fragment
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW ~~[illegible]~~ Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: ~~Double Van Veen~~ Hand Sample Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-018			
Latitude: 47.57339		Longitude: 122.34315		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1202	N/A	10	Y	collected by hand

SAMPLE DATA	Sample ID: EW09-SS-018-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray dark	strong	wood debris, shell fragments, sheen
clay	black		

GRAB DATA	Location ID: EW09-SS-016			
Latitude: 47.57248		Longitude: 122.34395		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1228	N/A	10	Y	collected by hand

SAMPLE DATA	Sample ID: EW09-SS-016-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray dark	strong	worms, clams (~2cm), crabs, wood debris, sheen
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Double VanVeen Crew: TD, SP, RB, CL

GRAB DATA	Location ID: EW09-SS-022			
Latitude: 47.57306		Longitude: 122.34533		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1249/1251	2.2	N/A	N	
1252	2.4	11	Y	
1300	4	13	Y	

SAMPLE DATA	Sample ID: EW09-SS-022-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt (trace)	gray	strong	
clay	black		

worms, worm tubes, shell fragments, blated sheen

GRAB DATA	Location ID: EW09-SS-028			
Latitude: 47.57429		Longitude: 122.34593		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1318	20	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-028-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	
clay	black		

- Collected field Duplicate + EW09-SS-303-010

worms & tubes

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Dabbe VanVeen Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-039			
Latitude: 47.57277		Longitude: 122.34557		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1337	6.2	N/A	N	
1340	6.2	10	Y	

SAMPLE DATA	Sample ID: EW09-SS-039-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	- extra volume collected for lab QC MS/MSD
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt (trace)	gray dark	strong		worm, trace shell fragments
clay	black			

GRAB DATA	Location ID: EW09-SS-017			
Latitude: 47.57275		Longitude: 122.34485		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1400	18	12.5	Y	

SAMPLE DATA	Sample ID: EW09-SS-017-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	worms, worm tubes
silt	gray dark	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Double Van Veen Crew: TD, RB, SR, CL

GRAB DATA	Location ID: EW09-SS-026			
Latitude: 47.57409		Longitude: 122.34350		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1422	17.2	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-026-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	worms,
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-040			
Latitude: 47.57482		Longitude: 122.34320		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1436	27	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-040-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M C)	brown	moderate	other:	few worms
silt	gray dark	strong		
clay	black			-extra volume collected for lab QC MS/MSD

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Double VanVeen Crew: TD, SE, RB, CL

GRAB DATA	Location ID: EW09-SS-037			
Latitude: 47.57674		Longitude: 122.34378		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1459	1.6	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-037-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	large worms,
clay	black		

GRAB DATA	Location ID: EW09-SS-103			
Latitude: 47.57809		Longitude: 122.34316		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1515	16.4	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-103-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	worms,
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46
Date: 6.22.09 Weather: partly cloudy
Sampling Method: Double VanVeen Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-105			
Latitude: 47.57859		Longitude: 122.34073		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1532	13.2	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-105-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	worms
gravel	drab olive	slight / petroleum	- collected field
sand (F M C)	brown	moderate / other:	dup, EW09-SS-304-010
silt	gray dark	strong	
clay	black		

GRAB DATA	Location ID: EW09-SS-112			
Latitude: 47.579760		Longitude: 122.34240		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1550	14.1	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-112-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	worms
gravel	drab olive	slight / petroleum	
sand (F M C)	brown	moderate / other:	
silt	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: Partly cloudy

Sampling Method: Double VanVeen Crew: JD, CL, SR, RB

GRAB DATA	Location ID: EW09-SS-115			
Latitude: 47.58048		Longitude: 122.34310 ~~34031~~		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1610	15	17	Y	

SAMPLE DATA	Sample ID: EW09-SS-115-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	
gravel	drab olive	slight / petroleum	
sand (F M C)	brown	moderate / other:	worms, worm tubes
silt	gray / dark	strong	
clay	black		

GRAB DATA	Location ID: EW09-SS-133			
Latitude: 47.57824		Longitude: 122.31594		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1624	18.3	N/A	N	
1626	18.3	13	Y	

SAMPLE DATA	Sample ID: EW09-SS-133-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	
gravel	drab olive	slight / petroleum	
sand (F M C)	brown	moderate / other:	worms, worm tubes, isolated sheen
silt	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 09-08-09-46
Date: 6.22.09
Weather: partly cloudy
Sampling Method: Double Van Veen
Crew: TD, SR, RB, CL

GRAB DATA	Location ID: EW09-SS-108			
Latitude: 47.57909		Longitude: 122.34579		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1642	19	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-108-D10		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt (trace)	gray	strong	trace worms
clay	black		

GRAB DATA	Location ID: EW09-SS-118			
Latitude: 47.58189		Longitude: 122.34498		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1658	19	N/A	N	
1701	19	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-118-D10		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	shell fragments, worms, worm tubes
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 09-08-09-46

Date: 6.22.09 Weather: partly cloudy

Sampling Method: Ponar/Van Veen Crew: TD, SL, RB, CL

GRAB DATA	Location ID: EW09-SS-121			
Latitude: 47.58326		Longitude: 122.34446		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1716	19	16	Y	

SAMPLE DATA	Sample ID: EW09-SS-121-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	worms, worm tubes
gravel	drab olive	slight / petroleum	isolated sheen,
sand (F M C)	brown	moderate / other:	trace shell fragments
silt	gray / dark	strong	
clay	black		

GRAB DATA	Location ID:			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID:		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	
gravel	drab olive	slight / petroleum	
sand (F M C)	brown	moderate / other:	
silt	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 09.08 09.~~08~~ 46
Date: 06 23.09
Weather: ~~Cloudy~~ sunny
Sampling Method: Van Veen
Crew: TD, SF, RB, SR

47 591 80 122° 343 00

GRAB DATA	Location ID: EW09-SS-222-~~010~~			
Latitude: ~~47° 591.80~~		Longitude: ~~122° 343.00~~		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
Grab #1 0833	16.0	--	N	did not close
#2/#3 0846 0850	16.0 16.0	8 cm	N N	
#5 0857	16	8	Y	need to take add'l sample

#4 0853 - did not trigger

SAMPLE DATA	Sample ID: EW09-SS-222-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	sheen, worms, trace shell frag
silt - wave	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-222			
Latitude: 47° 591.80		Longitude: 122° 343.00		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
#6 0903	16	8	Y	
#7 0907	16	10	Y	

SAMPLE DATA	Sample ID: Same as above			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 09 08 : 4.4 6
Date: 06.23.09
Weather: sunny, light breeze
Sampling Method: sediment grab
Crew: SK, DZ, SF, RB

GRAB DATA	Location ID: EW09-SS-221			
Latitude: 47° 54' 29		Longitude: 122° 34' 395		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0929	15.7	—	N	broken pen
0929	15.7	11	Y	needed 1/2 sediment
0931 0934	15.7 15.7	11	N Y	didn't bigger

SAMPLE DATA	Sample ID: EW09-SS-221-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt - trace	gray	strong	trace wood debris + shell frags, sheen, worms
clay	black		

GRAB DATA	Location ID: EW09-SS-009			
Latitude: 47° 57' 131		Longitude: 122° 34' 545		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1003	1	13	Y	

SAMPLE DATA	Sample ID: EW09-SS-009-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt - trace	gray - dk	strong	sheen shell frags, worms algae
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW surface Sediment Project no.: 09 05 09 44

Date: 06 10 09 Weather: sunny

Sampling Method: sediment grab Crew: JD DB, SKSK

GRAB DATA	Location ID: ~~EWSS-09~~ EW09-SS-012			
Latitude: 47° 57.175		Longitude: 122° 34.532		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1024	12	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-012-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	lots of shell frags.
clay	black		

GRAB DATA	Location ID: EW09-SS-015			
Latitude: 47° 57.070		Longitude: 122° 34.620		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1031	0	~~N/A~~ ID	Y	hand collected

hand sampled here.

SAMPLE DATA	Sample ID: EW09-SS-015-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	lots of shell frags.
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: PW-Surface Sediment Project no.: 09.08.09.4b

Date: 04.23.09 Weather: sunny, windy

Sampling Method: sediment grab Crew: TP, RB, SP, SL

GRAB DATA	Location ID: PW09-SS-107-			
Latitude: 47° 575990		Longitude: 122° 34264		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1050	0	10	Y	hand collected

SAMPLE DATA	Sample ID: PW09 SS-107-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	wood debris
silt	gray - dark	strong		shell frags
clay	black			

GRAB DATA	Location ID: PW09 ~~[illegible]~~ SS-106			
Latitude: 47° 578066		Longitude: 122° 341690		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1108	0	10	Y	hand collected

SAMPLE DATA	Sample ID: PW09-SS-106-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel wood	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	shell frags.
silt	gray	strong		wood debris. worms
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 0908.09.16
Date: 06.23.09
Weather: sunny, windy
Sampling Method: sediment grab
Crew: TD, RB, SF, SK

GRAB DATA	Location ID: EW09-SS-208			
Latitude: 47° 58959		Longitude: 122° 31304		sampled w/ van Veen
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments: unable to sample location by hand at target due to gravel
1132	6.2	15	Y	
"				

SAMPLE DATA	Sample ID: EW09-SS-208-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	duplicate - EW09-SS-305
gravel	drab olive	slight / petroleum	isolated sheen
sand (F/M/C)	brown	moderate / other:	
silt trace	gray, dark	strong	
clay	black		

GRAB DATA	Location ID: EW09-SS-209			
Latitude: 47° 58911		Longitude: 122° 31318		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1153	6	11	Y	
1200	6	—	N	
1203	6	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-209-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	add'l sediment collected for MS/MSD.
gravel	drab olive	slight / petroleum	shell frags, worms
sand (F/M/C)	brown	moderate / other:	isolated sheen
silt trace	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: East Waterway Surface Sediment
Project no.: 09 08 89 46
Date: 06.23.09
Weather: partly cloudy/sunny
Sampling Method: sediment grab
Crew: TD, RB, SF, SK

GRAB DATA	Location ID: EW09-SS-210			
Latitude: 47° ~~59.89~~ 58984		Longitude: 122° 315 70		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1305	15.4	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-210-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	RB - EW09-SS-210-RB
gravel	drab olive	slight / petroleum	
sand (F/M/C)	brown	moderate / other:	worms
silt trace	gray	strong	
clay	black		

GRAB DATA	Location ID: EW09-SS-205			
Latitude: 47° 58858		Longitude: 122° 315 63		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1319	~~18~~ 17.4	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-205-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	worms in worm tubes
gravel	drab olive	slight / petroleum	trace plant/wood debris
sand (F/M/C)	brown	moderate / other:	
silt sheen	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW - Surface Sediment
Project no.: 09.08 09.46
Date: 06.23.09
Weather: Partly sunny
Sampling Method: sediment grab
Crew: TD, RB, SF, SK

GRAB DATA	Location ID: EW09-SS-203			
Latitude: 47.58790		Longitude: 122.39512		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1332	17.0	NA	N	Rope caught in jaws
1348	17	NA	N	Underpen
1351	17	3	N	Underpen

SAMPLE DATA	Sample ID: EW09-SS-203-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-203			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1351	17	5	Y	Need add'l sediment
1402	17	—	Y	

SAMPLE DATA	Sample ID: Same			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	worms, worm tubes
silt trace	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 0908.09.46
Date: 06 23.09
Weather: partly sunny, breezy
Sampling Method: sediment grab
Crew: TD, SPASK, RB

GRAB DATA	Location ID: EW09-SS-212			
Latitude: 47° 58990		Longitude: 122° 34402		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1415	15.6	11	Y	
1422	15.6	—	N	
1424	15.6	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-212-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	worms
silt trace	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-209			
Latitude: 47° 58980		Longitude: 122° 31336		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1436	17	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-209-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F/M/C)	brown	moderate	other:	worms
silt	gray	strong		plant debris - trace
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: DW Surface sediment Project no.: 0908 09 46

Date: 06.23.09 Weather: sunny, some breeze

Sampling Method: sediment grab Crew: TD, SK, SF, RB

GRAB DATA	Location ID: EW09-SS-201			
Latitude: 47 58.719		Longitude: 122° 34.975		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1459	17.3	—	N	didn't trigger
1502	17.3	12	Y	need add'l sediment
1509	17.3	11	Y	

SAMPLE DATA	Sample ID: EW09-SS-201-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F/M/C)	brown	moderate	other:
silt trace	gray	strong	
clay	black		

lots worms, wormtubes, shell frags

GRAB DATA	Location ID: EW09-SS-131			
Latitude: 47° 58.67.0		Longitude: 122° 34.393		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1523	17	—	N	
1526	17	—	N	
1538	17	15	Y	

SAMPLE DATA	Sample ID: EW09-SS-131-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F/M/C)	brown	moderate	other:
silt	gray	strong	
clay	black		

worms

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW-Surface Sediment
Project no.: 09.08.09.46
Date: 06.23.09
Weather: partly sunny, breezy
Sampling Method: sediment grab (van Veen)
Crew: TO, SE, SK, RB

GRAB DATA	Location ID: EW09-SS131			
Latitude: 47 58636		Longitude: 122 34463		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1545	18	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-131-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	worms
gravel	drab olive	slight / petroleum	face wood debris
sand (F M C)	brown	moderate / other:	
silt	gray	strong	
clay	black		

GRAB DATA	Location ID: EW09-SS-128			
Latitude: 47 58586		Longitude: 122 34482		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1601	19	—	N	washout
1604	19	—	N	unclosed
1608	19	14	Y	

SAMPLE DATA	Sample ID: EW09-SS-128-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	worms,
gravel	drab olive	slight / petroleum	worm tubes
sand (F M C)	brown	moderate / other:	isolated sheen
silt	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 09 08.09.46
Date: 06.23.09
Weather: overcast, sun breaks
Sampling Method: sediment grab (Van Veen)
Crew: TD, SF, SK, RB

GRAB DATA	Location ID: EW09-SS-125			
Latitude: 47° 58556		Longitude: 122° 34546		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1624	19.8	12	Y	

SAMPLE DATA	Sample ID: EW09-SS-125-010		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	baby clam
clay	black		worms
			sheen (isolated)

GRAB DATA	Location ID: EW-09-SS-124			
Latitude: 47° 58455		Longitude: 122° 34518		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1643	20	—	N	didn't trigger
1645	20	—	N	didn't trigger
1648	20	19	Y	

SAMPLE DATA	Sample ID: EW09-SS-124-010		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt trace	gray dark	strong	worms
clay	black		wood debris
			trace shell frags

Reader
Reader w/15 lens

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: OW Surface Sediment
Project no.: 09.08.09.46
Date: 06.23.09
Weather: sunny
Sampling Method: sediment grab
Crew: TD, SK, ST, RB

GRAB DATA	Location ID: OW09-SS-123			
Latitude: 47° 58.119		Longitude: 122° 34.437		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
17:02	19	14	Y	

SAMPLE DATA	Sample ID: OW09-SS-123-000		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	worm worm tubes
clay	black		have clam debris

GRAB DATA	Location ID:			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID:		
Sediment type (%)	Sediment color:	Sediment odor:	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (F M C)	brown	moderate	other:
silt	gray	strong	
clay	black		

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 09 08 09 46
Date: 06.24.09
Weather: sunny
Sampling Method: Van Veen / hand collected
Crew: SF, SK, CC, RB

GRAB DATA	Location ID: EW09-SS-002-0			
Latitude: 47° 56976		Longitude: 122° ~~34545~~ 34563		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0819	1	NA	N	rock in jaws
0821	1	NA	N	~~[illegible]~~ water only
1010	0	10	Y	hand collected

Van Veen
hand collected

SAMPLE DATA	Sample ID: EW09-SS-002-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	shell frags
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09 SS 007			
Latitude: 47° 57160		Longitude: 122° 34456		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1140	0	10	Y	hand collected

hand collected

SAMPLE DATA	Sample ID: EW09-SS-007-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown dk.	moderate	other:	green mass
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment Project no.: 0908.0946

Date: 06.24.09 Weather: Sunny

Sampling Method: van veen/hand sampled Crew: SF, CL, RB, SK

GRAB DATA	Location ID: EW09-SS-004			
Latitude: ~~EW09-SS-004~~		Longitude: coords below		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0828	1	—	N	No sediment
0830	1	—	N	wash out
0832	1	—	N	wash out

Van veen sampled

SAMPLE DATA	Sample ID: EW09-SS-004-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS-001			
Latitude: 47° 57.026		Longitude: 122° 34.545		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1035	0	10	Y	hand sampled

SAMPLE DATA	Sample ID: Same as above EW09-SS-001-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	clams
silt	gray	strong		lots of shell debris
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 09 08 07 ~~09~~ 46
Date: 06 24 09
Weather:
Sampling Method: van sediment grab
Crew: RB CL SF SR

GRAB DATA	Location ID: EW09-SS006			
Latitude:		Longitude: coords below		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0839	2	—	N	rock in jaws
0842	2	—	N	didn't trigger
0843	2	—	N	didn't trigger

Van Veen

SAMPLE DATA	Sample ID: EW09-SS006-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

GRAB DATA	Location ID: EW09-SS006			
Latitude: 47° 57.060		Longitude: 122° 34.609		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1057	0	10	Y	hand collected

hand sample

SAMPLE DATA	Sample ID: EW09-SS006-010			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

trace shell frags
~~[illegible]~~ pockets sheen

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC SURFACE SEDIMENT COLLECTION FORM

Project Name: EW Surface Sediment
Project no.: 0908 0946
Date: 06.24.09
Weather: raining
Sampling Method: sediment grab
Crew: RB, CJ, SF, SK

GRAB DATA	Location ID: EW09-SS-010			
Latitude: 47.57133		Longitude: 122.34542		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1215	0	10	Y	hand collected

SAMPLE DATA	Sample ID: EW09-SS-010-010			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel surface	drab olive	slight	petroleum	
sand (F M C)	brown dark	moderate	other:	shell fragments
silt	gray	strong		
clay	black			

GRAB DATA	Location ID:			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID:			
Sediment type (%)	Sediment color:	Sediment odor:		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW RI/FS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

Surface sediment samples will be collected "within 1 to 2 m of the target sampling location." (QAPP - Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: Samples were hand collected by scuba divers under dock structures.

Variation from Field or Analytical Procedure: Sediment samples were collected further than 2m from the target location at stations EW09-SS-027, EW09-SS-100, EW09-SS-114, EW09-SS-126, and EW09-SS-219.

Special Equipment, Materials or Personnel Required: N/A

Initiator's Name: Date: 07.31.09

Project Manager: Date: 9.08.09

QA Manager: Date: 9.14.09

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW RI/FS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):
Surface sediment samples will be collected "within 1 to 2m of the target sampling location." (QAPP-Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: Target locations were amid riprap and sample locations were moved to the nearest exposed intertidal sediment to be collected by hand.

Variation from Field or Analytical Procedure: Sediment samples were collected further than 2m from the target locations at stations EW09-SS-002, EW09-SS-006, EW09-SS-015, EW09-SS016, EW09-SS-018, and EW09-SS-107.

Special Equipment, Materials or Personnel Required: N/A

Initiator's Name: Date: 07.31.09

Project Manager: Date: 9-08-09

QA Manager: Date: 9.14.09

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW RI/FS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):
Surface sediment samples will be collected "within 1 to 2m of the target sampling location." (QAPP - Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: After 3 unsuccessful grabs, the locations were moved to the closest area that produced successful grabs.

Variation from Field or Analytical Procedure: Sample locations were further than 2m from target locations at stations EW09-SS-022, EW09-SS-203, and EW09-SS-003.

Special Equipment, Materials or Personnel Required: N/A.

Initiator's Name: Date: 07.31.09

Project Manager: Date: 9-08-09

QA Manager: Date: 9.14.2009

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW R1/PS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):
Surface sediment samples will be collected "within 1 to 2m of the target sampling location." (QAPP-Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: Sample locations were further from target locations because a container ship or barge was in the way.

Variation from Field or Analytical Procedure: Sample locations were further than 2m from the target locations at stations EW09-SS-039 and EW09-SS-528.

Special Equipment, Materials or Personnel Required: N/A

Initiator's Name: Date: 07.31.09

Project Manager: Susan Mitchelmore Date: 9.08.09

QA Manager: Date: 9.14.09

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW RI/FS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

Surface sediment samples will be collected "within 1 to 2m of the target sampling location." (QAPP-Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: Stations were unable to be sampled by hand because of riprap or rocky substrate. Sample locations were moved to the closest sediment area offshore and collected with van Veen.

Variation from Field or Analytical Procedure: Sample locations were further than 2m from the target locations at stations EW09-SS-206 and EW09-SS-208

Special Equipment, Materials or Personnel Required: N/A

Initiator's Name: Date: 07.31.09

Project Manager: Date: 9-08-09

QA Manager: Date: 9.14.09

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW RI/FS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):
Surface sediment samples will be collected "within 1 to 2m of the target sampling location." (QAPP-Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: Sample was further than 2m because of the USCG dock structure in the way.

Variation from Field or Analytical Procedure: Sample location was further than 2m from target location at station EW09-SS-530.

Special Equipment, Materials or Personnel Required: N/A

Initiator's Name: [signature] Date: 07.31.09

Project Manager: [signature] Date: 9-08-09

QA Manager: [signature] Date: 9.14.09

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EWRI/FS Surface Sediment 09-08-09-46

Material to be Sampled: Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):

A penetration depth of at least 11cm needs to be achieved when sampling with the double vanVeen. (QAPP, Section 3.2.3)

Reason for Change in Field Procedure or Analysis Variation: After multiple grab attempts, unable to obtain required penetration depths because of bottom substrate.

Variation from Field or Analytical Procedure: The following samples had penetration depths less than 11 cm: EW09-SS-223 (7cm), EW09-SS-203 (5 cm), EW09-SS-039 (10 cm), and EW09-SS-222 (10 cm).

Special Equipment, Materials or Personnel Required:

Initiator's Name: Date: 06.24.09

Project Manager: Date: 7-01-09

QA Manager: Date: 07.01.09

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW RI/FS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):
Surface sediment samples will be collected "within 1 to 2m of the target sampling location." (QAPP - Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: Unable to get stable GPS readings.

Variation from Field or Analytical Procedure: Sample locations were further than 2m from target locations at Stations, EW09-SS-036, EW09-SS-102, EW09-SS-115, EW09-SS-120, EW09-SS-123, EW09-SS-130, EW09-SS-132, EW09-SS-134, EW09-SS-205, and EW09-SS-207.

Special Equipment, Materials or Personnel Required: N/A

Initiator's Name: Date: 07.31.09

Project Manager: Susan M. Hardy Date: 9-08-09

QA Manager: Date: 9.15.09

Windward environmental LLC

PROTOCOL MODIFICATION FORM

Project Name and Number: EW RI/FS Surface Sediment 09.08.09.46

Material to be Sampled: Surface Sediment

Measurement Parameter: N/A

Standard Procedure for Field Collection & Laboratory Analysis (cite reference):
Surface sediment samples will be collected "within 1 to 2m of the target sampling location." (QAPP-Windward 2009)

Reason for Change in Field Procedure or Analysis Variation: Sample locations were under bridges which created interference with the accuracy of the GPS reader.

Variation from Field or Analytical Procedure: Sediment samples were collected further than 2m from the target locations at stations EW09-SS-009, EW09-SS-012, EW09-SS-007, and station EW09-SS-010.

Special Equipment, Materials or Personnel Required: N/A

Initiator's Name: Date: 07.31.09

Project Manager: Date: 9-08-09

QA Manager: Date: 9.15.09

MIS Sampling

CLorenz 8·17·09

700 Arrive at Area 3.

Field crew:

1 { Chelsea Lorenz, Helle Andersen, Mike Yarns } Windward

2 { Rick Berg, Joanna Fluer } Windward

Delaney Peterson, Nathan Soccorsy > Anchor

Peter oversight

7:15 Health & Safety Briefing

7:30 Start measuring grids &

8:00 samples at area 3 A & B

915 Area B finished sampling, start measuring grids in area C

930 Peter leaves

1000 Area A finished measuring area 1

1040 Packup gear, head to Windward and ARI.

8·17·09

CLorenz

CLorenz 8·18·09

7:00 Meet @ Area 3 parking lot. Same field crew as yesterday (no Peter)

7:20 Tide not yet low enough to sample, waiting and prep. gear

745 Crew 1 (Helle, Mike, Chelsea, Delaney) start sampling Area 1 A.

8:00 Crew 2 (Joanna, Rick, Nathan) started samping area 3C

910 Crew 1 finished samping area 1A, start area 1B

920 Crew 2 finished area 3C, moving to area 2

950 Crew 2 started samping area 2

1010 Crew 1 ~~fin~~ finished area 1B, starting area 1C

1100 Crew 2 finished area 2

1105 Crew 1 finished area 1C, moving to collect 3 extra samples at area 3D.

1130 Finished area 3D. End of Day

CLorenz 8·18·09

8·19·09 Clorenz

830 meet at Jack Perry Park and go to T-30 to sample areas 4 through 10
Field Crew:
Chelsea Lorenz
Joanna Flover
Rick Berg
Mike Yarns
} WW
Delaney Petrson
Nathan Soccarsy
} mcher

915 Crew 1 (Chelsea, Delaney, Nathan) started sampling area 4.

920 Crew 2 (Mike, Joanna, Rick) started sampling area 10

1002 Crew 1 finished area 4, starting area 5.

1025 Crew 1 finished area 5. Start sampling area 6. Very high cobble and gravel content. Dug 8 test holes in area and no sediment available to sample. Moved west to find sediment. Collected 3 samples at only accessible areas.

8·19·09 Clorenz

1050 Finished area 6, met with Crew 2.
Crew 2 finished area 10.
Called Susie to discuss sampleable areas in 10.

1110 Crew 1 started area 9, Crew 2 started area 7

1135 Crew 2 finished area 7, started on area 8

1150 Crew 1 finished area 9
Crew 2 finished area 8.
End of Day

8·19·09
Clorenz

8·20·09 C. Lorenz

1020 Arrive at Jack Perry Park.
Field crew:
Chelsea Lorenz
Joanna Floner
~~Rick Berg~~
Mike Yarns

1035 Begin sampling area 11

1215 finished sampling area 11, end of day.

8·20·09

CLorenz

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: sunny-clear
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01A- ITSED01			
Latitude: 47.57062		Longitude: 122.34532		
Grab time	Bottom depth ~~(m)~~	Penetration depth ~~(cm)~~	Acceptable grab (Y/N)	Comments:
7~~8~~48	17 in	17 in	Y	dug down to cloth layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	shell hash
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01A- ITSED02			
Latitude: 47.57056		Longitude: 122.34534		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
758	13	13	Y	dug down to cloth layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·18·09
Weather: Sunny, clear
Sampling Method: shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01A- ITSED03			
Latitude: 47.57055		Longitude: 122.34536		
Grab time	Bottom depth ~~(m)~~	Penetration depth ~~(cm)~~	Acceptable grab (Y/N)	Comments:
805	9m	9in	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01A- ITSED04			
Latitude: 47.57048		Longitude: 122.34537		
Grab time	Bottom depth ~~(m)~~	Penetration depth ~~(cm)~~	Acceptable grab (Y/N)	Comments:
810	14 in	14 in	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	some shell hash
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	sunny
Sampling Method:	shovel	Crew:	CL, HA, MY

GRAB DATA	Location ID: EW09 - 01A - ITSED 05			
Latitude: 47.57049		Longitude: 122.34538		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
817	13	13	Y	dug to clay layer

SAMPLE DATA	Sample ID: EW09 - 01A - ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 01A - ITSED 06			
Latitude: 47.57047		Longitude: 122.34541		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
824	9	9	Y	dug to clay layer

SAMPLE DATA	Sample ID: EW09 - 01A - ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel few	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	trace shell hash,
silt	black	strong		
clay	brown			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8·18·09	Weather:	sunny, clear
Sampling Method:	Shovel	Crew:	CL, HA, MY

GRAB DATA	Location ID: EW09 -01A- ITSED07			
Latitude: 47.57045		Longitude: 122.34540		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
830	16	16	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED07			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	worm in hole
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01A- ITSED08			
Latitude: 47.57041		Longitude: 122.34542		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
834	12	12	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED08			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	trace shell hash
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8·18·09	Weather:	Sunny, clear
Sampling Method:	Shovel	Crew:	CL, HA, MY

GRAB DATA	Location ID: EW09 -01A- ITSED 09			
Latitude: 47.57035		Longitude: 122.34541		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
841	18	18	Y	dug to clam layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED 09			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	shell hash
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01A- ITSED 10			
Latitude: 47.57036		Longitude: 122.34543		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
845	14	14	Y	dug to clam layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED 10			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	trace shell fragments
silt	black	strong		
clay	brown			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8.18.08	Weather:	sunny, clear
Sampling Method:	shovel	Crew:	CL, HA, MY

GRAB DATA	Location ID: EW09 -01A- ITSED 11			
Latitude: 47.570313		Longitude: 122.34547		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
852	14	14	Y	drug to clay layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED 11			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell fragments
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01A- ITSED 12			
Latitude: 47.57058		Longitude: 122.34536		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
900	10	10	Y	drug to clay layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED 12			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash, trace wood debris
gravel	drab olive	slight	petroleum	
sand (C M F)	~~gray~~ CL	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: sunny, clear
Sampling Method: shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01A- ITSED 13			
Latitude: 47.57056		Longitude: 122.34535		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
0915	13	13	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01A- ITSED 13			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	shell fragments
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01B- ITSED 01			
Latitude: 47.57028		Longitude: 122.34542		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
0910	14	14	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	shell fragments
silt	black	strong		
clay	brown			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8-18-09	Weather:	sunny, clear
Sampling Method:	shovel	Crew:	CL, HA, MY

GRAB DATA	Location ID: EW09 -01B- ITSED 02			
Latitude: 47.57028		Longitude: 122.34545		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
0915	14	14	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	trace shell fragments
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01B- ITSED 03			
Latitude: 47.57033		Longitude: 122.34548		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
925	13	13	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED 03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray light	moderate	other:	shell fragments (trace)
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: sunny, clear
Sampling Method: shovel
Crew: CL, HR, MY

GRAB DATA	Location ID: EW09 -01B- ITSED04			
Latitude: 47.57022		Longitude: 122.34552		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
933	18	18	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	~~trace~~
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01B- ITSED05			
Latitude: 47.57023		Longitude: 122.34548		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
937	13	13	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	trace shell fragments
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·18·09
Weather: sunny, clear
Sampling Method: shovel
Crew: CL, MA, MY

GRAB DATA	Location ID: EW09 -01B- ITSED06			
Latitude: 47.57025		Longitude: 122.34552		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
941	13	13	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED06		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel trace	drab olive	slight	petroleum
sand (C M F)	gray light	moderate	other:
silt	black	strong	
clay	brown		

GRAB DATA	Location ID: EW09 -01B- ITSED07			
Latitude: 47.57022		Longitude: 122.34561		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
945	10	10	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED07		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray dark	moderate	other:
silt	black	strong	
clay	brown		

trace shell fragments

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8.18.09	Weather:	Sunny, clear
Sampling Method:	shovel	Crew:	CL, HH, MY

GRAB DATA	Location ID: EW09 -01B - ITSED 08			
Latitude: 47.57019		Longitude: ~~47.7~~ CL 122.34553		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
950	7	7	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 - 01B ITSED 08			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	trace shell fragments
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01B - ITSED09			
Latitude: 47.57008		Longitude: 122.34552		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
954	8	8	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 - 01B - ITSED09			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8.18.09	Weather:	sunny, clear
Sampling Method:	shovel	Crew:	CL, HA, MY

GRAB DATA	Location ID: EW09 -01B ITSED 10			
Latitude: 47.570085		Longitude: 122.34557		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
958	10	10	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED 10			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01B- ITSED 11			
Latitude: 47.570067		Longitude: 122.34556 67		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1003	10	10	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED 11			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray light	moderate	other:	
silt	black	strong		
clay	brown			

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SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·18·09
Weather: sunny, clear
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01B- ITSED 12			
Latitude: 47.57007		Longitude: 122.34557		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1007	9	9	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED 12			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01B- ITSED 13			
Latitude: 47.57007		Longitude: 122.34558		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1010	7	7	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01B- ITSED 13			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·18·09
Weather: Sunny, clear
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01C- ITSED 01			
Latitude: 47.56999		Longitude: 122.34558		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1015	10	10	Y	drug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	shell hash
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01C- ITSED 02			
Latitude: 47.56997		Longitude: 122.34560		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1019	8	8	Y	drug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	trace shell fragments
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: Sunny, Clear
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01C- ITSED03			
Latitude: 47.56996		Longitude: 122.34559		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1021	18	18	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 - 01C - ITSED03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	shell fragments
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01C- ITSED04			
Latitude: 47.56995		Longitude: 122.34563		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1024	9	9	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

SURFACE SEDIMENT COLLECTION FORM

Wind Ward environmental LLC

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: Sunny, clear
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01C- ITSED 05			
Latitude: 47.56997		Longitude: 122.34565		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1030	7	7	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01C- ITSED 06			
Latitude: 47.56992		Longitude: 122.34560		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1032	10	10	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8.18.09	Weather:	Sunny
Sampling Method:	Shovel	Crew:	CL, HA, DLY

GRAB DATA	Location ID: EW09 -01C- ITSED 07			
Latitude: 47.56988		Longitude: 122.34563		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1038	10	10	Y	drag to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 07			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray light	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01C- ITSED 08			
Latitude: 47.56983		Longitude: 122.34562		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1042	13	13	Y	drag to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 08			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: sunny
Sampling Method: shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -01C- ITSED 09			
Latitude: 47.56982	Longitude: 122.34562			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1044	9	9	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 09			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01C- ITSED 10			
Latitude: 47.56978	Longitude: 122.34567			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1054	7	7	Y	dug to cloth layer

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 10			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: Sunny
Sampling Method: shovel
Crew: CL, HM, MY

GRAB DATA	Location ID: EW09 -01C- ITSED 11			
Latitude: 47.56973	Longitude: 122.34567			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1057	18	18	Y	dug to cloth cover

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 11			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -01C ITSED 12			
Latitude: 47.56977	Longitude: 122.34567			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1101	12	12	Y	dug to cloth cover

SAMPLE DATA	Sample ID: EW09 -01C- ITSED 12			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	Clear, sunny
Sampling Method:	shovel/spoon	Crew:	J.F, RB, NS

GRAB DATA	Location ID: EW09 - 2 - ITSED 01			
Latitude: 47.57073		Longitude: 122.34622		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0952	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 2 - ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Black w/ brown layer on top
gravel 80%	drab olive	slight	petroleum	80% gravel, silty sand, no odor
sand (C M F) 15%	gray	moderate	other:	no sheen, with shell hash
silt 5	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 2 - ITSED 02			
Latitude: 47.57124		Longitude: 122.34629		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1000	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 2 - ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) silty sand
cobble	brown surface	none	H_2S	slight sheen on overlying water
gravel	drab olive	slight	petroleum	trace shell hash,
sand (C M F) 100%	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date:
Weather:
Sampling Method:
Crew:

GRAB DATA	Location ID: EW09 - 2 - ITSED 03			
Latitude: 47.57140		Longitude: 122.34611		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1008	0	12	Yes	

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	silty sand, trace shell hash
gravel 10%	drab olive	slight	petroleum	
sand (C M F) 90%	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 2 - ITSED 04			
Latitude: 47.57133		Longitude: 122.34623		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1020	0	12	Y	

SAMPLE DATA	Sample ID: EW09 - 2 - ITSED 04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell hash - trace
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

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Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/18/09
Weather: Clear, sunny
Sampling Method: shovel/spoon
Crew: JF, RB, NS

GRAB DATA	Location ID: EW09 - 2 - ITSED 05			
Latitude: 47.57133		Longitude: 122.34626		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1025	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 2 - ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell hash, green algae on surface
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt - trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 2 - ITSED 06			
Latitude: 47.57125		Longitude: 122.34624		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1032	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 2 - ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell hash
gravel	drab olive	slight	petroleum	
sand (C M F)	~~gray dark~~	moderate	other:	
silt - trace	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	9/18/09	Weather:	clear/sunny
Sampling Method:	shovel/spoon	Crew:	JF, RB,

GRAB DATA	Location ID: EW09 - 2 - ITSED 07			
Latitude: 47.54127		Longitude: 122.34633		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1040	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 2 - ITSED 07			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell hash
gravel	drab olive	slight	petroleum	trace sheen
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 2 - ITSED 08			
Latitude: 47.57096		Longitude: 122.34638		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1045	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 2 - ITSED 08			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell hash -
gravel - 20%	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	Sunny, clear
Sampling Method:	shovel/spoon	Crew:	JF, RB, NS

GRAB DATA	Location ID: EW09 - 2 - ITSED 09			
Latitude: 47.57098		Longitude: 122.34620		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1055	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel - 10%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt - trace	black	strong		
clay	brown dark			

GRAB DATA	Location ID: EW09 - - ITSED			
Latitude: 47		Longitude: 122.		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
			Y	

N/A
8/18/09
finished 11am

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.17.09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -~~03A~~- ITSED 01			
Latitude: 47.57		Longitude: 122.34		accuracy ± 40 ft
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
834	12	12	Y	- on waters edge, under spokane st
				- bridge edge (see map notes)

SAMPLE DATA	Sample ID: EW09 -~~03A~~- ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -~~03A~~- ITSED 02			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
840	12	12	Y	- under Spokane St. Bridge.
				no satellite signal (see map
				notes)

SAMPLE DATA	Sample ID: EW09 -~~03A~~- ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	light shell hash
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

SURFACE SEDIMENT COLLECTION FORM

Windward environmental LLC

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8·17·09	Weather:	Sunny
Sampling Method:	Shovel	Crew:	CL, HB, MY

GRAB DATA	Location ID: EW09 -03A- ITSED 03			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
850	12 m	12 m	Y	under Spokane St. Bridge no satellite signal (see map notes)

SAMPLE DATA	Sample ID: EW09 - 03A ITSED 03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell fragments, wood debris
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -03A- ITSED 04			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
855	12 m	12 m	Y	under Spokane St. Bridge (no satellite signal) see map notes

SAMPLE DATA	Sample ID: EW09 -03A- ITSED 04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash, trace wood debris
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8 17 09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -03A- ITSED 05			
Latitude: 47.57		Longitude: 122.35		accuracy ± 75 ft
Grab time	Bottom depth ~~(m)~~	Penetration depth ~~(cm)~~	Acceptable grab (Y/N)	Comments:
900	12 m	12 m	Y	under Spokane St. Bridge (see map notes)

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	shell fragments
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -03A ITSED 06			
Latitude: 47.57		Longitude: 122.35		accuracy ± 100 ft
Grab time	Bottom depth ~~(m)~~	Penetration depth ~~(cm)~~	Acceptable grab (Y/N)	Comments:
905	12 m	12 m	Y	under Spokane St Bridge

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	trace wood debris
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay trace	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·17·09
Weather: sunny
Sampling Method: shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 ~~034~~- ITSED 07			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
910	12m	12m	Y	under Spokane St. Bridge
				no satellite signal
				(see map notes)

SAMPLE DATA	Sample ID: EW09 - ~~034~~ ITSED 07		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble trace	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray dark	moderate	other:
silt	black	strong	trace wood debris,
clay	brown		Shell fragments

GRAB DATA	Location ID: EW09 ~~034~~- ITSED 08			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
920	12m	12m	Y	under Spokane St. Bridge,
				no satellite signal
				(see map notes)

SAMPLE DATA	Sample ID: EW09 ~~034~~- ITSED 08		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray dark	moderate	other:
silt	black	strong	Shell fragments
clay slight	brown		

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8-17-09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -03A- ITSED 09			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
930	12	12	Y	- under Spokane St. Bridge (see map notes)
				- next to drainstream
				- no satellite signal

SAMPLE DATA	Sample ID: EW09 -03A- ITSED 09			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace wood debris
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay trace	brown			

GRAB DATA	Location ID: EW09 -03A- ITSED 10			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
935	12	12	Y	under Spokane St. Bridge,
				(see map notes) no satellite signal

SAMPLE DATA	Sample ID: EW09 -03A- ITSED 10			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell fragments,
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.17.09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -~~03A~~ ITSED 11			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
0940	12	12	Y	under Spokane St. Bridge (see map notes) (no satellite signal)

SAMPLE DATA	Sample ID: EW09 -~~03A~~- ITSED 11		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	
gravel	drab olive	slight / petroleum	
sand (C M F)	gray	moderate / other:	
silt	black	strong	
clay	brown		

GRAB DATA	Location ID: EW09 -~~03A~~- ITSED 12			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
0945	12	12	Y	under Spokane St. Bridge (see map notes) (no satellite signal)

SAMPLE DATA	Sample ID: EW09 -~~03A~~- ITSED 12		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none / H_2S	
gravel trace	drab olive	slight / petroleum	
sand (C M F)	gray dark	moderate / other:	shell fragments & wood debris
silt	black	strong	
clay	brown		

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·17·09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -03A- ITSED 13			
Latitude:		Longitude:		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
955	12	12	Y	under Spokane St. Bridge (see map notes) (no satellite signal)

SAMPLE DATA	Sample ID: EW09 -03A- ITSED 13			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay trace	brown			

GRAB DATA	Location ID: EW09 -03A- ITSED			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09 -03A- ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/17/09
Weather: clear
Sampling Method: spoon/shovel
Crew: JF, ~~AA~~, RB, ~~MY, CC~~, PL,

GRAB DATA	Location ID: EW09 - 3B - ITSED 01 gM			
Latitude: 47.57126		Longitude: 122.345486		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0806	Ø	12	Y	10ft W + 8ft south of NE corner of gridcell 1

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) worm
cobble	brown surface	none	H_2S	
gravel 50%	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3B - ITSED 02 gM			
Latitude: 47.57126 gM		Longitude: 122.345481		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0814	Ø	12	Y	7ft S. + 1ft E. of NW corner of gridcell 42 gMA

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) Some shell hash, worm clamshell
cobble	brown surface	none	H_2S	
gravel 70%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown dark			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/17/09	Weather:	clear
Sampling Method:	shovel/spoon	Crew:	PL, JF, RB

GRAB DATA	Location ID: EW09 - 3B - ITSED 03 gmt			
Latitude: 47.57127		Longitude: 122.34~~500~~479		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0824	Ø	12	Y	10ft S + 6ft W from
				NE corner of grid cell
				3

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) surface covered w/ algae slight sheen on surface water, shell hash
cobble	brown surface	none	H_2S	
gravel 20%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3B - ITSED 04 gmt			
Latitude: 47.57120		Longitude: 122.34~~5~~491		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0829	Ø	12	Y	5ft South + 3ft east of
				NW corner of grid cell ~~4~~ 7

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) shell hash
cobble	brown surface	none	H_2S	
gravel 70%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/17/09
Weather: clear
Sampling Method: shovel/spoon
Crew: PL, JF, RB

GRAB DATA	Location ID: EW09 - 3B - ITSED 05 gMA			
Latitude: 47.57128		Longitude: 122 34 5488		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0841	Ø	12	Y	from NW corner 7ft
				S + 2ft east grid 4

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel 20%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3B - ITSED 06			
Latitude: 47.57121		Longitude: 122.34473		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0841	Ø	12	Y	9ft S + 2ft E of NW
				corner of grid cell 6

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell hash, surface
gravel 20%	drab olive	slight	petroleum	covered w/ algae
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	9/17/09	Weather:	clear
Sampling Method:	shovel	Crew:	PL, JF, RB

GRAB DATA	Location ID: EW09 - 3B - ITSED 07			
Latitude: 47.57118		Longitude: 122.34480		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0847	Ø	12	Y	10ft W + 5ft S of NW corner grid cell 8

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 07			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel 3-2%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3B - ITSED 08			
Latitude: 47.57107		Longitude: 122.34476		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0847	Ø	12	Y	13ft W + 5ft south from NW corner of grid cell 8 → 3m 7
				15 7

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 08			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell fragments
gravel 10%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/17/09	Weather:	clear
Sampling Method:	Shovel	Crew:	PL, JF, RB

GRAB DATA	Location ID: EW09 -3B- ITSED 09			
Latitude: 47.57121		Longitude: 122.34469		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0857	Ø	12	Y	4ft 5ft west from NE corner grid cell 9

SAMPLE DATA	Sample ID: EW09 -3B- ITSED 09			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell fragments
gravel 70%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -3B - ITSED 10			
Latitude: 47.57180		Longitude: 122.34540		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0857	Ø	12	Y	9ft S + 2ft W from NE corner of grid cell 10

SAMPLE DATA	Sample ID: EW09 -3B - ITSED 10			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	algae on surface
gravel 30%	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/17/09	Weather:	clear
Sampling Method:	shovel	Crew:	JF, RB, PL

GRAB DATA	Location ID: EW09 - 3B - ITSED 11			
Latitude: 47.57161		Longitude: 122.34517		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0906	Ø	12	Y	13ft N + 3ft E from SW corner grid cell 11

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none JMF	H_2S	
gravel - 30%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3B - ITSED 12			
Latitude: 47.57109		Longitude: 122.34490		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0910	Ø	12	Y	10ft S + 6ft W from NW corner of grid cell 13

SAMPLE DATA	Sample ID: EW09 - 3B - ITSED 12			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell hash
gravel 20%	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/17/09
Weather: Clear
Sampling Method: shovel/spoon
Crew: JF/RB, DC

GRAB DATA	Location ID: EW09 -3B- ITSED 13			
Latitude: 47.57126		Longitude: 122.34487		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0915	Ø	12	Y	9ft west + 5ft S from NW corner of grid cell 14

SAMPLE DATA	Sample ID: EW09 -3B- ITSED 13			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell hash
gravel 30%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - - ITSED			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
~~0915~~				

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

9 MA 8/17/09

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/13/09	Weather:	Clear
Sampling Method:	Shovel/spoon	Crew:	JF, RB, NS

GRAB DATA	Location ID: EW09 - ~~3B~~ 3C - ITSED 01			
Latitude: 47.57087		Longitude: 122.34482		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
0747	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel - 30%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3C - ITSED 02			
Latitude: 47.57093		Longitude: 122.34483		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
0752	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	algae on surface
gravel - 15%	drab olive	slight	petroleum	sheen on water (biological)
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	clear
Sampling Method:	spoon/shovel	Crew:	JF, RB, NS

GRAB DATA	Location ID: EW09 - 3C - ITSED 03			
Latitude: 47.57091		Longitude: 122.34488		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
0800	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 03		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt	black	strong	
clay	brown		

green algae on surface
Neanthes, sheen on water (biological)
trace wood/piling debris

GRAB DATA	Location ID: EW09 - 3C - ITSED 04			
Latitude: 47.57089		Longitude: 122.34495		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
0816	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 04		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt	black	strong	
clay	brown		

sheen on water, algae on surface

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	Clear
Sampling Method:	spoon/shovel	Crew:	JF, RB, NS

GRAB DATA	Location ID: EW09 - 36 - ITSED 05			
Latitude: 47.57094		Longitude: 122.34493		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
0815	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 36 - ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) black plastic 9" below surface algae on surface, plant debris
cobble	~~brown surface~~ 2m7	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 36 - ITSED 06			
Latitude: 47.57098		Longitude: 122.34513		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
0822	Ø	12	Y	underneath bridge

SAMPLE DATA	Sample ID: EW09 - - ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) Shell hash - 30%
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	clear
Sampling Method:	shovel/spoon	Crew:	JF, RB, NS

GRAB DATA	Location ID: EW09 - 3C - ITSED 07			
Latitude: 47.57077		Longitude: 122.34521		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0830	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 07		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hassh - 50%
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3C - ITSED 08			
Latitude: 47.57068		Longitude: 122.34547		poor accuracy on GPS
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
TMF ~~0830~~ 0835	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 08		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell hash, woody piling debris - 60%
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	clear
Sampling Method:	shovel/spoon	Crew:	JF, RB, NS

GRAB DATA	Location ID: EW09 - 36 - ITSED 09			
Latitude: 47.57099		Longitude: 122.34484		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
0840	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 36 - ITSED 09		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	algae on surface
gravel trace (5%)	drab olive	slight	petroleum	~~trace gravel (gm)~~
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 36 - ITSED 10			
Latitude: 47.57097		Longitude: 122.34494		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0845	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 36 - ITSED 10		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	algae on surface, trace plant debris
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	clear
Sampling Method:	shovel/spoon	Crew:	RB, JF, NS

GRAB DATA	Location ID: EW09 - 3C - ITSED 11			
Latitude: 47.57099		Longitude: 122.34497		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
0855	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 11			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel - 20%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3C - ITSED 12			
Latitude: 47.57093		Longitude: 122.34500		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
0900	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 12			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.) algae on surface
cobble	brown surface	none	H_2S	
gravel trace (<5%)	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/18/09	Weather:	clear
Sampling Method:	shovel/spoon	Crew:	RB, JF, US

GRAB DATA	Location ID: EW09 - 3C - ITSED 13			
Latitude: 47.57098		Longitude: 122.34610		poor GPS accuracy
Grab time	Bottom depth (m)	Penetration depth (cm) (cm)	Acceptable grab (Y/N)	Comments:
0905	Ø	12	Y	underneath bridge

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 13			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell hash - 30%
gravel - 20%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 3C - ITSED 14			
Latitude: 47.57098		Longitude: 122.34610		poor GPS accuracy
Grab time	Bottom depth (m)	Penetration depth (cm) (cm)	Acceptable grab (Y/N)	Comments:
0910	Ø	12	Y	underneath bridge

SAMPLE DATA	Sample ID: EW09 - 3C - ITSED 14			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell hash - 30%
gravel - 20%	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -030- ITSED 01			
Latitude: 47.57198		Longitude: 122.34465		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1115	8	8	Y	N of Spokane St Bridge
				- rocks began after 8in deep, could
				not sample below

SAMPLE DATA	Sample ID: EW09 -030- ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -030- ITSED 02			
Latitude: 47.57191		Longitude: 122.34459		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1120	12	12	Y	N. of Spokane St Bridge

SAMPLE DATA	Sample ID: EW09 -030- ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	brick pieces
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.18.09
Weather: Sunny
Sampling Method: shovel
Crew: CL, HA, MY

GRAB DATA	Location ID: EW09 -~~03~~- ITSED 03			
Latitude: 47.57184		Longitude: 122.34458		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1125	10	10	Y	N of Spokane St. Bridge
				- rocks below 10 in,

SAMPLE DATA	Sample ID: EW09 -~~03~~- ITSED 03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	trace shell fragments
silt	black	strong		
clay trace	brown			

GRAB DATA	Location ID: EW09 - - ITSED			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·19·09
Weather: Sunny
Sampling Method: shovel
Crew: CL, MY

GRAB DATA	Location ID: EW09 -04- ITSED 01			
Latitude: 47.57257	Longitude: 122.34389			accuracy ±.89 ft
Grab time	Bottom depth (m) m	Penetration depth (cm) m	Acceptable grab (Y/N)	Comments:
927	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -04- ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	large angular rocks, shells
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -04- ITSED 02			
Latitude: 47.57256	Longitude: 122.34389			
Grab time	Bottom depth (m) m	Penetration depth (cm) m	Acceptable grab (Y/N)	Comments:
934	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -04- ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	slight sheen, wood debris
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8 19 09
Weather: sunny
Sampling Method: shovel
Crew: CL, MY

GRAB DATA	Location ID: EW09 - 04 - ITSED 03			
Latitude: 47.57262	Longitude: 122.34390			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
940	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 - 04 - ITSED 03		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt	black	strong	
clay	brown		

Shell fragments, moderate sheen

GRAB DATA	Location ID: EW09 - 04 - ITSED 04			
Latitude: 47.57259	Longitude: 122.34380			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
946	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 - 04 - ITSED 04		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel trace	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt	black	strong	
clay	brown		

shell fragments, slight sheen

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.19.09
Weather: sunny
Sampling Method: shovel
Crew: CL, MY

GRAB DATA	Location ID: EW09 -04- ITSED 05			
Latitude: 47.57256		Longitude: 122.34383		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
950	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -04- ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell fragments, slight sheen, trace wood debris
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -04- ITSED 06			
Latitude: 47.57266		Longitude: 122.34383		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
956	12	12	Y	- between old pilings
				- accuracy on GPS ±60

SAMPLE DATA	Sample ID: EW09 -04- ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	worms,
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.19.09
Weather: Sunny
Sampling Method: shovel
Crew: CL, MY

GRAB DATA	Location ID: EW09 -05- ITSED 01			
Latitude: 47.57333	Longitude: 122.34348			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1010	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -05- ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -05- ITSED 02			
Latitude: 47.57339	Longitude: 122.34349			
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1015	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -05- ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	wood debris, trace sheen
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8·19·09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, MY

GRAB DATA	Location ID: EW09 -05- ITSED 03			
Latitude: 47.57333		Longitude: 122.34356		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1020	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -05- ITSED03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash, wood debris
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -06 ITSED 01			
Latitude: 47.57345		Longitude: 122.3410		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1033	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -06- ITSED01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash, trace sheen
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.19.09
Weather: sunny
Sampling Method: shovel
Crew: CL, MK

GRAB DATA	Location ID: EW09 -06- ITSED 02			
Latitude: 47.57347		Longitude: 122.34314		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
1040	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -06- ITSED 02		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt	black	strong	
clay	brown		

Shell hashy, M. to C. sand, slight sheen, substantial gravel

GRAB DATA	Location ID: EW09 -06- ITSED 03			
Latitude: 47.57345		Longitude: 122.34328		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
1045	12	12	Y	between old pilings

SAMPLE DATA	Sample ID: EW09 -06- ITSED 03		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt	black	strong	
clay	brown		

Shell hash, wood debris, slight sheen

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: Sunny
Sampling Method: spoon/shovel
Crew: RB, JD, MY

GRAB DATA	Location ID: EW09 -07- ITSED 01			
Latitude: 47.57892		Longitude: 122.34260		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1105	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -07- ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash -50%
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -07- ITSED 02			
Latitude: 47.57894		Longitude: 122.34263		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1108	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -07- ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell hash 50%
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name:	EW RI/FS Surface Sediment	Project no.	09-08-09-46
Date:	8/19/09	Weather:	sunny
Sampling Method:	shovel/spoon	Crew:	RB, MY, JF

GRAB DATA	Location ID: EW09 -07- ITSED 03			
Latitude: 47.57901		Longitude: 122.34268		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1111	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -07- ITSED 03		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt	black	strong	
clay	brown		

shell hash ~~soft~~ on surface, sheen

GRAB DATA	Location ID: EW09 -07- ITSED 04			
Latitude: 47.57902		Longitude: 122.34264		
Grab time	Bottom depth (m)	Penetration depth ~~(cm)~~ (in)	Acceptable grab (Y/N)	Comments:
1115	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -07- ITSED 04		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt -	black	strong	
clay	brown		

shell hash - 20% - mostly on surface

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment

Project no. 09-08-09-46

Date:

Weather: sunny

Sampling Method:

Crew: RB, MY, JF

GRAB DATA	Location ID: EW09 -07- ITSED 05			
Latitude: 47.57095		Longitude: 122.34263		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
1118	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -07- ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash - 30% on surface
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate JMF	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -07- ITSED 06			
Latitude: 47.57905		Longitude: 122.34255		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
1120	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -07- ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash - 70%
gravel - trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown dark			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: sunny
Sampling Method: shovel/spoon
Crew: RB, MY, JF

GRAB DATA	Location ID: EW09 -08- ITSED01			
Latitude: 47.57867		Longitude: 122.34182		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1140	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -08- ITSED01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	Shell hash -40%
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt -trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -08- ITSED02			
Latitude: 47.57865		Longitude: 122.34182		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:
1143	Ø			

SAMPLE DATA	Sample ID: EW09 -08- ITSED02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace shell hash
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: sunny
Sampling Method: shovel/spoon
Crew: MY, RB, CL, JF, NS

GRAB DATA	Location ID: EW09 -08 - ITSED 03			
Latitude: 47.57863		Longitude: 122.34176		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1146	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -08- ITSED03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel + race	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -08 - ITSED 04			
Latitude: 47.57861		Longitude: 122.34171		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1150	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 08 - ITSED04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment

Project no. 09-08-09-46

Date:

Weather:

Sampling Method:

Crew:

GRAB DATA	Location ID: EW09 -08- ITSED 05			
Latitude: 47.57858		Longitude: 122.34165		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
1153	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -08- ITSED 06			
Latitude: 47.57858		Longitude: 122.34169		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
1156	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.19.09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, NS, DP

GRAB DATA	Location ID: EW09 -09- ITSED01			
Latitude: 47.57835		Longitude: 122.34128		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1115	12	12	Y	

SAMPLE DATA	Sample ID: EW09 -09- ITSED01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	trace wood debris
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -09- ITSED02			
Latitude: 47.57834		Longitude: 122.34126		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1123	12	12	Y	

SAMPLE DATA	Sample ID: EW09 -09- ITSED02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	worms, trace wood debris
silt	black	strong		
clay	brown			

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SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.19.09
Weather: Sunny
Sampling Method: Shovel
Crew: CL, NS, DP

GRAB DATA	Location ID: EW09 -09- ITSED 03			
Latitude: 47.57837		Longitude: 122.34133		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1128	12	12	Y	

SAMPLE DATA	Sample ID: EW09 -09- ITSED 03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -09- ITSED 04			
Latitude: 47.57839		Longitude: 122.34134		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1134	12	12	Y	

SAMPLE DATA	Sample ID: EW09 -09- ITSED 04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	trace shell fragments
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.19.09
Weather: sunny
Sampling Method: Shovel
Crew: CL, NS, DP

GRAB DATA	Location ID: EW09 -09- ITSED05			
Latitude: 47.57837		Longitude: 122.34133		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1140	12	12	Y	

SAMPLE DATA	Sample ID: EW09 -09- ITSED05		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray dark	moderate	other:
silt	black	strong	
clay	brown		

trace wood debris

GRAB DATA	Location ID: EW09 -09- ITSED06			
Latitude: 47.57837		Longitude: 122.34135		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1145	12	12	Y	

SAMPLE DATA	Sample ID: EW09 -09- ITSED06		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray dark	moderate	other:
silt	black	strong	
clay	brown		

trace wood debris & shell fragments

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: sunny
Sampling Method: shovel/spoon
Crew: JF, MY, RB

GRAB DATA	Location ID: EW09 - 10 - ITSED01			
Latitude: 47.57797		Longitude: 122.34030		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
0945	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 10 - ITSED01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	woody debris - 30%
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 10 - ITSED02			
Latitude: 47.57801		Longitude: 122.34036		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
0950	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 10 - ITSED02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	trace woody debris
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

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SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: sunny
Sampling Method: shovel/spoon
Crew: JF, MY, RB

GRAB DATA	Location ID: EW09 - 10 - ITSED 03			
Latitude: 47.57840		Longitude: 122.34069		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
1000	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 10 - ITSED 03			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	trace sheen
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 10 - ITSED 04			
Latitude: 47.57815		Longitude: 122.34027		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
1005	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 10 - ITSED 04			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: Sunny
Sampling Method: Shovel/spoon
Crew: JF, MY, RB

GRAB DATA	Location ID: EW09 - 10 - ITSED 05 3			
Latitude: 47.57187		Longitude: 122.34025		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1010	~~12~~ Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 10 - ITSED 05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	trace sheen
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 10 - ITSED 06			
Latitude: 47.57823		Longitude: 122.34027		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1015	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 - 10 - ITSED 06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: Sunny
Sampling Method: shovel/spoon
Crew: JF, RB, MY

GRAB DATA	Location ID: EW09 -10 - ITSED 07			
Latitude: 47.57837		Longitude: 122.34030		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1020	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -10 - ITSED 07			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 -10 - ITSED 08			
Latitude: 47.57838		Longitude: 122.34028		
Grab time	Bottom depth (m)	Penetration depth (cm) (in)	Acceptable grab (Y/N)	Comments:
1030	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -10 - ITSED 08			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt trace	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8/19/09
Weather: sunny
Sampling Method: shovel/spoon
Crew: JF, RB, MY

GRAB DATA	Location ID: EW09 -10 - ITSED 09			
Latitude: 47.57828		Longitude: 122.34032		
Grab time	Bottom depth (m)	Penetration depth (~~cm~~) (in)	Acceptable grab (Y/N)	Comments:
1035	Ø	12	Y	

SAMPLE DATA	Sample ID: EW09 -10 - ITSED 09			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - - ITSED			
Latitude:		Longitude:		
Grab time	Bottom depth (m)	Penetration depth (cm)	Acceptable grab (Y/N)	Comments:

SAMPLE DATA	Sample ID: EW09 - - ITSED			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8-20-09
Weather: sunny, partly cloudy
Sampling Method: shovel/spoon
Crew: CL, JF, RB, MY

GRAB DATA	Location ID: EW09 - 11 - ITSED 01			
Latitude: 47.58733		Longitude: 122.34272		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1040	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 01			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash, cobble in area
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 11 - ITSED 02			
Latitude: 47.58736		Longitude: 122.34273		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1045	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 02			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	1 clam found, shell hash (40%)
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.20.09
Weather: sunny, partly cloudy
Sampling Method: shovel/spoon
Crew: CL, JF, RB, MY

GRAB DATA	Location ID: EW09 - 11 - ITSED03			
Latitude: 47.58740		Longitude: 122.34270		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1052	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED03		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel 10%	drab olive	slight	petroleum
sand (C M F)	gray dark	moderate	other:
silt trace	black	strong	Shell hash (25%)
clay	brown		

GRAB DATA	Location ID: EW09 - 11 - ITSED04			
Latitude: 47.58740		Longitude: 122.34274		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1057	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED04		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S
gravel	drab olive	slight	petroleum
sand (C M F)	gray	moderate	other:
silt trace	black	strong	moderate sheen, shell hash
clay	brown		

Wind Ward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.20.09
Weather: Sunny, partly cloudy
Sampling Method: shovel/Spoon
Crew: CL, JF, RB, MY

GRAB DATA	Location ID: EW09 - 11 - ITSED05			
Latitude: 47.58737		Longitude: 122.342572		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1103	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED05			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	1 clam found, shell hash
sand (C M F)	gray	moderate	other:	trace sheen
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 11 - ITSED06			
Latitude: 47.58739		Longitude: 122.342668		
Grab time	Bottom depth ~~(m)~~ in	Penetration depth ~~(cm)~~ in	Acceptable grab (Y/N)	Comments:
1108	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED06			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	shell hash (70%)
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8 20 09
Weather: Sunny, partly cloudy
Sampling Method: shovel/spoon
Crew: EL, JF, RB, MY

GRAB DATA	Location ID: EW09 - 11 - ITSED 07			
Latitude: 47.58737		Longitude: 122.34273		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
1113	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 07			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	substantial shell hash
gravel	drab olive	slight	petroleum	- top 6 in of hole is gray, 6-12 in is black
sand (C M F)	gray, dark	moderate	other:	
silt trace	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 11 - ITSED 08			
Latitude: 47.58740		Longitude: 122.34269		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
1118	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 08			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt trace	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.20.09
Weather: Sunny, partly cloudy
Sampling Method: Shovel / Spoon
Crew: CL, JF, RB, MY

GRAB DATA	Location ID: EW09 - 11 - ITSED09			
Latitude: 47.58738		Longitude: 122.34273		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
1124	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 09		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	shell hash, sheen (slight)
gravel trace	drab olive	slight	
sand (C M F)	gray	moderate	
silt trace	black	strong	
clay	brown	H_2S petroleum other:	

GRAB DATA	Location ID: EW09 - 11 - ITSED 10			
Latitude: 47.58744		Longitude: 122.34280		
Grab time	Bottom depth ~~(m)~~ m	Penetration depth ~~(cm)~~ m	Acceptable grab (Y/N)	Comments:
1130	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 10		
Sediment type (%)	Sediment color	Sediment odor	Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	moderate sheen, shell hash (25%)
gravel 15%	drab olive	slight	
sand (C M F)	gray	moderate	
silt	black	strong	
clay	brown	H_2S petroleum other:	

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.20.09
Weather: Sunny, partly cloudy
Sampling Method: shovel/spoon
Crew: CL, JF, RB, MY

GRAB DATA	Location ID: EW09 - 11 - ITSED 11			
Latitude: 47.58737		Longitude: 122.34165		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1135	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 11			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	shell hash (50%)
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 11 - ITSED 12			
Latitude: 47.58733		Longitude: 122.34262		
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1140	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 12			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	
gravel	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	trace shell hash
silt	black	strong		
clay	brown			

Windward environmental LLC

SURFACE SEDIMENT COLLECTION FORM

Project Name: EW RI/FS Surface Sediment
Project no. 09-08-09-46
Date: 8.20.09
Weather: Sunny, partly cloudy
Sampling Method: shovel / spoon
Crew: CL, JF, RB, MY

GRAB DATA	Location ID: EW09 - 11 - ITSED 13			
Latitude: 47.58738	Longitude: 122.34265			
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1145	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 13			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash (30%)
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray dark	moderate	other:	
silt	black	strong		
clay	brown			

GRAB DATA	Location ID: EW09 - 11 - ITSED 14			
Latitude: 47.58737	Longitude: 122.34265			
Grab time	Bottom depth (in)	Penetration depth (in)	Acceptable grab (Y/N)	Comments:
1152	12	12	Y	

SAMPLE DATA	Sample ID: EW09 - 11 - ITSED 14			
Sediment type (%)	Sediment color	Sediment odor		Comments: (i.e. organic matter, wood debris, shell fragments, sheen, fauna, field duplicate, rinsate blank, etc.)
cobble	brown surface	none	H_2S	shell hash (10%)
gravel trace	drab olive	slight	petroleum	
sand (C M F)	gray	moderate	other:	
silt	black	strong		
clay	brown			

APPENDIX F

Chain-of-Custody Forms

ON35

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: T30 PDM
Project Number: 07.08.09.38
Contact Name: Marina Mitchell
Sampled By: S. Kutka, T. D

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: hand del'd
Form filled out by: S. Kutka

Shipping Date: 02.18.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): PCB Aroclors	SVOCs, SVOC-SIM	Metals	TOC	Total Solids	Grain Size		Comments / Instructions (Jar tag number(s))
02.18.09	0921	T30-09-01	3	sediment	X	X	X	X	X	X		
	0938	T30-09-02	3	"	X	X	X	X	X	X		archive
	1003	T30-09-03	3	"	X	X	X	X	X	X		
	1003	T30-09-~~04~~ 101	3	"	X	X	X	X	X	X		
	1018	T30-09-04	3	"	X	X	X	X	X	X		archive
	1030	T30-09-05	3	"	X	X	X	X	X	X		archive
	1050	T30-09-06	3	"	X	X	X	X	X	X		archive
	1107	T30-09-07	7	"	X	X	X	X	X	X		extra volume for MS/MSD
	1135	T30-09-08	3	"	X	X	X	X	X	X		archive
	1157	T30-09-09	3	"	X	X	X	X	X	X		
	1206	T30-09-10	3	"	X	X	X	X	X	X		archive
	1311	T30-09-11	3	"	X	X	X	X	X	X		archive
		Total Number of Containers	40	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by: Jenny	2) Rec'd by:
Print name: Jenny Bunning		Print name:	
Signature: Jenny Bunning	Company: ARI	Signature:	Company:
Company: Windward Env.		Company:	
Date/Time: 2/18/09	Date/Time: 2/18/09 1625	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CH2M-000002

ON35

2 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2494

Project/Client Name: T30 PDM
Project Number: 07.08.09.38
Contact Name: Marina Mitchell
Sampled By: S. Katka, T. Do

Ship to: ARI
Attn: Sue Donnihoo
Shipper: hand del'd
Form filled out by: S. Katka

Shipping Date: 02.18.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCB Aroclors	SVOCs, SVOC-SIM	Metals	TOC	Total Solids	Grain Size		Comments / Instructions (Jar tag number(s))
02.18.09	1250	T30-09-11-RB	5	water	X	X	X					
02.18.09	1319	T30-09-12	3	sediment	X	X	X	X	X	X		archive
	1335	T30-09-13	3	sediment	X	X	X	X	X	X		archive
	1348	T30-09-14	7	"	X	X	X	X	X	X		extra volume for ms/msD
	1358	T30-09-15	3	"	X	X	X	X	X	X		archive
	1407	T30-09-16	3	"	X	X	X	X	X	X		archive
	1419	T30-09-17	3	"	X	X	X	X	X	X		archive
	1427	T30-09-18	3	"	X	X	X	X	X	X		archive
	1434	T30-09-19	3	"	X	X	X	X	X	X		archive
	1444	T30-09-20	3	"	X	X	X	X	X	X		
	1455	T30-09-21	3	"	X	X	X	X	X	X		[redacted]
		Total Number of Containers	39	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Jenny Buening		Print name:	
Signature: Jenny Buening	Company: ARI	Signature:	Company:
Company: WindWard Env.		Company:	
Date/Time: 2/18/09	Date/Time: 2/18/09 1625	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

WindWard environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

ONES : 00023

1 of 1 ON50

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2495

Project/Client Name: T30 PDM
Project Number: 07-08-09-38
Contact Name: Marina Mitchell
Sampled By: S. Katka, T. DD

Ship to: ARI
Attn: Sue Donnihoo
Shipper: hand del'd
Form filled out by: S. Katka

Shipping Date: 02.19.09
Airbill Number:
Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCB Aroclors	SVOCs SVOC-SIM	Metals	TOC	Total Solids	Grain Size		Comments / Instructions (Jar tag number(s))
02.19.09	0905	T30-09-22	3	Sediment	X	X	X	X	X	X		archive
	0916	T30-09-23	3	"	X	X	X	X	X	X		archive
	0928	T30-09-24	3	"	X	X	X	X	X	X		archive
	0943	T30-09-25	3	"	X	X	X	X	X	X		archive
	0957	T30-09-26	3	"	X	X	X	X	X	X		analyze
	1007	T30-09-27	3	"	X	X	X	X	X	X		archive
	1017	T30-09-28	3	"	X	X	X	X	X	X		archive
	1029	T30-09-29	3	"	X	X	X	X	X	X		[redacted] analyze
	1040	T30-09-30	3	"	X	X	X	X	X	X		archive
	1107	T30-09-31	3	"	X	X	X	X	X	X		archive
		Total Number of Containers	30	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Shannon Katka		Print name:	
Signature: Shann Katka	Company: ARI	Signature:	Company:
Company: Windward Env.		Company:	
Date/Time: 2/19/09 1220	Date/Time: 2/19/09 1220	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

ON50 : 00005

0097

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2658

Project/Client Name: EW R1/FS SURFACE SEDIMENT
Project Number:
Contact Name: MARINA MITCHELL
Sampled By: THAI DO, ANGELITA RODRIQUEZ

Ship to: ARI
Attn: SUE DUNNIHOO
Shipping Date: 3/2/09
Shipper: HAND DELIVER
Airbill Number: —
Form filled out by: ANGELITA RODRIQUEZ
Turnaround requested: STANDARD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCB AROCLORS	SVOCS PESTICIDES	METALS BUTYLTINS	TOC TOTAL SOLIDS	GRAIN SIZE	TOTAL SULFIDE AMMONIA	(MS) ARCHIVE	Comments / Instructions [Jar tag number(s)]
3/1/09	0956	EW09-SS-220-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1104	EW09-SS-218-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1130	EW09-SS-217-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1221	EW09-SS-216-010	12	SEDIMENT	X	X	X	X	X	X	X	EXTRA VOLUME FOR LAB QC
	1256	EW09-SS-207-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1315	EW09-SS-204-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1349	EW09-SS-202-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1410	EW09-SS-200-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1410	EW09-SS-300-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1435	EW09-SS-130-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1453	EW09-SS-129-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1512	EW09-SS-127-010	6	SEDIMENT	X	X	X	X	X	X	X	
		Total Number of Containers	78/102	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: CHELSEA LORENZ	Jonathon Walter	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.02.09/10:45	Date/Time: 3/2/09 1045	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

4

0097

2 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2655

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: MARINA MITCHELL
Sampled By: THAI DO, ANGELITA RODRIGUEZ

Ship to: ARI
Attn: SUE DUNNIHOO
Shipping Date: 3/2/09
Shipper: HAND-DELIVER
Airbill Number: —
Form filled out by: ANGELITA RODRIGUEZ
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): PCBs Aroclors	SVOCs Pesticides	Metals Butyltins	TOC Total Solids	Total Sulfides Ammonia	(MS) Archive		Comments / Instructions [Jar tag number(s)]
3/1/09	1530	EW09-SS-122-010	6	SEDIMENT	X	X	X	X	X	X		
	1554	EW09-SS-119-010	6	SEDIMENT	X	X	X	X	X	X		
	1615	EW09-SS-120-010	6	SEDIMENT	X	X	X	X	X	X		
	1636	EW09-SS-132-010	6	SEDIMENT	X	X	X	X	X	X		
		Total Number of Containers	24/102	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: CHELSEA LORENZ	Jonathon Walter	Print name:	
Signature: Chelsea Lorenz	Company: ARI	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.02.09/10:45	Date/Time: 3/2/09 1045	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

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200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

00097 : 2600

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2660

OP22

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: MARINA MITCHELL
Sampled By: THAI DO, ANGELITA RODRIGUEZ

Ship to: ARI
Attn: SUE DUNNIHOO
Shipping Date: 3/2/09
Shipper: HAND DELIVER
Airbill Number: —
Form filled out by: ANGELITA RODRIGUEZ
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): PCBs Aroclors	SVOCs Pesticides	Metals Butyltins Mercury	Total Sulfides Ammonia	TOC Total Solids	(MS) Archive		Comments / Instructions [Jar tag number(s)]
3/2/09	0829	EW09-SS116-010	6	SEDIMENT	X	X	X	X	X	X		
	0829	EW09-SS301-010	6	SEDIMENT	X	X	X	X	X	X		
	0906	EW09-SS113-010	12	SEDIMENT	X	X	X	X	X	X		EXTRA VOLUME FOR LAB QC
	0933	EW09-SS111-010	6	SEDIMENT	X	X	X	X	X	X		
	1014	EW09-SS109-010	6	SEDIMENT	X	X	X	X	X	X		
	1036	EW09-SS104-010	6	SEDIMENT	X	X	X	X	X	X		
		Total Number of Containers	42	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: SARAH POWLER	A. Volgardson	Print name:	
Signature:	Company: ART	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.0.09	Date/Time: 3/2/09 1212	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

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Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2659

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: MARINA MITCHELL
Sampled By: KATHLEEN HURLEY

Ship to: ARI
Attn: SUE DUNNIHOO
Shipper: HAND DELIVER
Form filled out by:

Shipping Date:
Airbill Number: —
Turnaround requested: STANDARD

OP33

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs PESTICIDES SVOCS	METALS Hg BUTYLTINS	GRAIN SIZE	AMMONIA, TOC, TS	TOTAL SULFIDES	ARCHIVE (MIS)		Comments / Instructions [Jar tag number(s)]
3/4/09	0952	EW09-SS-038-010	6	SEDIMENT	X	X	X	X	X	X		
	1035	EW09-SS-100-010	6		X	X	X	X	X	X		
	1122	EW09-SS-101-010	6		X	X	X	X	X	X		
	1208 ~~1345~~	EW09-SS-110-010	6		X	X	X	X	X	X		
	1305	EW09-SS-114-010	6		X	X	X	X	X	X		
	1346	EW09-SS-117-010	6		A	R	C	H	I	VE		*ARCHIVE ALL*
	1434	EW09-SS-211-010	6		X	X	X	X	X	X		
	1512	EW09-SS-219-010	6		X	X	X	X	X	X		
3/4/09	0920	EW09-SS-038-RB	9	WATER	X	X	X	X	X			
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: KATHLEEN HURLEY		Print name:	
Signature: [signature]	Company: ARI	Signature:	Company:
Company: WINDWARD ENV		Company:	
Date/Time: 3/4/09 4:11pm	Date/Time: 3/4/09 4:16"	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature: 5.8, 3.6	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2662

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: MARINA MITCHELL
Sampled By: THAI DO, ANGELITA RODRIQUEZ

Ship to: ARI
Attn: SUE DUNNIHOO
Shipping Date: 3/4/09
Shipper: HAND-DELIVER
Airbill Number:
Form filled out by: ANGELITA RODRIQUEZ
Turnaround requested: STANDARD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCB AROCLORS	SVOCs PESTICIDES	METALS BUTYLTINS MERCURY	TOC TOTAL SOLIDS	AMMONIA TOTAL SULFIDES	(MIS) ARCHIVE	GRAIN SIZE	Comments / Instructions [Jar tag number(s)]
3/2/09	1050	EW09-SS-027-010	6	SEDIMENT	X	X	X	X	X	X	X	ONLY ANALYZE TBT
3/4/09	0843	EW09-SS-102-010	6	SEDIMENT	X	X	X	X	X	X	X	& PESTICIDES PER QAPP
	0843	EW09-SS-302-010	6	SEDIMENT	X	X	X	X	X	X	X	" "
	0804	EW09-SS-102-RB	9	WATER	X	X	X					
	0909	EW09-SS-036-010	12	SEDIMENT	X	X	X	X	X	X	X	Extra volume for lab QC
	0930	EW09-SS-034-010	6	SEDIMENT	X	X	X	X	X	X	X	ONLY ANALYZE TBT
	0953	EW09-SS-035-010	6	SEDIMENT	X	X	X	X	X	X	X	& PESTICIDES PER QAPP
	1015	EW09-SS-033-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1034	EW09-SS-032-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1054	EW09-SS-031-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1114	EW09-SS-030-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1137	EW09-SS-029-010	6	SEDIMENT	X	X	X	X	X	X	X	
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Chelsea Lorenz	Print name: Jami Hayes	Print name:	
Signature: Chelsea Lorenz	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 3-4-09 5:50	Date/Time: 3/4/09 1750	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature: 3.8, 1.2, 2.8, 1.6	Received by:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2664

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: MARINA MITCHELL
Sampled By: THAI DO, ANGELITA RODRIGUEZ

Ship to: ARI
Attn: SUE DUNNIHOO
Shipping Date: 3/4/09
Shipper: HAND-DELIVER
Airbill Number:
Form filled out by: ANGELITA RODRIGUEZ
Turnaround requested: STANDARD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCB AROCLORS	SVOCs PESTICIDES	METALS BUTYLTINS MERCURY	TOC TOTAL SOLIDS	AMMONIA TOTAL SULFIDES	(MS) ALCHAVE	GRAIN SIZE	Comments / Instructions [Jar tag number(s)]
3/4/09	1156	EW09-SS-025-010	6	SEDIMENT	X	X	X	X	X	X	X	ONLY ANALYZE TBT
	1300	EW09-SS-024-010	6	SEDIMENT	X	X	X	X	X	X	X	& PESTICIDES PER QAPP
	1322	EW09-SS-023-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1350	EW09-SS-020-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1430	EW09-SS-013-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1502	EW09-SS-011-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1526	EW09-SS-008-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1549	EW09-SS-005-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1625	EW09-SS-003-010	6	SEDIMENT	X	X	X	X	X	X	X	
	1644	EW09-SS-001-010	6	SEDIMENT	X	X	X	X	X	X	X	
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Chelsea Lorenz	Print name: Jami Hayes	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 3-4-09 5:50	Date/Time: 3/4/09 1750	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature: 3.8, 1.2, 2.8, 1.4	Received by:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2666

Project/Client Name: EW RI/FS Surface Sediment
Project Number:
Contact Name: Marina Mitchell
Sampled By: Thai Do

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: hand del'd
Form filled out by: T. Do

Shipping Date: 03.05.09
Airbill Number: —
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs, SVOCs, Pesticides	Metals, Hg, Butyltins	Grain Size	Ammonia, TOC, TS	Total Sulfides	Archive (MS/MS)	Archive	Comments / Instructions [Jar tag number(s)]
03.05.09	0938	EW09-SS014-RB	9	H_2O	X	X						
	0955	EW09-SS014-010	6	SEDIMENT	X	X	X	X	X	X		ANALYZE PESTICIDES
	0855	EW09-SS126-010	6		X	X	X	X	X	X		& TBT ONLY AS PER
	1017	EW09-SS019-010	6		X	X	X	X	X	X		QAPP
	1251	EW09-SS021-010	6		X	X	X	X	X	X		
	1034	EW09-SS501-010	2							X	X	
	1047	EW09-SS502-010	2							X	X	
	1100	EW09-SS503-010	2							X	X	
	1113	EW09-SS504-010	2							X	X	
	1126	EW09-SS505-010	2							X	X	
	1137	EW09-SS506-010	2							X	X	
	1147	EW09-SS507-010	2							X	X	
		Total Number of Containers	47/71	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: CHELSEA LORENZ		Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.05.09/4:30	Date/Time: 3/5/09 1630	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

WindWard environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature: 0.4, 1.4	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2667

Project/Client Name: EW RI/FS Surface Sediment
Project Number:
Contact Name: Marina Mitchell
Sampled By: Thai Do

Ship to: ARI
Attn: Sue Dunihoo
Shipper: hand del'd
Form filled out by: T.DO

Shipping Date: 03.05.09
Airbill Number:
Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): ARCHIVE (MS)	ARCHIVE						Comments / Instructions [Jar tag number(s)]
03.05.09	1200	EW09-SS508-010	2	SEDIMENT	X	X						
	1343	EW09-SS509-010	2		X	X						
	1355	EW09-SS510-010	2		X	X						
	1404	EW09-SS511-010	2		X	X						
	1414	EW09-SS512-010	2		X	X						
	1423	EW09-SS513-010	2		X	X						
	1432	EW09-SS514-010	2		X	X						
	1440	EW09-SS515-010	2		X	X						
	1450	EW09-SS516-010	2		X	X						
	1459	EW09-SS517-010	2		X	X						
	1525	EW09-SS518-010	2		X	X						
	1516	EW09-SS519-010	2		X	X						
		Total Number of Containers	24/71	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: CHELSEA LORENZ		Print name:	
Signature: Chelsea	Company: ARI	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.05.09/ 4:30	Date/Time: 03/5/09 16 30	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature: 0.4, 1.4	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

1 of 1 OQ68

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2673

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09-08-09-46
Contact Name: Marina Mitchell
Sampled By: T.DO.

Ship to: ARI
Attn: Sue Dominhoo
Shipper: hand del'd.
Form filled out by: T.DD

Shipping Date: 03.13.09
Airbill Number:
Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Grain Size	Ammonia & TOC	Total Sulfides					Comments / Instructions [Jar tag number(s)]
03.12.09	1320	CI09-SS-020-010	3	sediment	x	x	x					
↓	1600	CI09-SS-060-010	3	↓	x	x	x					
↓	1830	CI09-SS-080-010	3	↓	x	x	x					
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Jenny Buening	Print name: Jami Hayes	Print name:	
Signature: Jenny Buening	Company: ARI	Signature:	Company:
Company: Windward Environmental		Company:	
Date/Time: 3/13/09 / 5:25	Date/Time: 3/13/09 1725	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

1 of 3 PD97

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2691

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: MARINA MITCHEL
Sampled By: TD, SR, RB, CL

Ship to: ARI
Attn: SUE DUNNIHOO
Shipper: HAND DEL'D
Form filled out by: C. Lorenz

Shipping Date: 6.22.09
Airbill Number: —
Turnaround requested: STD.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs SVOCs	Pesticides	Metals TOC, TS	Butyltins	Grain Size	Tot. Sulfides Ammonia	Archive (MS)	Comments / Instructions [Jar tag number(s)]
6.22.09	903	EW09-SS-223-010	6	Sediment	X	X	X		X	X	X	no pesticides
6.22.09	955	EW09-SS-531-010	2		X			X			X	Archive
6.22.09	1007	EW09-SS-214-010	6		X		X	X	X	X	X	
	1027	EW09-SS-532-010	2								X	Archive
	1036	EW09-SS-213-010	6		X	X	X		X	X	X	
	1047	EW09-SS-529-010	2								X	Archive
	1057	EW09-SS-528-010	2								X	Archive
	1108	EW09-SS-530-010	2								X	Archive
	1121	EW09-SS-215-010	6		X		X	X	X	X	X	
	1202	EW09-SS-018-010	6		X		X		X	X	X	
	1228	EW09-SS-016-010	6		X		X		X	X	X	
	1252	EW09-SS-022-010	6		X		X	X	X	X	X	
		Total Number of Containers	52	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Chelsea Lorenz		Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 6.22.09 6:10	Date/Time: 6/22/09 1312	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2692

Project/Client Name: EW RI/FS surface Sediment
Project Number: 09.08.09.46
Contact Name: MARINA MITCHELL
Sampled By: TD, RB, SR, CL

Ship to: ARI
Attn: SUE DUNIHOO
Shipper: HAND DELD
Form filled out by: C. Lorenz

Shipping Date: 6.22.09
Airbill Number: —
Turnaround requested: STD.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs, SVOCs	Pesticides	Metals, TOC, TS	Butyltins	Grain size	Total sulfide Ammonia	Arsenic (MS)	Comments / Instructions [Jar tag number(s)]
6.22.09	1318	EW09-SS-028-010	6	Sediment	X		X		X	X	X	
	1318	EW09-SS-303-010	6		X		X		X	X	X	
	1340	EW09-SS-039-010	12		X		X		X	X	X	extra vol. for lab QC
	1400	EW09-SS-017-010	6		X		X		X	X	X	
	1422	EW09-SS-026-010	6		X		X		X	X	X	
	1436	EW09-SS-040-010	12		X		X		X	X	X	extra vol for lab QC
	1459	EW09-SS-037-010	6		X		X		X	X	X	
	1515	EW09-SS-103-010	6		X		X		X	X	X	
	1532	EW09-SS-105-010	6 ~~12~~		X	X	X	X	X	X	X	
	1550	EW09-SS-112-010	6		X		X		X	X	X	
	1532	EW09-SS-304-010	6		X	X	X	X	X	X	X	
	1610	EW09-SS-115-010	6		X		X	X	X	X	X	
		Total Number of Containers	84	Purchase Order / Statement of Work #								

1) Released by: Windward	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Chelsea Lorenz		Print name:	
Signature: Chelsea	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 6.22.09 1610	Date/Time: 6/22/09 - 1610	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

P0959.000282

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2693

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09-08.09.46
Contact Name: Manna Mitchell
Sampled By: TD, SR, RB, CL

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Hand del'd
Form filled out by: C. Lorenz

Shipping Date: 6.22.09
Airbill Number: —
Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs SVOCs	Pesticides	Metals, TOC, TS	Butyltins	Grain Size	Total Sulfide Ammonia	Archive (MS)	Comments / Instructions (Jar tag number(s))
6.22.09	1626	EW09-SS-133-010	6	Sediment	X		X	X	X	X	X	
	1612	EW09-SS-108-010	6		X		X	X	X	X	X	
	1701	EW09-SS-118-010	6		X	X	X	X	X	X	X	
	1716	EW09-SS-121-010	6		X		X		X	X	X	
		Total Number of Containers	24	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Chelsea Lorenz		Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 6.22.09 6:10	Date/Time: 6/22/09 - 1512	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

1 of PE07

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2694

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Marina Mitchell
Sampled By: Thai Do

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Hand del'd
Form filled out by: Shannon Katka

Shipping Date: 06.23.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs, SVOCs	Pesticides	Metals, TOC, TS	Butyltins	Grain Size	Total sulfides Ammonia	Archive (MS)	Comments / Instructions [Jar tag number(s)]
06.23.09	0857	EW09-SS-222-010	6	Sediment	X		X		X	X	X	
06.23.09	0811	EW-09-SS-222-RB	9	Water	X	X	X	X				rinsate blank
	0929	EW09-SS-221-010	6	Sediment	X		X		X	X	X	
	1003	EW09-SS-09[illegible]-010	6	"	X		X		X	X	X	re butyltins
	1024	EW09-SS-012-010	6	"	X		X		X	X	X	
	1034	EW09-SS-015-010	6	"	X	X	X		X	X	X	
	1050	EW09-SS-107-010	6	"	X		X	X	X	X	X	
	1108	EW09-SS-06-010	6	"	X	X	X	X	X	X	X	
	1132	EW09-SS-208-010	6	"	X	X	X		X	X	X	
	1132	EW09-SS-205-010	5	"	X	X	X		X	X		
	1153	EW09-SS-206-010	12	"	X	X	X		X	X	X	add'l sediment for MS/MSD
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Chelsea Lorenz		Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 6.23.09 12:45	Date/Time: 6/23/09 1245	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

7.2°, 3.0°

Wind Ward environmental LLC

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Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2690

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.07 44
Contact Name: Manna Mitchell
Sampled By: Thao Do

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Hand delivered
Form filled out by: Shannon Katka

Shipping Date: 06.23.09
Airbill Number: —
Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs, SVOCs	Pesticides	Metals, TOC, TS	Butyltins	Grain Size	Total Sulfide Ammonia	Arsenic (MS)	Comments / Instructions [Jar tag number(s)]
06.23.09	1251	EW09-SS-210-RB	~~water~~ 9	water	X	X	X	X				
	1305	EW09-SS-210-010	6	Sediment	X		X		X	X	X	
	1319	EW09-SS-205-010	6	"	X	X	X	X	X	X	X	
	~~1330~~ 1354	EW09-SS-203-010	6	"	X	X	X	X	X	X	X	
	1415	EW09-SS-212-010	6	"	X		X	X	X	X	X	
	1436	EW09-SS-209-010	6	"	X		X		X	X	X	
	1502	EW09-SS-201-010	6	"	X		X	X	X	X	X	
	1538	EW09-SS-134-010	6	"	X		X		X	X	X	
	1545	EW09-SS-131-010	6	"	X		X		X	X	X	
	1608	EW09-SS-128-010	6	"	X		X		X	X	X	
	1624	EW09-SS-125-010	6	"	X		X		X	X	X	
	1648	EW09-SS-124-010	6	"	X	X	X	X	X	X	X	
		Total Number of Containers	75	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Shannon Katka	Print name: Jami Hayes	Print name:	
Signature: Shannon Katka	Company: ARI	Signature:	Company:
Company: WindWard		Company:	
Date/Time: 6/23/09 1800	Date/Time: 6/23/09 1800	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

WindWard environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature: 5.6, 5.2	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2701

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08 09.46
Contact Name: Marina Mitchell
Sampled By: Thai Do

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Hand delivered
Form filled out by: Shannon Katka

Shipping Date: 06 23 09
Airbill Number: —
Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCBs Sv/Cs	Pesticides	Metals, TOC, TS	Butyltins	Grain size	Total sulfide Ammonia	Archive (Mus)	Comments / Instructions [Jar tag number(s)]
06.23.09	1702	EW09-SS-123-010	6	Sediment	X	X	X	X	X	X	X	
		Total Number of Containers	6	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Shannon Katka	Print name: Jami Hayes	Print name:	
Signature: Shannon Katka	Company: ARI	Signature:	Company:
Company: Windward Env		Company:	
Date/Time: 6/23/09 1800	Date/Time: 6/23/09 1800	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature: 5.6, 5.2	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2702

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 0908 09 46
Contact Name: Marina Michell
Sampled By: Rick Berg

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Hand delivered
Form filled out by: S. Katka

Shipping Date: 06.24.09
Airbill Number: —
Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	PCB, SVOC	Pesticides	Metals, TOC, TS	Butyltins	Grain Size	Total sulfide Ammonia	Archive (MS)	Comments / Instructions [Jar tag number(s)]
06.24.09	0804	EW09-SS-02-026	9	Water	X	X	X	X				rinsate blank
	1010	EW09-SS-02-010	6	Sediment	X		X		X	X	X	
	1035	EW09-SS-04-010	6	"	X		X	X	X	X	X	
	1057	EW09-SS-06-010	6	"	X		X	X	X	X	X	
	1140	EW09-SS-07-010	6	"	X		X		X	X	X	
	1215	EW09-SS-10-010	6	"	X		X	X	X	X	X	
		Total Number of Containers	39	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Chelsea Lorenz		Print name:	
Signature: Chelsea Lorenz	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 12:55 6.24.09	Date/Time: 6/24/09 1255	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2705

Project/Client Name: EW RI/FS Surface Sediment (Round 2)
Project Number: 09.08.09.46
Contact Name: Marina Mitchell
Sampled By: T. Do, R. Berg

Ship to: ARI
Attn: SUE DUNNIHOO
Shipper: HAND DEL'D
Form filled out by: T. Do

Shipping Date:
Airbill Number:
Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): GRAIN SIZE	SULFIDES	AMMONIA & TOC					Comments / Instructions (Jar tag number(s))
07.07.09	1125	CI09-SS-120-010	3	SEDIMENT	X	X	X					
↓	1440	CI09-SS-140-010	3	↓	X	X	X					
↓	1730	CI09-SS-180-010	3	↓	X	X	X					
		Total Number of Containers	9	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Sarah Fowler	Mikka Mulumba	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: WINDWARD ENV. LLC		Company:	
Date/Time: 7-8-09 12:10	Date/Time: 7-8-09 1210	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

BROOKS RAND LABS
MEANINGFUL METALS DATA
3958 6th Avenue NW
Seattle, WA 98107
Phone: 206-632-6206
Fax: 206-632-6017
samples@brooksrand.com
www.brooksrand.com

Chain of Custody Record

White: LAB COPY
Yellow: CUSTOMER COPY

Client:	Address:	COC receipt confirmation? (Y) / N If so, by: (email) / fax (circle one)
Contact:		
Client project ID:		Email: misty@brooksrand.com
PO #:	Phone #:	Fax #:

Requested TAT in business days:
- ☐ 20 (standard)
- ☐ 15
- ☐ 10
- ☐ 5
- ☐ Other ____

Surcharges apply for expedited turn around times.

	Sample ID	Collection: Date	Collection: Time	Miscellaneous: Sampler (initials)	Miscellaneous: Matrix type	Miscellaneous: # of containers	Miscellaneous: Field filtered? (Y/N)	Field Preservation: Unpreserved / ice only	Field Preservation: HCl / HNO_3 (circle one)	Field Preservation: Other (specify)	Analyses required: Total Hg, EPA 1631	Analyses required: Methyl Hg, EPA 1630	Analyses required: ICP-MS Metals (specify)	Analyses required: As / Se species (specify)	Analyses required: % Solids	Analyses required: Filtration	Analyses required: Other (specify)	Analyses required: Other (specify)	Comments
1	0830030-04	7/08			Sed	1		X											LSO-045E-080722
2	11																		LSO-105E-080722
3	12																		LSO-215E-080722
4	02					2													LSO-025E-080723
5	10					1													LSO-115E-080722
6	13																		LSO-225E-080723
7	01																		LSO-015E-080723
8	08																		LSO-085E-080722
9	07																		LSO-075E-080722
10	03																		LSO-035E-080722

Relinquished by:	Date: 4/3/09	Time: 1324	Relinquished by:	Date:	Time:
Received by: Mikka Mulumba	Date: 4/3/09	Time: 1024	Received at BRL by:	Date:	Time:
Shipping carrier: FedEx	# of coolers: 1		BRL work order ID:	BRL project ID:	

3.4°C

BROOKS RAND LABS
MEANINGFUL METALS DATA
3958 6th Avenue NW
Seattle, WA 98107
Phone: 206-632-6206
Fax: 206-632-6017
samples@brooksrand.com
www.brooksrand.com

Chain of Custody Record

White: LAB COPY
Yellow: CUSTOMER COPY

Client:	Address:	COC receipt confirmation? Y / N If so, by: email / fax (circle one)
Contact:		
Client project ID:		Email:
PO #:	Phone #:	Fax #:

Requested TAT in business days:
- ☐ 20 (standard)
- ☐ 15
- ☐ 10
- ☐ 5
- ☐ Other ____

Surcharges apply for expedited turn around times.

	Sample ID	Collection		Miscellaneous				Field Preservation			Analyses required								Comments
		Date	Time	Sampler (initials)	Matrix type	# of containers	Field filtered? (Y/N)	Unpreserved / Ice only	HCl / HNO_3 (circle one)	Other (specify)	Total Hg, EPA 1631	Methyl Hg, EPA 1630	ICP-MS Metals (specify)	As / Se species (specify)	% Solids	Filtration	Other (specify)	Other (specify)	
1	0830036 - 06	7/08			Sed	1		X											LSO-065E-080722
2	05	↓			↓	↓		↓											LSO-055E-080722
3	09	↓			↓	↓		↓											LSO-095E-080722
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: [signature]	Date: 4/3/09	Time: 1325	Relinquished by:	Date:	Time:
Received by: Nikka Hulumba	Date: 4/6/09	Time: 1029	Received at BRL by:	Date:	Time:
Shipping carrier: FedEx	# of coolers: 1		BRL work order ID:	BRL project ID:	

3.4°C

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2657

Project/Client Name: EW R1/FS
Project Number:
Contact Name: ~~MARINA MITCHELL~~ HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIQUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.02.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIQUEZ
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (jar tag number(s))
3/1/09	0956	EW09-SS-220-010	5	SEDIMENT	X			NAS#	2471G			HOLD PENDING
	1104	EW09-SS-218-010	5	SEDIMENT	X				2472G			INSTRUCTIONS TO
	1130	EW09-SS-217-010	5	SEDIMENT	X				2473G			ANALYZE
	1221	EW09-SS-216-010	5	SEDIMENT	X				2474G			
	1256	EW09-SS-207-010	5	SEDIMENT	X				2475G			
	1315	EW09-SS-204-010	5	SEDIMENT	X				2476G			
	1349	EW09-SS-202-010	5	SEDIMENT	X				2477G			
	1410	EW09-SS-200-010	5	SEDIMENT	X				2478G			
	~~1435~~ 1416	~~EW09-SS-198-010~~ ~~EW09-SS-130-010~~										
	1435	EW09-SS-130-010	5	SEDIMENT	X				2479G			
	1453	EW09-SS-129-010	5	SEDIMENT	X				2480G			
	1512	EW09-SS-127-010	5	SEDIMENT	X				2481G			
		Total Number of Containers	55/75	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00 Am 3/2/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

If sample jar was not full, headspace was flushed w/ N_2 - MLR 3-3-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5-4.5 °C	Received by: Michele L. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2656

Project/Client Name: EW RI/FS
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO, ANGELITA RODRIGUEZ

Ship to: NAS
Attn: MICHELE REDMOND
Shipper: UPS
Form filled out by: ANGELITA RODRIGUEZ

Shipping Date: 03.02.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/1/09	1530	EW09-SS122-010	5	SEDIMENT	X			NAS # 2482G				HOLD PENDING
	1554	EW09-SS119-010	5	SEDIMENT	X			2483G				INSTRUCTIONS TO
	1615	EW09-SS120-010	5	SEDIMENT	X			2484G				ANALYZE
	1636	EW09-SS132-010	5	SEDIMENT	X			2485G				✓
		Total Number of Containers	20/75	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: Helle Andersen	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 10:00am 3/2/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any sample jar that was not full, headspace was flushed w/ N2 - MR 3-3-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-3-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 1.5 - 4.5 °C	Received by: Michele Redmond

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Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2663

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipper: UPS
Form filled out by: ANGELITA RODRIGUEZ

Shipping Date: 03.05.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (Jar tag number(s))
3/4/09	0843	EW09-SS-102-010	5	SEDIMENT	X			NAS #2491G				HOLD PENDING
	0909	EW09-SS-036-010	5	SEDIMENT	X			2492G				INSTRUCTIONS TO
	0930	EW09-SS-034-010	5	SEDIMENT	X			2493G				ANALYZE
	0953	EW09-SS-035-010	5	SEDIMENT	X			2494G				
	1015	EW09-SS-033-010	5	SEDIMENT	X			2495G				
	1034	EW09-SS-032-010	5	SEDIMENT	X			2496G				
	1054	EW09-SS-031-010	5	SEDIMENT	X			2497G				
	1114	EW09-SS-030-010	5	SEDIMENT	X			2498G				
	1137	EW09-SS-029-010	5	SEDIMENT	X			2499G				
	1156	EW09-SS-025-010	5	SEDIMENT	X			2500G				
	1300	EW09-SS-024-010	5	SEDIMENT	X			2501G				
	1322	EW09-SS-023-010	5	SEDIMENT	X			2502G				
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: [signature]	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 915 Am 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

For any jars with headspace, headspace was flushed w/ N_2 - MLR

To be completed by Laboratory upon sample receipt: 3-6-09

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5-6.0°C	Received by: Michelle Redmond

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2665

Project/Client Name: EW RI/FS SURFACE SEDIMENT
Project Number:
Contact Name: HELLE ANDERSEN
Sampled By: THAI DO

Ship to: NAS
Attn: MICHELE REDMOND
Shipping Date: 03.05.09
Shipper: UPS
Airbill Number:
Form filled out by: ANGELITA RODRIGUEZ
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (jar tag number(s))
3/4/09	1350	EW09-SS-020-010	5	SEDIMENT	X			NAS #	2503G			HOLD PENDING
	1430	EW09-SS-013-010	5	SEDIMENT	X				2504G			INSTRUCTIONS TO
	1502	EW09-SS-011-010	5	SEDIMENT	X				2505G			ANALYZE
	1526	EW09-SS-008-010	5	SEDIMENT	X				2506G			
	1549	EW09-SS-005-010	5	SEDIMENT	X				2507G			
	1626	EW09-SS-003-~~001~~ 010	5	SEDIMENT	X				2508G			
	1644	EW09-SS-001-010	5	SEDIMENT	X				2509G			
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature: [signature]	Company:	Signature:	Company:
Company: WINDWARD		Company:	
Date/Time: 915am 3/5/09	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. For any jars w/ headspace, headspace was filled w/ N_2 - MLR 3-6-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-6-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 11:00
Cooler temperature: 2.5 - 6.0°C	Received by: Michele S. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2672

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: T.Do, J. Florer

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: T.Do

Shipping Date: 03.13.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (Jar tag number(s))
1/23/09	1430	SPB-NB-1014	4 (3.5L)	Sediment	X		NAS # 2519G					Contact Helle Andersen for analysis instructions
03.12.09	1320	CI09-SS-020-010	10	↓	X			2520G				
↓	1600	CI09-SS-060-010	10		X			2521G				
↓	1830	CI09-SS-080-010	10	↓	X			2522G				
		Total Number of Containers	14	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: HELLE ANDERSEN		Print name:	
Signature:	Company:	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 03.13.09 / 8:45 AM	Date/Time:	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor. Any jars with headspace had the headspace flushed w/ nitrogen MLR 3-14-09

To be completed by Laboratory upon sample receipt:

Date of receipt:: 3-14-09	Laboratory W.O. #:
Condition upon receipt: intact	Time of receipt: 09:00
Cooler temperature: 1.5 - 3.0°C	Received by: Michele L. Redmond

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: TD, SR, RB, CL

Ship to: NAS
Attn: Michele Redmond
Shipping Date: 6.23.09
Shipper: UPS
Airbill Number:
Form filled out by: C. Lorenz
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (jar tag number(s))
6.22.09	903	EW09-SS-223-010	5	Sediment	X							NAS # 27336
	1007	EW09-SS-214-010	5		X							27346
	1036	EW09-SS-213-010	5		X							27356
	1121	EW09-SS-215-010	5		X							27366
	1202	EW09-SS-018-010	5		X							27376
	1228	EW09-SS-016-010	5		X							27386
	1252	EW09-SS-022-010	5		X							27396
	1318	EW09-SS-028-010	5		X							27406
	1340	EW09-SS-039-010	5		X							27416
	1400	EW09-SS-017-010	5		X							27426
	1422	EW09-SS-026-010	5		X							27436
	1436	EW09-SS-040-010	5		X							27446
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: TODD DO	Print name: [illegible]	Print name:	
Signature: [signature]	Company: [illegible] Gary Butler	Signature:	Company:
Company: WINDWARD	NORTHWESTERN AQUATIC SCIENCES	Company:	
Date/Time: 06.23.09/1200	Date/Time: 6-24-09 / 0945	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt: 6-24-09	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
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Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2698

Project/Client Name: EW RI/FS Surface Sediment
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: Thu Do

Ship to: NAS
Attn: Michele Redmond
Shipping Date: 6/24/2009
Shipper: UPS
Airbill Number:
Form filled out by: Skatka
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Toxicity							Comments / Instructions (Jar tag number(s))
06.23.09	0857	EW09-SS-222-010	5	Sediment	X							NAS# 27546
	0929	EW09-SS-221-010	5	"	X							27556
	1002	EW09-SS-098-010	5	"	X							27566
	1024	EW09-SS-012-010	5	"	X							27576
	1034	EW09-SS-015-010	5	"	X							27586
	1050	EW09-SS-107-010	5	"	X							27596
	1108	EW09-SS-106-010	5	"	X							27606
	1132	EW09-SS-208-010	5	"	X							27616
	1153	EW09-SS-206-010	5	"	X							27626
	1305	EW09-SS-210-010	5	"	X							27636
	1319	EW09-SS-205-010	5	"	X							27646
	1354	EW09-SS-202-010	5	"	X							27656
		Total Number of Containers	60	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Suzanne Reinger	[illegible]	Print name:	
Signature: [illegible]	Company:	Signature:	Company:
Company: Windward	Northwestern Aquatic Sciences	Company:	
Date/Time: 6/24/2009 0700	Date/Time: 6-25-09/0350	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

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Windward environmental LLC

200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2709

Project/Client Name: EW RI/FS Surface Sediment (Round 2)
Project Number: 09.08.09.46
Contact Name: Helle Andersen
Sampled By: J.Do, R. Berg

Ship to: NAS
Attn: Michele Redmond
Shipper: UPS
Form filled out by: J.DO

Shipping Date: 07.08.09
Airbill Number:
Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): TOXICITY							Comments / Instructions (jar tag number(s))
07.07.09	1125	CI09-SS-120-010	10 L	Sediment	X				NAS# 2788G			HOLD PENDING INSTRUCTIONS TO ANALYZE ~20% fines
↓	1440	CI09-SS-140-010	10 L	↓	X				#2789G			~40% fines
↓	1730	CI09-SS-180-010	10 L	↓	X				#2790G			~80% fines
		Total Number of Containers	30 L	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: THAI DO	Michele L. Redmond	Print name:	
Signature:	Company: NAS	Signature:	Company:
Company: WINDWARD ENV LLC		Company:	
Date/Time: 07.08.09/1200	Date/Time: 7-9-09 / 08:30	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Wind Ward environmental LLC
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Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

2 of 4

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2761

Project/Client Name: EW P1/P3 Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Manna Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunniway
Shipping Date: 8·19·09
Shipper: Windward Env
Airbill Number:
Form filled out by: Clarenz
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions [Jar tag number(s)]
8·19·09	1115	EW09-09-1TSED01	2	Sediment	X							
	1123	EW09-09-1TSED02										
	1128	EW09-09-1TSED03										
	1134	EW09-09-1TSED04										NOTE:
	1140	EW09-09-1TSED05										Archive all
	1145	EW09-09-1TSED06										samples frozen
	1140	EW09-08 1TSED01										until further
	1143	EW09-08-1TSED02										instructions
	1146	EW09-08-1TSED03										
	1150	EW09-08-1TSED04										
	1153	EW09-08-1TSED05										
	1156	EW09-08-1TSED06										
		Total Number of Containers	24	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Manna Flover	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/19/09 1705	Date/Time: 8/19/09 1708	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2742

Project/Client Name: EWRIFS Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Manna Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunnihoo
Shipping Date: 8-19-09
Shipper: Windward Env.
Airbill Number:
Form filled out by: Clemenz
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions (Jar tag number(s))
8-19-09	1105	EW09-07-ITSED01	2	Sediment	X							
	1108	EW09-07-ITSED02										
	1111	EW09-07-ITSED03										
	1115	EW09-07-ITSED04										NOTE
	1119	EW09-07-ITSED05										Archive all
	1120	EW09-07-ITSED06										samples frozen
	945	EW09-10-ITSED01										until further
	950	EW09-10-ITSED02										instructions
	1000	EW09-10-ITSED03										
	1005	EW09-10-ITSED04										
	1010	EW09-10-ITSED05										
	1015	EW09-10-ITSED06										
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Joanna Florer	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/19/09 1705	Date/Time: 8/19/09 1705	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

0054 : 000016

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2763

Project/Client Name: EWRI/PS Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Marina Mitchell
Sampled By: CL, JF, HA, RB, MY

Ship to: ARI
Attn: Sue Dimmkoo
Shipper: Windward Env.
Form filled out by: C. Lorenz

Shipping Date: 8-18-09
Airbill Number:
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions [Jar tag number(s)]
8-18-09	1032	EW09-02-ITSED06	2	sediment	X							
	1040	EW09-02-ITSED07										
	1045	EW09-02-ITSED08										NOTE:
	1055	EW09-02-ITSED09										Archive all samples frozen until further instructions
		Total Number of Containers	8	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Joanna Florer		Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/18/09 1758	Date/Time: 8/18/09 1759	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2743

Project/Client Name: EW RI/FS Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Marina Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunniway
Shipping Date: 8-19-09
Shipper: Windward Env
Airbill Number:
Form filled out by: Clemenz
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions (Jar tag number(s))
8-19-09	927	EW09-04-ITSED01	2	sediment	X							
	934	EW09-04-ITSED02										
	940	EW09-04-ITSED03										
	946	EW09-04-ITSED04										NOTE
	950	EW09-04-ITSED05										Archive all
	956	EW09-04-ITSED06										samples frozen
	1010	EW09-05-ITSED01										until further
	1015	EW09-05-ITSED02										instructions
	1020	EW09-05-ITSED03										
	1033	EW09-06-ITSED01										
	1040	EW09-06-ITSED02										
	1045	EW09-06-ITSED03										
		Total Number of Containers	24	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Joanna Florer	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/19/09 1705	Date/Time: 8/19/09 1705	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Wind Ward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2761

Project/Client Name: EW P1/P3 Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Manna Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunniway
Shipping Date: 8·19·09
Shipper: Windward Env
Airbill Number:
Form filled out by: Clarenz
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions [Jar tag number(s)]
8·19·09	1115	EW09-09-1TSED01	2	Sediment	X							
	1123	EW09-09-1TSED02										
	1128	EW09-09-1TSED03										
	1134	EW09-09-1TSED04										NOTE:
	1140	EW09-09-1TSED05										Archive all
	1145	EW09-09-1TSED06										samples frozen
	1140	EW09-08 1TSED01										until further
	1143	EW09-08-1TSED02										instructions
	1146	EW09-08-1TSED03										
	1150	EW09-08-1TSED04										
	1153	EW09-08-1TSED05										
	1156	EW09-08-1TSED06										
		Total Number of Containers	24	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Manna Flover	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/19/09 1705	Date/Time: 8/19/09 1708	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2742

Project/Client Name: EWRIFS Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Manna Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunnihoo
Shipping Date: 8-19-09
Shipper: Windward Env.
Airbill Number:
Form filled out by: Clemenz
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions (Jar tag number(s))
8-19-09	1105	EW09-07-ITSED01	2	Sediment	X							
	1108	EW09-07-ITSED02										
	1111	EW09-07-ITSED03										
	1115	EW09-07-ITSED04										NOTE
	1119	EW09-07-ITSED05										Archive all
	1120	EW09-07-ITSED06										samples frozen
	945	EW09-10-ITSED01										until further
	950	EW09-10-ITSED02										instructions
	1000	EW09-10-ITSED03										
	1005	EW09-10-ITSED04										
	1010	EW09-10-ITSED05										
	1015	EW09-10-ITSED06										
		Total Number of Containers		Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Joanna Florer	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/19/09 1705	Date/Time: 8/19/09 1705	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

0054 : 000016

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2744

Project/Client Name: EWR1/BS Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Manna Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Windward Env
Form filled out by: L Lorenz

Shipping Date:
Airbill Number:
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Arsenic							Comments / Instructions [Jar tag number(s)]
8-19-09	1020	EW09-10-ITSED07	2	Sediment	X							
↓	1030	EW09-10-ITSED08	↓	↓	↓							
↓	1035	EW09-10-ITSED09	↓	↓	↓							
												NOTE: Archive all samples frozen until further instructions
		Total Number of Containers	6	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Joanna Flores	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/19/09 1705	Date/Time: 8/19/09 1705	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

0005147

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2744

Project/Client Name: EWR1/BS Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Manna Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Windward Env
Form filled out by: L Lorenz

Shipping Date:
Airbill Number:
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Arsenic							Comments / Instructions [Jar tag number(s)]
8-19-09	1020	EW09-10-ITSED07	2	Sediment	X							
↓	1030	EW09-10-ITSED08	↓	↓	↓							
↓	1035	EW09-10-ITSED09	↓	↓	↓							
												NOTE: Archive all samples frozen until further instructions
		Total Number of Containers	6	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Joanna Flores	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/19/09 1705	Date/Time: 8/19/09 1705	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

0005147

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2745

Project/Client Name: EW R1/P3 Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Marina Mitchell
Sampled By: CL, JF, RB, MY

Ship to: ARI
Attn: Sue Dunnihoo
Shipping Date: 8.20.09
Shipper: Windward Env
Airbill Number:
Form filled out by: C. Lorenz
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions [Jar tag number(s)]
8-20-09	1040	EW09-11-ITSED01	2	sediment	X							
	1045	EW09-11-ITSED02										
	1052	EW09-11-ITSED03										NOTE:
	1057	EW09-11-ITSED04										Archive all
	1103	EW09-11-ITSED05										samples frozen
	1108	EW09-11-ITSED06										until further
	1113	EW09-11-ITSED07										instructions.
	1118	EW09-11-ITSED08										
	1124	EW09-11-ITSED09										
	1130	EW09-11-ITSED10										
	1135	EW09-11-ITSED11										
	1140	EW09-11-ITSED12										
		Total Number of Containers	24	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Joanna Florer	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/20/09 1758	Date/Time: 8/20/09 1758	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

0051-0001-0003

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 2746

Project/Client Name: EWRI/FS Surface Sediment MIS
Project Number: 09-08-09-46
Contact Name: Mona Mitchell
Sampled By: CL, JF, DB, MY

Ship to: ARI
Attn: Sue Dunnihoo
Shipper: Windward Env
Form filled out by: C. Lorenz

Shipping Date: 8 20 09
Airbill Number:
Turnaround requested:

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required): Archive							Comments / Instructions [Jar tag number(s)]
8.20.09	1145	EW09-11-ITSED13	2	sediment	X							
↓	1152	EW09-11-ITSED14	2	↓	X							
												NOTE: Archive all samples frozen until further instructions.
		Total Number of Containers	4	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Janna Flaxer	J. Peterson	Print name:	
Signature:	Company: ARI	Signature:	Company:
Company: Windward		Company:	
Date/Time: 8/20/09 1750	Date/Time: 8/20/09 1758	Date/Time:	Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Windward environmental LLC
200 West Mercer Street
Suite 401
Seattle, WA 98119
Tel: (206) 378-1364
Fax: (206) 217-9343

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: PW59	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: WINDWARD	Phone:	Date: 11/5/09	Ice Present?
Client Contact: Susan McGroddy		No. of Coolers:	Cooler Temps:
Client Project Name:			
Client Project #:	Samplers: eg gs		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	PCB Congeners	Dioxins/Furans	Aroclors	organochlorine PEST	SVOCs	Metals Hg	Tributyltin	TOC	Total solids	Notes/Comments
EW09-ITSED-AWMIS-01	11/5/09	11:22	Sed	2										
EW09-ITSED-AWMIS-02		9:52		2										
EW09-ITSED-AWMIS-03		12:07		2										
EW09-ITSED-PAMIS-01		10:40		2										

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
~~1 Jar for analysis~~	(Signature)	(Signature) J. Peterson	(Signature)	(Signature)
~~1 jar for archive~~	Printed Name:	Printed Name: J. Peterson	Printed Name:	Printed Name:
2 Jars on Hold	Company:	Company: ARI	Company:	Company:
	Date & Time:	Date & Time: 11/6/09 1750	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

71855

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 11/17/09

ANALYTICAL RESOURCES INCORPORATED

ARI Project: PY02

Laboratory: Analytical Perspectives
Lab Contact:
Lab Address: 2714 Exchange Drive
Wilmington, NC 28405
Phone: 910-794-1613
Fax: 910-794-3919

ARI Client: Windward Environmental, LLC
Project ID: EW RI/FS SURFACE SEDIMENT
ARI PM: Sue Dunnihoo
Phone: 206-695-6207
Fax: 206-695-6201

Analytical Protocol: PSDDA
Special Instructions:

Requested Turn Around: **12/01/09**
Fax Results (Y/N): **Yes**

Limits of Liability. *Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or sucessors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.*

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
09-28441-PY02A	EW09-CS-001-010-AREA1	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28442-PY02B	EW09-CS-002-010-AREA2	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28443-PY02C	EW09-CS-003-010-AREA3	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28444-PY02D	EW09-CS-004-010-AREA4	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28445-PY02E	EW09-CS-005-010-AREA5	11/14/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28446-PY02F	EW09-CS-006-010-AREA6	11/14/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28447-PY02G	EW09-CS-007-010-AREA7	11/14/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28448-PY02H	EW09-CS-008-010-AREA8	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					

Carrier UPS	Airbill 1Z8326950144025831		Date 11/17/09
Relinquished by [signature]	Company ARI	Date 11/17/09	Time 1600
Received by [signature]	Company Analytical Perspectives	Date 18 Nov 09	Time 10:30

P1855

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 11/17/09

ANALYTICAL RESOURCES INCORPORATED

ARI Project: PY02

Laboratory: Analytical Perspectives
Lab Contact:

ARI Client: Windward Environmental,
Project ID:

ARI Sample ID	Client Sample ID/ Add'l Sample ID	Sampled	Matrix	Bottles	Analyses
09-28449-PY02I	EW09-CS-009-010-AREA9	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28450-PY02J	EW09-CS-010-010-AREA10	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28451-PY02K	EW09-CS-011-010-AREA11	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28452-PY02L	EW09-CS-012-010-AREA12	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28453-PY02M	EW09-CS-013-010-AREA13	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					

Carrier UPS	Airbill 1Z8326950144025831		Date 11/17/09
Relinquished by	Company ARI	Date 11/17/09	Time 1600
Received by M Moodsuhite	Company Analytical Perspectives	Date 18 Nov 09	Time 10:30

P1855

Kimberly Mace

From: Cheronne Oreiro [cheronneo@arilabs.com]
Sent: Tuesday, November 17, 2009 7:44 PM
To: tmorgan@ultratrace.com
Subject: ARI Project PY02 Dioxin Samples

Attachments: PY02_Sub_Data.pdf

PY02_Sub_Data.pdf (98 KB)

Hi Tamara,

Sorry, Sue is on vacation and I wasn't sure who to send this to. Would you please forward this to the appropriate person if it's not you?
We shipped 13 sediment samples 11/17/09 to your lab under ARI project:
PY02. The client wanted to omit the '-AREA#' from each of the sample ID.
Attached is the revised custody transfer.
Please let me know if you have any questions.
Thanks,
-Cheronne

--
Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 11/17/09

ANALYTICAL RESOURCES INCORPORATED

ARI Project: PY02

P1855

Laboratory: Analytical Perspectives
Lab Contact:
Lab Address: 2714 Exchange Drive
Wilmington, NC 28405
Phone: 910-794-1613
Fax: 910-794-3919

ARI Client: Windward Environmental, LLC
Project ID: EW RI/FS SURFACE SEDIMENT
ARI PM: Sue Dunnihoo
Phone: 206-695-6207
Fax: 206-695-6201

Analytical Protocol: PSDDA
Special Instructions:

Requested Turn Around: 12/01/09
Fax Results (Y/N): Yes

Limits of Liability. *Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or sucessors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.*

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
09-28441-PY02A	EW09-CS-001-010	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28442-PY02B	EW09-CS-002-010	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28443-PY02C	EW09-CS-003-010	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28444-PY02D	EW09-CS-004-010	11/12/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28445-PY02E	EW09-CS-005-010	11/14/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28446-PY02F	EW09-CS-006-010	11/14/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28447-PY02G	EW09-CS-007-010	11/14/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28448-PY02H	EW09-CS-008-010	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					

Carrier	Airbill		Date
Relinquished by	Company	Date	Time
Received by M Russelewhite	Company Analytical Perspectives	Date 18 Nov 09	Time 10:30

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 11/17/09

ANALYTICAL RESOURCES INCORPORATED

ARI Project: PY02

P1855

Laboratory: Analytical Perspectives
Lab Contact:

ARI Client: Windward Environmental,
Project ID:

ARI Sample ID	Client Sample ID/ Add'l Sample ID	Sampled	Matrix	Bottles	Analyses
09-28449-PY02I	EW09-CS-009-010	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28450-PY02J	EW09-CS-010-010	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28451-PY02K	EW09-CS-011-010	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28452-PY02L	EW09-CS-012-010	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					
09-28453-PY02M	EW09-CS-013-010	11/16/09	Sediment	1	Dioxin/Furans 1613(Sub)
Special Instructions: None					

Carrier		Airbill		Date	
Relinquished by	Company		Date		Time
Received by A. Russelwhite	Company Analytical Perspectives		Date 18 NOV 09		Time 10:30

SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 12/28/09

ANALYTICAL RESOURCES INCORPORATED

ARI Project: QC54

Laboratory: Analytical Perspectives
Lab Contact:
Lab Address: 2714 Exchange Drive
Wilmington, NC 28405
Phone: 910-794-1613
Fax: 910-794-3919

ARI Client: Windward Environmental, LLC
Project ID: EW RI/FS Surface Sediments
ARI PM: Sue Dunnihoo
Phone: 206-695-6207
Fax: 206-695-6201

Analytical Protocol: PSDDA
Special Instructions:

Requested Turn Around: **01/08/09**
Fax Results (Y/N): **Email**

Limits of Liability. *Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or sucessors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.*

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
09-31456-QC54N	EW09-ITSED-AWMIS-01	11/05/09 11:22	Sediment	1	Dioxin/Furans 1613(Sub) PCB Congeners
Special Instructions: None					
09-31457-QC54O	EW09-ITSED-AWMIS-02	11/05/09 09:52	Sediment	1	Dioxin/Furans 1613(Sub) PCB Congeners
Special Instructions: None					
09-31458-QC54P	EW09-ITSED-AWMIS-03	11/05/09 12:07	Sediment	1	Dioxin/Furans 1613(Sub) PCB Congeners
Special Instructions: None					
09-31459-QC54Q	EW09-ITSED-PAMIS-01	11/05/09 10:40	Sediment	1	Dioxin/Furans 1613(Sub) PCB Congeners
Special Instructions: None					

Carrier UPS	Airbill 1Z832695014359 6235		Date 12/28/09
Relinquished by [signature]	Company ARI	Date 12/28/09	Time 1600
Received by [signature]	Company Analytical Perspectives	Date 29 Dec 09	Time 10:19