UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

July 15, 2015

Ms. Keri Fitzpatrick
Regional Environmental Manager
Prolerized New England Company LLC
69 Rover Street - P.O. Box 49095
Everett, MA 02149

Re: Authorization to discharge under the Remediation General Permit (RGP) – for the Prolerized New England Company, LLC site located in Everett, Massachusetts; Authorization # MAG910690

Dear Ms. Fitzpatrick:

Based on the review of a Notice of Intent (NOI) you submitted along with supplemental information submitted on your behalf by Janelle Bonn of Woodard and Curran for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Owner and Operator, to discharge in accordance with the provisions of the RGP at this site. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: http://www.epa.gov/region1/npdes/mass.html#dgp.

Please note the enclosed checklist includes parameters that exceeded Appendix III limits. The checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels (ML) established in Appendix VI of the RGP. Pursuant to Part I. Section C.7., of the RGP, dilution factors may be available for discharges to saline waters but only with approval of the flow modeling information from the State prior to the submission of the NOI. Since the receiving water is tidally influenced, a dilution factor may not be applied to establish limits for this RGP.

Based on the NOI submitted, the following limits apply: **lead – 8.5 ug/l, iron - 1,000 ug/L, Total Suspended Solids (TSS) - 30 mg/l, Total Group I Polycyclic Aromatic Hydrocarbons – 10 ug/l, and pH range of 6.5 – 8.5 standard units (s.u.). Monitoring for chloride shall be conducted with no effluent limit.**

This EPA general permit and authorization to discharge will expire on September 9, 2015. You have reported this project will terminate on December 15, 2015. Please be aware you are required to reapply for coverage after the EPA expired permit has been reissued. The reissuance date as well as the reapplication submittal date will be posted on the EPA web site at that time. Regardless of your project termination date, you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within thirty (30) days of the termination of the discharge.

Thank you in advance for your cooperation in this matter. Please contact George Papadopoulos at 617-918-1579 or Papadopoulos.George@epa.gov, if you have any questions.

Sincerely,

Thelma Murphy

Thelma Murphy, Chief
Storm Water and Construction
Permits Section

Enclosure

cc: Janelle Bonn, Woodard and Curran
Robert Kubit, MassDEP

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910690**
Authorization Issued:	**July 15, 2015**
Facility/Site Name:	Prolerized New England Company LLC
Facility/Site Address:	
	Email address of owner: kfitzpatrick@schn.com
Legal Name of Operator:	Prolerized New England Company LLC
Operator contact name, title, and Address:	Keri Fitzpatrick, Regional Environmental Manager
	Email:kfitzpatrick@schn.com
Estimated date of The Project Completion:	December 15, 2015
Category and Sub-Category:	Contaminated Construction Dewatering Category– Known Contaminated Sites Subcategory
RGP Termination Date:	September 2015
Receiving Water:	Mystic River

Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	Parameter	**Effluent Limit/Method#/ML** (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
√	**1. Total Suspended Solids (TSS)**	30 milligrams/liter (mg/L) **, Me#160.2/ML5ug/L
	2. Total Residual Chlorine (TRC) [1]	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) [2, 3]	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L

	Parameter	**Effluent Limit/Method#/ML** (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	14. Naphthalene [5]	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) [6]	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
√	**35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)**	10.0 ug/L
√	**a. Benzo(a) Anthracene [7]**	0.0038 ug/L /Me#8270D/ ML 5ug/L,

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
		Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	**b. Benzo(a) Pyrene [7]**	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	**c. Benzo(b)Fluoranthene [7]**	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	**d. Benzo(k)Fluoranthene [7]**	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	**e. Chrysene [7]**	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	**f. Dibenzo(a,h)anthracene [7]**	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	**g. Indeno(1,2,3-cd) Pyrene[7]**	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	j. Anthracene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	l. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene [5]	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) [8, 9]	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
√	**38. Chloride**	Monitor only/Me# 300.0/ ML 100 ug/L

	Metal Parameters	Total Recoverable Metal Limit H [10] = 50 mg/l CaCO3, Units = ug/l Saltwater Limits	Minimum level=ML[11]
	39. Antimony	5.6	10
	40. Arsenic **	36	20
	41. Cadmium **	8.9	10
	42. Chromium III (trivalent) **	100	15
	43. Chromium VI (hexavalent) **	50.3	10
	44. Copper **	3.7	15
√	**45. Lead ** **	**8.5**	20
	46. Mercury **	1.1	0.2
	47. Nickel **	8.2	20
	48. Selenium **	71	20
	49. Silver	2.2	10
	50. Zinc **	85.6	15
√	**51. Iron**	**1,000**	20

	Other Parameters	Limit
√	**52. Instantaneous Flow**	Site specific in CFS
√	**53. Total Flow**	Site specific in CFS
	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab[12]
√	**55. pH Range for Class SA & Class SB Waters in MA**	6.5-8.5; 1/Month/Grab[12]
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab[12]
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab[13]
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab[13]
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab[13]
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab[13]
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab[13]
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab[13]
	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab[13]
	64. Maximum Change in Temperature in MA –Any Class SB water body - October to June	4°F; 1/Month/Grab[13]

Footnotes:

[1] Although the maximum values for TRC are 11 ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).

[2] Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.

[3] Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).

[4] BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

[5] Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.

[6] The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.
Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

[7] Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

[8] In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

[9]Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).

[10] Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

[11] Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

[12] pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.

[13] Temperature sampling per Method 170.1

COMMITMENT & INTEGRITY
DRIVE RESULTS

95 Cedar Street | Suite 100
Providence, Rhode Island 02903
www.woodardcurran.com

T 800.985.7897
T 401.273.1007
F 401.273.5087

Via Regular US Mail

June 16, 2015

Mr. George Papadopoulos
United States Environmental Protection Agency – Region 1
5 Post Office Square
Mail Code: OEP
Boston, MA 02109-3912

Re: Submittal of Remediation General Permit Notice of Intent
Construction Dewatering Activities
Prolerized New England Company, LLC
69 Rover Street
Everett, Massachusetts

Dear Mr. Papadopoulos:

On behalf of Prolerized New England Company, LLC's (Prolerized) Everett facility, Woodard & Curran, Inc. (Woodard & Curran) has prepared this Notice of Intent (NOI) for application of a National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP), Permit No. MAG910000, for proposed construction dewatering activities at 69 Rover Street in Everett, Massachusetts (the Site). Temporary dewatering is planned in support of the construction of surficial and subsurface components of a stormwater treatment system at the Site. The suggested NOI Form presented in Appendix V of the RGP is provided as **Appendix A**.

Existing Conditions

The proposed project is located on a parcel identified by the Town of Everett Assessor's Office as H0-09-00149. Rover Street bounds the Site to the north, the Mystic River abuts the Site to the south, and industrial properties are present to the east and west. The southern property line ends at approximately the top of a steep embankment armored with rip-rap and runs from the southern property line to the Mystic River. The entire property is actively used as a metals processing facility and contains no vegetated areas or suitable wildlife habitat. Scrap metal recycling and ship loading operations occur throughout the Site, including the entirety of the riverfront area.

Stormwater flow across the Site is divided by two distinct onsite watershed areas that encompass the eastern and western portions of the Site. Stormwater currently generated from the eastern portion of the proposed project area is directed to two at-grade concrete trench sedimentation basins along the northern boundary of the Site and two at-grade concrete trench sedimentation basins along the eastern boundary. A 10,000-gallon water quality tank (oil-water separator) receives discharge from the sedimentation basins prior to connection to a closed conduit drainage system that discharges to the Mystic River via an active outfall (Outfall #1) located on the southeastern corner of the Site. Stormwater generated from the western portion of the Site is currently transported via overland flow to a low-lying area of the facility, accumulating in a pond where it is conveyed, as needed, to the eastern side treatment system components via portable surface pumps and hoses.

Proposed Conditions

In order to better treat and manage stormwater generated at the Site, the proposed project will include construction of an active stormwater treatment system located on the eastern portion of the Site. The new treatment system will include two 248,000-gallon stormwater storage tanks and a 12,000-gallon per minute (gpm) stormwater lift station. One storage tank will be used for storage and sedimentation removal, while the other will be used to store treated stormwater for beneficial reuse. The treatment system will be incorporated into the existing closed conduit drainage system that services the eastern basin of the Site. Stormwater generated from the western portion of the Site will continue to be conveyed to the eastern portion of the Site through surface pumps and hoses for treatment in the new system.

Construction related excavation to install subsurface components of the stormwater treatment system will extend approximately 10 feet into the groundwater table, necessitating excavation dewatering activities. Groundwater levels are likely tidally influenced and are expected to fluctuate during excavation activities.

Figure 1 provides a Site Locus for the proposed work. **Figure 2** is an Existing Conditions Plan showing general Site boundaries, existing structures and wetland boundaries.

Site History

According to readily available documentation for the Site, the Site is located within a historically developed, heavily industrial area of Everett. The majority of the land area occupied by the Site was filled by others from approximately 1910 through 1950. Historic fill material at the Site has been observed to be greater than 25 feet in thickness. In the 1960's, Prolerized began acquiring parcels in the area of the Site to operate a metals processing facility. The Site is currently operating as a metals processing facility. Due to the historically industrial nature of the Site, soil quality beneath the Site is generally poor and has been subject to Massachusetts Contingency Plan (MCP) required management and reporting.

Groundwater Sampling

In order to obtain groundwater data representative of the proposed effluent that will be generated during construction dewatering activities, Woodard & Curran observed the installation of two temporary groundwater monitoring wells in the proposed excavation areas. Groundwater samples were collected from each monitoring well on May 1, 2015 and submitted to a laboratory for analysis for RGP Appendix III, Category III.B parameters. The results of the groundwater analyses demonstrated total suspended solids (TSS) in groundwater collected from both temporary monitoring wells above the RGP Appendix III, Category III.B effluent discharge limit. Additionally, benzo(a)anthracene was detected above the effluent discharge limit of 0.0038 ug/L in one of the monitoring wells. Laboratory analytical results are summarized in the table and laboratory report included in **Appendix B**.

Dilution Factor Application for Metals and 7Q10 Determination

Based on Woodard & Curran's telephone conversation with Mr. Victor Alvarez on June 2, 2015, no dilution factor is allowed for discharges to tidally influenced waters. As such, a dilution factor for metals was not calculated. During the same conversation, Mr. Alvarez agreed with Woodard & Curran's position that a 7Q10 calculation for the segment of the Mystic River proposed to receive discharged effluent was not possible due to tidal fluctuation of the river adjacent to the Site.

Groundwater Treatment

Based on the groundwater laboratory analytical results, construction dewatering groundwater will require treatment for TSS and benzo(a)anthracene prior to discharge into the Mystic River in order to meet RGP

Appendix III, Category III. B effluent limits. During excavation, encountered groundwater will be pumped into an onsite treatment system comprised of 21,000-gallon fractionation tanks, passed through a bag filtration system, discharged into the onsite sedimentation basin/oil-water separator, and ultimately discharged into the Mystic River. The final treatment system design is ultimately the responsibility of the Owner. The design will be based on commonly used equipment comprised of the components listed above based on Site conditions. Ultimately, the treatment system will be designed to remove TSS, consecutively treating benzo(a)anthracene, which is insoluble in water and was likely detected due to the presence of TSS in the groundwater samples. A schematic of the proposed treatment system is provided as **Appendix C**.

Environmental and Historic Determinations

Preparation of this NOI included a review of Appendix I "Areas of Critical Environmental Concern" (ACEC) and Appendix VII Endangered Species Act (ESA) and the National Historic Preservation Act (NHPA).

Based on information reviewed in Appendix I of the RGP and the Massachusetts Geographical Information Systems (MassGIS) Department of Environmental Protection (DEP) Priority Resource Map of Everett does not depict any ACECs exist on or surrounding the Site or proposed discharge location. Additionally, no Estimated Habitats of Rare Wildlife Areas are located on the Site or proximal to the proposed discharge location. The "Federally Listed Endangered and Threatened Species in Massachusetts" identified two listed species in Middlesex County. Because no endangered or threatened species or their designated critical habitat are likely to occur in proximity to the discharge related activities, permit eligibility meets "Criterion A" of Appendix VII. Related documentation regarding this determination is presented in **Appendix D**.

An electronic review of the Massachusetts Cultural Resource Information System database made available through the Massachusetts Historical Commission did not identify historical areas, buildings, objects, burial grounds, or structures on or in proximity to the Site. Therefore, under Appendix VII, the Site qualifies for permit eligibility under "Criterion 2". Related documentation regarding this determination is presented in **Appendix E**.

Construction Dewatering Discharge Timeframe

The proposed construction dewatering activities are scheduled to commence in mid-August 2015 and will terminate by the end of October 2015.

Woodard & Curran has prepared this NOI to satisfy discharge requirements under the RGP. Should you have any questions or comments concerning the information provided in the NOI please do not hesitate to contact the undersigned via telephone (401-273-1007, ext. 2032) or email: (jbonn@woodardcurran.com).

Sincerely,

WOODARD & CURRAN

Janelle Bonn

Janelle Bonn
Project Scientist
Enclosures

cc: Keri Fitzpatrick (Prolerized New England Company, LLC)

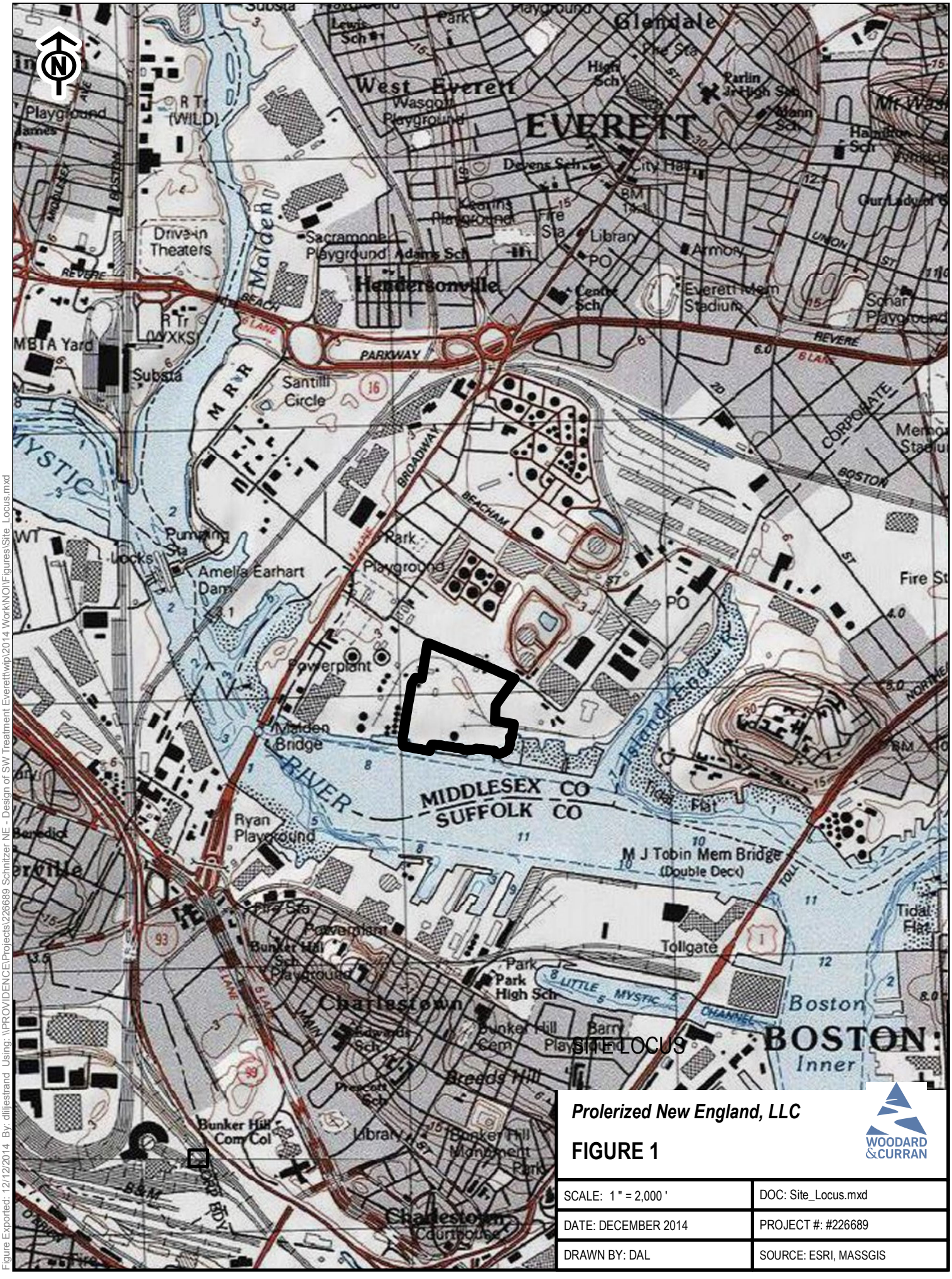
PN: 226689.01

FIGURES

APPENDIX A – NOI FORM

APPENDIX B – LABORATORY ANALYTICAL DATA

FIGURES



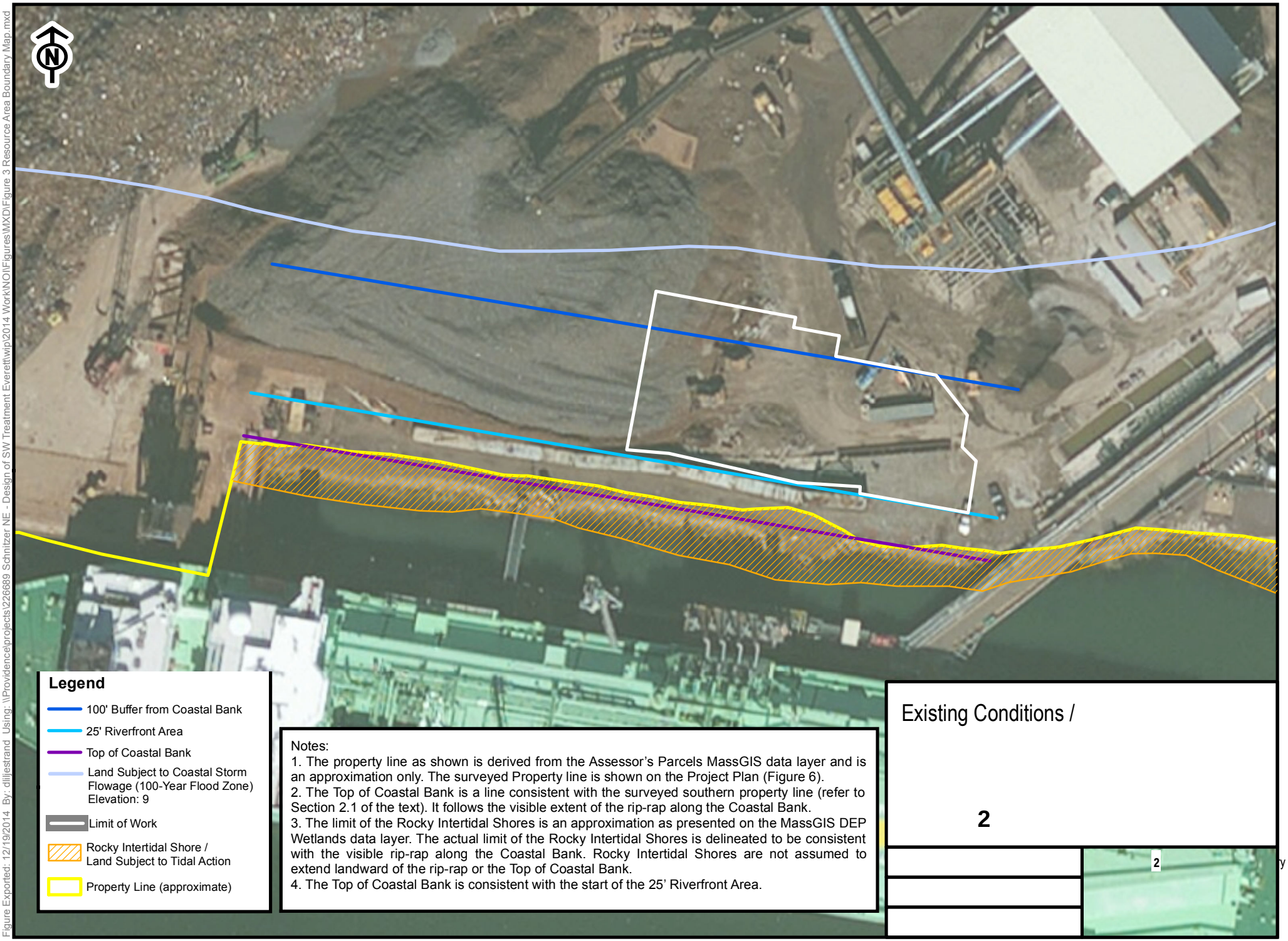
Prolerized New England, LLC

FIGURE 1

WOODARD &CURRAN

SCALE: 1 " = 2,000 '	DOC: Site_Locus.mxd
DATE: DECEMBER 2014	PROJECT #: #226689
DRAWN BY: DAL	SOURCE: ESRI, MASSGIS

Figure Exported: 12/12/2014 By: dlilljestrand Using: \\PROVIDENCE\Projects\226689 Schnitzer NE - Design of SW Treatment Everett\wip\2014 Work\NOI\Figures\Site_Locus.mxd



Notes:
1. The property line as shown is derived from the Assessor's Parcels MassGIS data layer and is an approximation only. The surveyed Property line is shown on the Project Plan (Figure 6).
2. The Top of Coastal Bank is a line consistent with the surveyed southern property line (refer to Section 2.1 of the text). It follows the visible extent of the rip-rap along the Coastal Bank.
3. The limit of the Rocky Intertidal Shores is an approximation as presented on the MassGIS DEP Wetlands data layer. The actual limit of the Rocky Intertidal Shores is delineated to be consistent with the visible rip-rap along the Coastal Bank. Rocky Intertidal Shores are not assumed to extend landward of the rip-rap or the Top of Coastal Bank.
4. The Top of Coastal Bank is consistent with the start of the 25' Riverfront Area.

Existing Conditions /

2

2

APPENDIX A – NOI FORM

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General facility/site information. Please provide the following information about the site:

a) Name of **facility/site:** Prolerized New England Co., LLC		**Facility/site** mailing address:		
Location of **facility/site:** longitude: -71.063260 latitude: 42.391772	Facility SIC code(s): 5093	Street: 69 Rover Street P.O. Box 49095		
b) Name of **facility/site owner:** Prolerized New England Co., LLC		Town: Everett		
Email address of facility/site owner: kfitzpatrick@schn.com		State: MA	Zip: 02149	County: Middlesex
Telephone no. of facility/site **owner:** 617-389-8300				
Fax no. of facility/site **owner:** 617-389-8030		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):				
Street:				
Town:	State:	Zip:	County:	
c) Legal name of **operator:** Prolerized New England Co., LLC	**Operator** telephone no: 617-389-8300	**Operator** fax no.: 617-389-8030	**Operator** email: kfitzpatrick@schn.com	
Operator contact name and title: Keri Fitzpatrick, Regional Environmental Manager				
Address of **operator** (if different from owner):	Street:			
Town:	State:	Zip:	County:	

d) Check Y for "yes" or N for "no" for the following:
1. Has a prior NPDES permit exclusion been granted for the discharge? Y ○ N ◉, if Y, number:
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ○ N ◉, if Y, date and tracking #:
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Y ◉ N ○
4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y ○ N ◉

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y ○ N ◉
If Y, please list:
1. site identification # assigned by the state of NH or MA:
2. permit or license # assigned:
3. state agency contact information: name, location, and telephone number:

f) Is the site/facility covered by any other EPA permit, including:
1. Multi-Sector General Permit? Y ◉ N ○,
if Y, number: MAR05D005
2. Final Dewatering General Permit? Y ○ N ◉,
if Y, number:
3. EPA Construction General Permit? Y ○ N ◉,
if Y, number:
4. Individual NPDES permit? Y ○ N ◉,
if Y, number:
5. any other water quality related individual or general permit? Y ○ N ◉, if Y, number:

g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y ○ N ◉

h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.

Activity Category	**Activity Sub-Category**
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☐
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☐ B. Known Contaminated Sites ☒

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ☐ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ☐ C. Hydrostatic Testing of Pipelines and Tanks ☐ D. Long-Term Remediation of Contaminated Sumps and Dikes ☐ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ☐

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:

Construction dewatering activities related to installation of subsurface stormwater management structures.

b) Provide the following information about each discharge:

1) Number of discharge points: 1

2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft^3/s)?
Max. flow 4 Is maximum flow a **design value**? Y ○ N ◉
Average flow (include units) 3.3 Is average flow a design value or estimate? estimate

3) Latitude and longitude of each discharge within 100 feet:

pt.1: lat	42.388	long	-71.062	pt.2: lat.		long.	;
pt.3: lat		long		pt.4: lat.		long.	;
pt.5: lat		long		pt.6: lat.		long.	;
pt.7: lat		long		pt.8: lat.		long.	; etc.

4) If hydrostatic testing, total volume of the discharge (gals): N/A

5) Is the discharge intermittent ◉ or seasonal ○ ?
Is discharge ongoing? Y ○ N ◉

c) Expected dates of discharge (mm/dd/yy): start Aug 15, 2015 end Dec 15, 2015

d) Please attach a line drawing or flow schematic showing water flow through the facility including:
1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s). See schematic provided with NOI application.

3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒	2	grab	2540 D	5 mg / L	51,000		50,500	
2. Total Residual Chlorine (TRC)		☒	☐	2	grab	4500 -CIE	10 ug / L				
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	2	grab	1664A	5 mg / L				
4. Cyanide (CN)	57125	☒	☐	2	grab	4500 CN CE	5 ug / L				
5. Benzene (B)	71432	☒	☐	2	grab	8260 B	1 ug / L				
6. Toluene (T)	108883	☒	☐	2	grab	8260 B	1 ug / L				
7. Ethylbenzene (E)	100414	☒	☐	2	grab	8260 B	1 ug / L				
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	2	grab	8260 B	2 ug / L				
9. Total BTEX [2]	n/a	☒	☐	2	grab	8260 B	2 ug / L				
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	2	grab	8011	0.015 ug / L				
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	2	grab	8260 B	1 ug / L				
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	2	grab	8260B	25 ug/L				

* Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

[2] BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

[3] EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
13. tert-Amyl Methyl Ether (TAME)	9940508	☒	☐	2	grab	8260 B	1.0 ug / L				
14. Naphthalene	91203	☒	☐	2	grab	8260 B	1.0 ug/L				
15. Carbon Tetrachloride	56235	☒	☐	2	grab	8260 B	1.0 ug / L				
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	2	grab	8260 B	1.0 ug / L				
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	2	grab	8260 B	1.0 ug / L				
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	2	grab	8260 B	1.0 ug / L				
18a. Total dichlorobenzene		☒	☐	2	grab	8260 B	1.0 ug / L				
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	2	grab	8260 B	1.0 ug / L				
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	2	grab	8260 B	1.0 ug / L				
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	2	grab	8260 B	1.0 ug / L				
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	2	grab	8260 B	1.0 ug / L				
23. Methylene Chloride	75092	☒	☐	2	grab	8260 B	2.0 ug / L				
24. Tetrachloroethene (PCE)	127184	☒	☐	2	grab	8260 B	1.0 ug / L				
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	2	grab	8260 B	1.0 ug / L				
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	2	grab	8260 B	1.0 ug / L				
27. Trichloroethene (TCE)	79016	☒	☐	2	grab	8260 B	1.0 ug / L				

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
28. Vinyl Chloride (Chloroethene)	75014	☒	☐	2	grab	8260 B	1.0 ug / L				
29. Acetone	67641	☒	☐	2	grab	8260 B	10 ug / L				
30. 1,4 Dioxane	123911	☐	☒	2	grab	8270 D	0.2 ug / L	0.2		0.14	
31. Total Phenols	108952	☒	☐	2	grab	420.1	0.10 ug / L				
32. Pentachlorophenol (PCP)	87865	☒	☐	2	grab	8270DSIM	0.84 ug / L				
33. Total Phthalates (Phthalate esters) [4]		☒	☐	2	grab	8270DSIM	2.34 ug / L				
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	2	grab	8270DSIM	2.34 ug / L				
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	2	grab	8270DSIM	0.05 ug / L				
a. Benzo(a) Anthracene	56553	☐	☒	2	grab	8270DSIM	0.05 ug / L	0.02		0.02	
b. Benzo(a) Pyrene	50328	☒	☐	2	grab	8270DSIM	0.05 ug / L				
c. Benzo(b)Fluoranthene	205992	☒	☐	2	grab	8270DSIM	0.05 ug / L				
d. Benzo(k)Fluoranthene	207089	☒	☐	2	grab	8270DSIM	0.05 ug / L				
e. Chrysene	21801	☒	☐	2	grab	8270DSIM	0.05 ug / L				
f. Dibenzo(a,h)anthracene	53703	☒	☐	2	grab	8270DSIM	0.05 ug / L				
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	2	grab	8270DSIM	0.05 ug / L				
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	2	grab	8270DSIM	0.19 ug / L				

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☒	☐	2	grab	8270DSIM	0.19 ug / L				
i. Acenaphthylene	208968	☒	☐	2	grab	8270DSIM	0.19 ug / L				
j. Anthracene	120127	☒	☐	2	grab	8270DSIM	0.19 ug / L				
k. Benzo(ghi) Perylene	191242	☒	☐	2	grab	8270DSIM	0.19 ug / L				
l. Fluoranthene	206440	☒	☐	2	grab	8270DSIM	0.19 ug / L				
m. Fluorene	86737	☒	☐	2	grab	8270DSIM	0.19 ug / L				
n. Naphthalene	91203	☐	☒	2	grab	8270DSIM	0.19 ug / L	0.05		0.45	
o. Phenanthrene	85018	☒	☐	2	grab	8270DSIM	0.19 ug / L				
p. Pyrene	129000	☐	☒	2	grab	8270DSIM	0.19 ug / L	0.02		0.02	
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	2	grab	8082A	0.09 ug / L				
38. Chloride	16887006	☐	☒	----	-------	------	------	-------	-----	-------	----
39. Antimony	7440360	☒	☐	2	grab	7010	3.0 ug / L				
40. Arsenic	7440382	☒	☐	2	grab	7010	6.0 ug / L				
41. Cadmium	7440439	☒	☐	2	grab	7010	0.4 ug / L				
42. Chromium III (trivalent)	16065831	☒	☐	2	2	6010C	4.0 ug / L				
43. Chromium VI (hexavalent)	18540299	☒	☐	----	----	----	----	----	----	----	----
44. Copper	7440508	☒	☐	2	2	6010C	4.0 ug / L				
45. Lead	7439921	☐	☒	2	2	7010	2.0 ug / L	3.2		3.2	
46. Mercury	7439976	☒	☐	2	2	7470A	0.20 ug / L				
47. Nickel	7440020	☒	☐	2	2	6010C	4.0 ug / L				
48. Selenium	7782492	☒	☐	2	2	7010	4.0 ug / L				
49. Silver	7440224	☒	☐	2	2	6010C	1.0 ug / L				
50. Zinc	7440666	☒	☐	2	2	6010C	50 ug / L				
51. Iron	7439896	☐	☒	2	2	6010C	200 ug / L	587		587	
Other (describe):		☐	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
		☐	☐								
		☐	☐								

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

Step 1: Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y○ N◉	If yes, which metals?
Step 2: For any metals which exceed the **Appendix III** limits, calculate the **dilution factor (DF)** using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal: DF: Metal: DF: Metal: DF: Metal: DF: Etc.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y○ N○ If Y, list which metals: Dilution not applicable in tidal waters

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

See attached cover letter and schematic for a description of the proposed treatment system.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper ☐	Oil/water separator ☒	Equalization tanks ☐	Bag filter ☒	GAC filter ☐
	Chlorination ☐	De-chlorination ☐	Other (please describe):			

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate**(s) (gallons per minute) of the treatment system:
Average flow rate of discharge 1000 gpm Maximum flow rate of treatment system 1745 gpm
Design flow rate of treatment system _____ gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

No additives will be or are planned to be used.

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct to receiving water ☐	Within facility (sewer) ☐	Storm drain ☒	Wetlands ☐	Other (describe): Storm drain to outlet pipe to river

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Dewatering water will enter an onsite storm drain and exit an outfall to Mystic River below Amelia Earhart Dam to confluence with Chelsea River.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
1. For multiple discharges, number the discharges sequentially.
2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water SB (CSO)

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water Not applicable; see letter cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y ◉ N ○ If yes, for which pollutant(s)?

Is there a final TMDL? Y ○ N ◉ If yes, for which pollutant(s)? sediment screening value, ammonia (un-ionized), fecal coliform, foam/flocs/scum/oil slicks, other, D.O.

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?

A ◉ B ○ C ○ D ○ E ○ F ○

b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ○ N ○ Underway ○

c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Y ○ N ○

d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.

e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?

1 ◉ 2 ○ 3 ○

f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

7. Supplemental information.

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

See attached NOI submittal package.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name:	Prolerized New England Company LLC - Everett, MA
Operator signature:	Keri Fitzpatrick
Printed Name &Title:	Keri Fitzpatrick, Regional Environmental Manager
Date:	6/12/2015

APPENDIX B – LABORATORY ANALYTICAL DATA

Summary of Groundwater Analytical Data
Schnitzer Northeast Facility
69 Rover Street, Everett, MA
May 1, 2015

Analyte	RGP Appendix III Effluent Limit	Units	TMW-1		TMW-2		Mystic-1
8011 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane	0.05	ug/L	0.015	U	0.015	U	-
8082A Polychlorinated Biphenyls (PCB)							
Aroclor 1016	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1221	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1232	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1242	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1248	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1254	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1260	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1262	0.5	ug/L	0.09	U	0.09	U	-
Aroclor 1268	0.5	ug/L	0.09	U	0.09	U	-
8260B Volatile Organic Compounds							
1,1,1-Trichloroethane	200	ug/L	1	U	1	U	-
1,1,2-Trichloroethane	5	ug/L	1	U	1	U	-
1,1-Dichloroethane	70	ug/L	1	U	1	U	-
1,1-Dichloroethene	3.2	ug/L	1	U	1	U	-
1,2-Dibromoethane	0.02	ug/L	1	U	1	U	-
1,2-Dichlorobenzene	600	ug/L	1	U	1	U	-
1,2-Dichloroethane	5	ug/L	1	U	1	U	-
1,3-Dichlorobenzene	320	ug/L	1	U	1	U	-
1,4-Dichlorobenzene	5	ug/L	1	U	1	U	-
Acetone	Monitor Only	ug/L	10	U	10	U	-
Benzene	5	ug/L	1	U	1	U	-
Carbon Tetrachloride	4.4	ug/L	1	U	1	U	-
cis-1,2-Dichloroethene	70	ug/L	1	U	1	U	-
Ethylbenzene	700	ug/L	1	U	1	U	-
Methyl tert-Butyl Ether	70	ug/L	1	U	1	U	-
Methylene Chloride	4.6	ug/L	2	U	2	U	-
Naphthalene	20	ug/L	1	U	1	U	-
Tertiary-amyl methyl ether	Monitor Only	ug/L	1	U	1	U	-
Tertiary-butyl Alcohol	Monitor Only	ug/l	25	U	25	U	
Tetrachloroethene	5	ug/L	1	U	1	U	-
Toluene	100	ug/L	1	U	1	U	-
Trichloroethene	5	ug/L	1	U	1	U	-
Vinyl Chloride	2	ug/L	1	U	1	U	-
Xylene O	100	ug/L	1	U	1	U	-
Xylene P,M	100	ug/L	2	U	2	U	-
8270D(SIM) Semi-Volatile Organic Compounds							
Acenaphthene[2]	100	ug/L	0.19	U	0.19	U	-
Acenaphthylene[2]	100	ug/L	0.19	U	0.19	U	-
Anthracene[2]	100	ug/L	0.19	U	0.19	U	-
Benzo(a)anthracene[1]	0.0038	ug/L	0.05	U	**0.02**	J	-
Benzo(a)pyrene[1]	0.0038	ug/L	0.05	U	0.05	U	-
Benzo(b)fluoranthene[1]	0.0038	ug/L	0.05	U	0.05	U	-
Benzo(g,h,i)perylene[2]	100	ug/L	0.19	U	0.19	U	-
Benzo(k)fluoranthene[1]	0.0038	ug/L	0.05	U	0.05	U	-
bis(2-Ethylhexyl)phthalate	6	ug/L	2.34	U	2.34	U	-
Butylbenzylphthalate	3	ug/L	2.34	U	2.34	U	-
Chrysene[1]	0.0038	ug/L	0.05	U	0.05	U	-
Dibenzo(a,h)Anthracene[1]	0.0038	ug/L	0.05	U	0.05	U	-
Diethylphthalate	2000	ug/L	2.34	U	2.34	U	-
Dimethylphthalate	3	ug/L	2.34	U	2.34	U	-
Di-n-butylphthalate	3	ug/L	2.34	U	2.34	U	-
Di-n-octylphthalate	3	ug/L	2.34	U	2.34	U	-
Fluoranthene[2]	100	ug/L	0.19	U	0.19	U	-
Fluorene2	100	ug/L	0.19	U	0.19	U	-
Indeno(1,2,3-cd)Pyrene[1]	0.0038	ug/L	0.05	U	0.05	U	-
Naphthalene	20	ug/L	0.05	J	0.04	J	-
Pentachlorophenol	1	ug/L	0.84	U	0.84	U	-
Phenanthrene[2]	100	ug/L	0.19	U	0.19	U	-
Pyrene[2]	100	ug/L	0.19	U	0.02	J	-
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution							
1,4-Dioxane	Monitor Only	ug/L	0.08	J	0.2	J	-
Classical Chemistry							
Hexavalent Chromium	100	ug/L	10	U	10	U	-
Phenols	300	ug/L	0.1	U	0.1	U	
Salinity	NA	ppt	-	-	-	-	9.5
Total Cyanide (LL)	10	ug/L	5	U	5	U	-
Total Petroleum Hydrocarbon	5	mg/L	5	U	5	U	-
Total Residual Chlorine	Monitor Only	ug/L	10	U	10	U	-
Total Suspended Solids	30	mg/L	**51**		**50**		-
Total Metals							
Antimony	5.6	ug/L	3	EL, U, D	3	EL, U, D	-
Arsenic	36	ug/L	6	U, D	6	U, D	-
Cadmium	8.9	ug/L	0.4	EL, U, D	0.4	EL, U, D	-
Chromium	-	ug/L	4	U	4	U	-
Chromium III	100	ug/L	10	U	10	U	-
Copper	3.7	ug/L	4	U, D	4	U, D	-
Iron	1000	ug/L	200	U, D	587	D	-
Lead	8.5	ug/L	2	EL, U, D	3.2	EL, D	-
Mercury	1.1	ug/L	0.2	U	0.2	U	-
Nickel	8.2	ug/L	4	U	4	U	-
Selenium	71	ug/L	4	EL, U, D	4	EL, U, D	-
Silver	2.2	ug/L	1	U	1	U	-
Zinc	85.6	ug/L	50	U, D	50	U, D	-

Notes:
1. Maximum effluent limit is 0.0038 ug/L, but compliance limit is equal to the method reporting limit of the test method.
2. Denotes a Group II PAH and is limited as a total of all Group II PAHs.
BOLD values exceed RGP Appendix III Effluent Limits
"-" indicates this sample was not analyzed for this analyte
Total Benzene, Toluene, Ethyl Benzene, and Xylenes effluent limit is 100 ug/L
D = Sample was diluted in order to obtain a value within the calibration range.
E = Reported above the linear range; Estimated value.
J = Value below the Method reporting Limit; Estimated value.
U = Not Detected
NA = Not Applicable

CERTIFICATE OF ANALYSIS

Janelle Bonn
Woodard & Curran - RI
95 Cedar Street, Suite 100
Providence, RI 02903

RE: Schnitzer - RGP (229035)
ESS Laboratory Work Order Number: 1505022

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 6:29 pm, Jun 15, 2015

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

SAMPLE RECEIPT

The following samples were received on May 01, 2015 for the analyses specified on the enclosed Chain of Custody Record.

The samples and analyses listed below were analyzed in accordance with the 2010 Remediation General Permit under the National Pollutant Discharge Elimination System (NPDES).

Revision 1 May 15, 2015: This report has been revised to include Phenol and Tertiary Butyl Alcohol results.

Revision 2, May 28, 2015: This report has been revised to include Naphthalene results from the 8260 run instead of the 8270SIM run.

Revision 3, June 15, 2015: This report has been revised to include Naphthalene from both 8260 and 8270 SIM analyses.

Lab Number	Sample Name	Matrix	Analysis
1505022-01	TMW-1	Ground Water	1664A, 2540D, 420.1, 4500 CN CE, 4500-Cl E, 6010C, 7010, 7196A, 7470A, 8011, 8082A, 8260B, 8270D, 8270D SIM
1505022-02	TMW-2	Ground Water	1664A, 2540D, 420.1, 4500 CN CE, 4500-Cl E, 6010C, 7010, 7196A, 7470A, 8011, 8082A, 8260B, 8270D, 8270D SIM
1505022-03	Mystic-1	Ground Water	2520B

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
ESS Laboratory Work Order: 1505022

PROJECT NARRATIVE

8260B Volatile Organic Compounds

CE50506-BS1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (196% @ 70-130%)

CE50506-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (214% @ 70-130%)

8270D(SIM) Semi-Volatile Organic Compounds

CE50406-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Acenaphthene (31% @ 20%), Acenaphthylene (31% @ 20%), Anthracene (26% @ 20%), Benzo(a)anthracene (24% @ 20%), Benzo(a)pyrene (27% @ 20%), Benzo(b)fluoranthene (30% @ 20%), Benzo(g,h,i)perylene (28% @ 20%), Benzo(k)fluoranthene (28% @ 20%), Butylbenzylphthalate (21% @ 20%), Chrysene (29% @ 20%), Dibenzo(a,h)Anthracene (27% @ 20%), Diethylphthalate (27% @ 20%), Dimethylphthalate (26% @ 20%), Di-n-butylphthalate (25% @ 20%), Di-n-octylphthalate (29% @ 20%), Fluoranthene (26% @ 20%), Fluorene (28% @ 20%), Indeno(1,2,3-cd)Pyrene (29% @ 20%), Naphthalene (29% @ 20%), Pentachlorophenol (122% @ 20%), Phenanthrene (26% @ 20%), Pyrene (26% @ 20%)

CYE0046-CCV1 **Continuing Calibration recovery is above upper control limit (C+).**
Di-n-octylphthalate (122% @ -%)

CYE0046-CCV1 **Continuing Calibration recovery is below lower control limit (C-).**
Pentachlorophenol (17% @ -%)

CYE0046-TUN1 **DDT breakdown > 20%**

CYE0061-CCV1 **Continuing Calibration recovery is above upper control limit (C+).**
Di-n-octylphthalate (125% @ -%)

CYE0061-TUN1 **DDT breakdown > 20%**

8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution

CYE0110-CCV1 **Continuing Calibration recovery is above upper control limit (C+).**
1,4-Dioxane-d8 (122% @ -%)

CYE0110-TUN1 **DDT breakdown > 20%**

Classical Chemistry

1505022-01 **The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**

1505022-02 **The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.**

Total Metals

1505022-01 **Elevated Method Reporting Limits due to sample matrix (EL).**
Antimony , Cadmium , Lead , Selenium

1505022-02 **Elevated Method Reporting Limits due to sample matrix (EL).**
Antimony , Cadmium , Lead , Selenium

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
ESS Laboratory Work Order: 1505022

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
ESS Laboratory Work Order: 1505022

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015D - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-1
Date Sampled: 05/01/15 11:30
Percent Solids: N/A

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	**EL** ND (3.0)		7010		3	KJK	05/07/15 3:34	50	10	CE50424
Arsenic	ND (6.0)		7010		3	KJK	05/07/15 9:39	50	10	CE50424
Cadmium	**EL** ND (0.4)		7010		10	KJK	05/08/15 15:41	50	10	CE50424
Chromium	ND (4.0)		6010C		1	KJK	05/08/15 15:39	50	10	CE50802
Chromium III	ND (10)		6010C		1	JLK	05/08/15 15:39	1	1	[CALC]
Copper	ND (4.0)		6010C		2	JP	05/09/15 16:52	50	10	CE50802
Iron	ND (200)		6010C		10	KJK	05/08/15 17:21	50	10	CE50802
Lead	**EL** ND (2.0)		7010		5	KJK	05/05/15 22:28	50	10	CE50424
Mercury	ND (0.20)		7470A		1	RLA	05/06/15 16:00	20	40	CE50538
Nickel	ND (4.0)		6010C		1	KJK	05/08/15 15:39	50	10	CE50802
Selenium	**EL** ND (4.0)		7010		5	KJK	05/06/15 20:53	50	10	CE50424
Silver	ND (1.0)		6010C		1	KJK	05/08/15 15:39	50	10	CE50802
Zinc	ND (50.0)		6010C		5	KJK	05/08/15 15:53	50	10	CE50802

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-1
Date Sampled: 05/01/15 11:30
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 5/4/15 10:35
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1221	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1232	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1242	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1248	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1254	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1260	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1262	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405
Aroclor 1268	ND (0.09)	0.03	8082A		1	05/04/15 13:34		CE50405

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*86 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*84 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*63 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*69 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-1
Date Sampled: 05/01/15 11:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: ZLC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,1,2-Trichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,1-Dichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,1-Dichloroethene	ND (1.0)	0.3	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,2-Dibromoethane	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,2-Dichlorobenzene	ND (1.0)	0.1	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,2-Dichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,3-Dichlorobenzene	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
1,4-Dichlorobenzene	ND (1.0)	0.1	8260B		1	05/04/15 20:32	CYE0051	CE50506
Acetone	ND (10.0)	2.7	8260B		1	05/04/15 20:32	CYE0051	CE50506
Benzene	ND (1.0)	0.1	8260B		1	05/04/15 20:32	CYE0051	CE50506
Carbon Tetrachloride	ND (1.0)	0.1	8260B		1	05/04/15 20:32	CYE0051	CE50506
cis-1,2-Dichloroethene	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
Ethylbenzene	ND (1.0)	0.1	8260B		1	05/04/15 20:32	CYE0051	CE50506
Methyl tert-Butyl Ether	ND (1.0)	0.3	8260B		1	05/04/15 20:32	CYE0051	CE50506
Methylene Chloride	ND (2.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
Naphthalene	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
Tertiary-amyl methyl ether	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
Tertiary-butyl Alcohol	ND (25.0)	10.0	8260B		1	05/04/15 20:32	CYE0051	CE50506
Tetrachloroethene	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
Toluene	ND (1.0)	0.1	8260B		1	05/04/15 20:32	CYE0051	CE50506
Trichloroethene	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
Vinyl Chloride	ND (1.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506
Xylene O	ND (1.0)	0.1	8260B		1	05/04/15 20:32	CYE0051	CE50506
Xylene P,M	ND (2.0)	0.2	8260B		1	05/04/15 20:32	CYE0051	CE50506

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*106 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*109 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-1
Date Sampled: 05/01/15 11:30
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 5/6/15 19:11

8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,4-Dioxane	**J 0.08** (0.2)	0.07	8270D		1	05/07/15 21:23	CYE0110	CE50624

	%Recovery	Qualifier	Limits
Surrogate: 1,4-Dioxane-d8	*71 %*		*15-115*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-1
Date Sampled: 05/01/15 11:30
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 5/4/15 14:30

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acenaphthene	ND (0.19)	0.04	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Acenaphthylene	ND (0.19)	0.03	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Anthracene	ND (0.19)	0.03	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Benzo(a)anthracene	ND (0.05)	0.01	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Benzo(a)pyrene	ND (0.05)	0.01	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Benzo(b)fluoranthene	ND (0.05)	0.02	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Benzo(g,h,i)perylene	ND (0.19)	0.02	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Benzo(k)fluoranthene	ND (0.05)	0.02	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
bis(2-Ethylhexyl)phthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Butylbenzylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Chrysene	ND (0.05)	0.01	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Dibenzo(a,h)Anthracene	ND (0.05)	0.02	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Diethylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Dimethylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Di-n-butylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Di-n-octylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Fluoranthene	ND (0.19)	0.02	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Fluorene	ND (0.19)	0.03	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Indeno(1,2,3-cd)Pyrene	ND (0.05)	0.02	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Naphthalene	**J 0.05** (0.19)	0.04	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Pentachlorophenol	ND (0.84)	0.30	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Phenanthrene	ND (0.19)	0.04	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406
Pyrene	ND (0.19)	0.02	8270D SIM		1	05/06/15 4:40	CYE0060	CE50406

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*59 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*88 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*68 %*		*30-130*
Surrogate: Nitrobenzene-d5	*83 %*		*30-130*
Surrogate: p-Terphenyl-d14	*79 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-1
Date Sampled: 05/01/15 11:30
Percent Solids: N/A

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-01
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Hexavalent Chromium	ND (10)		7196A		1	JLK	05/01/15 18:24	ug/L	CE50151
Phenols	ND (0.10)	0.03	420.1		1	JLK	05/15/15 12:18	mg/L	CE51522
Total Cyanide (LL)	ND (5.00)		4500 CN CE		1	JLK	05/06/15 0:00	ug/L	CE50631
Total Petroleum Hydrocarbon	ND (5)		1664A		1	JLK	05/07/15 16:00	mg/L	CE50630
Total Residual Chlorine	ND (10)		4500-Cl E		1	JLK	05/01/15 18:34	ug/L	CE50152
Total Suspended Solids	**51** (5)		2540D		1	EEM	05/06/15 16:05	mg/L	CE50614

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-1
Date Sampled: 05/01/15 11:30
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: JXS
Prepared: 5/6/15 16:10

8011 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
1,2-Dibromoethane	ND (0.015)		8011		1	JXS	05/06/15 16:33		CE50643

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*106 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-2
Date Sampled: 05/01/15 13:40
Percent Solids: N/A

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-02
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	**EL** ND (3.0)		7010		3	KJK	05/07/15 3:40	50	10	CE50424
Arsenic	ND (6.0)		7010		3	KJK	05/07/15 9:45	50	10	CE50424
Cadmium	**EL** ND (0.4)		7010		10	KJK	05/08/15 15:47	50	10	CE50424
Chromium	ND (4.0)		6010C		1	KJK	05/08/15 15:45	50	10	CE50802
Chromium III	ND (10)		6010C		1	JLK	05/08/15 15:45	1	1	[CALC]
Copper	ND (4.0)		6010C		2	JP	05/09/15 16:58	50	10	CE50802
Iron	**587** (100)		6010C		5	KJK	05/08/15 15:58	50	10	CE50802
Lead	**EL 3.2** (2.0)		7010		5	KJK	05/05/15 22:23	50	10	CE50424
Mercury	ND (0.20)		7470A		1	RLA	05/06/15 16:02	20	40	CE50538
Nickel	ND (4.0)		6010C		1	KJK	05/08/15 15:45	50	10	CE50802
Selenium	**EL** ND (4.0)		7010		5	KJK	05/06/15 21:16	50	10	CE50424
Silver	ND (1.0)		6010C		1	KJK	05/08/15 15:45	50	10	CE50802
Zinc	ND (50.0)		6010C		5	KJK	05/08/15 15:58	50	10	CE50802

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-2
Date Sampled: 05/01/15 13:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: TJ
Prepared: 5/4/15 10:35
Cleanup Method: 3665A

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1221	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1232	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1242	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1248	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1254	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1260	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1262	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405
Aroclor 1268	ND (0.09)	0.03	8082A		1	05/04/15 13:53		CE50405

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*81 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*76 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*64 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*69 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-2
Date Sampled: 05/01/15 13:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: ZLC

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1-Trichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,1,2-Trichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,1-Dichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,1-Dichloroethene	ND (1.0)	0.3	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,2-Dibromoethane	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,2-Dichlorobenzene	ND (1.0)	0.1	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,2-Dichloroethane	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,3-Dichlorobenzene	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
1,4-Dichlorobenzene	ND (1.0)	0.1	8260B		1	05/04/15 21:05	CYE0051	CE50506
Acetone	ND (10.0)	2.7	8260B		1	05/04/15 21:05	CYE0051	CE50506
Benzene	ND (1.0)	0.1	8260B		1	05/04/15 21:05	CYE0051	CE50506
Carbon Tetrachloride	ND (1.0)	0.1	8260B		1	05/04/15 21:05	CYE0051	CE50506
cis-1,2-Dichloroethene	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
Ethylbenzene	ND (1.0)	0.1	8260B		1	05/04/15 21:05	CYE0051	CE50506
Methyl tert-Butyl Ether	ND (1.0)	0.3	8260B		1	05/04/15 21:05	CYE0051	CE50506
Methylene Chloride	ND (2.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
Naphthalene	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
Tertiary-amyl methyl ether	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
Tertiary-butyl Alcohol	ND (25.0)	10.0	8260B		1	05/04/15 21:05	CYE0051	CE50506
Tetrachloroethene	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
Toluene	ND (1.0)	0.1	8260B		1	05/04/15 21:05	CYE0051	CE50506
Trichloroethene	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
Vinyl Chloride	ND (1.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506
Xylene O	ND (1.0)	0.1	8260B		1	05/04/15 21:05	CYE0051	CE50506
Xylene P,M	ND (2.0)	0.2	8260B		1	05/04/15 21:05	CYE0051	CE50506

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*110 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-2
Date Sampled: 05/01/15 13:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 5/6/15 19:11

8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,4-Dioxane	**J 0.2** (0.2)	0.07	8270D		1	05/07/15 22:13	CYE0110	CE50624

	%Recovery	Qualifier	Limits
Surrogate: 1,4-Dioxane-d8	*79 %*		*15-115*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-2
Date Sampled: 05/01/15 13:40
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: VSC
Prepared: 5/4/15 14:30

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acenaphthene	ND (0.19)	0.04	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Acenaphthylene	ND (0.19)	0.03	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Anthracene	ND (0.19)	0.03	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Benzo(a)anthracene	**J 0.02** (0.05)	0.01	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Benzo(a)pyrene	ND (0.05)	0.01	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Benzo(b)fluoranthene	ND (0.05)	0.02	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Benzo(g,h,i)perylene	ND (0.19)	0.02	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Benzo(k)fluoranthene	ND (0.05)	0.02	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
bis(2-Ethylhexyl)phthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Butylbenzylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Chrysene	ND (0.05)	0.01	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Dibenzo(a,h)Anthracene	ND (0.05)	0.02	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Diethylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Dimethylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Di-n-butylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Di-n-octylphthalate	ND (2.34)	0.19	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Fluoranthene	ND (0.19)	0.02	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Fluorene	ND (0.19)	0.03	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Indeno(1,2,3-cd)Pyrene	ND (0.05)	0.02	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Naphthalene	**J 0.04** (0.19)	0.04	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Pentachlorophenol	ND (0.84)	0.30	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Phenanthrene	ND (0.19)	0.04	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406
Pyrene	**J 0.02** (0.19)	0.02	8270D SIM		1	05/06/15 6:59	CYE0061	CE50406

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*60 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*94 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*72 %*		*30-130*
Surrogate: Nitrobenzene-d5	*88 %*		*30-130*
Surrogate: p-Terphenyl-d14	*87 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-2
Date Sampled: 05/01/15 13:40
Percent Solids: N/A

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-02
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Hexavalent Chromium	ND (10)		7196A		1	JLK	05/01/15 18:24	ug/L	CE50151
Phenols	ND (0.10)	0.03	420.1		1	JLK	05/15/15 12:18	mg/L	CE51522
Total Cyanide (LL)	ND (5.00)		4500 CN CE		1	JLK	05/06/15 0:00	ug/L	CE50631
Total Petroleum Hydrocarbon	ND (5)		1664A		1	JLK	05/07/15 16:00	mg/L	CE50630
Total Residual Chlorine	ND (10)		4500-Cl E		1	JLK	05/01/15 18:34	ug/L	CE50152
Total Suspended Solids	**50** (5)		2540D		1	EEM	05/06/15 16:05	mg/L	CE50614

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: TMW-2
Date Sampled: 05/01/15 13:40
Percent Solids: N/A
Initial Volume: 35
Final Volume: 2
Extraction Method: 504/8011

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: JXS
Prepared: 5/6/15 16:10

8011 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
1,2-Dibromoethane	ND (0.015)		8011		1	JXS	05/06/15 18:26		CE50643

	%Recovery	Qualifier	Limits
Surrogate: Pentachloroethane	*111 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP
Client Sample ID: Mystic-1
Date Sampled: 05/01/15 10:55
Percent Solids: N/A

ESS Laboratory Work Order: 1505022
ESS Laboratory Sample ID: 1505022-03
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Salinity	**9.5** (0.1)		2520B		1	EEM	05/06/15 15:20	ppt	CE50612

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Total Metals

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CE50151 - [CALC]										
Blank										
Chromium III	ND	10	ug/L							
LCS										
Chromium III	ND		ug/L							
LCS Dup										
Chromium III	ND		ug/L							
Batch CE50424 - 3005A/200.7										
Blank										
Antimony	ND	1.0	ug/L							
Arsenic	ND	2.0	ug/L							
Cadmium	ND	0.04	ug/L							
Lead	ND	0.4	ug/L							
Selenium	ND	0.8	ug/L							
LCS										
Antimony	290	50.0	ug/L	250.0		116	80-120			
Arsenic	279	100	ug/L	250.0		111	80-120			
Cadmium	125	50.0	ug/L	125.0		100	80-120			
Lead	266	20.0	ug/L	250.0		106	80-120			
Selenium	592	40.0	ug/L	500.0		118	80-120			
LCS Dup										
Antimony	294	50.0	ug/L	250.0		118	80-120	2	20	
Arsenic	280	100	ug/L	250.0		112	80-120	0.6	20	
Cadmium	125	50.0	ug/L	125.0		100	80-120	0.7	20	
Lead	263	20.0	ug/L	250.0		105	80-120	1	20	
Selenium	595	40.0	ug/L	500.0		119	80-120	0.6	20	
Batch CE50538 - 245.1/7470A										
Blank										
Mercury	ND	0.20	ug/L							
LCS										
Mercury	6.70	0.20	ug/L	6.000		112	80-120			
LCS Dup										
Mercury	6.81	0.20	ug/L	6.000		114	80-120	2	20	
Batch CE50802 - 3005A/200.7										
Blank										
Chromium	ND	4.0	ug/L							
Chromium III	ND	4	ug/L							
Copper	ND	2.0	ug/L							
Iron	ND	20.0	ug/L							
Nickel	ND	4.0	ug/L							
Silver	ND	1.0	ug/L							
Zinc	ND	10.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CE50802 - 3005A/200.7										
LCS										
Chromium	229	10.0	ug/L	250.0		92	80-120			
Chromium III	229	10	ug/L							
Copper	232	5.0	ug/L	250.0		93	80-120			
Iron	1140	50.0	ug/L	1250		91	80-120			
Nickel	229	10.0	ug/L	250.0		91	80-120			
Silver	115	2.5	ug/L	125.0		92	80-120			
Zinc	223	25.0	ug/L	250.0		89	80-120			
LCS Dup										
Chromium	245	10.0	ug/L	250.0		98	80-120	7	20	
Chromium III	245	10	ug/L							
Copper	246	5.0	ug/L	250.0		98	80-120	6	20	
Iron	1200	50.0	ug/L	1250		96	80-120	5	20	
Nickel	244	10.0	ug/L	250.0		98	80-120	7	20	
Silver	123	2.5	ug/L	125.0		98	80-120	7	20	
Zinc	238	25.0	ug/L	250.0		95	80-120	7	20	
8082A Polychlorinated Biphenyls (PCB)										
Batch CE50405 - 3510C										
Blank										
Aroclor 1016	ND	0.10	ug/L							
Aroclor 1221	ND	0.10	ug/L							
Aroclor 1232	ND	0.10	ug/L							
Aroclor 1242	ND	0.10	ug/L							
Aroclor 1248	ND	0.10	ug/L							
Aroclor 1254	ND	0.10	ug/L							
Aroclor 1260	ND	0.10	ug/L							
Aroclor 1262	ND	0.10	ug/L							
Aroclor 1268	ND	0.10	ug/L							
Surrogate: Decachlorobiphenyl	*0.0463*		ug/L	*0.05000*		*93*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0447*		ug/L	*0.05000*		*89*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0287*		ug/L	*0.05000*		*57*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0353*		ug/L	*0.05000*		*71*	*30-150*			
LCS										
Aroclor 1016	0.77	0.10	ug/L	1.000		77	40-140			
Aroclor 1260	0.90	0.10	ug/L	1.000		90	40-140			
Surrogate: Decachlorobiphenyl	*0.0450*		ug/L	*0.05000*		*90*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0435*		ug/L	*0.05000*		*87*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0282*		ug/L	*0.05000*		*56*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0312*		ug/L	*0.05000*		*62*	*30-150*			
LCS Dup										

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch CE50405 - 3510C										
Aroclor 1016	0.81	0.10	ug/L	1.000		81	40-140	5	20	
Aroclor 1260	0.91	0.10	ug/L	1.000		91	40-140	1	20	
Surrogate: Decachlorobiphenyl	*0.0453*		ug/L	*0.05000*		*91*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0431*		ug/L	*0.05000*		*86*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0295*		ug/L	*0.05000*		*59*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0324*		ug/L	*0.05000*		*65*	*30-150*			
8260B Volatile Organic Compounds										
Batch CE50506 - 5030B										
Blank										
1,1,1-Trichloroethane	ND	1.0	ug/L							
1,1,2-Trichloroethane	ND	1.0	ug/L							
1,1-Dichloroethane	ND	1.0	ug/L							
1,1-Dichloroethene	ND	1.0	ug/L							
1,2-Dibromoethane	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichloroethane	ND	1.0	ug/L							
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
Acetone	ND	10.0	ug/L							
Benzene	ND	1.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
cis-1,2-Dichloroethene	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	2.0	ug/L							
Naphthalene	ND	1.0	ug/L							
Tertiary-amyl methyl ether	ND	1.0	ug/L							
Tertiary-butyl Alcohol	ND	25.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Toluene	ND	1.0	ug/L							
Trichloroethene	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*25.0*		ug/L	*25.00*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*27.8*		ug/L	*25.00*		*111*	*70-130*			
Surrogate: Dibromofluoromethane	*25.0*		ug/L	*25.00*		*100*	*70-130*			
Surrogate: Toluene-d8	*26.5*		ug/L	*25.00*		*106*	*70-130*			
LCS										
1,1,1-Trichloroethane	9.6		ug/L	10.00		96	70-130			
1,1,2-Trichloroethane	10.2		ug/L	10.00		102	70-130			
1,1-Dichloroethane	9.9		ug/L	10.00		99	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CE50506 - 5030B										
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130			
1,2-Dibromoethane	10.6		ug/L	10.00		106	70-130			
1,2-Dichlorobenzene	10.6		ug/L	10.00		106	70-130			
1,2-Dichloroethane	9.6		ug/L	10.00		96	70-130			
1,3-Dichlorobenzene	10.6		ug/L	10.00		106	70-130			
1,4-Dichlorobenzene	10.6		ug/L	10.00		106	70-130			
Acetone	97.9		ug/L	50.00		196	70-130			B+
Benzene	10.3		ug/L	10.00		103	70-130			
Carbon Tetrachloride	10.7		ug/L	10.00		107	70-130			
cis-1,2-Dichloroethene	10.0		ug/L	10.00		100	70-130			
Ethylbenzene	10.6		ug/L	10.00		106	70-130			
Methyl tert-Butyl Ether	10.4		ug/L	10.00		104	70-130			
Methylene Chloride	9.4		ug/L	10.00		94	70-130			
Naphthalene	10.6		ug/L	10.00		106	70-130			
Tertiary-amyl methyl ether	9.7		ug/L	10.00		97	70-130			
Tertiary-butyl Alcohol	59.3		ug/L	50.00		119	70-130			
Tetrachloroethene	9.0		ug/L	10.00		90	70-130			
Toluene	10.2		ug/L	10.00		102	70-130			
Trichloroethene	10.2		ug/L	10.00		102	70-130			
Vinyl Chloride	9.9		ug/L	10.00		99	70-130			
Xylene O	10.2		ug/L	10.00		102	70-130			
Xylene P,M	21.0		ug/L	20.00		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	*26.4*		ug/L	*25.00*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*27.8*		ug/L	*25.00*		*111*	*70-130*			
Surrogate: Dibromofluoromethane	*26.1*		ug/L	*25.00*		*105*	*70-130*			
Surrogate: Toluene-d8	*28.0*		ug/L	*25.00*		*112*	*70-130*			
LCS Dup										
1,1,1-Trichloroethane	9.4		ug/L	10.00		94	70-130	2	25	
1,1,2-Trichloroethane	10.3		ug/L	10.00		103	70-130	0.8	25	
1,1-Dichloroethane	9.6		ug/L	10.00		96	70-130	3	25	
1,1-Dichloroethene	8.3		ug/L	10.00		83	70-130	20	25	
1,2-Dibromoethane	10.4		ug/L	10.00		104	70-130	2	25	
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	3	25	
1,2-Dichloroethane	9.4		ug/L	10.00		94	70-130	2	25	
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130	3	25	
1,4-Dichlorobenzene	10.5		ug/L	10.00		105	70-130	0.3	25	
Acetone	107		ug/L	50.00		214	70-130	9	25	B+
Benzene	10.0		ug/L	10.00		100	70-130	2	25	
Carbon Tetrachloride	10.2		ug/L	10.00		102	70-130	5	25	
cis-1,2-Dichloroethene	9.8		ug/L	10.00		98	70-130	1	25	
Ethylbenzene	10.2		ug/L	10.00		102	70-130	4	25	
Methyl tert-Butyl Ether	10.4		ug/L	10.00		104	70-130	0.3	25	
Methylene Chloride	8.2		ug/L	10.00		82	70-130	14	25	
Naphthalene	9.8		ug/L	10.00		98	70-130	9	25	

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CE50506 - 5030B										
Tertiary-amyl methyl ether	9.8		ug/L	10.00		98	70-130	0.5	25	
Tertiary-butyl Alcohol	53.5		ug/L	50.00		107	70-130	10	25	
Tetrachloroethene	8.9		ug/L	10.00		89	70-130	0.4	25	
Toluene	10.0		ug/L	10.00		100	70-130	2	25	
Trichloroethene	9.5		ug/L	10.00		95	70-130	6	25	
Vinyl Chloride	10.4		ug/L	10.00		104	70-130	5	25	
Xylene O	9.6		ug/L	10.00		96	70-130	6	25	
Xylene P,M	20.5		ug/L	20.00		103	70-130	2	25	
Surrogate: 1,2-Dichloroethane-d4	*27.5*		ug/L	*25.00*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*27.2*		ug/L	*25.00*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*26.0*		ug/L	*25.00*		*104*	*70-130*			
Surrogate: Toluene-d8	*27.6*		ug/L	*25.00*		*110*	*70-130*			
8270D(SIM) Semi-Volatile Organic Compounds w/ Isotope Dilution										
Batch CE50624 - 3520C										
Blank										
1,4-Dioxane	ND	0.2	ug/L							
Surrogate: 1,4-Dioxane-d8	*3.93*		ug/L	*5.000*		*79*	*15-115*			
LCS										
1,4-Dioxane	8.3	0.2	ug/L	10.00		83	40-140			
Surrogate: 1,4-Dioxane-d8	*3.89*		ug/L	*5.000*		*78*	*15-115*			
LCS Dup										
1,4-Dioxane	8.6	0.2	ug/L	10.00		86	40-140	4	20	
Surrogate: 1,4-Dioxane-d8	*4.14*		ug/L	*5.000*		*83*	*15-115*			
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CE50406 - 3510C										
Blank										
Acenaphthene	ND	0.20	ug/L							
Acenaphthylene	ND	0.20	ug/L							
Anthracene	ND	0.20	ug/L							
Benzo(a)anthracene	ND	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	ug/L							
Benzo(g,h,i)perylene	ND	0.20	ug/L							
Benzo(k)fluoranthene	ND	0.05	ug/L							
bis(2-Ethylhexyl)phthalate	0.30	2.50	ug/L							J
Butylbenzylphthalate	ND	2.50	ug/L							
Chrysene	ND	0.05	ug/L							
Dibenzo(a,h)Anthracene	ND	0.05	ug/L							
Diethylphthalate	ND	2.50	ug/L							
Dimethylphthalate	ND	2.50	ug/L							
Di-n-butylphthalate	ND	2.50	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CE50406 - 3510C										
Di-n-octylphthalate	ND	2.50	ug/L							
Fluoranthene	ND	0.20	ug/L							
Fluorene	ND	0.20	ug/L							
Indeno(1,2,3-cd)Pyrene	ND	0.05	ug/L							
Naphthalene	ND	0.20	ug/L							
Pentachlorophenol	ND	0.90	ug/L							
Phenanthrene	ND	0.20	ug/L							
Pyrene	ND	0.20	ug/L							
Surrogate: 1,2-Dichlorobenzene-d4	*1.32*		ug/L	*2.500*		*53*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.00*		ug/L	*3.750*		*80*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.52*		ug/L	*2.500*		*61*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.79*		ug/L	*2.500*		*72*	*30-130*			
Surrogate: p-Terphenyl-d14	*1.93*		ug/L	*2.500*		*77*	*30-130*			
LCS										
Acenaphthene	2.97	0.20	ug/L	4.000		74	40-140			
Acenaphthylene	2.93	0.20	ug/L	4.000		73	40-140			
Anthracene	3.19	0.20	ug/L	4.000		80	40-140			
Benzo(a)anthracene	3.18	0.05	ug/L	4.000		79	40-140			
Benzo(a)pyrene	3.43	0.05	ug/L	4.000		86	40-140			
Benzo(b)fluoranthene	3.54	0.05	ug/L	4.000		89	40-140			
Benzo(g,h,i)perylene	3.43	0.20	ug/L	4.000		86	40-140			
Benzo(k)fluoranthene	3.47	0.05	ug/L	4.000		87	40-140			
bis(2-Ethylhexyl)phthalate	3.95	2.50	ug/L	4.000		99	40-140			
Butylbenzylphthalate	3.78	2.50	ug/L	4.000		94	40-140			
Chrysene	3.20	0.05	ug/L	4.000		80	40-140			
Dibenzo(a,h)Anthracene	3.59	0.05	ug/L	4.000		90	40-140			
Diethylphthalate	3.12	2.50	ug/L	4.000		78	40-140			
Dimethylphthalate	3.13	2.50	ug/L	4.000		78	40-140			
Di-n-butylphthalate	3.50	2.50	ug/L	4.000		88	40-140			
Di-n-octylphthalate	4.06	2.50	ug/L	4.000		102	40-140			
Fluoranthene	3.38	0.20	ug/L	4.000		84	40-140			
Fluorene	2.98	0.20	ug/L	4.000		74	40-140			
Indeno(1,2,3-cd)Pyrene	3.64	0.05	ug/L	4.000		91	40-140			
Naphthalene	2.47	0.20	ug/L	4.000		62	40-140			
Pentachlorophenol	1.53	0.90	ug/L	4.000		38	30-130			
Phenanthrene	3.07	0.20	ug/L	4.000		77	40-140			
Pyrene	3.17	0.20	ug/L	4.000		79	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*1.66*		ug/L	*2.500*		*66*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.81*		ug/L	*3.750*		*101*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.93*		ug/L	*2.500*		*77*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.16*		ug/L	*2.500*		*86*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.37*		ug/L	*2.500*		*95*	*30-130*			
LCS Dup										
Acenaphthene	2.18	0.20	ug/L	4.000		54	40-140	31	20	D+

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds										
Batch CE50406 - 3510C										
Acenaphthylene	2.15	0.20	ug/L	4.000		54	40-140	31	20	D+
Anthracene	2.46	0.20	ug/L	4.000		62	40-140	26	20	D+
Benzo(a)anthracene	2.49	0.05	ug/L	4.000		62	40-140	24	20	D+
Benzo(a)pyrene	2.60	0.05	ug/L	4.000		65	40-140	27	20	D+
Benzo(b)fluoranthene	2.63	0.05	ug/L	4.000		66	40-140	30	20	D+
Benzo(g,h,i)perylene	2.60	0.20	ug/L	4.000		65	40-140	28	20	D+
Benzo(k)fluoranthene	2.61	0.05	ug/L	4.000		65	40-140	28	20	D+
bis(2-Ethylhexyl)phthalate	3.26	2.50	ug/L	4.000		81	40-140	19	20	
Butylbenzylphthalate	3.05	2.50	ug/L	4.000		76	40-140	21	20	D+
Chrysene	2.40	0.05	ug/L	4.000		60	40-140	29	20	D+
Dibenzo(a,h)Anthracene	2.74	0.05	ug/L	4.000		69	40-140	27	20	D+
Diethylphthalate	2.37	2.50	ug/L	4.000		59	40-140	27	20	D+, J
Dimethylphthalate	2.41	2.50	ug/L	4.000		60	40-140	26	20	D+, J
Di-n-butylphthalate	2.74	2.50	ug/L	4.000		68	40-140	25	20	D+
Di-n-octylphthalate	3.03	2.50	ug/L	4.000		76	40-140	29	20	D+
Fluoranthene	2.60	0.20	ug/L	4.000		65	40-140	26	20	D+
Fluorene	2.25	0.20	ug/L	4.000		56	40-140	28	20	D+
Indeno(1,2,3-cd)Pyrene	2.73	0.05	ug/L	4.000		68	40-140	29	20	D+
Naphthalene	1.84	0.20	ug/L	4.000		46	40-140	29	20	D+
Pentachlorophenol	0.368	0.90	ug/L	4.000		9	30-130	122	20	D+, J
Phenanthrene	2.38	0.20	ug/L	4.000		59	40-140	26	20	D+
Pyrene	2.44	0.20	ug/L	4.000		61	40-140	26	20	D+
Surrogate: 1,2-Dichlorobenzene-d4	*1.18*		ug/L	*2.500*		*47*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.22*		ug/L	*3.750*		*86*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*1.43*		ug/L	*2.500*		*57*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.72*		ug/L	*2.500*		*69*	*30-130*			
Surrogate: p-Terphenyl-d14	*1.80*		ug/L	*2.500*		*72*	*30-130*			
Classical Chemistry										
Batch CE50151 - General Preparation										
Blank										
Hexavalent Chromium	ND	10	ug/L							
LCS										
Hexavalent Chromium	0.5		mg/L	0.4998		98	90-110			
LCS Dup										
Hexavalent Chromium	0.5		mg/L	0.4998		99	90-110	0.3	20	
Batch CE50152 - General Preparation										
Blank										
Total Residual Chlorine	ND	10	ug/L							
LCS										
Total Residual Chlorine	1		mg/L	0.9960		99	85-115			
Batch CE50612 - General Preparation										

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CE50612 - General Preparation										
LCS										
Salinity	1.0		ppt	1.000		97	85-115			
Batch CE50614 - General Preparation										
Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	66		mg/L	68.80		96	80-120			
Batch CE50630 - General Preparation										
Blank										
Total Petroleum Hydrocarbon	ND	5	mg/L							
LCS										
Total Petroleum Hydrocarbon	20	5	mg/L	19.38		104	66-114			
Batch CE50631 - TCN Prep										
Blank										
Total Cyanide (LL)	ND	5.00	ug/L							
LCS										
Total Cyanide (LL)	19.5	5.00	ug/L	20.06		97	90-110			
LCS										
Total Cyanide (LL)	155	5.00	ug/L	150.4		103	90-110			
LCS Dup										
Total Cyanide (LL)	156	5.00	ug/L	150.4		104	90-110	0.5	20	
Batch CE51522 - General Preparation										
Blank										
Phenols	ND	0.10	mg/L							
LCS										
Phenols	0.10	0.10	mg/L	0.1000		98	80-120			
LCS										
Phenols	1.00	0.10	mg/L	1.000		100	80-120			
8011 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CE50643 - 504/8011										
Blank										
1,2-Dibromoethane	ND	0.015	ug/L							
Surrogate: Pentachloroethane	*0.187*		ug/L	*0.2000*		*93*	*30-150*			
LCS										
1,2-Dibromoethane	0.176	0.015	ug/L	0.2000		88	60-140			
Surrogate: Pentachloroethane	*0.185*		ug/L	*0.2000*		*92*	*30-150*			
LCS										

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8011 1,2-Dibromoethane / 1,2-Dibromo-3-chloropropane										
Batch CE50643 - 504/8011										
1,2-Dibromoethane	0.091	0.015	ug/L	0.08000		114	60-140			
Surrogate: Pentachloroethane	*0.0730*		ug/L	*0.08000*		*91*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

Notes and Definitions

U	Analyte included in the analysis, but not detected
J	Reported between MDL and MRL
HT	The maximum holding time listed in 40 CFR Part 136 Table II for pH, Dissolved Oxygen, Sulfite and Residual Chlorine is fifteen minutes.
EL	Elevated Method Reporting Limits due to sample matrix (EL).
DDT	DDT breakdown > 20%
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
C+	Continuing Calibration recovery is above upper control limit (C+).
C-	Continuing Calibration recovery is below lower control limit (C-).
B+	Blank Spike recovery is above upper control limit (B+).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report

CERTIFICATE OF ANALYSIS

Client Name: Woodard & Curran - RI
Client Project ID: Schnitzer - RGP

ESS Laboratory Work Order: 1505022

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

Sample and Cooler Receipt Checklist

Client: Woodard & Curran
Client Project ID: _____
Shipped/Delivered Via: ESS Courier

ESS Project ID: 15050022
Date Project Due: 5/8/15
Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present?	* No	10. Are the samples properly preserved?	Yes
Air No.:		11. Proper sample containers used?	Yes
2. Were Custody Seals Present?	No	12. Any air bubbles in the VOA vials?	No
3. Were Custody Seals Intact?	N/A	13. Holding times exceeded?	No
4. Is Radiation count < 100 CPM?	Yes	14. Sufficient sample volumes?	Yes
5. Is a cooler present?	Yes	15. Any Subcontracting needed?	No
Cooler Temp: **3.3**		16. Are ESS labels on correct containers?	**Yes|No**
Iced With: **Ice**		17. Were samples received intact?	**Yes|No**
6. Was COC included with samples?	Yes	ESS Sample IDs:	
7. Was COC signed and dated by client?	Yes	Sub Lab:	
8. Does the COC match the sample	Yes	Analysis:	
9. Is COC complete and correct?	Yes	TAT:	

18. Was there need to call project manager to discuss status? If yes, please explain.

Cr^{+6} split + preserved JT 5/1/15 @1740 WS 5/1/15

Who was called?:_____ By whom? _____

Sample Number	Properly Preserved	Container Type	# of Containers	Preservative
1	Yes	1 L Glass	2	H2SO4
1	Yes	1 L Glass	6	NP
1	Yes	1 L Plastic	1	NP
1	Yes	250 ml Plastic	1	HNO3
1	Yes	250 ml Plastic	1	NaOH pH=11 WS 5/1/15 1740
1	Yes	250 ml Plastic	1	NP
1	Yes	40 ml - VOA	6	HCL
1	Yes	500 ml Plastic	1	HNO3
2	Yes	1 L Glass	2	H2SO4
2	Yes	1 L Glass	6	NP
2	Yes	1 L Plastic	1	NP
2	Yes	250 ml Plastic	1	HNO3
2	Yes	250 ml Plastic	1	NaOH pH=11 WS 5/1/15 1740
2	Yes	250 ml Plastic	1	NP
2	Yes	40 ml - VOA	5	HCL
2	Yes	500 ml Plastic	1	HNO3
3	Yes	250 ml Glass	1	NP

Completed By: _____ Date/Time: 5/1/15 1744
Reviewed By: _____ Date/Time: 5/1/15 1800

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time ✓ Standard Other ______
If faster than 5 days, prior approval by laboratory is required # ______

State where samples were collected from: (MA circled) RI CT NH NJ NY ME Other ______

Is this project for any of the following: MA-MCP Navy USACE Other ______

Reporting Limits: MA RGP Appendix III

ESS LAB PROJECT ID: 1505022

Electronic Deliverable Yes ✓ No ____
Format: Excel ✓ Access __ PDF ✓ Other ______

Co. Name	Project #	Project Name (20 Char. or less)
Woodard & Curran	229035	Schnitzer

Contact Person	Address
Janelle Bonn	95 Cedar Street

City	State	Zip	PO#
Providence	RI	02903	

Telephone #	Fax #	Email Address
401-273-1007		Jbonn@woodardcurran.com

Circle and/or Write Required Analysis

Analysis columns: (A) 8260 VOA (circled) / 624 / 524.2; (B) 8021 MTBE/BTEX / 8015 GRO / VPH w/targets; (C) 8100 TPH / 8015 DRO; (D) EPH w/o PAHs / EPH w/PAHs / EPH 4 Diesel; (E) 8081 Pesticides / 8082 PCB (circled) / 608 Pesticides / 608 PCB; (F) 8270 SVOA (circled) / 625 / PAH 8270-; (G) RCRA5 / RCRA8 / PP13 / TAL23; (H) ~~TCLP RCRA8~~ 8270 SIMS; (I) ~~MCP Metals (15)~~ NPDES Metals; (J) EDB 8011; (K) TPH 1664; (L) SM-2540D, 4500Cl; (M) 4500 CN; (N) 2510B

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	5/1/15	1130		X		TMW-1	1,2,3 4,5	18	P/G/V	X					X		X	X	X	X	X	X	
2	5/1/15	1340		X		TMW-2	1,2,3 4,5	~~17~~ 18	P/G/V	X					X		X	X	X	X	X	X	
3	5/1/15	1055		X		Mystic-1	1	1	G														X

Container Type: P-Poly G-Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present ✓ Yes ___ No
Seals Intact ___ Yes ___ No NA: ✓
Cooler Temp: 3.3 / 4.8 Ice Kit

Internal Use Only
[ ] Pickup
[ ] Technicians ____

Preservation Code 1- NP, 2- HC1, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ______

Sampled by: J. Guerra

Comments: Use 8270 SIM for pentachlorophenol, ~~[illegible]~~ Broke VOC VOA in Field.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	5/1/15 1436	[signature]	5/1/15 1436	[signature]	5/1/15 1720	[signature]	5/1/15 1729
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

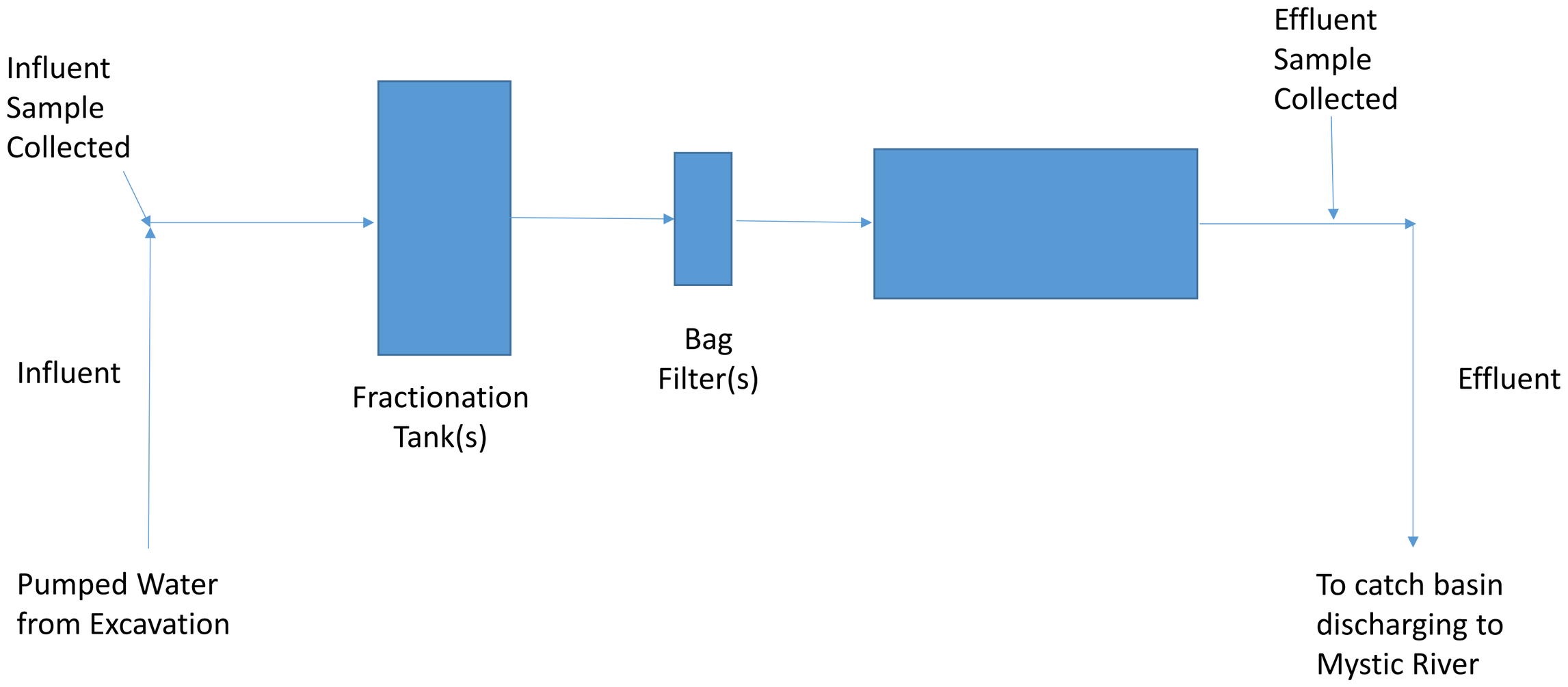
*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

APPENDIX C – TREATMENT SYSTEM SCHEMATIC

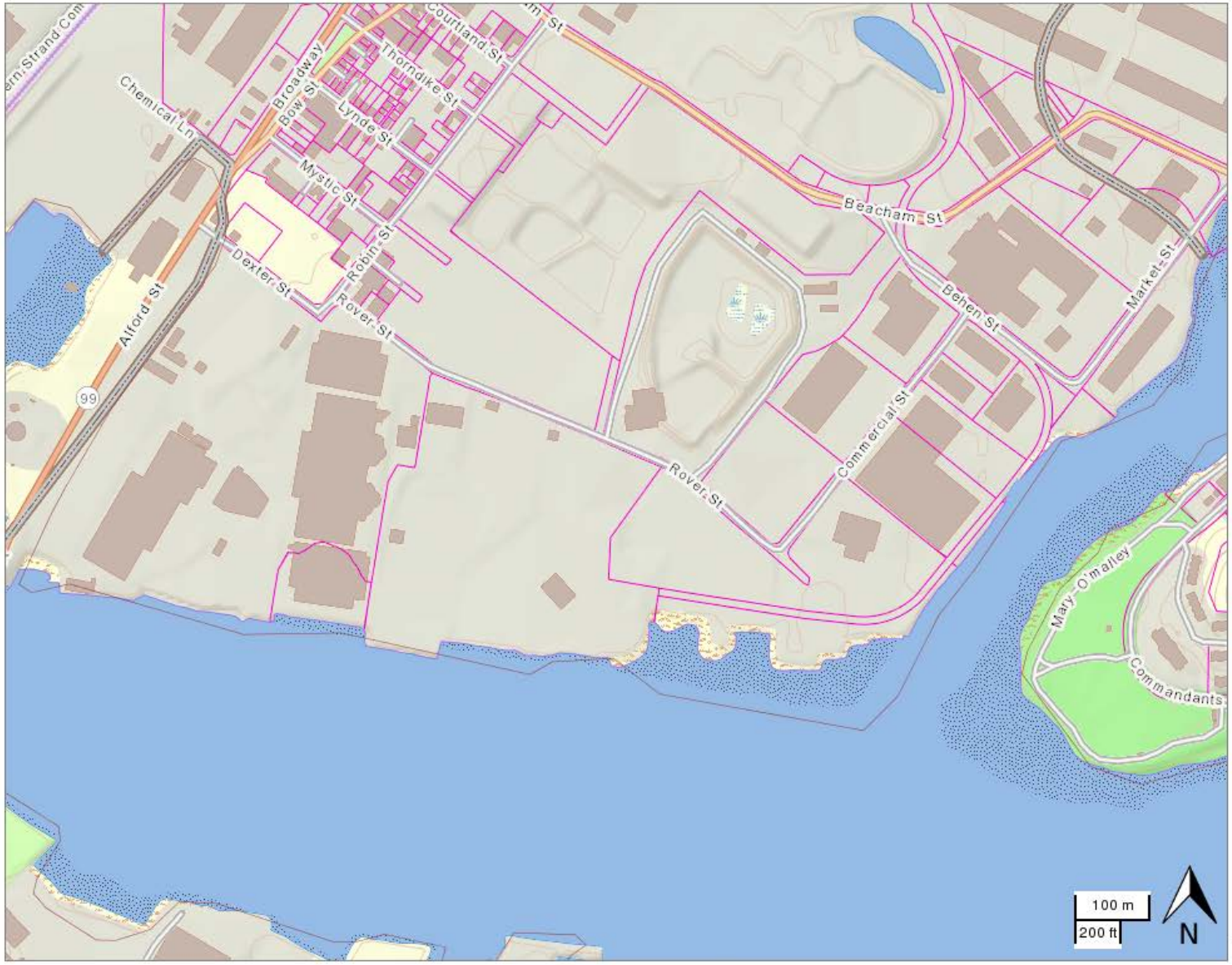
69 Rover Street, Everett, MA Proposed Construction Dewatering
Treatment Schematic



Details of treatment system may vary from the system indicated above. Specific means and methods of treatment are to be selected by the subcontractor. All water discharged at the effluent point shall meet required effluent standards as specified in Remediation General Permit.

APPENDIX D – ENVIRONMENTAL DETERMINATION

MassGIS Oliver Priority Resources Map - 69 Rover Street, Everett, MA



Potential Vernal Pools

NHESP Priority Habitats of Rare Species

NHESP Natural Communities

NHESP Estimated Habitats of Rare Wildlife

NHESP Certified Vernal Pools

NHESP Ecoregions

Areas of Critical Environmental Concern ACECs Boundaries
- ROAD/RAIL BASED
- RIVER BASED
- WETLAND BASED
- FLOODPLAIN BASED
- TIDAL BASED
- CONTOUR BASED
- POLITICAL BOUNDARY
- PROPERTY LINE BASED
- OTHER
- NOT DEFINED

Areas of Critical Environmental Concern ACECs

Tax Parcels for Query

Detailed Features

Tax Parcels

Structures

See Information for Middlesex County

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 01/09/2015

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 01/09/2015

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Suffolk	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
	Northern Long-eared Bat	Proposed Endangered	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

[1]Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Updated 01/09/2015

Remediation General Permit
Appendix I

Areas of Critical Environmental Concern (ACEC) in Massachusetts

This appendix presents the June 2009 list of Massachusetts ACECs, Towns with ACECs within their Boundaries, and a map showing ACECs. If the project proposed is located in one of the communities listed on the "Towns with ACECs within their Boundaries", the project may be located in an ACEC.

To confirm whether the project location is in an ACEC, contact the local Conservation Commission or the Massachusetts Department of Conservation & Recreation (DCR) ACEC program at:

Elizabeth Sorenson, Director
ACEC Program
Massachusetts Department of Conservation and Recreation
Bureau of Planning and Resource Protection
251 Causeway St., Ste. 700, Boston, MA 02114-2104
Phone: 617-626-1394
Email: Elizabeth.Sorenson@state.ma.us
Fax: 617-626-1349

For further information, please reference the Massachusetts DCR ACEC Program Home website at: http://www.mass.gov/dcr/stewardship/acec/index.htm

MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN
June 2009

Total Approximate Acreage: 268,000 acres
Approximate acreage and designation date follow ACEC names below.

Bourne Back River
(1,850 acres, 1989) Bourne

Canoe River Aquifer and Associated Areas (17,200 acres, 1991) Easton, Foxborough, Mansfield, Norton, Sharon, and Taunton

Cedar Swamp
(1,650 acres, 1975) Hopkinton and Westborough

Central Nashua River Valley
(12,900 acres, 1996) Bolton, Harvard, Lancaster, and Leominster

Cranberry Brook Watershed
(1,050 acres, 1983) Braintree and Holbrook

Ellisville Harbor
(600 acres, 1980) Plymouth

Fowl Meadow and Ponkapoag Bog
(8,350 acres, 1992) Boston, Canton, Dedham, Milton, Norwood, Randolph, Sharon, and Westwood

Golden Hills
(500 acres, 1987) Melrose, Saugus, and Wakefield

Great Marsh (originally designated as Parker River/Essex Bay)
(25,500 acres, 1979) Essex, Gloucester, Ipswich, Newbury, and Rowley

Herring River Watershed
(4,450 acres, 1991) Bourne and Plymouth

Hinsdale Flats Watershed
(14,500 acres, 1992) Dalton, Hinsdale, Peru, and Washington

Hockomock Swamp
(16,950 acres, 1990) Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater

Inner Cape Cod Bay
(2,600 acres, 1985) Brewster, Eastham, and Orleans

Kampoosa Bog Drainage Basin
(1,350 acres, 1995) Lee and Stockbridge

Karner Brook Watershed
(7,000 acres, 1992) Egremont and Mount Washington

Miscoe, Warren, and Whitehall Watersheds
(8,700 acres, 2000) Grafton, Hopkinton, and Upton

Neponset River Estuary
(1,300 acres, 1995) Boston, Milton, and Quincy

Petapawag
(25,680 acres, 2002) Ayer, Dunstable, Groton, Pepperell, and Tyngsborough

Pleasant Bay
(9,240 acres, 1987) Brewster, Chatham, Harwich, and Orleans

Pocasset River
(160 acres, 1980) Bourne

Rumney Marshes
(2,800 acres, 1988) Boston, Lynn, Revere, Saugus, and Winthrop

Sandy Neck Barrier Beach System
(9,130 acres, 1978) Barnstable and Sandwich

Schenob Brook Drainage Basin
(13,750 acres, 1990) Mount Washington and Sheffield

Squannassit
(37,420 acres, 2002) Ashby, Ayer, Groton, Harvard, Lancaster, Lunenburg, Pepperell, Shirley, and Townsend

Three Mile River Watershed
(14,280 acres, 2008) Dighton, Norton, Taunton

Upper Housatonic River
(12,280 acres, 2009) Lee, Lenox, Pittsfield, Washington

Waquoit Bay
(2,580 acres, 1979) Falmouth and Mashpee

Weir River
(950 acres, 1986) Cohasset, Hingham, and Hull

Wellfleet Harbor
(12,480 acres, 1989) Eastham, Truro, and Wellfleet

Weymouth Back River
(800 acres, 1982) Hingham and Weymouth

ACEC acreages above are based on MassGIS calculations and may differ from numbers originally presented in designation documents and other ACEC publications due to improvements in accuracy of GIS data and boundary clarifications. Listed acreages have been rounded to the nearest 50 or 10 depending on whether boundary clarification has occurred. For more information please see, http://www.mass.gov/dcr/stewardship/acec/aboutMaps.htm.

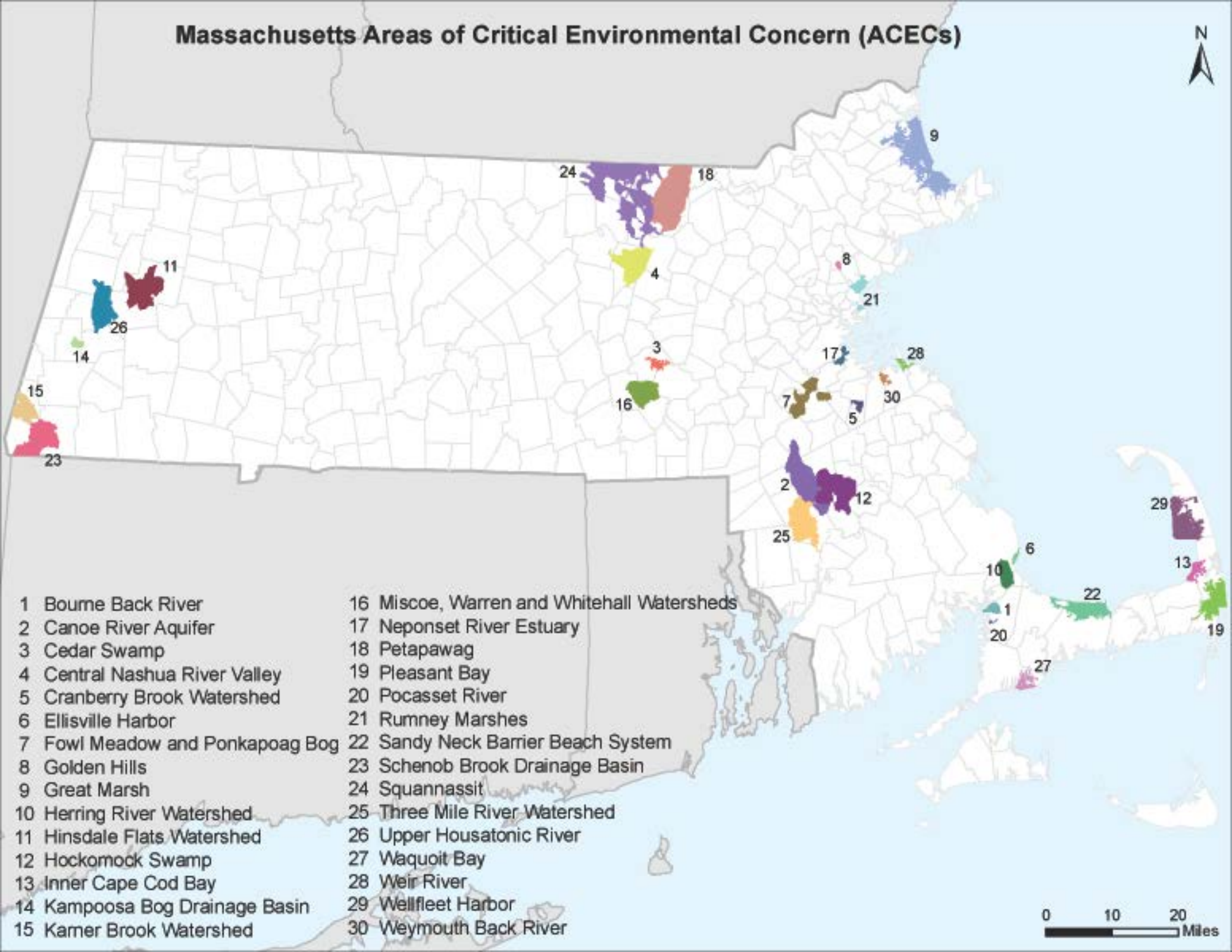
Towns with ACECs within their Boundaries June 2009

TOWN	ACEC
Ashby	Squannassit
Ayer	Petapawag
	Squannassit
Barnstable	Sandy Neck Barrier Beach System
Bolton	Central Nashua River Valley
Boston	Rumney Marshes
	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary
Bourne	Pocasset River
	Bourne Back River
	Herring River Watershed
Braintree	Cranberry Brook Watershed
Brewster	Pleasant Bay
	Inner Cape Cod Bay
Bridgewater	Hockomock Swamp
Canton	Fowl Meadow and Ponkapoag Bog
Chatham	Pleasant Bay
Cohasset	Weir River
Dalton	Hinsdale Flats Watershed
Dedham	Fowl Meadow and Ponkapoag Bog
Dighton	Three Mile River Watershed
Dunstable	Petapawag
Eastham	Inner Cape Cod Bay
	Wellfleet Harbor
Easton	Canoe River Aquifer
	Hockomock Swamp
Egremont	Karner Brook Watershed
Essex	Great Marsh
Falmouth	Waquoit Bay
Foxborough	Canoe River Aquifer
Gloucester	Great Marsh
Grafton	Miscoe-Warren-Whitehall Watersheds
Groton	Petapawag
	Squannassit
Harvard	Central Nashua River Valley
	Squannassit
Harwich	Pleasant Bay
Hingham	Weir River
	Weymouth Back River
Hinsdale	Hinsdale Flats Watershed
Holbrook	Cranberry Brook Watershed
Hopkinton	Miscoe-Warren-Whitehall Watersheds
	Cedar Swamp
Hull	Weir River
Ipswich	Great Marsh
Lancaster	Central Nashua River Valley
	Squannassit
Lee	Kampoosa Bog Drainage Basin
	Upper Housatonic River
Lenox	Upper Housatonic River
Leominster	Central Nashua River Valley
Lunenburg	Squannassit
Lynn	Rumney Marshes
Mansfield	Canoe River Aquifer
Mashpee	Waquoit Bay
Melrose	Golden Hills
Milton	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary

TOWN	ACEC
Mt. Washington	Karner Brook Watershed
	Schenob Brook
Newbury	Great Marsh
Norton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Norwood	Fowl Meadow and Ponkapoag Bog
Orleans	Inner Cape Cod Bay
	Pleasant Bay
Pepperell	Petapawag
	Squannassit
Peru	Hinsdale Flats Watershed
Pittsfield	Upper Housatonic River
Plymouth	Herring River Watershed
	Ellisville Harbor
Quincy	Neponset River Estuary
Randolph	Fowl Meadow and Ponkapoag Bog
Raynham	Hockomock Swamp
Revere	Rumney Marshes
Rowley	Great Marsh
Sandwich	Sandy Neck Barrier Beach System
Saugus	Rumney Marshes
	Golden Hills
Sharon	Canoe River Aquifer
	Fowl Meadow and Ponkapoag Bog
Sheffield	Schenob Brook
Shirley	Squannassit
Stockbridge	Kampoosa Bog Drainage Basin
Taunton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Truro	Wellfleet Harbor
Townsend	Squannassit
Tyngsborough	Petapawag
Upton	Miscoe-Warren-Whitehall Watersheds
Wakefield	Golden Hills
Washington	Hinsdale Flats Watershed
	Upper Housatonic River
Wellfleet	Wellfleet Harbor
W Bridgewater	Hockomock Swamp
Westborough	Cedar Swamp
Westwood	Fowl Meadow and Ponkapoag Bog
Weymouth	Weymouth Back River
Winthrop	Rumney Marshes

.

Massachusetts Areas of Critical Environmental Concern (ACECs)



1 Bourne Back River
2 Canoe River Aquifer
3 Cedar Swamp
4 Central Nashua River Valley
5 Cranberry Brook Watershed
6 Ellisville Harbor
7 Fowl Meadow and Ponkapoag Bog
8 Golden Hills
9 Great Marsh
10 Herring River Watershed
11 Hinsdale Flats Watershed
12 Hockomock Swamp
13 Inner Cape Cod Bay
14 Kampoosa Bog Drainage Basin
15 Karner Brook Watershed
16 Miscoe, Warren and Whitehall Watersheds
17 Neponset River Estuary
18 Petapawag
19 Pleasant Bay
20 Pocasset River
21 Rumney Marshes
22 Sandy Neck Barrier Beach System
23 Schenob Brook Drainage Basin
24 Squannassit
25 Three Mile River Watershed
26 Upper Housatonic River
27 Waquoit Bay
28 Weir River
29 Wellfleet Harbor
30 Weymouth Back River

APPENDIX E – HISTORIC DETERMINATION

Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): Everett; Street No: 69; Street Name: Rover; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

MACRIS MAPS 2.0 beta

About || Help || Disclaimer

69 rover street everett Search

69 Rover St, Everett, Massachusetts, 02149

Bing MassDOT Street View

MHC Inventory Points

- Nat'l Register of Historic Places
- Preservation Restriction
- Local Historic District
- NRHP and LHD
- Inventoried Property

MHC Inventory Areas

- Nat'l Register of Historic Places
- Preservation Restriction
- Local Historic District
- NRHP and LHD
- Inventoried Area

MHC Towns Completed

- Completed
- Not Completed

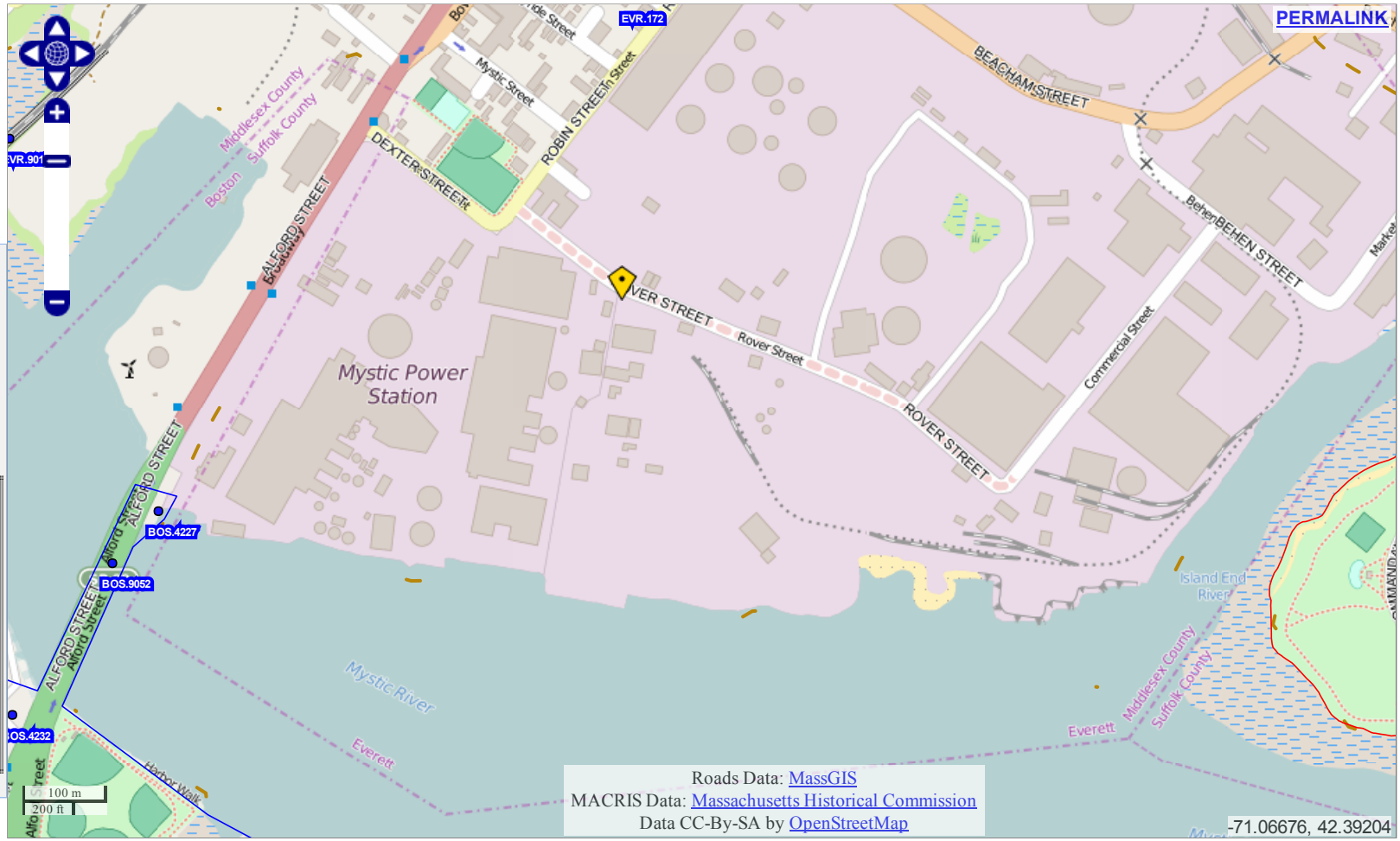
Street Names

ACEC

Archaeology Login

Username:

Password: Login



MACRIS Maps Last Updated 06/05/2015