



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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

APR 22 2011

Douglas Weimer
Senior Project Manager
Shell Oil Products US
4094 Majestic LN PMB #224
Fairfax, VA 22033

Re: Authorization to discharge under the Remediation General Permit (RGP) –
MAG910000. Former Fall River Distribution Terminal site located at One New Street,
Fall River, MA 02720, Bristol County; Authorization # MAG910474

Dear Mr. Weimer:

Based on the review of a Notice of Intent (NOI) submitted on behalf of Shell Oil Company by the firm Sovereign Consulting Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site.

This letter and authorization terminate any and all exclusion letters that EPA issued for this discharge at your site or facility prior to this date and close out any and all NPDES applications submitted to EPA prior to this date for an individual permit for this discharge. 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 established in Appendix VI of the RGP.

Due to the historic presence of petroleum and petroleum by-products stored at the site for many years, including gasoline, kerosene, heavy oils, #2 fuel oils, asphalts products, etc. EPA is requiring that pollutants listed in the RGP Appendix III associated with the petroleum by-products be monitored at the site for the first six

months and reported to EPA Region I, RGP office. (Please see the checklist for further monitoring details).

EPA is aware that the Fall River Distribution Terminal is in the final stages of implementing a ground water reinjection system and expects that when this reinjection system is operational, the RGP permit will be either discontinued, or will remain active should the ground water injection system fail. After reporting results for the first six months are reviewed, EPA will issue an adjusted monitoring list in the event the terminal maintains the RGP and continues discharging treated groundwater to the Taunton River.

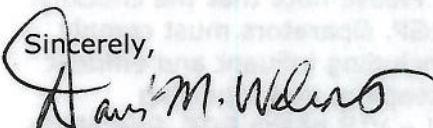
Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on selected dilution ranges and technology-based ceiling limitations. With the absence of dilution of freshwater into tidal water, EPA determined that the Dilution Factor Range (DFR) for each parameter for this site is in the one to five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limits for antimony of 5.6 ug/L, arsenic of 36 ug/L, trivalent chromium of 100 ug/L, copper of 3.7 ug/L, lead of 8.5 ug/L, mercury of 0.2 ug/L, nickel of 8.2 ug/L, zinc of 85.6 ug/L and iron of 1,000 ug/L, are required to achieve permit compliance at your site.

Finally, please note the checklist of pollutants attached to this authorization is subject to a recertification if the operations at the site result in a discharge lasting longer than six months. A recertification can be submitted to EPA within six (6) to twelve (12) months of operations in accordance with the 2010 RGP requirements.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that the termination date of this discharge needs to be determined. If for any reason the discharge terminates at a future point in time you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within Thirty days (30) of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez.Victor@epa.gov, if you have any questions.

Sincerely,


David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP

**2010 Remediation General Permit
Summary of Monitoring Parameters^[1]**

NPDES Authorization Number:		MAG910474 - New
Date Authorization Issued:	April, 2011	
Facility/Site Name:	Former Fall River Distribution Terminal	
Facility/Site Address:	One New Street, Fall River, MA 02720, Bristol County	
	Email of owner:bfrothingham@hessIng.com; Telephone n: 5086759473	
Legal Name of Operator:	Shell Oil Products US	
Operator contact name, title, and Address:	Douglas Weimer – Senior Project Manager Email:douglas.weimer@shell.com/ Gregory Motta- Operator in Charge; Email :Gregory.motta@shell.com	
Estimated Date of Completion:	To be determined	
Category and Sub-Category:	Category I. Petroleum Related Site Remediation. Sub-Category B. Fuel Oil and Other Oils Sites and Sub-category C. Petroleum sites with additional Contamination.	
Receiving Water:	Taunton River	

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

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (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) **, 50 mg/L for hydrostatic testing **, Me#60.2/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

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (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, Me#610/ML 5ug/L& Me#625/ML 5ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	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/ML 5ug/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/ML 5ug/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 0.1ug/L

	<u>Metal parameter</u>	<u>Total Recoverable Metal Limit @ H ¹⁰ = 50 mg/l CaCO3 for discharges in Massachusetts (ug/l)</u> <u>11/12</u>		<u>Minimum level=ML</u>
		<u>Freshwater</u>	<u>Saltwater</u>	
✓	39. Antimony	5.6/ML 10		
✓	40. Arsenic **	10/ML 20	36/ML 20	

	Metal parameter	Total Recoverable Metal Limit @ H¹⁰ = 50 mg/l CaCO₃ for discharges in Massachusetts (ug/l) 11/12		Minimum level=ML	
		Freshwater	Saltwater		
✓	41. Cadmium **	0.2/ML10	8.9/ML 10		
✓	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15		
	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10		
✓	44. Copper **	5.2/ML15	3.7/ML 15		
✓	45. Lead **	1.3/ML20	8.5/ML 20		
✓	46. Mercury **	0.9/ML0.2	1.1/ML 0.2		
✓	47. Nickel **	29/ML20	8.2/ML 20		
	48. Selenium **	5/ML20	71/ML 20		
	49. Silver	1.2/ML10	2.2/ML 10		
✓	50. Zinc **	66.6/ML15	85.6/ML 15		
✓	51. Iron	1,000/ML 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 ¹³
✓	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab ¹³
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab ¹³
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab ¹⁴
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab ¹⁴
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab ¹⁴
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab ¹⁴
	61. Maximum Change in Temperature in MA - Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab ¹⁴
	62. Maximum Change in Temperature in MA - Any Class SA water body - Coastal	1.5°F; 1/Month/Grab ¹⁴
	63. Maximum Change in Temperature in MA - Any Class SB water body - July to September	1.5°F; 1/Month/Grab ¹⁴
	64. Maximum Change in Temperature in MA -Any Class SB water body - October to June	4°F; 1/Month/Grab ¹⁴

Footnotes:

¹ Although the maximum values for TRC are 11ug/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.

⁹Although 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).

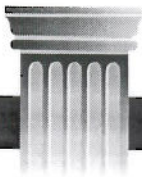
¹⁰ Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

¹¹ For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using $DF \times 1,000 \text{ ug/L}$ (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit = $1,000 \times 2 = 2,000 \text{ ug/L}$, etc. not to exceed the DF=5.

¹² 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).

¹³ pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.

¹⁴ Temperature sampling per Method 170.1



SOVEREIGN CONSULTING INC.

December 17, 2010

U.S Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, Massachusetts 02109-3912
ATTN: Remediation General Permit NOI Processing

New
MAG 9/10/494

RE: **Remediation General Permit – Notice of Intent**
Former Shell Distribution Facility
1 New Street
Fall River, Massachusetts
NPDES Outfall 001A

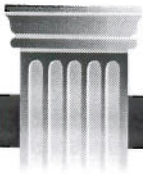
To Whom It May Concern:

Sovereign Consulting Inc. (Sovereign), on behalf of Shell Oil Company (Shell), has prepared this Remediation General Permit (RGP) – Notice of Intent (NOI) for the above referenced disposal site. The completed RGP – NOI application form is provided as **Attachment A**. This RGP – NOI pertains to Category I – Petroleum Related Site Remediation, Sub-Category B (Fuel Oils and Other Oil Sites) and Sub-Category C (Petroleum Sites with Additional Contamination). Refer to **Figure 1**, Site Locus, **Figure 2**, Bureau of Waste Site Cleanup (BWSC) Site Scoring Map, **Figure 3**, Site Layout and **Figure 4**, Treatment System As-Built for the location of the facility, groundwater treatment system and surrounding disposal site features. Refer to **Tables 1** through **6** for a Summary of Influent laboratory analytical data.

The facility was formerly owned by New England Oil Refining Company from 1920 to 1929 and was operated as a crude oil refinery, product storage, and distribution facility. Shell purchased the facility in 1929 and operated a petroleum product distribution facility until 1995. Commercial petroleum products are no longer stored at, transmitted to or distributed from the facility. Shell representatives are present at the facility to operate and maintain the remedial system and conduct regulatory compliance monitoring of the remedial system, the NPDES outfall associated with the remediation system, and disposal site groundwater.

In 1975, a recovery well and groundwater treatment system were installed at the facility in response to a release of a mixture of kerosene, heating oil, and gasoline. In 1983, an initial Site Investigation was conducted by Shell, which documented the presence of LNAPL on the water table at the facility. The MassDEP issued a Notice of Responsibility (NOR) on November 15, 1989 that required the preparation and submittal of a Phase I Report. From January 1989 through 1994, Phase I and Phase I Addendum activities were conducted at the facility. The Phase I – Limited Site Investigation, submitted to MassDEP on November 13, 1991 by Groundwater Technology, documents the release history of the entire disposal site including both the South and North Plant areas. On October 26, 1994, the disposal site was classified as Tier 1B pursuant to the transition provisions of the MCP.

A Release Abatement Measure (RAM) Plan was submitted to MassDEP in 1995 for the continued operation of the LNAPL recovery system that utilized seven recovery wells. Three of



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the recovery wells (1-W, 2-W, and 8-W) were part of the South Plant system. Four recovery wells (RW-3, RW-5, RW-6R, and RW-7) are part of the North Plant system. Each recovery well was equipped with a dual-phase pump system to recover both groundwater and LNAPL. The LNAPL was pumped into above ground storage tanks prior to off-site disposal. The groundwater from the South Plant system was treated on-site through an oil/water separator and discharged to the Taunton River under NPDES Permit Number MA 0004871 and State Permit Number 17, through outfall #001. The groundwater from the North Plant system was treated with a granular activated carbon (GAC) water treatment system prior to discharge to the Taunton River. The treated groundwater from the North Plant system was discharged through outfall #001A under NPDES Permit Exclusion, which was issued in 1989.

In August 2000, Shell sold the property to Jay Cashman, Inc. Cashman or its affiliate, Fall River Marine Terminals, LLC, operated a construction contracting business and utilized the facility for heavy equipment storage, and materials fabrication and storage. As part of the purchase and sales agreement, Shell was to reroute the groundwater discharges from recovery wells 2-W and 8-W from NPDES outfall 001 to NPDES outfall 001A. The rerouting of water from 2-W and 8-W would result in NPDES outfall 001 discharging only storm water from within the facility. In December of 2002, this work was completed by the former consultant, Corporate Environmental Advisors, Inc. (CEA). After the completion of the work, NPDES outfall 001 became the responsibility of Jay Cashman, Inc., while Shell retained responsibility for NPDES outfall 001A.

On September 9, 2005, the USEPA, United States Environmental Protection Agency, published the NPDES Remediation General Permit (RGP) in the Federal Register. It stated the deadline for submittal of Notices of Intent (NOIs) or individual NPDES applications for those facilities currently discharging under USEPA NPDES Permit Exclusions was October 10, 2005. On September 19, 2005, NewFields Princeton LLC (NewFields), a former consultant for this disposal site, requested, in writing, a 60-day extension to the October 10, 2005 deadline. On October 6, 2005, Mr. George Papadopoulos of the EPA granted an extension until October 24, 2005 via electronic mail (e-mail). The e-mail stated that in cases where the permittee was unable to submit all the required information by October 24, 2005, the application should be submitted with as much information as possible and supplemental data provided when it becomes available. Accordingly, NewFields, on behalf of Shell, submitted an incomplete individual NPDES application to the USEPA on October 24, 2005. A complete NPDES application was submitted to the USEPA on December 8, 2005. Copies of the incomplete and complete individual NPDES applications were also submitted to the MassDEP as required by the NPDES RGP. Pursuant to the *Response to Comments on the October 2004 Proposed Remediation General Permit* document posted on the USEPA website, the existing discharge will be covered under the existing Permit Exclusion until the applicant receives notification of other permit coverage.¹

Effective January 4, 2007, Weaver's Cove Energy, LLC (Weaver's Cove) purchased the facility. The improved deed restrictions require: compliance with all applicable federal, state, municipal, environmental laws, the MCP, including review by an LSP, and maintaining a condition of no

¹ <http://www.epa.gov/ne/npdes/rgp.html>



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significant risk on the facility. The majority of the facility is currently vacant with the exception of portions of the former petroleum terminal and tank farm infrastructure, the groundwater pump and treatment system and an occupied office building.

On February 6, 2009, Mr. Joseph Landyn, the former LSP for the disposal site, received an e-mail from Mr. Victor Alvarez, of the USEPA, requesting additional information about the disposal site in order to draft a NPDES Permit for the groundwater discharge. Mr. Alvarez requested:

- a summary of historical disposal site operations (including facility ownership and products stored onsite)
- Information about the existing storage tanks and other pertinent storage information
- An exact description of the groundwater collection and treatment system.
- A Site Map showing the discharge location
- A complete and current laboratory analysis of the groundwater influent, using the USEPA's Remediation General Permit Appendix III.

Based on the request from Mr. Alvarez, samples from the treatment system influent were collected on March 23, 2009 in accordance with the USEPA's Remediation General Permit Appendix III. CEA provided the requested information to the USEPA in May 2009.

On June 29, 2009, CEA, on behalf of Shell, submitted a letter to MassDEP indicating Shell's intent to relocate the discharge of the existing remediation system from surface water to groundwater reinjection. A copy of the June 29, 2009 letter was sent to the USEPA.

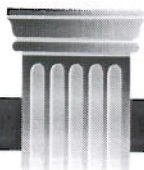
- ✓ On December 2, 2010, Mr. Alvarez requested that a RGP - NOI be submitted to the USEPA by December 18, 2010.

Details and Clarifications of the RGP NOI are as follows:

- Section 2.2:

Cubic Feet Per Second (cfs) Formula : 1 gpm = 0.00223 cfs
50 gpm = 0.1115 cfs

- The receiving water has both fresh and saltwater components. Therefore, to be conservative, all influent water samples were compared to both fresh water and saltwater EPA RGP Effluent Limits, as listed in Appendix III of the Remediation General Permit.
- Section 3.A:
 - Any analyte detected above laboratory detection limits from the March 23, 2009 influent groundwater samples were recorded in the Contaminant Information table as 'Believed Present'.



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- Any analyte detected below laboratory detection limits from the March 23, 2009 influent groundwater samples were recorded in the Contaminant information table as 'Believed Absent'
- At the time of the March 2009 sampling chloride was not included as an analyte for the RGP permit. On December 13, 2010, Sovereign collected a sample for analysis of chloride. The influent sample was submitted to Accutest of Marlboro, Massachusetts for rush turn-around time. However, the results have not been received as of this submittal. Chloride is not believed to be present as a contaminant of concern at the site. Therefore, this NOI is being submitted without the lab results. However, the lab results will be submitted to EPA when received.
- Due to Laboratory Limitations, the following analytes were analyzed using alternative methods, not listed in Appendix VI of the Remediation General Permit. In most instances, the laboratory analytical results were compared to the Minimum Level (ML) of a comparable method as noted below.

Analyte Parameter Number	Analyte	Analyte Analyzed Via Method	ML Method that analyte was compared against.
2	Total Residual Chlorine	SM21 4500 CLF	None
3	Total Petroleum Hydrocarbons (TPH)	EPA 1664	EPA 1664A
5,6,7,8,9	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	SW846 8260B	SW846 8260C
10	Ethylene Dibromide (EDB)	EPA 504	EPA 504.1
11	Methyl-tert-Butyl Ether (MtBE)	SW846 8260B	SW846 8260C
12	tert-Butyl Alcohol (TBA)	SW846 8260B	SW846 8260C
13	tert-Amyl Methyl Ether (TAME)	SW846 8260B	SW846 8260C
14	Naphthalene	SW846 8260B	SW846 8260C
15	Carbon Tetrachloride	SW846 8260B	SW846 8260C
16	1,2 Dichlorobenzene	SW846 8260B	SW846 8260C
17	1,3 Dichlorobenzene	SW846 8260B	SW846 8260C
18	1,4 Dichlorobenzene	SW846 8260B	SW846 8260C
19	1,1 Dichloroethane	SW846 8260B	SW846 8260C
20	1,2 Dichloroethane	SW846 8260B	SW846 8260C
21	1,1 Dichloroethene	SW846 8260B	SW846 8260C
22	cis-1,2 Dichloroethene	SW846 8260B	SW846 8260C
23	Methylene Chloride	SW846 8260B	SW846 8260C
24	Tetrachloroethene	SW846 8260B	SW846 8260C
25	1,1,1 Trichloro-ethane	SW846 8260B	SW846 8260C
26	1,1,2 Trichloro-ethane	SW846 8260B	SW846 8260C



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27	Trichloroethene	SW846 8260B	SW846 8260C
28	Vinyl Chloride	SW846 8260B	SW846 8260C
29	Acetone	SW846 8260B	SW846 8260C
30	1,4 Dioxane	SW846 8260B	SW846 8260C
31	Total Phenols	SW846 8270C	8270D
32	Pentachlorophenol	SW846 8270C	8270D
33a-e	Phthalates	SW846 8270C	8270D
34	Bis (2-Ethylhexyl)Phthalate[Di-(ethylhexyl) Phthalate]	SW846 8270C	8270D
35a-g	Group I Polycyclic Aromatic Hydrocarbons	SW846 8270C	8270D
36h-p	Group II Polycyclic Aromatic Hydrocarbons	SW846 8270C	8270D
39	Antimony	SW846 6010B	6010C
40	Arsenic	SW846 6010B	6010C
41	Cadmium	SW846 6010B	6010C
44	Copper	SW846 6010B	6010C
45	Lead	SW846 6010B	6010C
47	Nickel	SW846 6010B	6010C
48	Selenium	SW846 6010B	6010C
49	Silver	SW846 6010B	6010C
50	Zinc	SW846 6010B	6010C
51	Iron	SW846 6010B	6010C

- Section 3.A:

Per Accutest Laboratories, the concentration of Chromium III (trivalent) can be calculated as follows:

Chromium III (trivalent) = Chromium (as reported in the Metal Analysis) minus Chromium Hexavalent (as reported in the General Chemistry Analysis).

Chromium III (trivalent) = 1.1 ug/L - 10 ug/L

= -8.9 ug/L

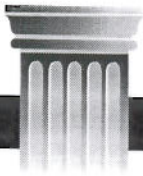
= to be conservative, a value of <10 ug/L will be used.

- Section 3.B:

Dilution Factor (DF) Calculation: $DF = (Q_d + Q_s) / Q_d$

Q_d = Maximum flow rate of the discharge in cubic feet per second (cfs)

cfs = 1.0 gallon per minute = 0.00223 cubic feet per second



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To be conservative, a value of 100 gallons per minute was utilized,
therefore, $Q_d = 100 * 0.00223$

$$Q_d = 0.223 \text{ cfs}$$

Q_s = Receiving water 7Q10 flow (cfs) where 7Q10 is the minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years.

* Q_s value of 24.6 cfs obtained from October 24, 2005 Individual NPDES Permit Application, prepared by NewFields on behalf of Shell.

$$\begin{aligned} DF &= (Q_d + Q_s) / Q_d \\ &= (0.223 + 24.6) / 0.223 \\ &= 111.3 \end{aligned}$$

- Section 6.A:

ESA Eligibility - Criterion A: According to Appendix II of the Remediation General Permit, there are no Endangered Species or Critical Habitat Areas in Bristol County or in close proximity of the facility and discharge location.

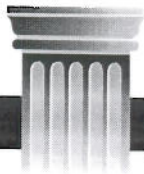
If you have any questions or comments regarding this submittal please do not hesitate to contact the undersigned at (508) 339-3200.

Sincerely,

SOVEREIGN CONSULTING INC.

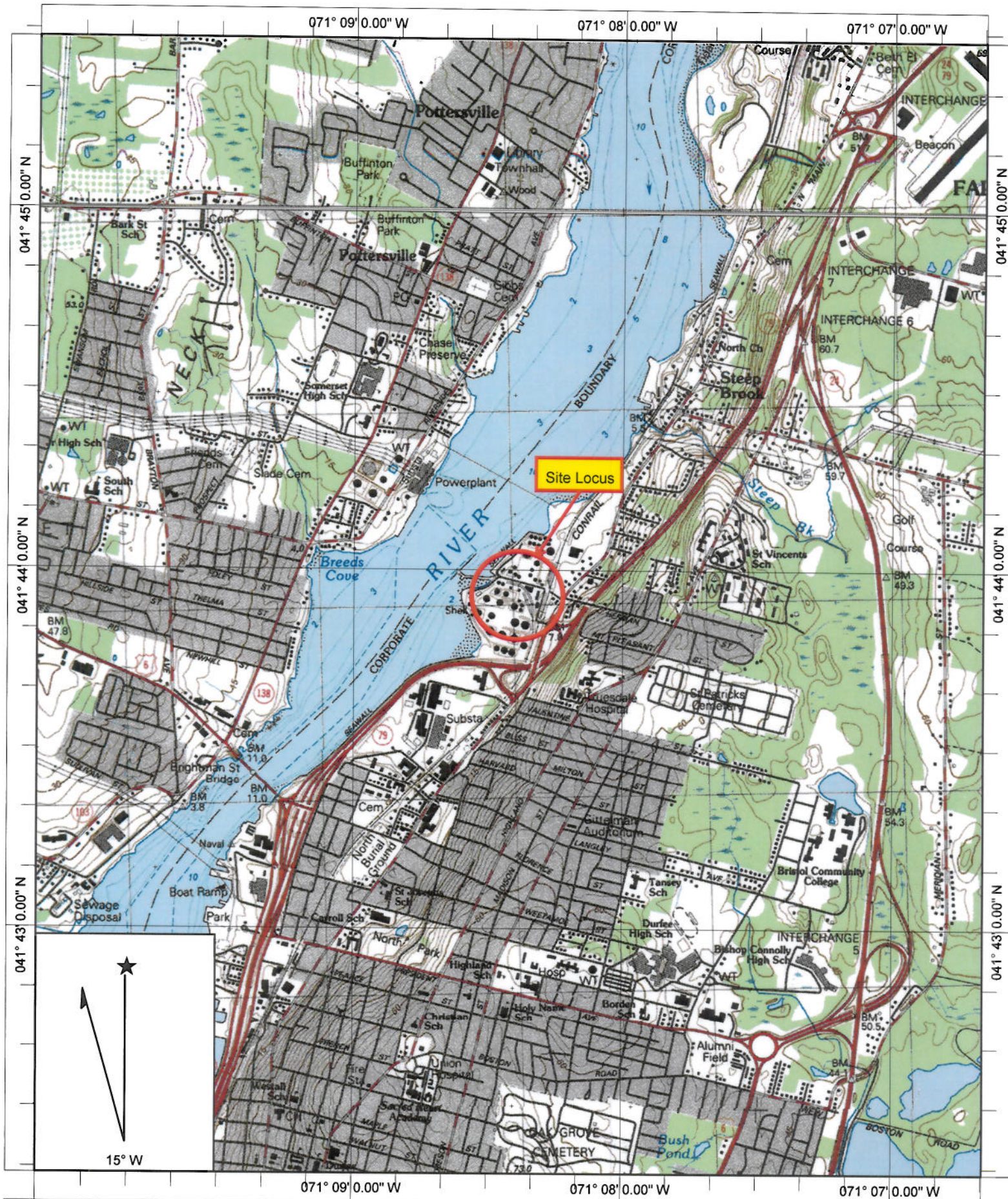
Matthew D. Young
Senior Project Manager

cc: Mr. Douglas Weimer, Senior Project Manager, SOPUS
Ben Frothingham - Weaver's Cove Energy
MassDEP - SERO
Sovereign File - EQ866



SOVEREIGN CONSULTING INC.

Figures



Name: FALL RIVER
 Date: 10/3/2005
 Scale: 1 inch equals 2000 feet

Location: 041° 43' 53.9" N 071° 08' 24.9" W
 Caption: FIGURE 1: Site Locus

MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

SITE NAME:

Former Shell Dist. Facility
1 New Street
Fall River, MA 02720-1417
414354n 710825ew

Site Location

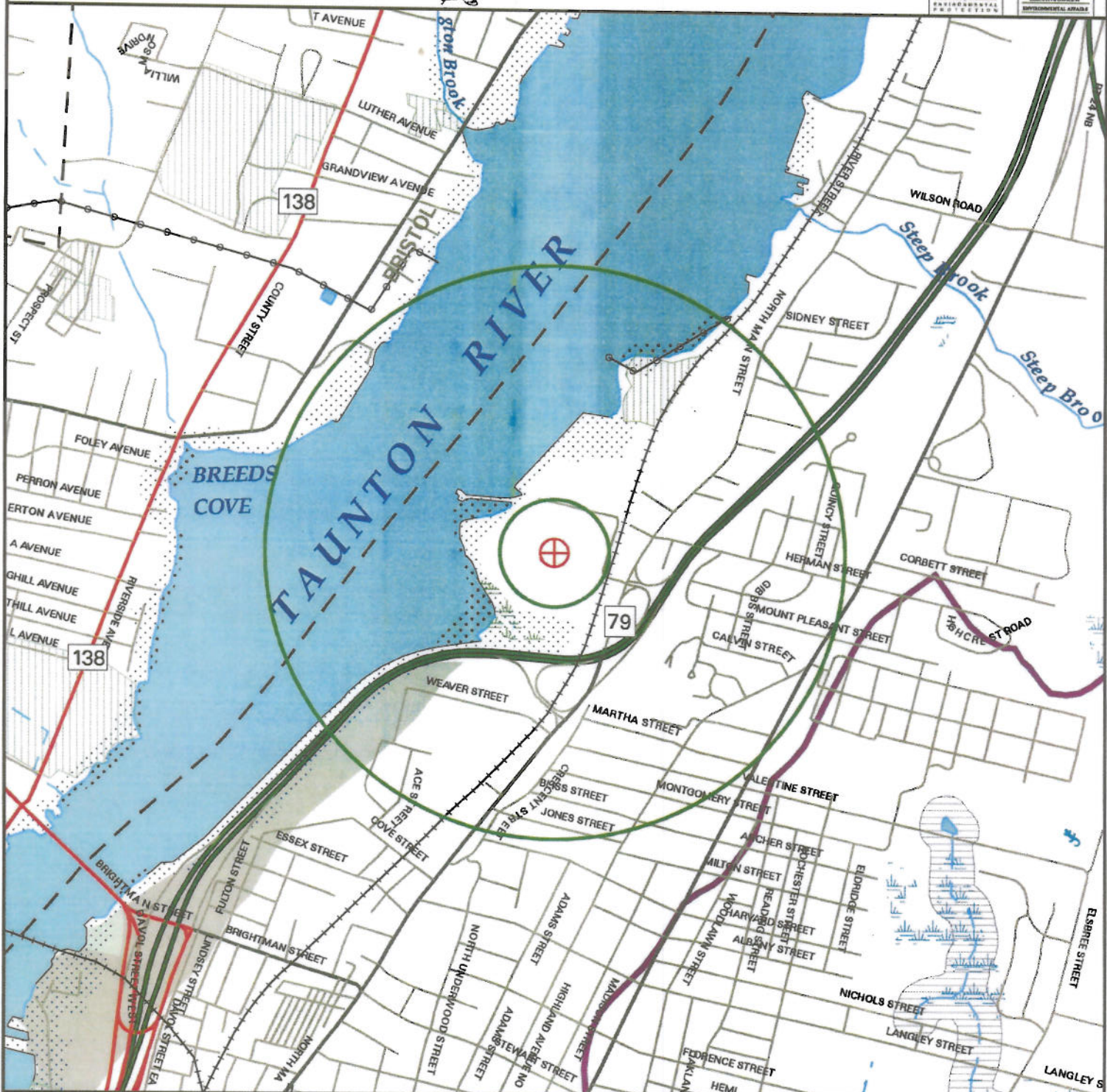


The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.



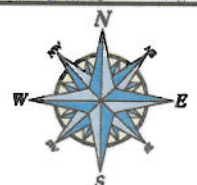
Massachusetts Executive Office of Environmental Affairs - 2005

Massachusetts Geographic Information System



Roads: Limited Access, Divided, Major Road, Connector, Street, Trail
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct
Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dams
Potentially Productive Aquifers: Medium, High Yield
Non-Potential Drinking Water Source Area: Medium, High Yield

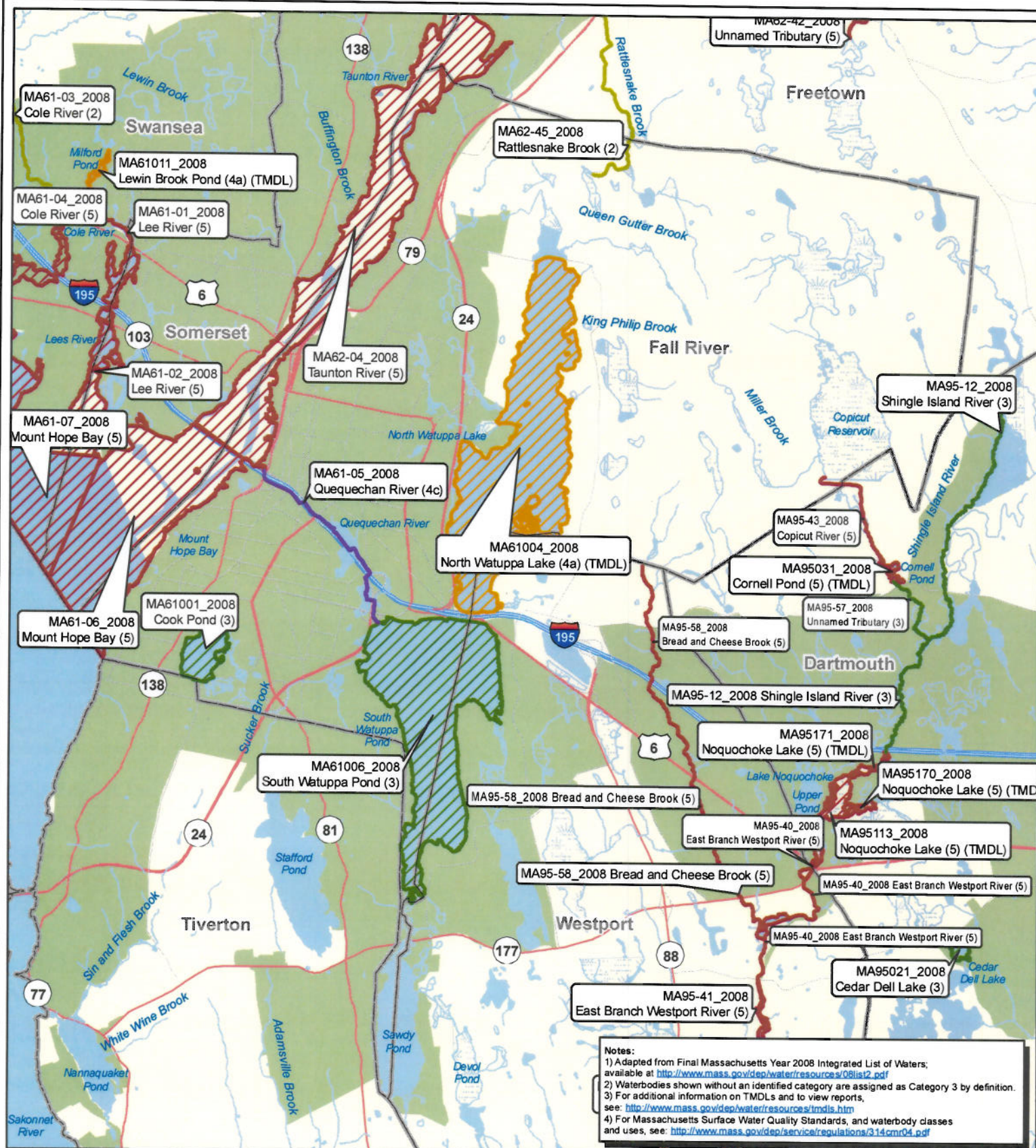
EPA Sole Source Aquifer; FEMA 100-year floodplain
Public Water Supplies: Ground, Surface, Non Community
Approved Zone2; MWPA; Surface Water Supply Zone A
Hydrography: Water Features, Public Surface Water Supply
Wetlands: Fresh, Salt, NHEP Wetlands Habitat
Protected Open Space: ACEC
DEP Permitted Solid Waste Facilities; Certified Vernal Pools



SCALE 1:15000

0 1/2 1 KILOMETERS

October 21, 2005



Waterbody Assessment and TMDL Status Fall River, MA



0 0.5
Miles



Map produced by EPA Region I GIS Center
Map Tracker ID 6678, February 25, 2010
Data Sources: TeleAtlas, Census Bureau, USGS, MassDEP

Waterbody Label

State ID,
Waterbody Name (Category)
(TMDL(s) approved for this waterbody)

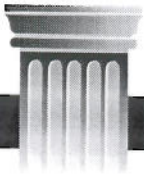
See companion table for a listing of pollutants, non-pollutants, and TMDLs for each waterbody

Assessment of Waterbody Segment

- Category 2: Attaining some uses; other uses not assessed
- Category 3: Insufficient information to make assessments for any use.

- Category 4a: TMDL is completed and approved for one or more pollutants
- Category 4c: Impairment not caused by a pollutant.
- Category 5: Impaired or threatened for one or more uses and requiring a TMDL.

- Waterbodies
- Swamp/Marsh
- MS4 Urbanized Areas (2000 Census)
- Municipal Boundaries



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Tables

		EPA RGP Effluent Limits		Sample Location & Date	
		Fresh Water	Saltwater	Influent	Influent
				3/19/2009	3/23/2009
Acetone	ug/l	See Note #4	See Note #4	<5.0	
Benzene	ug/l	5 ^{1,3}	5 ^{1,3}	317	
Bromobenzene	ug/l	NS	NS	<5.0	
Bromochloromethane	ug/l	NS	NS	<5.0	
Bromodichloromethane	ug/l	NS	NS	<1.0	
Bromoform	ug/l	NS	NS	<1.0	
Bromomethane	ug/l	NS	NS	<2.0	
2-Butanone (MEK)	ug/l	NS	NS	<5.0	
n-Butylbenzene	ug/l	NS	NS	5.4	
sec-Butylbenzene	ug/l	NS	NS	6.2	
tert-Butylbenzene	ug/l	NS	NS	1.7	
Carbon disulfide	ug/l	NS	NS	<5.0	
Carbon tetrachloride	ug/l	4.4 ¹	4.4 ¹	<1.0	
Chlorobenzene	ug/l	NS	NS	<1.0	
Chloroethane	ug/l	NS	NS	<2.0	
Chloroform	ug/l	NS	NS	<1.0	
Chloromethane	ug/l	NS	NS	<2.0	
o-Chlorotoluene	ug/l	NS	NS	<5.0	
p-Chlorotoluene	ug/l	NS	NS	<5.0	
1,2-Dibromo-3-chloropropane	ug/l	NS	NS	<5.0	
Dibromochloromethane	ug/l	NS	NS	<1.0	
1,2-Dibromoethane (EDB)	ug/l	0.05 ¹	0.05 ¹	<2.0	<0.015 ⁶
1,2-Dichlorobenzene	ug/l	600 ¹	600 ¹	<1.0	
1,3-Dichlorobenzene	ug/l	320 ¹	320 ¹	<1.0	
1,4-Dichlorobenzene	ug/l	5.0 ¹	5.0 ¹	<1.0	
Dichlorodifluoromethane	ug/l	NS	NS	<2.0	
Dichloromethane	ug/l	4.6 ¹	4.6 ¹	<2.0	
1,1-Dichloroethane	ug/l	70 ¹	70 ¹	<1.0	
1,2-Dichloroethane	ug/l	5.0 ¹	5.0 ¹	<1.0	
1,1-Dichloroethylene	ug/l	3.2 ¹	3.2 ¹	<1.0	
cis-1,2-Dichloroethylene	ug/l	70 ¹	70 ¹	<1.0	
trans-1,2-Dichloroethene	ug/l	NS	NS	<1.0	
1,2-Dichloropropane	ug/l	NS	NS	<2.0	
1,3-Dichloropropane	ug/l	NS	NS	<5.0	
2,2-Dichloropropane	ug/l	NS	NS	<5.0	
1,1-Dichloropropene	ug/l	NS	NS	<5.0	
cis-1,3-Dichloropropene	ug/l	NS	NS	<0.50	
trans-1,3-Dichloropropene	ug/l	NS	NS	<0.50	
1,4-Dioxane	ug/l	See Note #4	See Note #4	<25	
Ethylbenzene	ug/l	See Note #5	See Note #5	46	
Hexachlorobutadiene	ug/l	NS	NS	<5.0	
2-Hexanone (MIBK)	ug/l	NS	NS	<5.0	
Iodomethane	ug/l	NS	NS	<5.0	
Isopropylbenzene	ug/l	NS	NS	31.6	
p-Isopropyltoluene	ug/l	NS	NS	2.5	
Methyl tert-butyl ether	ug/l	70 ¹	70 ¹	38.7	
4-Methyl-2-pentanone (MIBK)	ug/l	NS	NS	<5.0	
Methylene bromide	ug/l	NS	NS	<2.0	
Methylene chloride	ug/l	4.6 ¹	4.6 ¹	<2.0	
Naphthalene	ug/l	20 ¹	20 ¹	29.1	
n-Propylbenzene	ug/l	NS	NS	26	
Styrene	ug/l	NS	NS	<5.0	
tert-Amyl Methyl Ether	ug/l	See Note #4	See Note #4	2.2	
Tert Butyl Alcohol	ug/l	See Note #4	See Note #4	<20	
1,1,1,2-Tetrachloroethane	ug/l	NS	NS	<5.0	
1,1,2,2-Tetrachloroethane	ug/l	NS	NS	<1.0	
Tetrachloroethylene	ug/l	5.0 ¹	5.0 ¹	<1.0	
Toluene	ug/l	See Note #5	See Note #5	7.1	
1,2,3-Trichlorobenzene	ug/l	NS	NS	<5.0	
1,2,4-Trichlorobenzene	ug/l	NS	NS	<5.0	
1,1,1-Trichloroethane	ug/l	200 ¹	200 ¹	<1.0	
1,1,2-Trichloroethane	ug/l	5.0 ¹	5.0 ¹	<1.0	
Trichloroethene	ug/l	5.0 ¹	5.0 ¹	<1.0	
Trichlorofluoromethane (Freon 11)	ug/l	NS	NS	<1.0	
1,2,3-Trichloropropane	ug/l	NS	NS	<5.0	
1,2,4-Trimethylbenzene	ug/l	NS	NS	45.2	
1,3,5-Trimethylbenzene	ug/l	NS	NS	9.5	
Vinyl Acetate	ug/l	NS	NS	<5.0	
Vinyl chloride	ug/l	2 ¹	2 ¹	<1.0	
Xylene (total)	ug/l	See Note #5	See Note #5	74.4	
TOTAL BTEX ⁵	ug/l	100.0	100.0	444.5	

Influent > RGP Effluent Limits

1=Daily Maximum

2=Monthly Average

3=50 w/hydrostatic testing only

4=Monitor Only

5=Limited as ug/L total BTEX

6=Analyzed Separately

ug/l = micrograms per liter

NS = no standard

Former Shell Terminal Facility
1 New Street, Fall River, Massachusetts
Summary of Appendix III of RGP Sampling
Table 3: Phthalates and Phenols

	2-Chlorophenol ug/l	4-Chloro-3-methyl phenol ug/l	2,4-Dichlorophenol ug/l	2,4-Dimethylphenol ug/l	2,4-Dinitrophenol ug/l	4,6-Dinitro-o-cresol ug/l	2-Methylphenol ug/l	3&4-Methylphenol ug/l	2-Nitrophenol ug/l	4-Nitrophenol ug/l	Pentachlorophenol ug/l	Phenol ug/l	2,4,5-Trichlorophenol ug/l	2,4,6-Trichlorophenol ug/l	Total Phenols ug/l	Bis (2-ethylexyl) phthalate ug/l	Butylbenzyl phthalate ug/l	Diethyl phthalate ug/l	Dimethyl phthalate ug/l	Di-n-butylphthalate ug/l	Di-n-octylphthalate ug/l	Total Phthalates ug/l
EPA RGP Effluent Limits																						
Fresh Water															300	6.0 ¹						3.0 ³
Saltwater															300	6.0 ¹						3.0 ³
Influent	3/19/2009 ⁵	<6.3	<13	<13	<13	<13	<13	<13	<13	<25	<13	<13	<13	<13	3.2	<2.5	<6.3	<6.3	<6.3	<6.3	<6.3	0
Influent	3/19/2009 ⁶	<0.85	<0.72	<0.87	<2.7	<0.72	<0.91	<0.60	<0.79	<0.82	<0.77	<4.1	<0.50	<0.47	3.2	<0.61	<0.51	<0.15	<0.14	<0.42	<0.42	0

Influent > RGP Effluent Limits

1=Daily Maximum

2=Monthly Average

3 = RGP Effluent limits a monthly average limit of 3.0 ug/l total phthalates (the sum of the phthalates including Bis (2-ethylexyl) phthalate)

4 = RGP Effluent limit is total phenols daily maximum of 300 ug/l

5 = Reporting Limit

6 = Method Detection Limit

Notes 4 and 5 are for the same sample run

ug/l = micrograms per liter

Former Shell Terminal Facility

1 New Street, Fall River, Massachusetts

Summary of Appendix III of RGP Sampling

Table 4: Polychlorinated biphenyls (PCBs)

	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs
EPA RGP Effluent Limits	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Fresh Water ³	See note 3 below							
Saltwater ³	See note 3 below							
Influent ⁴	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0
3/19/2009								

Influent > RGP Effluent Limits

1=Daily Maximum

2=Monthly Average

3 = Effluent Limit is Total PCBs not to exceed a daily maximum of 0.000064 ug/l

RGP APP III Limitations States: 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

4 = Method 608 used for analysis

ug/l = micrograms per liter

		Antimony	Arsenic	Cadmium	Total Chromium	Chromium, Hexavalent	Copper	Cyanide ³	Iron	Lead	Mercury	Nickel	Selenium	Silver	Zinc
EPA RGP Effluent Limits		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Fresh Water		5.6 ¹	10 ⁻²	0.2 ⁻²	48.8 ⁻²	11.4 ⁻²	5.2 ⁻²	5.2 ^{-2,3}	1,000 ⁻¹	1.3 ⁻²	0.9 ⁻²	29.0 ⁻²	5.0 ⁻²	1.2 ⁻¹	66.6 ⁻²
Saltwater		5.6 ⁻¹	36 ⁻³	8.9 ⁻²	100 ⁻²	50.3 ⁻²	3.7 ⁻²	1.0 ^{-2,3}	1,000 ⁻¹	8.5 ⁻²	1.1 ⁻²	8.2 ⁻²	71 ⁻²	2.2 ⁻¹	85.6 ⁻²
Influent		1.6 U	34.4	1.9U	1.1U	<10	4.4B	<10	46,900	2.7U	0.061B	1.9B	3.5U	1.3U	26.5

MDL RL > RGP Effluent Limits

Influent > RGP Effluent Limits

1 = Daily Maximum

2 = Monthly Average

3 = RGP APP III Limitations States: 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)

ug/l = micrograms per liter

U = Result less than method detection limit (Reported as MDL because RL did not meet Effluent limit standards)

B = Result greater than method detection limit but less than reporting limit

MDL = Method Detection Limit

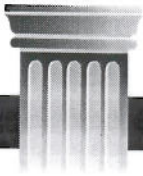
RL = Reporting Limit

Former Shell Terminal Facility
 1 New Street, Fall River, Massachusetts
 Summary of Appendix III of RGP Sampling

Table 6: HEM Petroleum Hydrocarbons, Total Residual Chlorine, and Total Suspended Solids

		HEM Petroleum Hydrocarbons	Total Residual Chlorine	Total Suspended Solids
<i>EPA RGP Effluent Limits</i>		mg/l	ug/l	mg/l
Fresh Water		5.0 ¹	11 ²	30 ^{2,3}
Saltwater		5.0 ¹	7.5 ²	30 ^{2,3}
Influent	3/19/2009	<4.1	<50	30

MDL RL > RGP Effluent Limits
 Influent > RGP Effluent Limits
 1=Daily Maximum
 2=Monthly Average
 3=50 w/hydrostatic testing only
 ug/l = micrograms per liter
 mg/l = milligrams per liter



SOVEREIGN CONSULTING INC.

Attachment A

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: <u>Former Fall River Distribution Term.</u>		Facility/site mailing address:	
Location of facility/site:	Facility SIC code(s):	Street:	
Longitude: <u>71 08' 17.03"</u>	<u>5171</u>	<u>One New Street</u>	
Latitude: <u>41 44' 7.06"</u>			
b) Name of facility/site owner: <u>Weavers Cove Energy</u>		Town:	<u>Fall River</u>
Email address of facility/site owner:		State:	
<u>bfrothingham@hessing.com</u>		<u>MA</u>	County: <u>Bristol</u>
Telephone no. of facility/site owner:	<u>1-508-675-9470</u>	Zip:	<u>02720</u>
Fax no. of facility/site owner:	<u>1-508-675-9473</u>	Owner is (check one): 1. Federal ☐ 2. State/Tribal ☐	
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator:	Operator telephone no: <u>1-718-599-2042</u>		
Shell Oil Products US	Operator fax no.:	Operator email: <u>douglas.weimer@shell.com</u>	
Operator contact name and title: <u>Douglas Weimer - Senior Project Manager / Gregory Motta - Operator WASK Water 21</u>			
Address of operator (if different from owner):		Street: <u>4094 Majestic LN PMB #224</u>	
Town: <u>Fairfax</u>	State: <u>VA</u>	Zip: <u>22033</u>	County: <u>Fairfax</u>

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: <u>MA-031-006</u> 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Y ☒ N ☐ if Y, date and tracking #: <u>October 24, 2005 and December 8, 2005 - Tracking Number Unknown</u> 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: <u>RTN 4-0749</u> 2. permit or license # assigned: <u>Tier 1B #82670</u> 3. state agency contact information: name, location, and telephone number: <u>Len Pinard, Mass DEP, SERO Office</u> <u>20 Riverside Drive</u> <u>Lakeville, Massachusetts 02347 Phone # - 1-508-946-2700</u>	f) Is the site/facility covered by any other EPA permit, including: 1. Multi-Sector General Permit? Y ☐ N ☒ if Y, number: <u> </u> 2. Final Dewatering General Permit? Y ☐ N ☒ if Y, number: <u> </u> 3. EPA Construction General Permit? Y ☐ N ☒ if Y, number: <u> </u> 4. Individual NPDES permit? Y ☒ N ☐ if Y, number: <u>MA0004871</u> 5. any other water quality related individual or general permit? Y ☐ N ☒ if Y, number: <u> </u>
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 I - Petroleum Related Site Remediation	Activity Sub-Category 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) ☐
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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:	
Groundwater Remediation System. Treated effluent water will be discharged to the Taunton River through Outfall 001A.	
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 0.11 Is maximum flow a design value? Y ☒ N ☐ Average flow (include units) 50 gpm Is average flow a design value or estimate? Design
3) Latitude and longitude of each discharge within 100 feet:	
pt.1: lat 041° 44' 7.06" long 071° 08' 17.03"	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):	5) Is the discharge intermittent ☐ or seasonal ☐ ? Is discharge ongoing? Y ☒ N ☐
c) Expected dates of discharge (mm/dd/yy): start 02/01/2010 — end to be determined	
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). (Refer to Figures 3 and 4 for disposal site features and an As Built of the Remediation System. Fe/Mn/As Treatment included in Attachment B)	

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)		☐	☒	1	Grab	SM21 2540D	5,000 ug/l	30,000	7.4350		
2. Total Residual Chlorine (TRC)		☒	☐	1	Grab	SM214500C ⁺		<50			
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	Grab	EPA 1664	5,000 ug/l	<4100			
4. Cyanide (CN)	57125	☒	☐	1	Grab	EPA 335.4	5 ug/l	<10			
5. Benzene (B)	71432	☐	☒	1	Grab	SW846 8260B	2 ug/l	317	0.07856		
6. Toluene (T)	108883	☐	☒	1	Grab	SW846 8260B	2 ug/l	7.1	0.00176		
7. Ethylbenzene (E)	100414	☐	☒	1	Grab	SW846 8260B	2 ug/l	46	0.0114		
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☐	☒	1	Grab	SW846 8260E ⁺	4 ug/l	74.4	0.0184		
9. Total BTEX ²	n/a	☐	☒				2 ug/l	444.5	0.1101		
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934	☒	☐	1	Grab	EPA 504	0.01 ug/l	<0.015			
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☐	☒	1	Grab	SW846 8260E ⁺	10 ug/l	38.7	0.0095		
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	Grab	SW846 8260E ⁺	10 ug/l	<20			

* 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	☐	☒	1	Grab	SW8468260B ⁺	10 ug/l	2.2	0.0005		
14. Naphthalene	91203	☐	☒	1	Grab	SW8468260B	5 ug/l	29.1	0.0072		
15. Carbon Tetrachloride	56235	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
18a. Total dichlorobenzene		☐	☐				N/A	<1			
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
23. Methylene Chloride	75092	☒	☐	1	Grab	SW8468260B	5 ug/l	<2			
24. Tetrachloroethene (PCE)	127184	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
27. Trichloroethene (TCE)	79016	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			

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	☒	☐	1	Grab	SW8468260B ⁺	5 ug/l	<1			
29. Acetone	67641	☒	☐	1	Grab	SW8468260B	50 ug/l	<5			
30. 1,4 Dioxane	123911	☒	☐	1	Grab	SW8468260B	50 ug/l	<25			
31. Total Phenols	108952	☐	☒	1	Grab	SW846 8270C	5 ug/l	3.2	0.0007		
32. Pentachlorophenol (PCP)	87865	☒	☐	1	Grab	SW846 8270C ⁺	5 ug/l	<13			
33. Total Phthalates (Phthalate esters) ⁴		☒	☐			SW846 8270C ⁺	5 ug/l	<6.3			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	Grab	SW846 8270C ⁺	5 ug/l	<2.5			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐			SW846 8270C ⁺	5 ug/l	0			
a. Benzo(a) Anthracene	56553	☒	☐	1	Grab	SW846 8270C	5 ug/l	<0.063			
b. Benzo(a) Pyrene	50328	☒	☐	1	Grab	SW846 8270C	5 ug/l	<0.13			
c. Benzo(b) Fluoranthene	205992	☒	☐	1	Grab	SW846 8270C ⁺	5 ug/l	<0.063			
d. Benzo(k) Fluoranthene	207089	☒	☐	1	Grab	SW846 8270C ⁺	5 ug/l	<0.13			
e. Chrysene	21801	☒	☐	1	Grab	SW846 8270C	5 ug/l	<0.13			
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	Grab	SW846 8270C ⁺	5 ug/l	<0.13			
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	Grab	SW846 8270C ⁺	5 ug/l	<0.13			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☐	☒			SW846 8270C ⁺	5 ug/l	25.738	0.0063		

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	☐	☒	1	Grab	SW8468 8270C	5 ug/l	0.94	0.0002		
i. Acenaphthylene	208968	☐	☒	1	Grab	SW8468 8270C	5 ug/l	0.15	0.00037		
j. Anthracene	120127	☐	☒	1	Grab	SW8468 8270C	5 ug/l	0.16	0.00039		
k. Benzo(ghi) Perylene	191242	☒	☐	1	Grab	SW8468 8270C	5 ug/l	<0.13			
l. Fluoranthene	206440	☒	☐	1	Grab	SW8468 8270C	5 ug/l	<0.13			
m. Fluorene	86737	☐	☒	1	Grab	SW8468 8270C	5 ug/l	1.2	0.0002		
n. Naphthalene	91203	☐	☒	1	Grab	SW8468 8270C	5 ug/l	22.4	0.0055		
o. Phenanthrene	85018	☐	☒	1	Grab	SW8468 8270C	5 ug/l	0.82	0.0002		
p. Pyrene	129000	☐	☒	1	Grab	SW8468 8270C	5 ug/l	0.068	0.000017		
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	Grab	EPA 608	0.5 ug/l	<0.50			
38. Chloride	16887006	☐	☐								
39. Antimony	7440360	☒	☐	1	Grab	SW84660108	10 ug/l	<1.6			
40. Arsenic	7440382	☐	☒	1	Grab	SW84660108	20 ug/l	34.4	0.0085		
41. Cadmium	7440439	☒	☐	1	Grab	SW84660108	10 ug/l	<1.9			
42. Chromium III (trivalent)	16065831	☒	☐				15 ug/l	<10			
43. Chromium VI (hexavalent)	18540299	☒	☐	1	Grab	SW8467196A ⁺	10 ug/l	<10			
44. Copper	7440508	☐	☒	1	Grab	SW84660108	15 ug/l	4.4	0.0010		
45. Lead	7439921	☒	☐	1	Grab	SW84660108	20 ug/l	<2.7			
46. Mercury	7439976	☐	☒	1	Grab	SW8467470A	0.2 ug/l	0.061	0.000015		
47. Nickel	7440020	☐	☒	1	Grab	SW84660108	20 ug/l	1.9	0.0004		
48. Selenium	7782492	☒	☐	1	Grab	SW84660108	20 ug/l	<3.5			
49. Silver	7440224	☒	☐	1	Grab	SW84660108	10 ug/l	<1.3			
50. Zinc	7440666	☐	☒	1	Grab	SW84660108	15 ug/l	26.5	0.0065		
51. Iron	7439896	☐	☒	1	Grab	SW84660108	20 ug/l	46,900	11.6234		
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 ☐ 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? <table> <tr> <td>Metal: Arsenic</td> <td>DF: >100</td> </tr> <tr> <td>Metal: Cadmium</td> <td>DF: >100</td> </tr> <tr> <td>Metal: Copper</td> <td>DF: >100</td> </tr> <tr> <td>Metal: Iron, Lead and Silver</td> <td>DF: >100</td> </tr> </table> Etc.	Metal: Arsenic	DF: >100	Metal: Cadmium	DF: >100	Metal: Copper	DF: >100	Metal: Iron, Lead and Silver	DF: >100	If yes, which metals? Arsenic, Cadmium, Copper, Iron, Lead and Silver Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the effluent 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: Iron
Metal: Arsenic	DF: >100								
Metal: Cadmium	DF: >100								
Metal: Copper	DF: >100								
Metal: Iron, Lead and Silver	DF: >100								

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: The North Plant Groundwater (GW) Treatment System treats GW pumped from recovery wells (RW) 2-W, 8-W, RW-3, RW-5, RW-6R. The treatment system currently consists of one 3,000-gallon oil/water separator (currently off-line), two oil-water coalescer vessels piped in parallel, two bag filters and two sets of two 2,000-pound capacity liquid phase granular activated carbon units, piped in parallel. LNAPL removed from the GW is drained into a holding tank located inside the treatment building, which is pumped into a 6,000-gallon above ground storage tanks located outside the treatment building. Treated GW discharges into the Taunton River through Outfall 001A.			
b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☐ Chlorination ☐	Air stripper ☐ De-chlorination ☐	Oil/water separator ☐ Other (please describe): Two oil-water coalescers removing TSS, Fe, Mn, H₂O₂, organic, water sep, Activated Carbon (see Appendix B)
	Equalization tanks ☐ Bag filter ☒ GAC filter ☒		

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 gpm Maximum flow rate of treatment system gpm

Design flow rate of treatment system gpm

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

Not applicable

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):
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b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

Taunton River Segment MA62-04

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 discharges, 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

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 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)?

Organic Enrichment / Low D.O. and Pathogens

Is there a final TMDL? Y ☐ N ☒ If yes, for which pollutant(s)?

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.

Refer to attached documentation.

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:	Former Shell Terminal
Operator signature:	
Printed Name & Title:	Gregory Motta operator Waste Water 21
Date:	Dec 17, 2010

Report of Analysis

Client Sample ID:	INFLUENT	Date Sampled:	03/19/09
Lab Sample ID:	M81351-1	Date Received:	03/19/09
Matrix:	AQ - Influent	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	CEA:300700 1 New St. Fall River, MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P35649.D	1	03/27/09	AMY	n/a	n/a	MSP1183
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	3.2	ug/l	
71-43-2	Benzene	317	0.50	0.22	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.27	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.80	ug/l	
75-25-2	Bromoform	ND	1.0	0.37	ug/l	
74-83-9	Bromomethane	ND	2.0	0.78	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	0.93	ug/l	
104-51-8	n-Butylbenzene	5.4	5.0	0.48	ug/l	
135-98-8	sec-Butylbenzene	6.2	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	1.7	5.0	0.43	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.62	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.47	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.26	ug/l	
75-00-3	Chloroethane	ND	2.0	0.56	ug/l	
67-66-3	Chloroform	ND	1.0	0.29	ug/l	
74-87-3	Chloromethane	ND	2.0	0.45	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.26	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.22	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.5	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.89	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.31	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.36	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.27	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.27	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.44	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.52	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.43	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.25	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	INFLUENT	Date Sampled:	03/19/09
Lab Sample ID:	M81351-1	Date Received:	03/19/09
Matrix:	AQ - Influent	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	CEA:300700 1 New St. Fall River, MA		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	0.16	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.47	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.32	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
123-91-1	1,4-Dioxane	ND	25	19	ug/l	
100-41-4	Ethylbenzene	46.0	1.0	0.32	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.87	ug/l	
591-78-6	2-Hexanone	ND	5.0	0.71	ug/l	
74-88-4	Iodomethane	ND	5.0	0.38	ug/l	
98-82-8	Isopropylbenzene	31.6	5.0	0.42	ug/l	
99-87-6	p-Isopropyltoluene	2.5	5.0	0.35	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	38.7	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.32	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.28	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.4	ug/l	
91-20-3	Naphthalene	29.1	5.0	0.77	ug/l	
103-65-1	n-Propylbenzene	26.0	5.0	0.30	ug/l	
100-42-5	Styrene	ND	5.0	0.24	ug/l	
994-05-8	tert-Amyl Methyl Ether	2.2	2.0	0.90	ug/l	
75-65-0	Tert Butyl Alcohol	ND	20	5.7	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.31	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.52	ug/l	
108-88-3	Toluene	7.1	1.0	0.31	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.41	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.49	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.29	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.98	ug/l	
95-63-6	1,2,4-Trimethylbenzene	45.2	5.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	9.5	5.0	0.32	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.78	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.31	ug/l	
1330-20-7	Xylene (total)	74.4	1.0	0.26	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: INFLUENT
 Lab Sample ID: M81351-1
 Matrix: AQ - Influent
 Method: SW846 8260B
 Project: CEA:300700 1 New St. Fall River, MA

Date Sampled: 03/19/09
 Date Received: 03/19/09
 Percent Solids: n/a

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		78-129%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	94%		80-120%

ND = Not detected MDL = Method Detection Limit
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 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: INFLUENT
Lab Sample ID: M81351-1
Matrix: AQ - Influent
Method: SW846 8270C SW846 3510C
Project: CEA:300700 1 New St. Fall River, MA

Date Sampled: 03/19/09
Date Received: 03/19/09
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	S6840.D	1	03/24/09	PN	03/23/09	OP18112	MSS234
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

ABN PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	6.3	0.85	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	13	0.72	ug/l	
120-83-2	2,4-Dichlorophenol	ND	13	0.87	ug/l	
105-67-9	2,4-Dimethylphenol	ND	13	2.7	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	0.72	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	13	0.91	ug/l	
95-48-7	2-Methylphenol	ND	13	0.60	ug/l	
	3&4-Methylphenol	ND	13	0.79	ug/l	
88-75-5	2-Nitrophenol	ND	13	0.82	ug/l	
100-02-7	4-Nitrophenol	ND	25	0.77	ug/l	
87-86-5	Pentachlorophenol	ND	13	4.1	ug/l	
108-95-2	Phenol	3.2	6.3	2.6	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	13	0.50	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	13	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.3	0.51	ug/l	
84-74-2	Di-n-butyl phthalate	ND	6.3	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	6.3	0.42	ug/l	
84-66-2	Diethyl phthalate	ND	6.3	0.15	ug/l	
131-11-3	Dimethyl phthalate	ND	6.3	0.14	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.5	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	64%		15-110%
4165-60-0	Nitrobenzene-d5	83%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-120%
1718-51-0	Terphenyl-d14	70%		30-120%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	INFLUENT	Date Sampled:	03/19/09
Lab Sample ID:	M81351-1	Date Received:	03/19/09
Matrix:	AQ - Influent	Percent Solids:	n/a
Method:	EPA 608 EPA 608		
Project:	CEA:300700 I New St. Fall River, MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB24567.D	1	03/27/09	CZ	03/23/09	OP18115	GBB1014
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	0.029	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	0.060	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	0.076	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	0.036	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	0.058	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	0.067	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	0.023	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		44-132%
877-09-8	Tetrachloro-m-xylene	94%		44-132%
2051-24-3	Decachlorobiphenyl	77%		12-151%
2051-24-3	Decachlorobiphenyl	104%		12-151%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: INFLUENT
Lab Sample ID: M81351-1
Matrix: AQ - Influent
Project: CEA:300700 1 New St. Fall River, MA

Date Sampled: 03/19/09
Date Received: 03/19/09
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	1.6 U	6.0	1.6	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Arsenic	34.4	10	1.8	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Cadmium	1.9 U	4.0	1.9	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Chromium	1.1 U	10	1.1	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Copper	4.4 B	25	4.0	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Iron	46900	100	13	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Lead	2.7 U	5.0	2.7	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Mercury	0.061 B	0.20	0.048	ug/l	1	03/25/09	03/25/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	1.9 B	40	1.3	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Selenium	3.5 U	10	3.5	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Silver	1.3 U	5.0	1.3	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³
Zinc	26.5	20	1.5	ug/l	1	03/23/09	03/24/09 PY	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10275

(2) Instrument QC Batch: MA10280

(3) Prep QC Batch: MP13228

(4) Prep QC Batch: MP13242

RL = Reporting Limit

MDL = Method Detection Limit

U = Indicates a result < MDL

B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: INFLUENT

Lab Sample ID: M81351-1

Matrix: AQ - Influent

Date Sampled: 03/19/09

Date Received: 03/19/09

Percent Solids: n/a

Project: CEA:300700 1 New St. Fall River, MA

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/19/09 12:55	CF	SW846 7196A
Cyanide	< 0.010	0.010	mg/l	1	03/26/09 12:20	MA	EPA 335.4
HEM Petroleum Hydrocarbons	< 4.1	4.1	mg/l	1	03/26/09	BF	EPA 1664
Solids, Total Suspended	30.0	4.0	mg/l	1	03/20/09	BF	SM21 2540D
Total Residual Chlorine	< 0.050	0.050	mg/l	1	03/19/09 13:30	NJ	SM21 4500CL F

RL = Reporting Limit

Report of Analysis

Client Sample ID: INFLUENT
Lab Sample ID: M81351-1A
Matrix: AQ - Influent
Method: SW846 8270C BY SIM SW846 3510C
Project: CEA:300700 1 New St. Fall River, MA

Date Sampled: 03/19/09
Date Received: 03/19/09
Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F40715.D	1	03/24/09	PN	03/23/09	OP18113	MSF1927
Run #2							

Run #	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
87-86-5	Pentachlorophenol	ND	1.3		ug/l	
83-32-9	Acenaphthene	0.94	0.13	0.043	ug/l	
208-96-8	Acenaphthylene	0.15	0.13	0.042	ug/l	
120-12-7	Anthracene	0.16	0.13	0.057	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.063	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.13	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.063	0.063	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.13	0.042	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.13	0.047	ug/l	
218-01-9	Chrysene	ND	0.13	0.030	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.13	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.13	0.045	ug/l	
86-73-7	Fluorene	1.2	0.13	0.043	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.13	0.035	ug/l	
91-57-6	2-Methylnaphthalene	14.6	0.25	0.089	ug/l	
91-20-3	Naphthalene	22.4	0.13	0.069	ug/l	
85-01-8	Phenanthrene	0.82	0.063	0.047	ug/l	
129-00-0	Pyrene	0.068	0.13	0.034	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	58%		10-110%
4165-62-2	Phenol-d5	41%		10-110%
118-79-6	2,4,6-Tribromophenol	90%		10-141%
4165-60-0	Nitrobenzene-d5	93%		30-130%
321-60-8	2-Fluorobiphenyl	87%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

ND = Not detected MDL - Method Detection Limit
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