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MEMORANDUM

DATE: February 8, 2011

SUBJ: Data Validation Report – Merino Park Site
Case: 40414, SDG: D24240

FROM: Steve Stodola, QA Chemist, OEME SS

TO: Ted Bazenas, OSC, OSRR

Attached please find the Data Validation Report (DV memo, worksheets and support documents) and the laboratory data package for the Case and SDG mentioned above. The Data Summary Table in the DV memo is the one that we sent to you on November 10, 2010. After signing the Receipt/Transfer Forms attached to the top of the data packages, please forward the hardcopies of the DV Report and data package to Records Center.

If you have any questions, please give me a call at 617-918-8634.

cc: G. Sotolongo, OEME

SDMS DocID 485699

Steve Stodola
US EPA Approval Signature

11-10-10
Date

Ms. Christine Clark
Regional Sample Control Custodian
Office of Environmental Measurement and Evaluation
U.S. EPA Region I
11 Technology Drive
North Chelmsford, MA 01863

November 9, 2010

Re: TO No. 45, Task No. 1, TDF No. 2047B
Case No. 40414, SDG No. D24240
AGAT Laboratories - Calgary, AB
Merino Park Site, Providence, RI
Stage_2B_Validation_Manual (S2BVM)

Dioxin/Furan:	18/Soil/	D24240, D24241, D24242, D24243, D24244, D24245, D24246, D24247, D24248, D24249, D24250, D24251, D24252, D24253, D24254, D24255, D24256, D24257 (Field duplicates D24254/ D24257)
	2/PE/	D24258 (PC01411), D24259 (PC02263)

Dear Ms. Clark:

A stage 2B manual validation was performed on the organic analytical data for 18 soil samples and 2 performance evaluation samples collected by Weston Solutions, Inc. for the U.S. EPA at the Merino Park Site in Providence, RI. The samples were analyzed according to USEPA SOW DLM02.2, December 2009. The samples were validated using first the criteria in the USEPA SOW DLM02.2, December 2009, and then the Sampling and Analysis Plan (SAP) for the Merino Park Site, Providence, Providence County, RI, August 2010; conducted under the: Emergency Planning and Response Branch (EPRB) Generic Program Quality Assurance Project Plan (QAPP), June16, 2005; and finally to EPA Region I's Environmental Services Assistance Team Dioxin/Furan Data Validation SOP ESAT-01-0007 (10/7/10). The data were evaluated based on the following parameters:

	I.	Data Completeness
*	II.	Preservation and Holding Times
	III.	Accuracy Check (Performance Evaluation Results)
*	IV.	Window Defining Mix
	V.	Initial and Continuing Calibrations
*	VI.	Chromatographic Resolution and Sensitivity Check
*	VII.	Blanks
NR	VIII.	Matrix Spike/Matrix Spike Duplicate
*	IX	Laboratory Control Sample
	X.	Field Duplicates
	XI.	Labeled Compounds and Clean-Up Standards
*	XII.	Sample Analysis and Identification
	XIII.	Sample Quantitation
	XIV.	2378-TCDD Toxicity Equivalents (TE)
*	XV.	Required Sample Reruns

XVI. System Performance

* All criteria were met for this parameter.
NR Not Required
Electronic Data Review Report not available for this SDG

Overall Evaluation of Data and Potential Usability Issues

The following is a summary of the site investigation/assessment objectives:

- To determine whether a removal action is warranted and if so whether the response should be classified as an emergency, time-critical, or non-time critical removal action.
- To rapidly assess and evaluate the urgency, magnitude, extent and impact of a release, or threatened release, of hazardous substances, pollutants or contaminants, and their impact on human health and/or the environment.
- To assess air quality to determine the level of personal protective equipment that must be used by site workers and to identify safety zones at the site.
- To supply ATSDR or others with information about the nature and magnitude of any health threat and to support subsequent public health advisories.
- To determine a remedy to eliminate, reduce, or control risks to human health and the environment and to support an "Action" decision memorandum documenting the identified removal approach.
- To support a "Closure" decision memorandum, when removal site evaluation is terminated.

Two single-blind PE samples (fortified native soil D24258/PC01411 and fortified native soil blank D24259/PC02263) were analyzed by the laboratory. All dioxins and furans were "Within Limits" for PE sample D24258 except OCDD which was scored "Action High". All dioxins and furans were "Within Limits" for PE sample D24259 with the following exceptions. The 2378-TCDD, 2378-TCDF, 123789-HxCDD, 1234678-HpCDF, 1234678-HpCDD, 1234789-HpCDF, OCDD, and OCDF results were scored "Action High". The positive results for the congeners listed above are estimated (J) in all samples because the concentrations may be biased high.

Data validation indicated some data quality problems. Results were qualified due to PE sample results, continuing calibration %D, field duplicate precision, labeled compound recovery, and labeled compound ion ratios. See the attached worksheets for details. The reported results are usable for the site objectives. The Data Summary Tables summarize the final sample results that have been validated according to EPA Region 1 data validation procedures.

Very truly yours,

Robert Peary
Sr. Chemist

Louis Macri
Program Manager

cc: Ted Bazenas, On Scene Coordinator (DV Memorandum, Attachments, Laboratory Data Package)

Attachments: Data Summary Tables
Data Validation Worksheets
Support Documentation
PE Score Results
Communications
CSF Audit

Data Summary Table
Dioxin/Furan Analysis - Soil Samples
(ng/Kg, Dry wt.)

SITE: Merino Park Site - Providence, RI
CASE NO. 40414 SDG No. D24240
LABORATORY: AGAT Laboratories - Calgary, AB

SAMPLE NUMBER:	Toxicity	D24240		D24241		D24242		D24243		D24244	
STATION LOCATION:	Equivalency	SS-01		SS-02		SS-03		SS-04		SS-05	
MATRIX:	Factors #	SOIL		SOIL		SOIL		SOIL		SOIL	
TCDD/TCDF CONC.:		ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*
2,3,7,8-TCDD	1	33.5 J		135 J		59.7 J		222 J		314 J	
2,3,7,8-TCDF	0.1	2.69 J		7.02 J		14.7 J		10.9 J		11.2 J	
1,2,3,7,8-PeCDF	0.03	2.82 J		U	0.432	U	0.279	U	0.221	U	0.330
1,2,3,7,8-PeCDD	1	3.86 J		1.39 J		4.11 J		4.31 J		3.61 J	
2,3,4,7,8-PeCDF	0.3	4.03 J		2.40 J		5.18 J		4.76 J		3.53 J	
1,2,3,4,7,8-HxCDF	0.1	5.53		5.49		16.3		10.7		7.21	
1,2,3,6,7,8-HxCDF	0.1	5.03 J		3.73 J		11.3		6.22		6.61	
1,2,3,4,7,8-HxCDD	0.1	4.84 J		1.85 J		5.56 J		3.11 J		3.50 J	
1,2,3,6,7,8-HxCDD	0.1	4.90 J		3.64 J		16.6		7.13		8.44	
1,2,3,7,8,9-HxCDD	0.1	6.93 J		4.70 J		17.2 J		12.7 J		9.50 J	
2,3,4,6,7,8-HxCDF	0.1	4.91 J		4.46 J		12.1		10.3		7.81	
1,2,3,7,8,9-HxCDF	0.1	3.52 J			0.490 *	1.89		7.03		2.56 J	
1,2,3,4,6,7,8-HpCDF	0.01	18.7 J		26.4 J		121 J		44.4 J		67.7 J	
1,2,3,4,6,7,8-HpCDD	0.01	51.0 J		67.1 J		434 J		117 J		183 J	
1,2,3,4,7,8,9-HpCDF	0.01	6.02 J		2.68 J		9.13 J		7.23 J		6.16 J	
OCDD	0.0003	364 J		526 J		4410 J		898 J		1320 J	
OCDF	0.0003	33.4 J		41.0 J		220 J		86.3 J		121 J	
TOTAL TCDD		40.7 J		151 J		84.3 J		255 J		341 J	
TOTAL PeCDD		91.8 J		282 J		54.6 J		52.4 J		256 J	
TOTAL HxCDD		28.5 J		36.8 J		193 J		74.3 J		90.2 J	
TOTAL HpCDD		88.4 J		132 J		943 J		235 J		370 J	
TOTAL TCDF		81.5 J		342 J		359 J		360 J		498 J	
TOTAL PeCDF		87.2 J		269 J		510 J		337 J		418 J	
TOTAL HxCDF		58.6 J		126 J		586 J		221 J		308 J	
TOTAL HpCDF		41.3 J		60.2 J		564 J		105 J		176 J	
TOXIC EQUIVALENT #:		43.3 J		141 J		82.0 J		236 J		328 J	
PERCENT SOLIDS:		95.3		91.4		84.1		96.5		81.8	
DILUTION FACTOR:		1.0		1.0		1.0		1.0		1.0	
COLLECTION DATE:		8/18/2010		8/18/2010		8/18/2010		8/18/2010		8/18/2010	
EXTRACTION DATE:		9/14/2010		9/14/2010		9/14/2010		9/14/2010		9/15/2010	
ANALYSIS DATE:		10/4/2010		10/4/2010		10/4/2010		10/4/2010		10/5/2010	
LAB SAMPLE ID:		1965028A		1965040A		1965041A		1965046A		1965050A	

Data Summary Table
Dioxin/Furan Analysis - Soil Samples
(ng/Kg, Dry wt.)

SITE: Merino Park Site - Providence, RI
CASE NO. 40414 SDG No. D24240
LABORATORY: AGAT Laboratories - Calgary, AB

SAMPLE NUMBER:	Toxicity Equivalency Factors #	D24245		D24246		D24247		D24248		D24249	
STATION LOCATION:		SS-06		SS-07		SS-08		SS-09		SS-10	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL	
TCDD/TCDF CONC.:		ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*
2,3,7,8-TCDD	1	179 J		163 J		35.1 J		114 J		54.7 J	
2,3,7,8-TCDF	0.1	10.6 J		7.05 J		3.02 J		4.48 J		5.08 J	
1,2,3,7,8-PeCDF	0.03	U	0.162	U	0.209	U	0.104	U	0.117	U	0.0975
1,2,3,7,8-PeCDD	1	2.04 J		1.77 J		0.830 J		1.24 J		1.01 J	
2,3,4,7,8-PeCDF	0.3	2.44 J		3.05 J		1.38 J		1.69 J		2.05 J	
1,2,3,4,7,8-HxCDF	0.1	7.89		10.3		2.84 J		3.99 J		4.93 J	
1,2,3,6,7,8-HxCDF	0.1	4.78 J		4.40 J		1.90 J		2.26 J		3.09 J	
1,2,3,4,7,8-HxCDD	0.1	2.12 J		1.88 J		1.17 J		1.62 J		1.09 J	
1,2,3,6,7,8-HxCDD	0.1	6.32		4.76 J		2.06 J		3.47 J		2.59 J	
1,2,3,7,8,9-HxCDD	0.1	5.90 J		5.11 J		3.33 J		4.13 J		3.77 J	
2,3,4,6,7,8-HxCDF	0.1	5.63		3.57 J		2.12 J		2.94 J		2.98 J	
1,2,3,7,8,9-HxCDF	0.1	1.80 J		1.18 J		0.580 J		0.721 J		0.528 J	
1,2,3,4,6,7,8-HpCDF	0.01	51.1 J		36.2 J		14.8 J		26.8 J		19.2 J	
1,2,3,4,6,7,8-HpCDD	0.01	149 J		97.4 J		38.5 J		85.1 J		47.3 J	
1,2,3,4,7,8,9-HpCDF	0.01	3.56 J		2.79 J		1.89 J		1.96 J		1.41 J	
OCDD	0.0003	1180 J		697 J		291 J		658 J		366 J	
OCDF	0.0003	95.5 J		53.9 J		24.7 J		53.1 J		26.6 J	
TOTAL TCDD		216 J		198 J		39.3 J		125 J		71.0 J	
TOTAL PeCDD		43.2 J		102 J		58.4 J		247 J		16.8 J	
TOTAL HxCDD		64.2 J		51.2 J		16.4 J		33.1 J		29.1 J	
TOTAL HpCDD		296 J		188 J		71.1 J		172 J		89.9 J	
TOTAL TCDF		351 J		299 J		71.5 J		205 J		171 J	
TOTAL PeCDF		310 J		344 J		65.0 J		196 J		171 J	
TOTAL HxCDF		212 J		166 J		46.5 J		124 J		80.8 J	
TOTAL HpCDF		132 J		79.3 J		33.5 J		70.0 J		38.4 J	
TOXIC EQUIVALENT #:		188 J		171 J		38.6 J		120 J		59.5 J	
PERCENT SOLIDS:		95.2		96.4		98.7		85.7		97.3	
DILUTION FACTOR:		1.0		1.0		1.0		1.0		1.0	
COLLECTION DATE:		8/18/2010		8/18/2010		8/18/2010		8/18/2010		8/18/2010	
EXTRACTION DATE:		9/15/2010		9/15/2010		9/15/2010		9/15/2010		9/15/2010	
ANALYSIS DATE:		10/5/2010		10/5/2010		10/5/2010		10/5/2010		10/5/2010	
LAB SAMPLE ID:		1965051A		1965052A		1965053A		1965054A		1965055A	

Data Summary Table
Dioxin/Furan Analysis - Soil Samples
(ng/Kg, Dry wt.)

SITE: Merino Park Site - Providence, RI
CASE NO. 40414 SDG No. D24240
LABORATORY: AGAT Laboratories - Calgary, AB

SAMPLE NUMBER:	Toxicity	D24250		D24251		D24252		D24253		D24254	
STATION LOCATION:	Equivalency	SS-11		SS-12		SS-13		SS-14		SS-15	
MATRIX:	Factors #	SOIL		SOIL		SOIL		SOIL		SOIL	
TCDD/TCDF CONC.:		ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*
2,3,7,8-TCDD	1	39.0 J		1.28 J		263 J		13.7 J		44.6 J	
2,3,7,8-TCDF	0.1	4.45 J		3.09 J		7.63 J		1.96 J		4.12 J	
1,2,3,7,8-PeCDF	0.03	U	0.945	U	0.0864	U	0.324	U	0.0685	U	0.0544
1,2,3,7,8-PeCDD	1	U	1.36	0.530 J		2.57 J		0.528 J		2.24 J	
2,3,4,7,8-PeCDF	0.3		2.07 *	1.54 J		2.09 J		0.901 J		1.99 J	
1,2,3,4,7,8-HxCDF	0.1	4.16 J		3.13 J		6.27 J		1.43 J		3.51 J	
1,2,3,6,7,8-HxCDF	0.1	3.99 J		1.96 J		6.14 J		1.00 J		3.05 J	
1,2,3,4,7,8-HxCDD	0.1		2.16 *	0.666 J		3.51 J		0.613 J		2.58 J	
1,2,3,6,7,8-HxCDD	0.1	3.99 J		1.26 J		6.81 J		0.980 J		3.67 J	
1,2,3,7,8,9-HxCDD	0.1	6.52 J		1.55 J		9.10 J		2.16 J		4.81 J	
2,3,4,6,7,8-HxCDF	0.1	4.02 J		2.25 J		5.59 J		1.20 J		2.93 J	
1,2,3,7,8,9-HxCDF	0.1		1.47 *	0.464 J		2.37 J		0.548 J		2.00 J	
1,2,3,4,6,7,8-HpCDF	0.01	21.1 J		9.56 J		56.2 J		5.32 J		16.7 J	
1,2,3,4,6,7,8-HpCDD	0.01	54.7 J		15.4 J		155 J		16.8 J		48.2 J	
1,2,3,4,7,8,9-HpCDF	0.01	4.44 J		1.31 J		4.00 J		1.08 J		4.19 J	
OCDD	0.0003	372 J		110 J		1160 J		177 J		394 J	
OCDF	0.0003	33.0 J		12.3 J		102 J		11.9 J		38.3 J	
TOTAL TCDD		48.1 J		12.9 J		288 J		18.8 J		56.2 J	
TOTAL PeCDD		10.3 J		8.87 J		147 J		69.3 J		134 J	
TOTAL HxCDD		30.7 J		14.7 J		70.4 J		12.6 J		25.3 J	
TOTAL HpCDD		97.0 J		31.8 J		320 J		33.2 J		91.1 J	
TOTAL TCDF		86.3 J		164 J		377 J		88.0 J		145 J	
TOTAL PeCDF		25.3 J		151 J		324 J		66.3 J		108 J	
TOTAL HxCDF		67.2 J		61.8 J		234 J		26.2 J		66.8 J	
TOTAL HpCDF		41.5 J		19.0 J		142 J		12.3 J		41.9 J	
TOXIC EQUIVALENT #:		43.6 J		4.01 J		274 J		15.8 J		51.0 J	
PERCENT SOLIDS:		94.8		96.8		61.2		94.1		81.3	
DILUTION FACTOR:		1.0		1.0		1.0		1.0		1.0	
COLLECTION DATE:		8/18/2010		8/18/2010		8/18/2010		8/18/2010		8/18/2010	
EXTRACTION DATE:		9/15/2010		9/16/2010		9/16/2010		9/16/2010		9/16/2010	
ANALYSIS DATE:		10/5/2010		10/5/2010		10/5/2010		10/5/2010		10/5/2010	
LAB SAMPLE ID:		1965056A		1965057A		1965058A		1965059A		1965060A	

Data Summary Table
Dioxin/Furan Analysis - Soil Samples
(ng/Kg, Dry wt.)

SITE: Merino Park Site - Providence, RI
CASE NO. 40414 SDG No. D24240
LABORATORY: AGAT Laboratories - Calgary, AB

SAMPLE NUMBER:	Toxicity	D24255		D24256		D24257	
STATION LOCATION:	Equivalency	SS-16		SS-17		SS-18	
MATRIX:	Factors #	SOIL		SOIL		SOIL	
TCDD/TCDF CONC.:		ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*	ng/Kg	DL/EMPC*
2,3,7,8-TCDD	1	33.2 J		12.1 J		54.2 J	
2,3,7,8-TCDF	0.1	2.83 J		4.32 J		4.88 J	
1,2,3,7,8-PeCDF	0.03	U	0.0713	U	0.0954	U	0.144
1,2,3,7,8-PeCDD	1	1.28 J		8.16		2.88 J	
2,3,4,7,8-PeCDF	0.3	1.49 J		4.24 J		2.79 J	
1,2,3,4,7,8-HxCDF	0.1	2.44 J		35.0		4.53 J	
1,2,3,6,7,8-HxCDF	0.1	1.73 J		44.9		4.15 J	
1,2,3,4,7,8-HxCDD	0.1	1.40 J		22.6		3.51 J	
1,2,3,6,7,8-HxCDD	0.1	2.23 J		40.3		4.81 J	
1,2,3,7,8,9-HxCDD	0.1	3.38 J		45.2 J		8.84 J	
2,3,4,6,7,8-HxCDF	0.1	2.03 J		42.7		4.21 J	
1,2,3,7,8,9-HxCDF	0.1	0.992 J		18.9		2.00 J	
1,2,3,4,6,7,8-HpCDF	0.01	11.3 J		1000 J		24.2 J	
1,2,3,4,6,7,8-HpCDD	0.01	31.0 J		1400 J		93.0 J	
1,2,3,4,7,8,9-HpCDF	0.01	2.59 J		68.0 J		6.77 J	
OCDD	0.0003	260 J		11400 J		815 J	
OCDF	0.0003	20.9 J		3520 J		90.7 J	
TOTAL TCDD		40.5 J		29.5 J		68.0 J	
TOTAL PeCDD		87.2 J		38.0 J		146 J	
TOTAL HxCDD		16.7 J		336 J		34.4 J	
TOTAL HpCDD		55.2 J		2410 J		150 J	
TOTAL TCDF		112 J		158 J		116 J	
TOTAL PeCDF		87.1 J		642 J		116 J	
TOTAL HxCDF		43.8 J		2610 J		88.1 J	
TOTAL HpCDF		26.7 J		3020 J		65.3 J	
TOXIC EQUIVALENT #:		37.2 J		76.1 J		63.1 J	
PERCENT SOLIDS:		92.8		96.8		85.2	
DILUTION FACTOR:		1.0		1.0		1.0	
COLLECTION DATE:		8/18/2010		8/18/2010		8/18/2010	
EXTRACTION DATE:		9/16/2010		9/16/2010		9/16/2010	
ANALYSIS DATE:		10/5/2010		10/5/2010		10/6/2010	
LAB SAMPLE ID:		1965061A		1965062A		1965063A	

* = The values in this column are either the Detection Limits (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a " * ". The DL values are unmarked.

The EMPC values are not qualified with a "J", because the values are already estimated.

= The Toxic Equivalent concentrations are calculated with the Toxicity Equivalency Factors (TEFs) found in "The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds", Society of Toxicology, July 7, 2006.
Concentrations reported by the laboratory below the CRQL are flagged (J) on the Data Summary Table as estimated values.

DATA VALIDATION STATEMENTS:
(1) 2378-TCDD, 2378-TCDF, 123789-HxCDD, 1234678-HpCDF, 1234678-HpCDD, 1234789-HpCDF, OCDD, OCDF: All positive results are estimated (J) due to "Action High" PE scores.
(2) OCDF: CCV %D criteria exceeded. All results are estimated (J, UJ) for samples D024248 through D024257.
(3) 23478-PeCDF, 1234789-HpCDF, OCDD, OCDF: Associated labeled compond CCV %D criteria exceeded. All results are estimated (J, UJ) for samples D024248 through D024257.
(4) 123789-HxCDD, 1234789-HpCDF, 1234678-HpCDD, OCDD, OCDF: Field duplicate precision outside criteria. Positive results are estimated (J) for samples D24254 and D24257.
(5) OCDD, OCDF, 1234678-HpCDF, 1234789-HpCDF/Sample D24242: Associated labeled compound recovery criteria exceeded. Results are estimated (J, UJ).
(6) 2378-TCDF/Samples D24246, D24249, D24251: Associated labeled compound ion ratio criteria exceeded. Results are estimated (J, UJ).

EPA-NE
Data Validation Worksheet Cover Page

Site Name Merrimac Park
Reference No. 01GL

REGION I DIOXIN/FURAN DATA VALIDATION

The following data package has been validated:

Lab Name AGAT Laboratories, Ltd.
Case/Project No. 40414
SDG No. D24240
No. of Samples/Matrix 18/Soil ; 2/PE Soil

SOW/Method No. DLM02.2
Sampling Date(s) 8/18/10 (Rcd. Lab-8/25/10)
Date(s) Rec'd by Lab 8/25/10
Validation Label Code S2BVM

Traffic Report Sample Nos. D24240 → D24257

Equipment Blank Nos. None
Field Duplicate Nos. D24254/D24257 (SJ-15/SJ-18 per e-mail)
PES Nos. D24258 (PC01411), D24259 (PC02263)

The samples were validated using the criteria in the SOW/Method stated above, and the EPA approved QAPP; defaulting next to Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 procedures; and finally to EPA Region I's ESAT Standard Operating Procedures for Dioxin/Furan Data Validation, October 2010 (ESAT-01-0007).

The data were evaluated based upon the following parameters. Check the appropriate column if all criteria are met and no hard copy worksheet provided. Also check the appropriate column for Manual Data Review or if Electronic Data Review Reports were used in the evaluation of the data.

Parameter		All Criteria Met	Manual Review	Electronic Data Review
I.	Data Completeness		✓	N/A
II.	Preservation and Holding Times	✓	✓	
III.	Accuracy Check (Performance Evaluation Results) Qual.	✓	✓	N/A
IV.	Window Defining Mix	✓	✓	N/A
V.	Initial and Continuing Calibrations Qual.		✓	N/A
VI.	Column Performance Resolution Check		✓	N/A
VII.	Blanks		✓	
VIII.	Matrix Spike/Matrix Spike Duplicate (~None)	NA	NA ✓	N/A
IX.	Laboratory Control Sample	✓	✓	
X.	Laboratory and Field Duplicates Qual.		✓	N/A
XI.	Labeled Compounds and Clean-Up Standard Qual		✓	
XII.	Sample Analysis and Identification		✓	N/A
XIII.	Sample Quantitation		✓	
XIV.	Sensitivity Check	✓	✓	
XV.	2378-TCDD Toxicity Equivalents (TE)		✓	N/A
XVI.	Required Sample Reruns and Second Column Confirmation		✓	
XVII.	System Performance		✓	N/A

I certify that all criteria were met for the worksheets checked above.

Validator's Name B Keary Company Name Tech Law/ESAT Phone Number 978-775-9730

Date Validation Started 10/19/10 Date Validation Completed 11/8/10

Region I Definitions and Qualifiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
EB - Compound detected in aqueous equipment blank associated with soil/sediment samples.

Region I
Data Review Worksheet

I. DATA COMPLETENESS

MISSING INFORMATION	DATE ~~LAB~~ TOPO CONTACTED	DATE RECEIVED
See Attached:	① 10/20/10	10/28/10 - (Partial); 11/8/10
	② 10/22/10	10/28/10 (Partial); 11/8/10
	~~3/Reply~~ ~~11/1/10~~	RCP 11/4/10 See 11/3 Conf. Call

Conf. Call w/ Paul Houle to discuss 10/28 lab response (2 separate e-mails) - lab will send corrections for all items pending. 11/3/10

Reviewer: [signature]

Date: 11/8/10

Peary, Rob

From: Peary, Rob
Sent: Wednesday, October 20, 2010 4:02 PM
To: stodola.steve@epamail.epa.gov
Cc: Svetaka.Pat@epamail.epa.gov; Depierro.Denise@epamail.epa.gov; Macri, Louis
Subject: Lab Info Request; Case:40414, SDG:D24240 - Merino Park

Hi Steve,
Here is a lab request for the Merino Park, Dioxin/Furan data package.
Thanks, Rob

Paul Houle
AGAT Laboratories - Calgary, AB
403-735-2005
houle@agatlabs.com

Paul:
During the data validation of the data package for Case: 40414, SDG: D24240 [Lab WO: 10C431462], we noted the following items that need to be resolved.

✓ 1. The "PCDD/PCDF Sample Data Summary" forms and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms do not contain the correct Lab. Sample ID. They all have the EPA Sample Number entered for the Lab. Sample ID. Please submit any corrected forms and additional data as necessary.

✓ 2. The "PCDD/PCDF Sample Data Summary" forms, "2DF-Form II HR CDD, Total homologues" forms, and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms contain numerous incorrect dates for the "Date Extracted" and the "Date Analyzed" for all samples. Please submit corrected forms and additional data as necessary.

✓ 3. The "2DF-Form II HR CDD, Total homologues" forms beginning with EPA Sample No. D24248 contain the incorrect "Lab File ID". Please submit any corrected forms and additional data as necessary.

✓ 4. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists the incorrect EPA Sample No. for lab sample 1965065A. Please submit any corrected forms and additional data as necessary.

✓ 5. The "5DFC-Form V-HR CDD-3, Analytical Sequence" forms (pages 602, 603) list numerous incorrect entries for "Date Analyzed" for both standards and samples. Please submit any corrected forms and additional data as necessary.

X No Response 6. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists samples D2457, D2458, and D2459 as being analyzed on 10/6/10. There is no Window Defining Mix or Continuing Calibration Standard listed for the beginning of the 12-hour sequence for these samples. Please submit any WDM and CCAL reports for these samples and all associated raw data.

X No Response 7. There are no ending CCAL Standards for the analytical sequences beginning 10/4/10, 1733 and 10/5/10, 1326. Please submit any available ending CCAL data for these sequences.

✓ 8. No "5DFA-Form V-HR CDD-1, WDM Summary", "5DFB-Form V-HR CDD-2, Chromatographic Resolution Summary", "5DFC-Form V-HR CDD-3, Analytical Sequence" forms, or Tune data were submitted for the 9/15/10 initial calibration. Please submit the associated ICAL information. [from next sequence following ICAL]

X Unable to fix 9. The "1DFB-Form I-HR CDD-2, Toxicity Equivalence Summary" forms for all samples show a final Total-TEQ value of "0.0". Please submit the forms with the correct sum of the TEF-Adjusted Concentrations. (If possible, please use the 2005 Toxicity Equivalency Factors instead of the 1989 TEFs.)

✓/X 10. No supporting data were included for the DB-225 confirmation analyses results for 2378-TCDF. Please submit all QC and raw data including: tune data, chromatographic resolution, initial calibration, continuing calibrations, quantitation reports, chromatograms, etc. for the confirmation analyses for all samples.

No CCAL data for 10/6/10

Thanks for your help in resolving this item.
Steve Stodola, QA Chemist, Region I

Peary, Rob

From:	Peary, Rob
Sent:	Wednesday, October 27, 2010 8:43 AM
To:	stodola.steve@epamail.epa.gov
Cc:	Svetaka.Pat@epamail.epa.gov; Depierro.Denise@epamail.epa.gov; Macri, Louis
Subject:	Lab Info Request-2; Case:40414, SDG:D24240 - Merino Park

Hi Steve,
Here is an additional lab request for the Merino Park dioxin SDG (TDF-2047). I included a request for a lab electronic deliverable of the sample results (#8). I wasn't sure if you had asked for that or not.
Thanks, Rob

Paul Houle
AGAT Laboratories - Calgary, AB
403-735-2005
houle@agatlabs.com

Paul:
During the data validation of the data package for Case: 40414, SDG: D24240 [Lab WO: 10C431462], we noted the following additional items that need to be resolved.

✓ 1. There was no supporting raw data for the Window Defining Mix samples which were run at the beginning of each sequence. Please submit the WDM raw data (chromatograms and quantitation reports) associated with all samples in this SDG. (From next sequence following DCAL)

X 2. There is only one Signal-to-Noise (S/N) value reported on the quantitation reports for each compound. Please identify which ion this is associated with and explain how the S/N is monitored for the other ion. (Software Issue)

X 3. An EMPC result which is a different value than the concentration result is reported when the ion ratio criteria are not met. Please explain show how the EMPC values are calculated and show an example for one of the samples. Do not know calc.

X 4. There is no Total Homologue report for the method blank DFBLKS1. Please submit a Total Homologue report for this method blank. Not submitted

✓ 5. The Percent Solids are not reported on the Sample Data Summary forms. Please submit any corrected forms as necessary.

X 6. The percent solids values appear to have been calculated on the sample preparation sheets but not included in the sample results calculations or reported on the results forms (item #5 above). Please identify whether the final sample results are reported on a wet weight or dry weight basis. Please identify whether the Volume/Mass Extracted values on the Sample Work-Up Sheets are wet or dry weights. Please show an example of a result calculation for one analyte. Resubmitted Forms 1, and EDD are wet wt.

✓ 7. No cleanup standard results are reported. Please indicate whether a cleanup standard was used for this analysis. Please submit any corrected forms and additional data as necessary. (None Used)

✓/X 8. A "standard" lab electronic deliverable sample results file would be helpful since the EXES data does not appear to be available for this SDG. (Contains wet wt. results and No Total Homologue results.)

Thanks for your help in resolving these items.
Steve Stodola, QA Chemist, Region I

Region I

Data Review Worksheet

A.C.M.

II. PRESERVATION AND HOLDING TIMES

Sampler:_____ Company: Weston Solutions Contacted Yes No Date:_____

1. Circle sample numbers with exceeded contract holding times or omitted preservation. Soil - 4°C ± 2°C

Sample Number	Matrix	Preserved Y/N	Date Sampled	Date Extracted	Date Analyzed	Action
D24240	Soil	11°C *	8/18/10	9/14,15,16/10	10/4,5,6/10	None
(thru)						
D24257						
		*Slight temp exceedance - P.J. - No Action				

List Technical Holding Times: Extraction: 1 Year, Analytical: 1 Year from extraction (Soil)

List Contractual Holding Times: Extraction: 35 Days (Completed) - Soil, Analytical: —

Validator: RFeay

Date: 10/19/10

01/03

(spike)

PES SCORING EVALUATION REPORT

PES PC01411 Rev: 3 EPA Sample No.: D24258 Report Date: 10/14/2010

Lab Name: AGAT Laboratories
Contract: EP10W001067
SDG No.: D24240
Lab File ID: 10C431463_DX_TS_I
Date Analyzed: 10/06/10
Conc. Extract Vol. (uL): 20.0
GC Column: DB-5
Units: ng/Kg

Case No.: 40414
Matrix: Soil
Date Received: 08/25/2010
Sample Wt./Vol. (g/mL): 9.33 g
Injection Vol. (uL): 1.0
ID (mm): 0.25

Lab Code: AGATAB
TO No.: EP-CALL-0002
Lab Sample ID: D24258
Date Extracted: 09/16/2010
Water Sample Prep.: NA
% Solids/Lipids: NA
Dilution Factor: 1

Analysis Method: DLM01.4
Scoring Method: DLM01.4
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
1746-01-6	2378-TCDD	11.2		PASS	Within Limits
51207-31-9	2378-TCDF	3.03		PASS	Within Limits
57117-41-6	12378-PeCDF	1.75	J	N.E.	Not Evaluated
40321-76-4	12378-PeCDD	8.62		PASS	Within Limits
57117-31-4	23478-PeCDF	4.62	J	PASS	Within Limits
70648-26-9	123478-HxCDF	2.23	J	N.E.	Not Evaluated
57117-44-9	123678-HxCDF	1.89	J	N.E.	Not Evaluated
39227-28-6	123478-HxCDD	6.78		PASS	Within Limits
57653-85-7	123678-HxCDD	12.2		PASS	Within Limits
19408-74-3	123789-HxCDD	19.1		PASS	Within Limits
60851-34-5	234678-HxCDF	9.91		PASS	Within Limits
72918-21-9	123789-HxCDF	13.7		PASS	Within Limits
67562-39-4	1234678-HpCDF	12.6		PASS	Within Limits
35822-46-9	1234678-HpCDD	70.6		PASS	Within Limits
55673-89-7	1234789-HpCDF	3.35	J	N.E.	Not Evaluated
3268-87-9	OCDD	175		FAIL	Action High
39001-02-0	OCDF	20.4		N.E.	Not Evaluated
41903-57-5	Total TCDD	23.003		PASS	Warning High
36088-22-9	Total PeCDD	38.4965		FAIL	Action High
34465-46-8	Total HxCDD	41.7901		PASS	Within Limits
37871-00-4	Total HpCDD	81.5238		PASS	Within Limits
55722-27-5	Total TCDF	11.3374		FAIL	Action High
30402-15-4	Total PeCDF	13.6408		PASS	Warning High
55684-94-1	Total HxCDF	35.5231		PASS	Within Limits
38998-75-3	Total HpCDF	34.3868		FAIL	Action High
****	END Main Analytes	**********	****	****	**********
****	END All Analytes	**********	****	****	**********

NA BEP 10/20/10 (Totals are already estimated.)

PC01411

SAMPLE No.

D24258

AGAT Laboratories
2910 12th St. NE Calgary
Alberta
PCDD/PCDF SAMPLE DATA SUMMARY
HRGC/HRMS

Lab Name:	AGAT laboratories	Contract:	EP10W001067
Lab Code:	AGATAB	Case No.:	40414
TO No.:	EP-CALL-0002	SDG No.:	D24240
Sample wt./vol.:	9.33	g/ml:	g
GC Column:	DB-5	ID(mm):	0.25
Lab.Sample ID:	D24258	Lab.File ID:	10C431463_DX_TS_RE
Matrix(Soil/Water/Ash/Tissue):	Water	Date Received:	08/25/2010
Water Sample Prep(SEPF/SPE):		Date Extracted:	09/16/2010
Concentration Units(pg/L or ng/kg):	ng/kg	Date Analysed:	06-Oct-10
Injection Volume(µl):	1.00	%Solids/Lipids:	
Concentrated Extract Volume(µl):	20.00	Dilution Factor:	1

Target Analytes	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Conc	Q	EMPC	EDL
2378-TCDD	320/322	26.89	0.748		11.2			
2378-TCDF	304/306	26.27	0.732		3.03			
12378-PeCDF	340/342	30.00	1.43		1.75	J		
12378-PeCDD	356/358	31.10	1.55		8.62			
23478-PeCDF	340/342	30.73	1.45		4.62	J		
123478-HxCDF	374/376	33.89	1.18		2.23	J		
123678-HxCDF	374/376	34.01	1.24		1.89	J		
123478-HxCDD	390/392	34.74	1.25		6.78			
123678-HxCDD	390/392	34.83	1.23		12.2			
123789-HxCDD	390/392	35.20	1.28		19.1			
234678-HxCDF	374/376	34.61	1.14		9.91			
123789-HxCDF	374/376	35.49	1.12		13.7			
1234678-HpCDF	408/410	37.43	0.979		12.6			
1234678-HpCDD	424/426	38.71	1.03		70.6			
1234789-HpCDF	408/410	39.30	1.11		3.35	J		
OCDD	458/460	43.38	0.897		175			
OCDF	442/444	43.60	0.771		20.4			

Note: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits
13C-2378-TCDD	332/334	26.88	0.774		0.65 - 0.89	61.8		25 - 164
13C-12378-PeCDD	368/370	31.07	1.58		1.32 - 1.78	56.2		25 - 181
13C-123478-HxCDD	402/404	34.73	1.26		1.05 - 1.43	78.6		32 - 141
13C-123678-HxCDD	402/404	34.82	1.27		1.05 - 1.43	77.4		28 - 130
13C-1234678-HpCDD	436/438	38.70	1.06		0.88 - 1.20	53.0		23 - 140
13C-OCDD	470/472	43.36	0.875		0.76 - 1.02	24.3		17 - 157
13C-2378-TCDF	316/318	26.25	0.774		0.65 - 0.89	56.8		24 - 169
13C-12378-PeCDF	352/354	29.99	1.57		1.32 - 1.78	48.7		24 - 185
13C-23478-PeCDF	352/354	30.71	1.56		1.32 - 1.78	49.7		21 - 178
13C-123478-HxCDF	384/386	33.88	0.497		0.43 - 0.59	66.5		26 - 152
13C-123678-HxCDF	384/386	34.00	0.504		0.43 - 0.59	67.3		26 - 123
13C-234678-HxCDF	384/386	34.58	0.508		0.43 - 0.59	69.7		28 - 136
13C-123789-HxCDF	384/386	35.48	0.505		0.43 - 0.59	66.6		29 - 147
13C-1234678-HpCDF	418/420	37.41	0.421		0.37 - 0.51	44.8		28 - 143
13C-1234789-HpCDF	418/420	39.28	0.406		0.37 - 0.51	40.7		26 - 138

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits

(#) Column to be used to flag values outside QC limits.

PC 01411

2DF - FORM II HR CDD
CDD/CDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY
HIGH RESOLUTION

EPA Sample No.
D24258

Lab Name:	AGAT Laboratories			Contract No	EP10W001067	
Lab Code	AGATAB	Case Number	40414	TO Number	SDG No.	D24240
Matrix(soil/water/ash/tissue/oil):	Soil			Las Sample ID	1965064A	
Sample wt/vol:	9.33 g/mL			Lab File ID	10C123456_TS	
Water Sample Prep:	SEPF/SPE			Date Received	08/25/2010	
Concentrated Extract Volume:	20 µL			Date Extracted	06/16/2010	
Injection Volume:	1 µL	% solids/lipids		Date Analyzed	10/5/10	
GC Column:	DB-5	ID	0.25 (mm)	Dilution Factor	1.0	

Concentration Units pg/L or ng/Kg: ng/kg

Homologue	Peaks	Concentration	Q	EMPC/EDL
Dioxins				
Total TCDD	10	23.003		
Total PeCDD	5	38.4965		
Total HxCDD	6	41.7901		
Total HpCDD	2	81.5238		
Furans				
Total TCDF	20	11.3374		
Total PeCDF	11	13.6408		
Total HxCDF	10	35.5231		
Total HpCDF	4	34.3868		

Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids). The total homologue concentrations do not affect the TEF (toxicity Equivalence Factor) calculations.

(BLK)

PES SCORING EVALUATION REPORT

PES PC02263 Rev: 3 EPA Sample No.: D24259 Report Date: 10/21/2010

Lab Name: AGAT Laboratories
Contract: EP10W001067
SDG No.: D24240
Lab File ID: 10C431462_DX_US_I
Date Analyzed: 10/06/10
Conc. Extract Vol. (uL): 20.0
GC Column: DB-5
Units: ng/Kg

Case No.: 40414
Matrix: Soil
Date Received: 08/25/2010
Sample Wt./Vol. (g/mL): 9.48 g
Injection Vol. (uL): 1.0
ID (mm): 0.25

Lab Code: AGATAB
TO No.: EP-CALL-0002
Lab Sample ID: D24259
Date Extracted: 09/16/2010
Water Sample Prep.: NA
% Solids/Lipids: NA
Dilution Factor: 1

Analysis Method: DLM01.4
Scoring Method: DLM01.4
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
1746-01-6	2378-TCDD	5.63		FAIL	Action High
51207-31-9	2378-TCDF	2.62		FAIL	Action High
57117-41-6	12378-PeCDF	0	U	PASS	Within Limits
40321-76-4	12378-PeCDD	2.97	J	PASS	Within Limits
57117-31-4	23478-PeCDF	2.21	J	PASS	Within Limits
70648-26-9	123478-HxCDF	4.03	J	PASS	Within Limits
57117-44-9	123678-HxCDF	4.05	J	PASS	Within Limits
39227-28-6	123478-HxCDD	3.60	J	PASS	Within Limits
57653-85-7	123678-HxCDD	4.72	J	PASS	Within Limits
19408-74-3	123789-HxCDD	6.76		FAIL	Action High
60851-34-5	234678-HxCDF	3.89	J	PASS	Within Limits
72918-21-9	123789-HxCDF	2.81		PASS	Within Limits
67562-39-4	1234678-HpCDF	47.0		FAIL	Action High
35822-46-9	1234678-HpCDD	74.6		FAIL	Action High
55673-89-7	1234789-HpCDF	6.80		FAIL	Action High
3268-87-9	OCDD	515		FAIL	Action High
39001-02-0	OCDF	127		FAIL	Action High
41903-57-5	Total TCDD	16.9621		N.E.	Not Evaluated
36088-22-9	Total PeCDD	7.0023		N.E.	Not Evaluated
34465-46-8	Total HxCDD	26.3296		N.E.	Not Evaluated
37871-00-4	Total HpCDD	122.2884		N.E.	Not Evaluated
55722-27-5	Total TCDF	13.6857		N.E.	Not Evaluated
30402-15-4	Total PeCDF	32.0633		N.E.	Not Evaluated
55684-94-1	Total HxCDF	115.2392		N.E.	Not Evaluated
38998-75-3	Total HpCDF	129.1214		N.E.	Not Evaluated
****	END Main Analytes	**********	****	****	**********
****	END All Analytes	**********	****	****	**********

PC 02263

SAMPLE No.

D24259

AGAT Laboratories
2910 12th St. NE Calgary
Alberta
PCDD/PCDF SAMPLE DATA SUMMARY
HRGC/HRMS

Lab Name:	AGAT laboratories	Contract:	EP10W001067
Lab Code:	AGATAB	Case No.:	40414
TO No.:	EP-CALL-0002	SDG No.:	D24240
Sample wt./vol.:	9.48	g/ml:	g
GC Column:	DB-5	ID(mm):	0.25
Lab.Sample ID:	D24259	Lab.File ID:	10C431462_DX_US_RE
Matrix(Soil/Water/Ash/Tissue):	Water	Date Received:	08/25/2010
Water Sample Prep(SEPF/SPE):		Date Extracted:	09/16/2010
Concentration Units(pg/L or ng/kg):	ng/kg	Date Analysed:	06-Oct-10
Injection Volume(µl):	1.00	%Solids/Lipids:	
Concentrated Extract Volume(µl):	20.00	Dilution Factor:	1

Target Analytes	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Conc	Q	EMPC	EDL
2378-TCDD	320/322	26.89	0.741		5.63			
2378-TCDF	304/306	26.27	0.670		2.62			
12378-PeCDF	340/342	0.00	0.0			U		0.0352
12378-PeCDD	356/358	31.10	1.52		2.97	J		
23478-PeCDF	340/342	30.73	1.43		2.21	J		
123478-HxCDF	374/376	33.90	1.11		4.03	J		
123678-HxCDF	374/376	34.02	1.15		4.05	J		
123478-HxCDD	390/392	34.75	1.24		3.60	J		
123678-HxCDD	390/392	34.85	1.24		4.72	J		
123789-HxCDD	390/392	35.20	1.18		6.76			
234678-HxCDF	374/376	34.61	1.15		3.89	J		
123789-HxCDF	374/376	35.50	1.17		2.81			
1234678-HpCDF	408/410	37.43	0.992		47.0			
1234678-HpCDD	424/426	38.72	1.02		74.6			
1234789-HpCDF	408/410	39.30	0.885		6.80			
OCDD	458/460	43.38	0.857		515			
OCDF	442/444	43.60	0.834		127			

Note: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits
13C-2378-TCDD	332/334	26.88	0.782		0.65 - 0.89	70.8		25 - 164
13C-12378-PeCDD	368/370	31.08	1.57		1.32 - 1.78	68.4		25 - 181
13C-123478-HxCDD	402/404	34.74	1.27		1.05 - 1.43	82.4		32 - 141
13C-123678-HxCDD	402/404	34.83	1.26		1.05 - 1.43	77.7		28 - 130
13C-1234678-HpCDD	436/438	38.70	1.04		0.88 - 1.20	60.6		23 - 140
13C-OCDD	470/472	43.36	0.906		0.76 - 1.02	35.8		17 - 157
13C-2378-TCDF	316/318	26.25	0.773		0.65 - 0.89	65.1		24 - 169
13C-12378-PeCDF	352/354	29.99	1.60		1.32 - 1.78	58.9		24 - 185
13C-23478-PeCDF	352/354	30.72	1.55		1.32 - 1.78	60.3		21 - 178
13C-123478-HxCDF	384/386	33.89	0.500		0.43 - 0.59	69.7		26 - 152
13C-123678-HxCDF	384/386	34.01	0.502		0.43 - 0.59	68.0		26 - 123
13C-234678-HxCDF	384/386	34.59	0.512		0.43 - 0.59	68.3		28 - 136
13C-123789-HxCDF	384/386	35.49	0.508		0.43 - 0.59	69.5		29 - 147
13C-1234678-HpCDF	418/420	37.42	0.428		0.37 - 0.51	51.0		28 - 143
13C-1234789-HpCDF	418/420	39.29	0.427		0.37 - 0.51	49.0		26 - 138

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits

(#) Column to be used to flag values outside QC limits.

PC02263

2DF - FORM II HR CDD
CDD/CDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY
HIGH RESOLUTION

EPA Sample No.
D24259

Lab Name:	AGAT Laboratories			Contract No	EP10W001067	
Lab Code	AGATAB	Case Number	40414	TO Number	SDG No.	D24240
Matrix(soil/water/ash/tissue/oil):	Soil			Las Sample ID	1965065A	
Sample wt/vol:	9.48 g/mL			Lab File ID	10C123456_US	
Water Sample Prep:	SEPF/SPE			Date Received	08/25/2010	
Concentrated Extract Volume:	20 µL			Date Extracted	06/16/2010	
Injection Volume:	1 µL	% solids/lipids		Date Analyzed	10/5/10	
GC Column:	DB-5	ID	0.25 (mm)	Dilution Factor	1.0	

Concentration Units pg/L or ng/Kg: ng/kg

Homologue	Peaks	Concentration	Q	EMPC/EDL
Dioxins				
Total TCDD	13	16.9621		
Total PeCDD	10	7.0023		
Total HxCDD	7	26.3296		
Total HpCDD	2	122.2884		
Furans				
Total TCDF	23	13.6857		
Total PeCDF	16	32.0633		
Total HxCDF	12	115.2392		
Total HpCDF	4	129.1214		

Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids). The total homologue concentrations do not affect the TEF (toxicity Equivalence Factor) calculations.

Region I

Data Review Worksheet

III. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: D24240 CASE/PROJECT No: 40414

Are more than one-half of the PES analytes within criteria for each parameter. Y N

PE Sample Number	Ampule Number	Type of PES	Matrix	Analyte	Conc. ng/Kg	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action
D24258	PC0444	RI-Single Blind	Soil (Spiked)	OCDD	175	Action High	—	All	J-pos.
				Total TCDD	23,003	warning High	—	—	None
				PeCDD	385	Action High	—	—	Totals
				TCDF	11.7		—	—	already
				HpCDF	34.4		—	—	estimated values
				PeCDF	136	warning High	—	—	

* For Region I PESs indicate the Region I PES Score Report Results: Action Low; Action High; TCL MISS; TCL CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: Pfeay Date: 10/21/10

Region I

Data Review Worksheet

III. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No: D24240 CASE/PROJECT No: 40414

Are more than one-half of the PES analytes within criteria for each parameter. Y N

PE Sample Number	Ampule Number	Type of PES	Matrix	Analyte	Conc. ng/kg	Region I EPA PES Scores*	Non-EPA PES Scores**	Samples Affected	Action
D24259	PC02263	RI-Single Blind	Soil-(Blank Matrix)	2378-TCDD	5.63	Action High	—	All	J-Pos.
				2378-TCDF	2.62				
				~~123478-HxCDD~~	~~360~~				
				123789-HxCDD	6.76				
				123478-HpCDF	47.0				
				1234678-HpCDD	74.8				
				1234789-HpCDF	6.80				
				OCDD	515				
				OCDF	127				

pd 10/22/10

* For Region I PESs indicate the Region I PES Score Report Results: Action Low; Action High; TCL MISS; TCL CONTAMINANT

** For Non-EPA PESs indicate the Non-EPA PES Score: PES COMPOUND MISS; PES COMPOUND CONTAMINANT; PES COMPOUND HIT (% Recovery Limits)

Validator: RPeary Date: 10/21/10

Region I

Data Review Worksheet

IV. WINDOW DEFINING MIX

1. Were the PCDD/PCDF isomers reported within the defined windows? Y or N

2. Was the WDM run at the required frequency? Y or N

Evaluation: List any of the PCDD/PCDF homologues which were outside the retention time windows.

WDM Date Run/ID	First Isomer/Retention Time	Last Isomer/Retention Time	Retention Time Of Homologue Outside Window	Sample No.

CCM
10/4/10 17:33
10/5/10 17:26

IEM
9/16/10 - 10:27 (Following ICAL, next sequence)
(*None Run Prior ICAL)

Validator: [signature]

Date: 11/8/10

01/03

Region I
Data Review Worksheets

V. INITIAL AND CONTINUING CALIBRATIONS

Va. INITIAL CALIBRATION

Date of ICAL	Instrument File Name	Compound	%RSD	Ion Ratio	S/N	RT	Resolution	Samples Affected	Action
9/5/10	091510_ DX-CS1 etc.		✓	✓	✓	✓	✓		None
9/20/10	092010_ DX-CS1 etc	(PFMS Conf)	✓	✓	✓	✓	✓		

DFLM01.2 criteria	1613B criteria	8290A criteria
The %RSD of the five ~~RRFs (CC1~~-CC5) for the unlabeled PCDDs/PCDFs ~~and~~ the internal standards must not exceed 15 percent. ±20 % Native, ±35 % labeled	The %R~~SD of~~ the five RRFs (CC1-CC5) for the unlabeled PCDDs/PCDFs must not exceed 20 percent and labeled standards must not exceed 35 percent.	The %RSD of the five RRFs (CC1-CC5) for the unlabeled PCDDs/PCDFs must not exceed 20 percent and labeled standards must not exceed 30 percent.

Other Method/Technical Specification criteria:	Comments:

Validator: [signature]

Date: 11/8/10

Region I
Data Review Worksheets

V. INITIAL AND CONTINUING CALIBRATIONS Continued

Vb. CONTINUING CALIBRATION

Date of CCAL	Instrument File Name	Compound	%D	Ion Ratio	S/N	RT	Resolution	Samples Affected	Action
10/4/10 18:22	10C43146Z DX-03VER-ARE	—	✓	✓	✓	✓	✓	—	None
10/5/10 14:14	↓	ARE OCDF	-29.44	✓	✓	✓	✓	D024248 → D024257	J/UJ
↓	↓	13C-OCDD	-42.71					↓	↓
		13C-123478-HpCDF	-38.16					↓	↓
		13C-23478-PeCDF	-36.37					↓	↓
		—							
10/6/10	DB-225 Conf.	- No cert submitted							(No results affected)

DFLM01.2 criteria

Each analyte and internal standard in the CC3 solution must be within 30% of the mean RRF established during an initial calibration.

2nd: ± 25% NATW, ± 35% Labeled

1613B criteria

Each unlabeled PCDD/PCDF standard in the CS3 solution must be within ± 20% of the mean RRF established during an initial calibration and each labeled PCDD/PCDF standard in the CS3 solution must be within ± 35% of the mean RRF established during an initial calibration.

8290A criteria

For the beginning calibration each unlabeled PCDD/PCDF standard in the CC3 solution must be within ± 20% of the mean RRF established during an initial calibration and each labeled PCDD/PCDF standard in the CC3 solution must be within ± 30% of the mean RRF established during an initial calibration.

For the ending calibration each unlabeled PCDD/PCDF standard in the CC3 solution must be within ± 25% of the mean RRF established during an initial calibration and each labeled PCDD/PCDF standard in the CC3 solution must be within ± 35% of the mean RRF established during an initial calibration.

Other Method/Technical Specification criteria:

Comments:

Validator: [signature]

Date: 11/8/10

Region I

Data Review Worksheets

VI. COLUMN PERFORMANCE RESOLUTION CHECK (Methods 1613B & 8290A)

Date:_____ **ID:**_____

Was the chromatographic resolution of the TCDD/TCDF isomers and the in the CC3 or CS3 solution for DB-5 columns calculated for each 12 hour period?

CCAL
10/4/10 17:33 - 198
10/5/10 13:26 - 202

% Valley 1238-TCDD/ 2378-TCDD_____ (QC Limit ≤ 25%)

% Valley _____-TCDF/_____-TCDF_____ ICAL 9/16/10 - 10:27 - 198 (Next sequence following ICAL - None Before) (QC Limit ≤ 25%)

For DB-225 columns:

% Valley _____-TCDD/_____-TCDD_____ ICAL 9/20/10 - 1830 (Next sequence following ICAL) (QC Limit ≤ 25%)

% Valley _____-TCDF/_____-TCDF_____ (QC Limit ≤ 25%)

CCAL - 10/12/10 - NONE Submitted

ACTIONS:

A. If the GC resolution criteria do not meet specifications, the positive hits will be qualified as "J". All tetras and hexas (for both dioxin and furans) will be qualified. The heptas are not believed to be affected. OCDD and OCDF are not affected as there is only one isomer in each group. No action is taken for non-detects.

B. The criteria for chromatographic resolution must be met for all standards and the reviewer must use professional judgement on the severity of the problem and its effect on the final results.

Validator: [signature] Date: 11/8/10

VIIb. BLANKS ANALYSIS

10.0g
ng/kg

Type of Blank	Date Blank Sample/Originated	Compound	Max Conc. (units)	Action Level (units)	Samples Affected	Action
MB	Extract. 9/15/10	2378-TCDD	0.0583	0.292	(Samples Reported with AH results are > Action level)	None
		2378-TCDF	0.0423*	0.212		
		12378-PeCDF	0.0153*	0.0765		
		12378-PeCDD	0.0307*	0.154		
		23478-PeCDF	0.0210*	0.105		
		234678-HxCDF	0.0215	0.108		
		1234678-HpCDF	0.0605*	0.303		
		1234678-HpCDD	0.186	0.930		
		OCDD	1.48	14.8		
		OCDF	0.211*	2.11		
Total Homologue results for MB requested from lab, but not received. The prepared samples results appear to be well above the individual compound blank action levels. Not likely to impact sample results						(None)

*EMPC

ACTIONS:

A. Blank action levels are calculated as ten times the highest concentration of the contaminant determined in any blank for common contaminants (OCDD/OCDF and Total Homologues) and five times the highest concentration for all other analytes.

B The positive sample results that are less than the action level are reported as non-detects "U" at the reported concentration on the Data Summary Table.

C. If no blank is run with a particular matrix, the non-detected results should be accepted without qualifying the data and the positive hits should be flagged "J". If all samples have the same hits with similar concentrations and no blank is run, professional judgment should be used to determine if all results should be rejected "R".

D. If positive results are detected in aqueous equipment (Rinsate) blanks and the associated non-aqueous samples, then the validator should flag (EB) those detected compounds in the associated non-aqueous samples to indicate an indeterminate amount of sampling error has potentially affected the sample results.

Validator: [signature]

Date: 11/8/10

Region I

Data Review Worksheet

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

None

Method/Technical Specification Reference:_____

Limits: % Recovery:_____ RPD:_____ Default Limits: % Recovery (50-150%), RPD (50%)

List all MS/MSD analytes that are outside QC acceptance criteria.

Compound	MS % Rec	MSD % Rec	RPD	Method QC Limits		Concentration			%RSD	Action
				% Rec	RPD	Unspiked Sample	MS	MSD		
2378-TCDD										
12378-PeCDD										
123478-HxCDD										
123678-HxCDD										
123789-HxCDD										
1234678-HpCDD										
OCDD										
2378-TCDF										
12378-PeCDF										
23478-PeCDF										
123478-HxCDF										
123678-HxCDF										
234678-HxCDF										
123789-HxCDF										
1234678-HpCDF										
1234789-HpCDF										
OCDF										

ACTIONS:

If recoveries are beyond Method/Technical Specification or 50-150%, recheck all calculations. See Standard Operating Procedures for Dioxin//Furan Data Validation, January 2003 for specific guidance to flag data.

If RPDs are beyond Method/Technical Specification or 50%, recheck all calculations. See Standard Operating Procedures for Dioxin//Furan Data Validation, January 2003 for specific guidance to flag data.

Validator: [signature] Date: 10/22/10

Region I

Data Review Worksheet

IX. LABORATORY CONTROL SAMPLE

(ACM)

Method/Technical Specification Reference: DLM02.2

Limits: % Recovery: Table-6 RPD: NA (No LCSD) Default Limits: % Recovery (50-150%), RPD (50%)

List all LCS analytes that are outside QC acceptance criteria. DLC551 (10C43/462_OPR)

Compound	LCS % Rec	Method QC Limits	DLM02.2 Limits	Action	Affected Samples
		% Rec	%Rec		
2378-TCDD			67-158		
12378-PeCDD			70-142		
123478-HxCDD			70-164		
123678-HxCDD			76-134		
123789-HxCDD			64-162		
1234678-HpCDD			70-140		
OCDD			78-144		
2378-TCDF			75-158		
12378-PeCDF			80-134		
23478-PeCDF			68-160		
123478-HxCDF			72-134		
123678-HxCDF			84-130		
234678-HxCDF			70-156		
123789-HxCDF			78-130		
1234678-HpCDF			82-132		
1234789-HpCDF			78-138		
OCDF			63-170		

ACTIONS:

If recoveries or RPDs are beyond Method/Technical Specification or default criteria, recheck all calculations. See Standard Operating Procedures for Dioxin//Furan Data Validation, October 2010 for specific guidance to flag data.

Validator: [signature] Date: 10/22/10

Region I

Data Review Worksheets

X. LABORATORY AND FIELD DUPLICATES

Method/Technical Specification Reference: EPA N.E., EP RD, Generic Program QAPP, r.1, 6/16/05

Limits RPD: Soil - 50% Default Limits: RPD (50%)

Was a duplicate run for each matrix? Yes [X] No [ ]

The RPD of each analyte detected must be within the Method/Technical Specification or 30% of the acceptance range for aqueous or 50% for solids.

SAMPLE ID: D74254 (55-15) (81.3% sol) DUPLICATE ID: D74257 (55-18) (85.2% sol) (wet wt)

Compound	Sample Conc. ng/kg	Sample EDL		Duplicate Conc. ng/kg	Duplicate EDL		%RPD	Action
		EDL	2xEDL		EDL	2xEDL		
2378-TCDD	(See Attached)							
12378-PeCDD								
123478-HxCDD								
123678-HxCDD								
123789-HxCDD	3.91			7.53			-63.3	~~J(+)~~
1234678-HpCDD	39.2			79.2			-67.6	↓
OCDD	370			694			-73.8	↓
2378-TCDF								
12378-PeCDF								
23478-PeCDF								
123478-HxCDF								
123678-HxCDF								
234678-HxCDF								
123789-HxCDF								
1234678-HpCDF								
1234789-HpCDF	3.41			5.77			-51.4	~~J(+)~~
OCDF	31.1			77.3			-85.2	↓

ACTIONS:

If RPD is greater than Method/Technical Specification or 30% for aqueous or 50% for solids, flag all positive results "J" and non-detects "UJ" in the field duplicate samples. Recheck all calculations if the duplicate precision is beyond the specified range. Professional judgment should be used to ascertain effect on the final data despite sample concentration.

Validator: [signature] Date: 10/22/10

Field Dup

SDG: D24240

Analyte	D24254 ng/kg (wet wt)	D24257 ng/kg	% RPD
TCDD	36.3	46.2	-24.0
PeCDD	1.82	2.45	-29.5
123478-HxCDD	2.10	2.99	-35.0
123678-HxCDD	2.98	4.10	-31.6
123789HxCDD	3.91	7.53	-63.3
HpCDD	39.2	79.2	-67.6
OCDD	320	694	-73.8
TCDF	3.35	4.16	-21.6
12378PeCDF	ND	ND	#VALUE!
23478PeCDF	1.62	2.38	-38.0
123478-HxCDF	2.85	3.86	-30.1
123678-HxCDF	2.48	3.54	-35.2
234678-HxCDF	2.38	3.59	-40.5
123789HxCDF	1.63	1.70	-4.2
1234678HpCDF	13.6	20.6	-40.9
1234789HpCDF	3.41	5.77	-51.4
OCDF	31.1	77.3	-85.2

(All Lower)

10/22/10

Region I

Data Review Worksheets

XI. LABELED COMPOUNDS AND CLEANUP STANDARD (1613B)

The native congeners are affected by its labeled compound analog, except for 123789-HxCDD and OCDF. 123789-HxCDD is affected by ~~both~~ $^{13}C_{12}$-123478-HxCDD and $^{13}C_{12}$-123678-HxCDD, and OCDF is affected by $^{13}C_{12}$-OCDD.

~~Recovery Acceptance Criteria per Method 1613B (40-135%)~~

Recovery Acceptance Criteria per Technical Specification: DLM022

Sample Nos.	D24242						D24246						D24249					
Internal Standard	% Rec.	S/N	RT	Ion Ratio	QC Limits	Action	% Rec.	S/N	RT	Ion Ratio	QC Limits	Action	% Rec.	S/N	RT	Ion Ratio	QC Limits	Action
$^{13}C_{12}$-2378-TCDD																		
$^{13}C_{12}$-12378-PeCDD																		
$^{13}C_{12}$-123478-HxCDD																		
$^{13}C_{12}$-123678-HxCDD																		
~~$^{13}C_{12}$-123789-HxCDD~~ N/A																		
$^{13}C_{12}$-1234678-HpCDD																		
$^{13}C_{12}$-OCDD	15.8				17-157	J,UJ												
$^{13}C_{12}$-2378-TCDF										0.900	0.65-0.89	J,UJ				0.905	0.65-0.89	J,UJ
$^{13}C_{12}$-12378-PeCDF																		
$^{13}C_{12}$-23478-PeCDF																		
$^{13}C_{12}$-123478-HxCDF																		
$^{13}C_{12}$-123678-HxCDF																		
$^{13}C_{12}$-234678-HxCDF																		
$^{13}C_{12}$-123789-HxCDF																		
$^{13}C_{12}$-1234678-HpCDF	26.7				28-143	J,UJ												
$^{13}C_{12}$-1234789-HpCDF	24.9				26-138	J,UJ												
$^{37}Cl_4$-2378-TCDD *	* No clean-up standard used during sample prep. — No action taken for missing clean-up standard.																	

Validator: [signature]

Date: 10/22/10

Region I

Data Review Worksheets

XI. LABELED COMPOUNDS AND CLEANUP STANDARD (~~1613B~~)

~~Recovery Acceptance Criteria per Method 1613B (40-135%)~~

Recovery Acceptance Criteria per Technical Specification: DLM02.2

Sample Nos.	D2475 1																	
Internal Standard	% Rec.	S/N	RT	Ion Ratio	QC Limits	Action	% Rec.	S/N	RT	Ion Ratio	QC Limits	Action	% Rec.	S/N	RT	Ion Ratio	QC Limits	Action
$^{13}C_{12}$-2378-TCDD																		
$^{13}C_{12}$-12378-PeCDD																		
$^{13}C_{12}$-123478-HxCDD																		
$^{13}C_{12}$-123678-HxCDD																		
~~$^{13}C_{12}$-123789-HxCDD~~ N/A																		
$^{13}C_{12}$-1234678-HpCDD																		
$^{13}C_{12}$-OCDD																		
$^{13}C_{12}$-2378-TCDF				1.26	0.65-0.89	J, U5												
$^{13}C_{12}$-12378-PeCDF																		
$^{13}C_{12}$-23478-PeCDF																		
$^{13}C_{12}$-123478-HxCDF																		
$^{13}C_{12}$-123678-HxCDF																		
$^{13}C_{12}$-234678-HxCDF																		
$^{13}C_{12}$-123789-HxCDF																		
$^{13}C_{12}$-1234678-HpCDF																		
$^{13}C_{12}$-1234789-HpCDF																		
$^{37}Cl_4$-2378-TCDD																		

Validator: R Reay

Date: 10/27/00

Region I

Data Review Worksheet

DLM02.2

XII. Sample Analysis and Identification (~~DELM01.2~~)

List any sample and analytes which did not meet identification criteria:

SAMPLE Nos.	D24241				D24250											
NATIVE ANALYTES	RT	S/N	Ion Ratio *	QC Limits	RT	S/N	Ion Ratio	QC Limits	RT	S/N	Ion Ratio	QC Limits	RT	S/N	Ion Ratio	QC Limits
2378-TCDD																
12378-PeCDD																
123478-HxCDD							0.973 (EMPC)	1.05-1.43								
123678-HxCDD																
123789-HxCDD																
1234678-HpCDD																
OCDD																
2378-TCDF																
12378-PeCDF																
23478-PeCDF							1.89 (EMPC)	1.32-1.78								
123478-HxCDF																
123678-HxCDF																
234678-HxCDF																
123789-HxCDF			0.883 (Report as EMPC)	1.05-1.43			3.06 (EMPC)	1.05-1.43								
1234678-HpCDF																
1234789-HpCDF																
OCDF																

* Ion Ratio outliers are flagged on the Sample Data Summary Report

Validator: [signature]

Date: 10/25/10

XIII. SAMPLE QUANTITATION (DFLM01.2)

1. Do all soil/sediment samples have % solids greater than 30%? Y or No

2. Did the laboratory increase sample weight to compensate for % solids? Y or No

If no, list sample numbers: Sufficient dry weights to meet PQLs - (O.K.) - Lab reported "wet weight" results. (ESAT Converted Lab's results to Dry wt. values) (See attached Note) Ref 11/10/14

NA - Calc - Tier II

$$\text{Concentration (ng/g)} = \frac{Q_{is} \times (A_{x^1} + A_{x^2}) \times D}{(W \; V) \times (A_{is^1} + A_{is^2}) \times RRF_x}$$

$$EDL = \frac{2.5 \times Q_{is} \times (H_{x^1} + H_{x^2}) \times D}{(W \; V) \times (H_{is^1} + H_{is^2}) \times RRF_x}$$

$$EMPC = \frac{Q_{is} \times (A_{x^1} + A_{x^2}) \times D}{(W \; V) \times (A_{is^1} + A_{is^2}) \times RRF_x}$$

where:

Q_{is} = Quantity (ng) of appropriate internal standard added to sample before extraction.
A_x^1/A_x^2 = Integrated areas of the two quantitation ions.
A_{is}^1/A_{is}^2 = Integrated areas of the internal standard quantitation ions
W = Weight (g) of sample extracted.
V = Volume (L) of sample extracted.
RRF_x = Calculated relative response factor from the continuing calibration.
$H_x^1 + H_x^2$ = Peak heights of the noise for the quantitation ions.
$H_{is}^1 + H_{is}^2$ = Peak heights of the internal standard quantitation ions.
D = Dilution.

Validator: [signature] Date: 10/25/00

XIII Sample Quantitation

It was determined that the laboratory originally reported the sample results on a wet weight basis. The validator converted the original wet weight results to dry weight using the % solids factors (as directed by EPA). The laboratory subsequently submitted dry weight results reports. The laboratory had to reprocess all the original raw chromatographic data for the samples in order to include the % solids values in the calculations. The necessary manual integrations performed during the reprocessing were not identical to those which had been performed when the data was initially processed. This resulted in numerous small discrepancies between some of the dry weight values calculated by the validator from the original results and those reported by the laboratory after reprocessing. The original laboratory results which were converted by the validator to dry weight are the ones reported on the Data Summary Table. These results represent the original laboratory data upon which the data validation was performed. The laboratory did not submit any data package for the reprocessed data. Only revised final results forms were submitted. The Data Summary Table represents the validated dry weight results for the laboratory data originally submitted. No changes to the Data Summary Table submitted on 11/9/10 were needed.

1/10/11

Region I
Data Review Worksheet

XIVa. SENSITIVITY CHECK (Method Detection Limit Study)

No MDL

List all compounds and internal standards that are outside the MDL criteria.

- Has an appropriate MDL study been submitted with seven replicates for each compound and matrix of interest? Y N
- Date of Preparation/Analysis:_____ Within 1 year? Y N
- Instrument I.D.: _____ Same as samples? Y N
- Column I.D.: _____ Same as samples? Y N

Matrix	Compound	MDL >EDL	Method QC Limits < 80% or >120%	RSD > 20%	Samples Affected	Action

If an MDL study has not been submitted, use only the LFB results to evaluate data.

No LFB

(Laboratory Fortified Blank) - List LFB compounds, surrogates and internal standards that are outside criteria.

- Has an appropriate and complete LFB been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Was the LFB spiked with a standard from a source (vendor) independent of the calibration standard? Y N

Matrix	Compound	Method QC limits < 60% or > 140%, other:	IS % Rec. and/or RT Criteria	Samples Affected	Action

Validator: BHeavy

Date: 10/25/10

Region I
Data Review Worksheet

XIVb. SENSITIVITY CHECK (Method Detection Limit Study)

List CC1 or CS1 compounds, internal, clean-up, and recovery standards that are outside criteria.

ACM

- Has an appropriate and complete CC1 or CS1 been submitted at the proper frequency? Y N
- Does it contain all target compounds at the method-required QLs? Y N
- Does the retention of the compounds, internal, clean-up, and recovery standards meet criteria? Y N
- Does the ion abundance ratios and S/N meet criteria? Y N

CC1 or CS1 ID	Compound	RT	Ion Ratio	S/N	Samples Affected	Action

Comments:

Validator: [signature]

Date: 10/25/10

01/03

XV. 2378-TCDD TOXICITY EQUIVALENTS (TE)

All TE values are calculated by the ESAT data validator using the validated data evaluated in these worksheets. The TE calculations include the positive results, estimated values, and reported EMPC values. The TE calculations do not include EDL values. The TEF values used are published in "The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds", Society of Toxicology, July 7, 2006.

Did the laboratory calculated TE values match the calculated TE values calculated by the validator? Yes or No

If no, comment below: Lab software problem; Not able to calculate Total TEs. All Total TEs reported as 0.0 ng/kg. [Lab used 1989 TEF factors; we are reporting 2005 TEFs]

XVI. REQUIRED SAMPLE RERUNS AND SECOND COLUMN CONFIRMATION

1. Were all samples and/or QC reanalyzed as required or did not require re-analysis. Yes or No

   If no, list samples and action:

1. Were all samples (analyzed on DB-5 column or equiv.) containing 2,3,7,8-TCDF at or above the CRQL, or reported as an EMPC at or above the CRQL, analyzed on a confirmatory column (DB-225 or equiv.)? NOTE: The confirmatory analysis is not required when the initial analysis column meets isomer specificity requirements for both 2,3,7,8-TCDD and 2,3,7,8-TCDF. Yes or No

   If no, list samples and action:

XVII. SYSTEM PERFORMANCE

Were any trends or other overall system performance issues noted? Yes or No

If yes, comment below:
- Numerous Software (System error) on report forms.
- TEQ Totals could not be calculated (Software error).
- S/N Reporting issues on quantitation report (Software issues).
- Results reported wet wt. System could not report Dry. wt results.

Validator: [signature] Date: 11/5/10

SITE: Merino Park Site, Providence, RI
CASE NO.: 40414 SDG No.: D24240

PCDDs & PCDFs

Total Toxic Equivalency Worksheet (ng/kg)

Sample No.		D24240	D24241	D24242	D24243	D24244	D24245	D24246	D24247	D24248
		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Chemical Name	2378-TCDD Equiv. Factr. (1)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)
2,3,7,8-TCDD	1.0	33.5	135	59.7	222	314	179	163	35.1	114
2,3,7,8-TCDF	0.1	2.69	7.02	14.7	10.9	11.2	10.6	7.05	3.02	4.48
1,2,3,7,8-PeCDF	0.03	2.82	0	0	0	0	0	0	0	0
1,2,3,7,8-PeCDD	1.0	3.86	1.39	4.11	4.31	3.61	2.04	1.77	0.830	1.24
2,3,4,7,8-PeCDF	0.3	4.03	2.40	5.18	4.76	3.53	2.44	3.05	1.38	1.69
1,2,3,4,7,8-HxCDF	0.1	5.53	5.49	16.3	10.7	7.31	7.89	10.3	2.84	3.99
1,2,3,6,7,8-HxCDF	0.1	5.03	3.73	11.3	6.22	6.61	4.78	4.40	1.90	2.26
1,2,3,4,7,8-HxCDD	0.1	4.84	1.85	5.56	3.11	3.50	2.12	1.88	1.17	1.62
1,2,3,6,7,8-HxCDD	0.1	4.90	3.64	16.6	7.13	8.44	6.32	4.76	2.06	3.47
1,2,3,7,8,9-HxCDD	0.1	6.93	4.70	17.2	12.7	9.50	5.90	5.11	3.33	4.13
2,3,4,6,7,8-HxCDF	0.1	4.91	4.46	12.1	10.3	7.81	5.63	3.57	2.12	2.94
1,2,3,7,8,9-HxCDF	0.1	3.52	0.490	1.89	7.03	2.56	1.80	1.18	0.580	0.721
1,2,3,4,6,7,8-HpCDF	0.01	18.7	26.4	121	44.4	67.7	51.1	36.2	14.8	26.8
1,2,3,4,6,7,8-HpCDD	0.01	51.0	67.1	434	117	183	149	97.4	38.5	85.1
1,2,3,4,7,8,9-HpCDF	0.01	6.02	2.68	9.13	7.23	6.16	3.56	2.79	1.89	1.96
OCDD	0.0003	364	526	4410	898	1320	1180	697	291	658
OCDF	0.0003	33.4	41.0	220	86.3	121	95.5	53.9	24.7	53.1
Total Toxic Equivalent to 2378-TCDD (1)		43.338	140.95	81.973	236.290	327.54	188.27	170.96	38.647	119.93

(1) The Toxic Equivalent concentrations are calculated with the Toxicity Equivalency Factors (TEFs) found in "The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds, Society of Toxicology, July 7, 2006

0 = ND (Not Detected)
R = Rejected

SITE: Merino Park Site, Providence, RI
CASE NO.: 40414 SDG No.: D24240

PCDDs & PCDFs

Total Toxic Equivalency Worksheet (ng/kg)

Sample No.		D24249	D24250	D24251	D24252	D24253	D24254	D24255	D24256	D24257
		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Chemical Name	2378-TCDD Equiv. Factr. (1)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)	Conc. (ng/kg)
2,3,7,8-TCDD	1.0	54.7	39.0	1.28	263	13.7	44.6	33.2	12.1	54.2
2,3,7,8-TCDF	0.1	5.08	4.45	3.09	7.63	1.96	4.12	2.83	4.32	4.88
1,2,3,7,8-PeCDF	0.03	0	0	0	0	0	0	0	0	0
1,2,3,7,8-PeCDD	1.0	1.01	0	0.530	2.57	0.528	2.24	1.28	8.16	2.88
2,3,4,7,8-PeCDF	0.3	2.05	2.07	1.54	2.09	0.901	1.99	1.49	4.24	2.79
1,2,3,4,7,8-HxCDF	0.1	4.93	4.16	3.13	6.27	1.43	3.51	2.44	35.0	4.53
1,2,3,6,7,8-HxCDF	0.1	3.09	3.99	1.96	6.14	1.00	3.05	1.73	44.9	4.15
1,2,3,4,7,8-HxCDD	0.1	1.09	2.16	0.666	3.51	0.613	2.58	1.40	22.6	3.51
1,2,3,6,7,8-HxCDD	0.1	2.59	3.99	1.26	6.81	0.980	3.67	2.23	40.3	4.81
1,2,3,7,8,9-HxCDD	0.1	3.77	6.52	1.55	9.10	2.16	4.81	3.38	45.2	8.84
2,3,4,6,7,8-HxCDF	0.1	2.98	4.02	2.25	5.59	1.20	2.93	2.03	42.7	4.21
1,2,3,7,8,9-HxCDF	0.1	0.528	1.47	0.464	2.37	0.548	2.00	0.992	18.9	2.00
1,2,3,4,6,7,8-HpCDF	0.01	19.2	21.1	9.56	56.2	5.32	16.7	11.3	1000	24.2
1,2,3,4,6,7,8-HpCDD	0.01	47.3	54.7	15.4	155	16.8	48.2	31.0	1400	93.0
1,2,3,4,7,8,9-HpCDF	0.01	1.41	4.44	1.31	4.00	1.08	4.19	2.59	68.0	6.77
OCDD	0.0003	366	372	110	1160	177	394	260	11400	815
OCDF	0.0003	26.6	33.0	12.3	102	11.9	38.3	20.9	3520	90.7
Total Toxic Equivalent to 2378-TCDD (1)		59.503	43.649	4.010	273.543	15.785	50.973	37.155	76.075	63.143

(1) The Toxic Equivalent concentrations are calculated with the Toxicity Equivalency Factors (TEFs) found in "The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds, Society of Toxicology, July 7, 2006

0 = ND (Not Detected)
R = Rejected

SUPPORT DOCUMENTATION

PE SCORE RESULTS

PES SCORING EVALUATION REPORT

PES PC01411 Rev: 3 EPA Sample No.: D24258 Report Date: 10/14/2010

Lab Name: AGAT Laboratories
Contract: EP10W001067
SDG No.: D24240
Lab File ID: 10C431463_DX_TS_I
Date Analyzed: 10/06/10
Conc. Extract Vol. (uL): 20.0
GC Column: DB-5
Units: ng/Kg

Case No.: 40414
Matrix: Soil
Date Received: 08/25/2010
Sample Wt./Vol. (g/mL): 9.33 g
Injection Vol. (uL): 1.0
ID (mm): 0.25

Lab Code: AGATAB
TO No.: EP-CALL-0002
Lab Sample ID: D24258
Date Extracted: 09/16/2010
Water Sample Prep.: NA
% Solids/Lipids: NA
Dilution Factor: 1

Analysis Method: DLM01.4
Scoring Method: DLM01.4
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
1746-01-6	2378-TCDD	11.2		PASS	Within Limits
51207-31-9	2378-TCDF	3.03		PASS	Within Limits
57117-41-6	12378-PeCDF	1.75	J	N.E.	Not Evaluated
40321-76-4	12378-PeCDD	8.62		PASS	Within Limits
57117-31-4	23478-PeCDF	4.62	J	PASS	Within Limits
70648-26-9	123478-HxCDF	2.23	J	N.E.	Not Evaluated
57117-44-9	123678-HxCDF	1.89	J	N.E.	Not Evaluated
39227-28-6	123478-HxCDD	6.78		PASS	Within Limits
57653-85-7	123678-HxCDD	12.2		PASS	Within Limits
19408-74-3	123789-HxCDD	19.1		PASS	Within Limits
60851-34-5	234678-HxCDF	9.91		PASS	Within Limits
72918-21-9	123789-HxCDF	13.7		PASS	Within Limits
67562-39-4	1234678-HpCDF	12.6		PASS	Within Limits
35822-46-9	1234678-HpCDD	70.6		PASS	Within Limits
55673-89-7	1234789-HpCDF	3.35	J	N.E.	Not Evaluated
3268-87-9	OCDD	175		FAIL	Action High
39001-02-0	OCDF	20.4		N.E.	Not Evaluated
41903-57-5	Total TCDD	23.003		PASS	Warning High
36088-22-9	Total PeCDD	38.4965		FAIL	Action High
34465-46-8	Total HxCDD	41.7901		PASS	Within Limits
37871-00-4	Total HpCDD	81.5238		PASS	Within Limits
55722-27-5	Total TCDF	11.3374		FAIL	Action High
30402-15-4	Total PeCDF	13.6408		PASS	Warning High
55684-94-1	Total HxCDF	35.5231		PASS	Within Limits
38998-75-3	Total HpCDF	34.3868		FAIL	Action High
****	END Main Analytes	**********	****	****	**********
****	END All Analytes	**********	****	****	**********

PC01411

SAMPLE No.

D24258

AGAT Laboratories
2910 12th St. NE Calgary
Alberta
PCDD/PCDF SAMPLE DATA SUMMARY
HRGC/HRMS

Lab Name:	AGAT laboratories	Contract:	EP10W001067
Lab Code:	AGATAB	Case No.:	40414
TO No.:	EP-CALL-0002	SDG No.:	D24240
Sample wt/vol.:	9.33	g/ml:	g
GC Column:	DB-5	ID(mm):	0.25
Lab Sample ID:	D24258	Lab File ID:	10C431463_DX_TS_RE
Matrix(Soil/Water/Ash/Tissue):	Water	Date Received:	08/25/2010
Water Sample Prep(SEPF/SPE):		Date Extracted:	09/16/2010
Concentration Units(pg/L or ng/kg):	ng/kg	Date Analysed:	06-Oct-10
Injection Volume(µl):	1.00	%Solids/Lipids:	
Concentrated Extract Volume(µl):	20.00	Dilution Factor:	1

Target Analytes	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Conc	Q	EMPC	EDL
2378-TCDD	320/322	26.89	0.748		11.2			
2378-TCDF	304/306	26.27	0.732		3.03			
12378-PeCDF	340/342	30.00	1.43		1.75	J		
12378-PeCDD	356/358	31.10	1.55		8.62			
23478-PeCDF	340/342	30.73	1.45		4.62	J		
123478-HxCDF	374/376	33.89	1.18		2.23	J		
123678-HxCDF	374/376	34.01	1.24		1.89	J		
123478-HxCDD	390/392	34.74	1.25		6.78			
123678-HxCDD	390/392	34.83	1.23		12.2			
123789-HxCDD	390/392	35.20	1.28		19.1			
234678-HxCDF	374/376	34.61	1.14		9.91			
123789-HxCDF	374/376	35.49	1.12		13.7			
1234678-HpCDF	408/410	37.43	0.979		12.6			
1234678-HpCDD	424/426	38.71	1.03		70.6			
1234789-HpCDF	408/410	39.30	1.11		3.35	J		
OCDD	458/460	43.38	0.897		175			
OCDF	442/444	43.60	0.771		20.4			

Note: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits
13C-2378-TCDD	332/334	26.88	0.774		0.65 - 0.89	61.8		25 - 164
13C-12378-PeCDD	368/370	31.07	1.58		1.32 - 1.78	56.2		25 - 181
13C-123478-HxCDD	402/404	34.73	1.26		1.05 - 1.43	78.6		32 - 141
13C-123678-HxCDD	402/404	34.82	1.27		1.05 - 1.43	77.4		28 - 130
13C-1234678-HpCDD	436/438	38.70	1.06		0.88 - 1.20	53.0		23 - 140
13C-OCDD	470/472	43.36	0.875		0.76 - 1.02	24.3		17 - 157
13C-2378-TCDF	316/318	26.25	0.774		0.65 - 0.89	56.8		24 - 169
13C-12378-PeCDF	352/354	29.99	1.57		1.32 - 1.78	48.7		24 - 185
13C-23478-PeCDF	352/354	30.71	1.56		1.32 - 1.78	49.7		21 - 178
13C-123478-HxCDF	384/386	33.88	0.497		0.43 - 0.59	66.5		26 - 152
13C-123678-HxCDF	384/386	34.00	0.504		0.43 - 0.59	67.3		26 - 123
13C-234678-HxCDF	384/386	34.58	0.508		0.43 - 0.59	69.7		28 - 136
13C-123789-HxCDF	384/386	35.48	0.505		0.43 - 0.59	66.6		29 - 147
13C-1234678-HpCDF	418/420	37.41	0.421		0.37 - 0.51	44.8		28 - 143
13C-1234789-HpCDF	418/420	39.28	0.406		0.37 - 0.51	40.7		26 - 138

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits

(#) Column to be used to flag values outside QC limits.

PC 01411

2DF - FORM II HR CDD
CDD/CDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY
HIGH RESOLUTION

EPA Sample No.
D24258

Lab Name:	AGAT Laboratories			Contract No	EP10W001067	
Lab Code	AGATAB	Case Number	40414	TO Number	SDG No.	D24240
Matrix(soil/water/ash/tissue/oil):	Soil			Las Sample ID	1965064A	
Sample wt/vol:	9.33 g/mL			Lab File ID	10C123456_TS	
Water Sample Prep:	SEPF/SPE			Date Received	08/25/2010	
Concentrated Extract Volume:	20 µL			Date Extracted	06/16/2010	
Injection Volume:	1 µL	% solids/lipids		Date Analyzed	10/5/10	
GC Column:	DB-5	ID	0.25 (mm)	Dilution Factor	1.0	

Concentration Units pg/L or ng/Kg: ng/kg

Homologue	Peaks	Concentration	Q	EMPC/EDL
Dioxins				
Total TCDD	10	23.003		
Total PeCDD	5	38.4965		
Total HxCDD	6	41.7901		
Total HpCDD	2	81.5238		
Furans				
Total TCDF	20	11.3374		
Total PeCDF	11	13.6408		
Total HxCDF	10	35.5231		
Total HpCDF	4	34.3868		

Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids). The total homologue concentrations do not affect the TEF (toxicity Equivalence Factor) calculations.

PES SCORING EVALUATION REPORT

PES PC02263 Rev: 3 EPA Sample No.: D24259 Report Date: 10/21/2010

Lab Name: AGAT Laboratories
Lab Code: AGATAB
Contract: EP10W001067
Case No.: 40414
TO No.: EP-CALL-0002
SDG No.: D24240
Matrix: Soil
Lab Sample ID: D24259
Lab File ID: 10C431462_DX_US_I
Date Received: 08/25/2010
Date Extracted: 09/16/2010
Date Analyzed: 10/06/10
Sample Wt./Vol. (g/mL): 9.48 g
Water Sample Prep.: NA
Conc. Extract Vol. (uL): 20.0
Injection Vol. (uL): 1.0
% Solids/Lipids: NA
GC Column: DB-5
ID (mm): 0.25
Dilution Factor: 1
Units: ng/Kg

Analysis Method: DLM01.4
Scoring Method: DLM01.4
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
1746-01-6	2378-TCDD	5.63		FAIL	Action High
51207-31-9	2378-TCDF	2.62		FAIL	Action High
57117-41-6	12378-PeCDF	0	U	PASS	Within Limits
40321-76-4	12378-PeCDD	2.97	J	PASS	Within Limits
57117-31-4	23478-PeCDF	2.21	J	PASS	Within Limits
70648-26-9	123478-HxCDF	4.03	J	PASS	Within Limits
57117-44-9	123678-HxCDF	4.05	J	PASS	Within Limits
39227-28-6	123478-HxCDD	3.60	J	PASS	Within Limits
57653-85-7	123678-HxCDD	4.72	J	PASS	Within Limits
19408-74-3	123789-HxCDD	6.76		FAIL	Action High
60851-34-5	234678-HxCDF	3.89	J	PASS	Within Limits
72918-21-9	123789-HxCDF	2.81		PASS	Within Limits
67562-39-4	1234678-HpCDF	47.0		FAIL	Action High
35822-46-9	1234678-HpCDD	74.6		FAIL	Action High
55673-89-7	1234789-HpCDF	6.80		FAIL	Action High
3268-87-9	OCDD	515		FAIL	Action High
39001-02-0	OCDF	127		FAIL	Action High
41903-57-5	Total TCDD	16.9621		N.E.	Not Evaluated
36088-22-9	Total PeCDD	7.0023		N.E.	Not Evaluated
34465-46-8	Total HxCDD	26.3296		N.E.	Not Evaluated
37871-00-4	Total HpCDD	122.2884		N.E.	Not Evaluated
55722-27-5	Total TCDF	13.6857		N.E.	Not Evaluated
30402-15-4	Total PeCDF	32.0633		N.E.	Not Evaluated
55684-94-1	Total HxCDF	115.2392		N.E.	Not Evaluated
38998-75-3	Total HpCDF	129.1214		N.E.	Not Evaluated
****	END Main Analytes	**********	****	****	**********
****	END All Analytes	**********	****	****	**********

PC 02263

SAMPLE No.

D24259

AGAT Laboratories
2910 12th St. NE Calgary
Alberta
PCDD/PCDF SAMPLE DATA SUMMARY
HRGC/HRMS

Lab Name:	AGAT laboratories	Contract:	EP10W001067
Lab Code:	AGATAB	Case No.:	40414
TO No.:	EP-CALL-0002	SDG No.:	D24240
Sample wt./vol.:	9.48	g/ml:	g
GC Column:	DB-5	ID(mm):	0.25
Lab.Sample ID:	D24259	Lab.File ID:	10C431462_DX_US_RE
Matrix(Soil/Water/Ash/Tissue):	Water	Date Received:	09/25/2010
Water Sample Prep(SEPF/SPE):		Date Extracted:	09/16/2010
Concentration Units(pg/L or ng/kg):	ng/kg	Date Analysed:	06-Oct-10
Injection Volume(µl):	1.00	%Solids/Lipids:	
Concentrated Extract Volume(µl):	20.00	Dilution Factor:	1

Target Analytes	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Conc	Q	EMPC	EDL
2378-TCDD	320/322	26.89	0.741		5.63			
2378-TCDF	304/306	26.27	0.670		2.62			
12378-PeCDF	340/342	0.00	0.0			U		0.0352
12378-PeCDD	356/358	31.10	1.52		2.97	J		
23478-PeCDF	340/342	30.73	1.43		2.21	J		
123478-HxCDF	374/376	33.90	1.11		4.03	J		
123678-HxCDF	374/376	34.02	1.15		4.05	J		
123478-HxCDD	390/392	34.75	1.24		3.60	J		
123678-HxCDD	390/392	34.85	1.24		4.72	J		
123789-HxCDD	390/392	35.20	1.18		6.76			
234678-HxCDF	374/376	34.61	1.15		3.89	J		
123789-HxCDF	374/376	35.50	1.17		2.81			
1234678-HpCDF	408/410	37.43	0.992		47.0			
1234678-HpCDD	424/426	38.72	1.02		74.6			
1234789-HpCDF	408/410	39.30	0.885		6.80			
OCDD	458/460	43.38	0.857		515			
OCDF	442/444	43.60	0.834		127			

Note: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits
13C-2378-TCDD	332/334	26.88	0.782		0.65 - 0.89	70.8		25 - 164
13C-12378-PeCDD	368/370	31.08	1.57		1.32 - 1.78	68.4		25 - 181
13C-123478-HxCDD	402/404	34.74	1.27		1.05 - 1.43	82.4		32 - 141
13C-123678-HxCDD	402/404	34.83	1.26		1.05 - 1.43	77.7		28 - 130
13C-1234678-HpCDD	436/438	38.70	1.04		0.88 - 1.20	60.6		23 - 140
13C-OCDD	470/472	43.36	0.906		0.76 - 1.02	35.8		17 - 157
13C-2378-TCDF	316/318	26.25	0.773		0.65 - 0.89	65.1		24 - 169
13C-12378-PeCDF	352/354	29.99	1.60		1.32 - 1.78	58.9		24 - 185
13C-23478-PeCDF	352/354	30.72	1.55		1.32 - 1.78	60.3		21 - 178
13C-123478-HxCDF	384/386	33.89	0.500		0.43 - 0.59	69.7		26 - 152
13C-123678-HxCDF	384/386	34.01	0.502		0.43 - 0.59	68.0		26 - 123
13C-234678-HxCDF	384/386	34.59	0.512		0.43 - 0.59	68.3		28 - 136
13C-123789-HxCDF	384/386	35.49	0.508		0.43 - 0.59	69.5		29 - 147
13C-1234678-HpCDF	418/420	37.42	0.428		0.37 - 0.51	51.0		28 - 143
13C-1234789-HpCDF	418/420	39.29	0.427		0.37 - 0.51	49.0		26 - 138

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ratio Flag#	Ratio Limits	% Rec	Rec Flag#	% Rec Limits

(#) Column to be used to flag values outside QC limits.

PC02263

2DF - FORM II HR CDD
CDD/CDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY
HIGH RESOLUTION

EPA Sample No.
D24259

Lab Name:	AGAT Laboratories			Contract No	EP10W001067	
Lab Code	AGATAB	Case Number	40414	TO Number	SDG No.	D24240
Matrix(soil/water/ash/tissue/oil):	Soil			Las Sample ID	1965065A	
Sample wt/vol:	9.48 g/mL			Lab File ID	10C123456_US	
Water Sample Prep:	SEPF/SPE			Date Received	08/25/2010	
Concentrated Extract Volume:	20 µL			Date Extracted	06/16/2010	
Injection Volume:	1 µL	% solids/lipids		Date Analyzed	10/5/10	
GC Column:	DB-5	ID	0.25 (mm)	Dilution Factor	1.0	

Concentration Units pg/L or ng/Kg: ng/kg

Homologue	Peaks	Concentration	Q	EMPC/EDL
Dioxins				
Total TCDD	13	16.9621		
Total PeCDD	10	7.0023		
Total HxCDD	7	26.3296		
Total HpCDD	2	122.2884		
Furans				
Total TCDF	23	13.6857		
Total PeCDF	16	32.0633		
Total HxCDF	12	115.2392		
Total HpCDF	4	129.1214		

Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids). The total homologue concentrations do not affect the TEF (toxicity Equivalence Factor) calculations.

COMMUNICATIONS

Peary, Rob

From: stodola.steve@epamail.epa.gov
Sent: Wednesday, October 20, 2010 10:05 AM
To: Peary, Rob
Subject: Fw: Merino Park ..field dups?

see below for the answer

----- Forwarded by Steve Stodola/R1/USEPA/US on 10/20/2010 10:03 AM -----

From: Ted Bazenas/R1/USEPA/US

To: Steve Stodola/R1/USEPA/US@EPA

Date: 10/20/2010 10:00 AM

Subject: Re: Fw: Merino Park

Samples 15 and 18 are field duplicates
Sent by EPA Wireless E-Mail Services. Mobile # 617-312-4710

----- Original Message -----
From: Steve Stodola
Sent: 10/20/2010 09:55 AM EDT
To: Ted Bazenas
Cc: Vicki Maynard
Subject: Re: Fw: Merino Park

Ted: We have to go by what the lab physically received and analyzed, i.e. what was on the CoC. There aren't two samples identified as ss15 or ss18. So please check with the samplers and see if they really took field dups.
Thanks,
Steve

From: Ted Bazenas/R1/USEPA/US

To: Steve Stodola/R1/USEPA/US@EPA

Date: 10/20/2010 08:59 AM

Subject: Re: Fw: Merino Park

How about ss15 and ss15 instead? Or pick any combination. .....
Sent by EPA Wireless E-Mail Services. Mobile # 617-312-4710

----- Original Message -----
From: Steve Stodola
Sent: 10/20/2010 08:22 AM EDT
To: Ted Bazenas
Cc: Vicki Maynard
Subject: Re: Fw: Merino Park

Ted: Do you mean ss15 and ss18, since they both point to to same spot on the map? Steve

From: Ted Bazenas/R1/USEPA/US

To: Steve Stodola/R1/USEPA/US@EPA

Cc: Vicki Maynard/R1/USEPA/US@EPA

Date: 10/20/2010 06:55 AM

Subject: Re: Fw: Merino Park

ss18 and ss18 are field dups; no notes yet.

Ted Bazenas, On-Scene Coordinator,
U.S. EPA - Region 1
5 Post Office Square - Suite 100 (OSRR02-2) Boston, MA 02109-3912
617-918-1230 - office
617-312-4710 - mobile phone

From: Steve Stodola/R1/USEPA/US

To: Ted Bazenas/R1/USEPA/US@EPA

Cc: Vicki Maynard/R1/USEPA/US@EPA

Date: 10/19/2010 04:06 PM

Subject: Re: Fw: Merino Park

Ted: Was there a field duplicate pair taken? Any field notes yet?
Thanks, Steve

From: Ted Bazenas/R1/USEPA/US

To: Vicki Maynard/R1/USEPA/US@EPA

Cc: Steve Stodola/R1/USEPA/US@EPA

Date: 10/18/2010 11:17 AM

Subject: Re: Fw: Merino Park

SAP is attached; no field notes yet.

[attachment "0649_SAP_Final_vs2_Combined.pdf" deleted by Steve Stodola/R1/USEPA/US]

Ted Bazenas, On-Scene Coordinator,
U.S. EPA - Region 1
5 Post Office Square - Suite 100 (OSRR02-2) Boston, MA 02109-3912
617-918-1230 - office
617-312-4710 - mobile phone

From: Vicki Maynard/R1/USEPA/US

To: Ted Bazenas/R1/USEPA/US@EPA

Cc: Steve Stodola/R1/USEPA/US@EPA

Date: 10/18/2010 07:38 AM

Subject: Fw: Merino Park

Hi Ted,

Would you send me a copy of the QAPP and field notes for the Merino event? Thanks, Vicki
----- Forwarded by Vicki Maynard/R1/USEPA/US on 10/18/2010 07:37 AM

From: Steve Stodola/R1/USEPA/US

To: Vicki Maynard/R1/USEPA/US@EPA

Date: 10/15/2010 02:41 PM

Subject: Merino Park

Vicki: I need to take Monday off for some family business. ESAT needs
the QAPP and field notes for the Merino Park DV report.
Could you try to locate them?
Thanks,
Steve

Peary, Rob

From: Peary, Rob
Sent: Wednesday, October 20, 2010 4:02 PM
To: stodola.steve@epamail.epa.gov
Cc: Svetaka.Pat@epamail.epa.gov; Depierro.Denise@epamail.epa.gov; Macri, Louis
Subject: Lab Info Request; Case:40414, SDG:D24240 - Merino Park

Hi Steve,
Here is a lab request for the Merino Park, Dioxin/Furan data package.
Thanks, Rob

Paul Houle
AGAT Laboratories - Calgary, AB
403-735-2005
houle@agatlabs.com

Paul:
During the data validation of the data package for Case: 40414, SDG: D24240 [Lab WO: 10C431462], we noted the following items that need to be resolved.

1. The "PCDD/PCDF Sample Data Summary" forms and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms do not contain the correct Lab. Sample ID. They all have the EPA Sample Number entered for the Lab. Sample ID. Please submit any corrected forms and additional data as necessary.
2. The "PCDD/PCDF Sample Data Summary" forms, "2DF-Form II HR CDD, Total homologues" forms, and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms contain numerous incorrect dates for the "Date Extracted" and the "Date Analyzed" for all samples. Please submit corrected forms and additional data as necessary.
3. The "2DF-Form II HR CDD, Total homologues" forms beginning with EPA Sample No. D24248 contain the incorrect "Lab File ID". Please submit any corrected forms and additional data as necessary.
4. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists the incorrect EPA Sample No. for lab sample 1965065A. Please submit any corrected forms and additional data as necessary.
5. The "5DFC-Form V-HR CDD-3, Analytical Sequence" forms (pages 602, 603) list numerous incorrect entries for "Date Analyzed" for both standards and samples. Please submit any corrected forms and additional data as necessary.
6. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists samples D2457, D2458, and D2459 as being analyzed on 10/6/10. There is no Window Defining Mix or Continuing Calibration Standard listed for the beginning of the 12-hour sequence for these samples. Please submit any WDM and CCAL reports for these samples and all associated raw data.
7. There are no ending CCAL Standards for the analytical sequences beginning 10/4/10, 1733 and 10/5/10, 1326. Please submit any available ending CCAL data for these sequences.
8. No "5DFA-Form V-HR CDD-1, WDM Summary", "5DFB-Form V-HR CDD-2, Chromatographic Resolution Summary", "5DFC-Form V-HR CDD-3, Analytical Sequence" forms, or Tune data were submitted for the 9/15/10 initial calibration. Please submit the associated ICAL information.
9. The "1DFB-Form I-HR CDD-2, Toxicity Equivalence Summary" forms for all samples show a final Total-TEQ value of "0.0". Please submit the forms with the correct sum of the TEF-Adjusted Concentrations. (If possible, please use the 2005 Toxicity Equivalency Factors instead of the 1989 TEFs.)
10. No supporting data were included for the DB-225 confirmation analyses results for 2378-TCDF. Please submit all QC and raw data including: tune data, chromatographic resolution, initial calibration, continuing calibrations, quantitation reports, chromatograms, etc. for the confirmation analyses for all samples.

Thanks for your help in resolving this item.
Steve Stodola, QA Chemist, Region I

Peary, Rob

From: stodola.steve@epamail.epa.gov
Sent: Friday, October 22, 2010 10:50 AM
To: houle@agatlabs.com
Cc: Clark.Christine@epamail.epa.gov; Maynard.Vicki@epamail.epa.gov
Subject: Request for Lab Information Case 40414 SDG D24240

Paul Houle
AGAT Laboratories - Calgary, AB
403-735-2005

Paul:

Our QA Unit here in Region I is doing the data validation review for Case: 40414, SDG: D24240 [Lab WO: 10C431462]. During the data validation of the data package, we noted the following items that need to be resolved.

1. The "PCDD/PCDF Sample Data Summary" forms and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms do not contain the correct Lab. Sample ID. They all have the EPA Sample Number entered for the Lab. Sample ID. Please submit any corrected forms and additional data as necessary.
2. The "PCDD/PCDF Sample Data Summary" forms, "2DF-Form II HR CDD, Total homologues" forms, and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms contain numerous incorrect dates for the "Date Extracted" and the "Date Analyzed" for all samples. Please submit corrected forms and additional data as necessary.
3. The "2DF-Form II HR CDD, Total homologues" forms beginning with EPA Sample No. D24248 contain the incorrect "Lab File ID". Please submit any corrected forms and additional data as necessary.
4. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists the incorrect EPA Sample No. for lab sample 1965065A. Please submit any corrected forms and additional data as necessary.
5. The "5DFC-Form V-HR CDD-3, Analytical Sequence" forms (pages 602, 603) list numerous incorrect entries for "Date Analyzed" for both standards and samples. Please submit any corrected forms and additional data as necessary.
6. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists samples D2457, D2458, and D2459 as being analyzed on 10/6/10. There is no Window Defining Mix or Continuing Calibration Standard listed for the beginning of the 12-hour sequence for these samples. Please submit any WDM and CCAL reports for these samples and all associated raw data.
7. There are no ending CCAL Standards for the analytical sequences beginning 10/4/10, 1733 and 10/5/10, 1326. Please submit any available ending CCAL data for these sequences.

8. No "5DFA-Form V-HR CDD-1, WDM Summary", "5DFB-Form V-HR CDD-2, Chromatographic Resolution Summary", "5DFC-Form V-HR CDD-3, Analytical Sequence" forms, or Tune data were submitted for the 9/15/10 initial calibration. Please submit the associated ICAL information.

9. The "1DFB-Form I-HR CDD-2, Toxicity Equivalence Summary" forms for all samples show a final Total-TEQ value of "0.0". Please submit the forms with the correct sum of the TEF-Adjusted Concentrations. (If possible, please use the 2005 Toxicity Equivalency Factors instead of the 1989 TEFs.)

10. No supporting data were included for the DB-225 confirmation analyses results for 2378-TCDF. Please submit all QC and raw data including: tune data, chromatographic resolution, initial calibration, continuing calibrations, quantitation reports, chromatograms, etc. for the confirmation analyses for all samples.

Thanks for your help in resolving this item.

Steve Stodola, QA Chemist, Region I
617-918-8634

Peary, Rob

From: stodola.steve@epamail.epa.gov
Sent: Monday, October 25, 2010 1:37 PM
To: Peary, Rob
Subject: Fw: Question on Case 40414; SDG D24240

Rob: I think last week we were worried about the Merino data -- wet or dry weight. The lab says DRY weight. Is there any way to check form the data they sent?
Steve

----- Forwarded by Steve Stodola/R1/USEPA/US on 10/25/2010 01:34 PM -----

From: "Paul Houle" <Houle@agatlabs.com>

To: Steve Stodola/R1/USEPA/US@EPA

Date: 10/25/2010 12:58 PM

Subject: RE: Question on Case 40414; SDG D24240

Steve,

The samples were reported on a dry weight basis.

I am in the middle of getting the other documents together for you.

Paul Houle B.Sc, P.Chem.
Division Manager: Ultra-Trace, Toxicology and Specialty Analysis.
AGAT Laboratories
2910 12th St. NE.
Calgary, AB T2E 7P7
Office: 403-735-2552
Mass Spec. Lab: 403-735-2767
Cell: 587-433-2502
e-mail: houle@agatlabs.com
Web: www.hrms.agatlabs.com

-----Original Message-----
From: stodola.steve@epamail.epa.gov

[mailto:stodola.steve@epamail.epa.gov]
Sent: Friday, October 22, 2010 10:40 AM
To: Paul Houle
Cc: Clark.Christine@epamail.epa.gov; Maynard.Vicki@epamail.epa.gov
Subject: Question on Case 40414; SDG D24240

Paul: One more quick question - were the results in this case reported in wet or dry weight?
Thanks,
Steve Stodola, QA Chemist
US EPA, Region I

Peary, Rob

From: Peary, Rob
Sent: Wednesday, October 27, 2010 8:43 AM
To: stodola.steve@epamail.epa.gov
Cc: Svetaka.Pat@epamail.epa.gov; Depierro.Denise@epamail.epa.gov; Macri, Louis
Subject: Lab Info Request-2; Case:40414, SDG:D24240 - Merino Park

Hi Steve,
Here is an additional lab request for the Merino Park dioxin SDG (TDF-2047). I included a request for a lab electronic deliverable of the sample results (#8). I wasn't sure if you had asked for that or not.
Thanks, Rob

Paul Houle
AGAT Laboratories - Calgary, AB
403-735-2005
houle@agatlabs.com

Paul:
During the data validation of the data package for Case: 40414, SDG: D24240 [Lab WO: 10C431462], we noted the following additional items that need to be resolved.

1. There was no supporting raw data for the Window Defining Mix samples which were run at the beginning of each sequence. Please submit the WDM raw data (chromatograms and quantitation reports) associated with all samples in this SDG.
2. There is only one Signal-to-Noise (S/N) value reported on the quantitation reports for each compound. Please identify which ion this is associated with and explain how the S/N is monitored for the other ion.
3. An EMPC result which is a different value than the concentration result is reported when the ion ratio criteria are not met. Please explain show how the EMPC values are calculated and show an example for one of the samples.
4. There is no Total Homologue report for the method blank DFBLKS1. Please submit a Total Homologue report for this method blank.
5. The Percent Solids are not reported on the Sample Data Summary forms. Please submit any corrected forms as necessary.
6. The percent solids values appear to have been calculated on the sample preparation sheets but not included in the sample results calculations or reported on the results forms (item #5 above). Please identify whether the final sample results are reported on a wet weight or dry weight basis. Please identify whether the Volume/Mass Extracted values on the Sample Work-Up Sheets are wet or dry weights. Please show an example of a result calculation for one analyte.
7. No cleanup standard results are reported. Please indicate whether a cleanup standard was used for this analysis. Please submit any corrected forms and additional data as necessary.
8. A "standard" lab electronic deliverable sample results file would be helpful since the EXES data does not appear to be available for this SDG.

Thanks for your help in resolving these items.
Steve Stodola, QA Chemist, Region I

Peary, Rob

From: stodola.steve@epamail.epa.gov
Sent: Thursday, October 28, 2010 1:19 PM
To: Peary, Rob
Subject: Fw: Request for Lab Information Case 40414 SDG D24240

----- Forwarded by Steve Stodola/R1/USEPA/US on 10/28/2010 01:18 PM

From: "Paul Houle" <Houle@agatlabs.com>

To: Steve Stodola/R1/USEPA/US@EPA

Date: 10/28/2010 12:44 PM

Subject: RE: Request for Lab Information Case 40414 SDG D24240

Steve,

These are the responses to some of the items. I am still working on the others.

1. The "PCDD/PCDF Sample Data Summary" forms and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms do not contain the correct Lab. Sample ID. They all have the EPA Sample Number entered for the Lab. Sample ID. Please submit any corrected forms and additional data as necessary.

RESPONSE: These sample numbers are software generated, and cannot be changed. As a result, the USEPA sample number becomes our LAB ID in regards to running them on the instrument . The work file is located on the form under lab file ID . The internal lab sample ID can be found on the individual chormatograms.

8. No "5DFA-Form V-HR CDD-1, WDM Summary", "5DFB-Form V-HR CDD-2, Chromatographic Resolution Summary", "5DFC-Form V-HR CDD-3, Analytical Sequence" forms, or Tune data were submitted for the 9/15/10 initial calibration. Please submit the associated ICAL information.

RESPONSE: I don't really understand this. The first and last eluting congeners are not present in the calibration solutions, and as a result, if the congeners are present in chromatography pages, and in the summary sheets, then that would indicate that all congeners (in the solution) are present. Also, referenceing the SOW, this is not required and this is why these forms are not in the data package.

9. The "1DFB-Form I-HR CDD-2, Toxicity Equivalence Summary" forms for all samples show a final Total-TEQ value of "0.0". Please submit the forms with the correct sum of the TEF-Adjusted Concentrations. (If possible, please use the 2005 Toxicity Equivalency Factors instead of the 1989 TEFs.)

RESPONSE: This is a software problem that I am currently experiencing, and have the software manufacturer looking at. This is also true for the secondary noise values and secondary S/N values. Once the software issues have been resolved, these pages can be re-submitted.

10. No supporting data were included for the DB-225 confirmation analyses results for 2378-TCDF. Please submit all QC and raw data including: tune data, chromatographic resolution, initial calibration, continuing calibrations, quantitation reports, chromatograms, etc. for the confirmation analyses for all samples.

RESPONSE: According to the SOW, this is not required unless requested. I will have these itmes put together and sent separately.

Paul Houle B.Sc, P.Chem.
Division Manager: Ultra-Trace, Toxicology and Specialty Analysis.
AGAT Laboratories
2910 12th St. NE.
Calgary, AB T2E 7P7
Office: 403-735-2552
Mass Spec. Lab: 403-735-2767
Cell: 587-433-2502
e-mail: houle@agatlabs.com
Web: www.hrms.agatlabs.com

-----Original Message-----
From: stodola.steve@epamail.epa.gov
[mailto:stodola.steve@epamail.epa.gov]
Sent: Friday, October 22, 2010 8:50 AM
To: Paul Houle
Cc: Clark.Christine@epamail.epa.gov; Maynard.Vicki@epamail.epa.gov
Subject: Request for Lab Information Case 40414 SDG D24240

Paul:

Our QA Unit here in Region I is doing the data validation review for Case: 40414, SDG: D24240 [Lab WO: 10C431462]. During the data validation of the data package, we noted the following items that need to be resolved.

1. The "PCDD/PCDF Sample Data Summary" forms and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms do not contain the correct Lab. Sample ID. They all have the EPA Sample Number entered for the Lab. Sample ID. Please submit any corrected forms and additional data as necessary.

2. The "PCDD/PCDF Sample Data Summary" forms, "2DF-Form II HR CDD, Total homologues" forms, and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms contain numerous incorrect dates for the "Date Extracted" and the "Date Analyzed" for all samples. Please submit corrected forms and additional data as necessary.
3. The "2DF-Form II HR CDD, Total homologues" forms beginning with EPA Sample No. D24248 contain the incorrect "Lab File ID". Please submit any corrected forms and additional data as necessary.
4. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists the incorrect EPA Sample No. for lab sample 1965065A. Please submit any corrected forms and additional data as necessary.
5. The "5DFC-Form V-HR CDD-3, Analytical Sequence" forms (pages 602, 603) list numerous incorrect entries for "Date Analyzed" for both standards and samples. Please submit any corrected forms and additional data as necessary.
6. The "5DFC-Form V-HR CDD-3, Analytical Sequence" form (page 603) lists samples D2457, D2458, and D2459 as being analyzed on 10/6/10. There is no Window Defining Mix or Continuing Calibration Standard listed for the beginning of the 12-hour sequence for these samples. Please submit any WDM and CCAL reports for these samples and all associated raw data.
7. There are no ending CCAL Standards for the analytical sequences beginning 10/4/10, 1733 and 10/5/10, 1326. Please submit any available ending CCAL data for these sequences.
8. No "5DFA-Form V-HR CDD-1, WDM Summary", "5DFB-Form V-HR CDD-2, Chromatographic Resolution Summary", "5DFC-Form V-HR CDD-3, Analytical Sequence" forms, or Tune data were submitted for the 9/15/10 initial calibration. Please submit the associated ICAL information.
9. The "1DFB-Form I-HR CDD-2, Toxicity Equivalence Summary" forms for all samples show a final Total-TEQ value of "0.0". Please submit the forms with the correct sum of the TEF-Adjusted Concentrations. (If possible, please use the 2005 Toxicity Equivalency Factors instead of the 1989 TEFs.)
10. No supporting data were included for the DB-225 confirmation analyses results for 2378-TCDF. Please submit all QC and raw data including: tune data, chromatographic resolution, initial calibration, continuing calibrations, quantitation reports, chromatograms, etc. for the confirmation analyses for all samples.

Thanks for your help in resolving this item.

Steve Stodola, QA Chemist, Region I
617-918-8634

Peary, Rob

From: stodola.steve@epamail.epa.gov
Sent: Thursday, October 28, 2010 1:20 PM
To: Peary, Rob
Subject: Fw: Request for Lab Information 2 - Case 40414, D24240

Rob: Pls let me know if this covers what we need....thanks....S..
----- Forwarded by Steve Stodola/R1/USEPA/US on 10/28/2010 01:19 PM

From: "Paul Houle" <Houle@agatlabs.com>

To: Steve Stodola/R1/USEPA/US@EPA

Date: 10/28/2010 12:57 PM

Subject: RE: Request for Lab Information 2 - Case 40414, D24240

Steve,

See below for further responses.

Paul Houle B.Sc, P.Chem.
Division Manager: Ultra-Trace, Toxicology and Specialty Analysis.
AGAT Laboratories
2910 12th St. NE.
Calgary, AB T2E 7P7
Office: 403-735-2552
Mass Spec. Lab: 403-735-2767
Cell: 587-433-2502
e-mail: houle@agatlabs.com
Web: www.hrms.agatlabs.com

-----Original Message-----
From: stodola.steve@epamail.epa.gov
[mailto:stodola.steve@epamail.epa.gov]
Sent: Wednesday, October 27, 2010 12:16 PM
To: Paul Houle
Cc: Maynard.Vicki@epamail.epa.gov; Clark.Christine@epamail.epa.gov
Subject: Request for Lab Information 2 - Case 40414, D24240

October 27, 2010
Paul Houle
AGAT Laboratories - Calgary, AB
403-735-2005

Paul:

These are addition items that we just found out about today in addition to the ones that I sent on 10/22. During the data validation of the data package for Case: 40414, SDG: D24240 [Lab WO: 10C431462], we noted the following additional items that need to be resolved.

1. There was no supporting raw data for the Window Defining Mix samples which were run at the beginning of each sequence. Please submit the WDM raw data (chromatograms and quantitation reports) associated with all samples in this SDG.

RESPONSE: According to the SOW, this is not required unless requested, I will gather this information hand have it sent.

2. There is only one Signal-to-Noise (S/N) value reported on the quantitation reports for each compound. Please identify which ion this is associated with and explain how the S/N is monitored for the other ion.

RESPONSE: This is a software problem that is currently being looked at by the software manufacturer.

3. An EMPC result which is a different value than the concentration result is reported when the ion ratio criteria are not met. Please explain or show how the EMPC values are calculated and show an example for one of the samples.

RESPONSE: This is a software generated value that is triggered when the ion ratios are out of specification according to Method 1613B. I've tried to duplicate one of the EMPC values manually, but I don't know what algorithm or calculation is used by the software. I have contacted the software manufacturer to gather this information.

4. There is no Total Homologue report for the method blank DFBLKS1. Please submit a Total Homologue report for this method blank.

RESPONSE: This page will be sent.

5. The Percent Solids are not reported on the Sample Data Summary forms. Please submit any corrected forms as necessary.

RESPONSE: These are soil samples, do you mean the percent moisture?

6. The percent solids values appear to have been calculated on the sample preparation sheets but not included in the sample results calculations or reported on the results forms (item #5 above). Please identify whether the final sample results are reported on a wet weight or dry weight basis. Please identify whether the Volume/Mass Extracted values on the Sample Work-Up

Sheets are wet or dry weights. Please show an example of a result calculation for one analyte.

RESPONSE: Samples are reported on a dry weigh basis, and the percent moisture is performed separately for information purposes. A sample calculation for one analyte can be provided.

7. No cleanup standard results are reported. Please indicate whether a cleanup standard was used for this analysis. Please submit any corrected forms and additional data as necessary.

RESPONSE: There was no clean up standard used in this analysis.

8. A "standard" lab electronic deliverable sample results file would be helpful since the EXES data does not appear to be available for this SDG.

RESPONSE: The SEDD 2a was submitted via EXES as required by the SOW and solicitation. To produce a standard Excel spreadsheet of the data would take some time. I had confirmation from Christian Jose that the SEDD 2a was received successfully.

Thanks for your help in resolving these items.
Steve Stodola, QA Chemist, Region I

Submitted to EPA (S. Stodola)
(Not sent to lab)

Peary, Rob

From:	Peary, Rob
Sent:	Monday, November 01, 2010 3:56 PM
To:	stodola.steve@epamail.epa.gov
Cc:	Svetaka.Pat@epamail.epa.gov; Depierro.Denise@epamail.epa.gov; Macri, Louis
Subject:	Lab Info Request-3/Reply; Case:40414, SDG:D24240 - Merino Park

Hi Steve,
Here are my Replies to AGAT's partial responses to the two lab info. requests for the Merino Park Dioxin/Furan data package.
Thanks, Rob

Paul Houle
AGAT Laboratories - Calgary, AB
403-735-2005
houle@agatlabs.com

Paul:
Below are the replies to your 10/28/10 responses for the data validation of the data package for Case: 40414, SDG: D24240 [Lab WO: 10C431462].

Partial Responses to 10/22/10 Request:

1. The "PCDD/PCDF Sample Data Summary" forms and the "1-DFC-Form I-HR CDD-3, Second Column Confirmation" forms do not contain the correct Lab. Sample ID. They all have the EPA Sample Number entered for the Lab. Sample ID. Please submit any corrected forms and additional data as necessary.

RESPONSE: These sample numbers are software generated, and cannot be changed. As a result, the USEPA sample number becomes our LAB ID in regards to running them on the instrument. The work file is located on the form under lab file ID. The internal lab sample ID can be found on the individual chromatograms.

REPLY: Item adequately addressed.

8. No "5DFA-Form V-HR CDD-1, WDM Summary", "5DFB-Form V-HR CDD-2, Chromatographic Resolution Summary", "5DFC-Form V-HR CDD-3, Analytical Sequence" forms, or Tune data were submitted for the 9/15/10 initial calibration. Please submit the associated ICAL information.

RESPONSE: I don't really understand this. The first and last eluting congeners are not present in the calibration solutions, and as a result, if the congeners are present in chromatography pages, and in the summary sheets, then that would indicate that all congeners (in the solution) are present. Also, referenceing the SOW, this is not required and this is why these forms are not in the data package.

REPLY: The SOW specifies that the WDM and Resolution Checks be performed at the beginning and end of all instrument sequences. Please see the following:

9.2.1 Summary of HRGC/HRMS System Performance Check

9.2.1.1
The HRGC/HRMS system performance check consists of three parts: a) the HRMS system must be tuned to meet the minimum static resolving power, using a suitable calibrant such as PFK; b) the resolution of the HRGC system must be verified by the analyses of the descriptor switching times set using the Window Defining Mixture (WDM), and c) the resolution verified by the analysis of the Isomer Specificity Check.

NOTE: The WDM and Isomer Specificity Check solutions may be combined into a single solution [Column Performance Solution (CPS)], provided that the combined solution contains the isomers needed to determine that the criteria for analysis are met (see Table 5).

9.2.1.2
At the beginning and end of each 12-hour shift and prior to analysis of any samples, blanks, QC samples, and calibration standards, the Contractor must establish that the HRGC/HRMS system meets the static mass resolution requirement, that the beginning and ending RTs for the dioxin and furan isomers are defined, and that the isomer specificity is demonstrated. (See Section 9.2.1.4 for the requirement for the MS calibration check at end of sequence.)

9.2.1.3
The WDM and the isomer specificity check are also used to set the descriptor switching times such that isomers that elute from the HRGC during a given RT window will also be those isomers for which the ions are monitored.

9.2.1.4
The HRMS System Tune, the WDM, and the Isomer Specificity Check must also be analyzed at the end of each 12-hour shift or analytical sequence. These analyses may also be used to establish the beginning of the next 12-hour shift or analytical sequence.
(DLM02.2, 12/09)

9. The "1DFB-Form I-HR CDD-2, Toxicity Equivalence Summary" forms for all samples show a final Total-TEQ value of "0.0". Please submit the forms with the correct sum of the TEF-Adjusted Concentrations. (If possible, please use the 2005 Toxicity Equivalency Factors instead of the 1989 TEFs.)

RESPONSE: This is a software problem that I am currently experiencing, and have the software manufacturer looking at. This is also true for the secondary noise values and secondary S/N values. Once the software issues have been resolved, these pages can be re-submitted.

REPLY: A separate spreadsheet or table of the Toxicity Equivalence Summary with the correct Total-TEQ values for the samples should be submitted if the software issue cannot be immediately resolved.

10. No supporting data were included for the DB-225 confirmation analyses results for 2378-TCDF. Please submit all QC and raw data including: tune data, chromatographic resolution, initial calibration, continuing calibrations, quantitation reports, chromatograms, etc. for the confirmation analyses for all samples.

RESPONSE: According to the SOW, this is not required unless requested. I will have these itmes put together and sent separately.

REPLY: All supporting data is required. Please submit as indicated.

<u>Partial Responses to 10/28/10 Request:</u>

1. There was no supporting raw data for the Window Defining Mix samples which were run at the beginning of each sequence. Please submit the WDM raw data (chromatograms and quantitation reports) associated with all samples in this SDG.

RESPONSE: According to the SOW, this is not required unless requested, I will gather this information hand have it sent.

REPLY: All supporting data is required. Please submit as indicated.

2. There is only one Signal-to-Noise (S/N) value reported on the quantitation reports for each compound. Please identify which ion this is associated with and explain how the S/N is monitored for the other ion.

RESPONSE: This is a software problem that is currently being looked at by the software manufacturer.

REPLY: Please just confirm which ion the reported values are associated with if the software issue cannot be immediately resolved.

3. An EMPC result which is a different value than the concentration result is reported when the ion ratio criteria are not met. Please explain show how the EMPC values are calculated and show an example for one of the samples.

RESPONSE: This is a software generated value that is triggered when the ion ratios are out of specification according to Method 1613B. I've tried to duplicate one of the EMPC values manually, but I don't know what algorithm or calculation is used by the software. I have contacted the software manufacturer to gather this information.

REPLY: Resolution pending.

4. There is no Total Homologue report for the method blank DFBLKS1. Please submit a Total Homologue report for this method blank.

RESPONSE: This page will be sent.

REPLY: Please submit as indicated.

5. The Percent Solids are not reported on the Sample Data Summary forms. Please submit any corrected forms as necessary.

RESPONSE: These are soil samples, do you mean the percent moisture?

REPLY: The "PCDD/PCDF Sample Data Summary" forms and the "2DF-Form II HR CDD, CDD/CDF Total Homologue Concentration Summary" forms both contain a "%Solids/Lipids" item in the header information. Please enter the "% Solids" values in this field and submit any corrected forms and additional data as necessary.

6. The percent solids values appear to have been calculated on the sample preparation sheets but not included in the sample results calculations or reported on the results forms (item #5 above). Please identify whether the final sample results are reported on a wet weight or dry weight basis. Please identify whether the Volume/Mass Extracted values on the Sample Work-Up Sheets are wet or dry weights. Please show an example of a result calculation for one analyte.

RESPONSE: Samples are reported on a dry weigh basis, and the percent moisture is performed separately for information purposes. A sample calculation for one analyte can be provided.

REPLY: Please identify whether the "Volume/Mass Extracted" values on the Sample Work-Up Sheets are wet or dry weights (for example: page 851, sample D24240, 10.23g). Please show a result calculation for one analyte from this SDG.

7. No cleanup standard results are reported. Please indicate whether a cleanup standard was used for this analysis. Please submit any corrected forms and additional data as necessary.

RESPONSE: There was no clean up standard used in this analysis.

REPLY: Item adequately addressed. The Cleanup Standard is specified in the SOW as follows:

7.8 Standards

7.8.1

Cleanup standard - Prepare 37Cl4-2,3,7,8-TCDD in nonane at the concentration shown in Table 3. The cleanup standard is added to all extracts prior to cleanup to measure the efficiency of the cleanup process. (DLM02.2, 12/09)

8. A "standard" lab electronic deliverable sample results file would be helpful since the EXES data does not appear to be available for this SDG.

RESPONSE: The SEDD 2a was submitted via EXES as required by the SOW and solicitation. To produce a standard Excel spreadsheet of the data would take some time. I had confirmation from Christian Jose that the SEDD 2a was received successfully.

REPLY: Item adequately addressed. Access to the EXES files by the Region will be worked out.

Thanks for your help in resolving these items and the other outstanding ones also.
Steve Stodola, QA Chemist, Region 1

Peary, Rob Conference Call

From: stodola.steve@epamail.epa.gov
Sent: Wednesday, November 03, 2010 1:10 PM
To: Paul Houle
Cc: Maynard.Vicki@epamail.epa.gov; Peary, Rob
Subject: RE: Request for Lab Information 2 - Case 40414, D24240

Paul: Thanks. I just set up call-in line at 617918-2826. So just call that number at 2pm EDT and punch in the code 635578. Steve

Participants: Steve Stodola, QA Chemist EPA
Vicki Maynard, QA Chemist, EPA
Rob Peary, Date Validator, TechLaw,Inc

From: "Paul Houle" <Houle@agatlabs.com>

To: Steve Stodola/R1/USEPA/US@EPA

Date: 11/03/2010 12:47 PM

Subject: RE: Request for Lab Information 2 - Case 40414, D24240

Steve,

I will make mtself available for 2:00PM EDT.

Who will be involved in the call...just for the telephone communication logbook.

Cheers,

Paul Houle B.Sc, P.Chem.
Division Manager: Ultra-Trace, Toxicology and Specialty Analysis.
AGAT Laboratories
2910 12th St. NE.
Calgary, AB T2E 7P7
Office: 403-735-2552
Mass Spec. Lab: 403-735-2767
Cell: 587-433-2502
e-mail: houle@agatlabs.com

CSF AUDIT

Evidence Audit Photocopy

CDD/CDF COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME AGAT Laboratories
CITY/STATE Calgary, Alberta
CASE NO. 40414 SDG NO. D24240 SDG NOS. TO FOLLOW
TASK ORDER NO. EP-CALL-0002
CONTRACT NO. EP10W001067
SOW NO. DLM02.2

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.6)

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK EPA
1. **Inventory Sheet** (DC-2) (Do not number)				✓
2. **SDG Narrative**	1	2		✓
3. **Traffic Report**	3	14		✓
4. **CDD/CDF Data**				
a. Sample Data				
Sample Data Summary (FORM I-HR CDD-1)	15	34		✓
Toxicity Equivalence Summary (FORM I-HR CDD-2)	35	54		✓
Second Column confirmation Summary (FORM I-HR CDD-3)	55	75		✓ (N=17-55)
~~TEF Adjusted Concentration Mammal/Fish/Bird (FORM I-HR CDD-4)~~ RSP 10/19/10	76	575		56-75 ✓
Selected Ion Current Profile (SICP) for each sample				—
Quantitation Reports and Area Summaries				—
Total Homologue Concentration Summary (FORM II-HR CDD)	576	595		✓
b. Quality Control Data				—
Lab Control Sample Summary (FORM III-HR CDD-1)	596	596		✓
Method Blank Summary (FORM IV-HR CDD)	597	597		✓
Window Defining Mix Summary (FORM V-HR CDD-1)	598	599		✓
Chromatographic Resolution Summary (FORM V-HR CDD-2)	600	601		✓
Analytical Sequence Summary (FORM V-HR CDD-3)	602	603		✓
c. Calibration Data				
Initial Calibration Data (FORM VI-HR CDD-1 and FORM VI-HR CDD-2), PFK mass resolution, CDD/CDF standard(s) SICPs, Quantitation Reports, and Area Summaries for the initial (five-point) calibration	604	730		✓
Continuing Calibration Data (FORM VII-HR CDD-1 and FORM VII-HR CDD-2), PFK mass resolution, SICPs, Quantitation Reports, and Area Summaries	731	794		✓

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	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK EPA
d. Raw Quality Control Data				
Blank Data FORM I-HR CDD-1, CDD-2, CDD-3 (if applicable)	795	796		✓
Blank Data including SICPs, Quantitation Reports, and Area Summaries for each blank analyzed	797	821		✓
LCS FORM I-HR CDD-1 and CDD-2	822	823		✓
LCS Data including SICPs, Quantitation Reports, and Area Summaries	824	848		✓
5. **Miscellaneous Data**				
Original preparation and analysis forms or copies of preparation and analysis logbook pages	849	870		✓
Internal sample and sample extract transfer Chain of Custody Records				
Screening records				
All instrument output, including strip charts from screening activities (describe or list)				
6. **EPA Shipping/Receiving Documents**				
Airbills (No. of shipments _____)				
Chain of Custody Records				
Sample Tags				
Sample Log-In Sheet (Lab & DC-1)				
Traffic Report Cover Sheet				
Miscellaneous Shipping/Receiving Records (describe or list)				
7. **Internal Lab Sample Transfer Records and Tracking Sheets** (Describe or list)				
8. **Other Records** (describe or list) Telephone Communication Log				

9. **Comments:**

Completed by: (CLP Lab) _____ (Signature) MGR - ULTRA TRACE (Print Name & Title) 10/07/2010 (Date)

Audited by: (USEPA) _____ (Signature) Robert Perry / EJAT-Tech Law (Print Name & Title) 10/19/2010 (Date)