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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

JUL 25 2012

Patrick D. Corcoran
Senior Project Manager
EnviroTrac Ltd.
2 Merchant Street, Suite 2
Sharon, MA 02067

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Hess Petroleum Retail Station # 21212 site located at 630 Squire Road Revere, MA 02151, Suffolk County; Authorization # MAG910547

Dear Mr. Corcoran:

Based on the review of a Notice of Intent (NOI) submitted on behalf of Hess Corporation by your firm EnviroTrac Ltd., 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. 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.

Also, please note that based on Part I. Section C.7., of the RGP reissuance issued on September 9, 2010, 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. Any other dilution factor based on estimated values such as the dilution factor of 180 proposed in your NOI is no longer accepted by EPA. Therefore, 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 and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limits for copper of 3.7 ug/L, lead of 8.5 ug/L, nickel of 8.2 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 regulations.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on August 30, 2013. If for any reason the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days 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,

Thelma Murphy

Thelma Murphy, Manager
Storm Water and Construction
Permits Section

Enclosure

cc: Kathleen Keohane, MassDEP
Donald Goodwin City of Revere DPW

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910547**
Authorization Issued:	July, 2012
Facility/Site Name:	Hess Petroleum Retail Station#21212
Facility/Site Address:	630 Squire Road, Revere, MA 02151
	Email address of owner:mmatri@hess.com
Legal Name of Operator:	EnviroTrac Ltd.
Operator contact name, title, and Address:	Patrick D. Corcoran, LSP. 2 Merchand Street, Suite 2, Sharon, MA 02067
	Email: patrickc@envirotrac.com
Estimated date of Completion:	August 30, 2013
Category and Sub-Category:	Category I. Petroleum Related Site Remediation. Subcategory A. Gasoline Only Sites
RGP Termination Date:	September 10, 2015
Receiving Water:	Town Line Brook to Pines 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) **, 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

	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)
	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
	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)	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML

	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)
	Phthalate]	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
	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 parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
			Saltwater		
	39. Antimony	5.6/ML 10			
	40. Arsenic **		36/ML 20		
	41. Cadmium **		8.9/ML 10		
	42. Chromium III (trivalent) **		100/ML 15		
	43. Chromium VI (hexavalent) **		50.3/ML 10		
√	44. Copper **		3.7/ML 15		
√	45. Lead **		8.5/ML 20		
	46. Mercury **		1.1/ML 0.2		
√	47. Nickel **		8.2/ML 20		
	48. Selenium **		71/ML 20		
	49. Silver		2.2/ML 10		
	50. Zinc **		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.
[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] 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 x 1,000ug/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 x 2 =2,000 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

EnviroTrac
Environmental Services

May 16, 2012 ✓

MAG910547

United States Environmental Protection Agency
RGP – NOI Processing
1 Congress Street
Boston, Massachusetts 02114-2023

Re: Remediation General Permit – Notice of Intent
Hess-branded Retail Petroleum Station #21212
630 Squire Street
Revere, Massachusetts 02151-1864
MassDEP RTN 3-22782

To Whom It May Concern:

At the request of Hess Corporation (Hess), EnviroTrac Ltd (EnviroTrac) is submitting the attached Remediation General Permit (RGP) – Notice of Intent (NOI) for the above-referenced location, referred to as the Site. The RGP-NOI form is included as **Attachment A**. The Site is a Hess-branded retail petroleum station. Temporary construction dewatering will be required to facilitate the removal of three underground storage tanks (USTs) ranging from 8,000 gallon to 12,000 gallons in capacity and the installation of two 20,000-gallon double-walled fiberglass reinforced plastic (FRP) USTs. Based on gauging of a monitoring well at the Site, the depth to groundwater is approximately 7 feet below ground surface (bgs). Excavation to approximately 16 to 17 feet bgs will be required for the UST installation. The location of the Site is depicted on the Site Locus Map (**Figure 1**). Also attached is a Discharge Location Plan (**Figure 2**), which depicts existing Site features, the catch basin representing the proposed discharge point, and the location of the discharge receiving water in relation to the Site.

During construction dewatering, groundwater will be pumped from the excavation into a fractionation tank for settlement and then treated through a bag filter and two 2,000-pound liquid phase carbon units arranged in series, followed by cartridge filters as a final unit process to remove suspended sediments. A schematic of the proposed treatment system is included as **Figure 3**. The treated effluent will be discharged via the catch basin located within Squire Road to the northwest of the Site. The catch basin discharges to the Town Line Brook, approximately 50 feet southeast of the Site. Town Line Brook ultimately discharges to the Pines River, approximately 2,000 feet east of the Site. The design flow of the treatment system is 200 gallons per minute (gpm), and the average discharge rate of treated groundwater is anticipated to be 150 gpm.

On March 6, 2012, a groundwater sample was obtained from a monitoring well (MW-301) located adjacent to the proposed excavation area. Based on analytical data, volatile organic compounds, metals, chloride, and total suspended solids (TSS) were detected in groundwater. Concentrations of arsenic, cadmium, copper, iron, lead, nickel, and TSS exceeded the applicable Effluent Limitations published in Appendix III of the RGP under the National Pollutant Discharge Elimination System for Discharges in Massachusetts. A dilution factor of 180 was calculated for all metals which exceeded Effluent Limitations published in Appendix III of the RGP (refer to **Attachment A)**. Based on a Dilution Factor Range of greater than 100, concentrations of iron exceeded applicable Total Recoverable Metal Limitations published in Appendix IV of the RGP. EnviroTrac collected an additional groundwater sample from the Site on March 6, 2012. The additional groundwater sample was submitted for laboratory analysis for dissolved arsenic, copper, iron and lead. Dissolved metal analytical data are summarized in **Table 1**. As shown in **Table 1**, no dissolved arsenic, copper, lead, or iron was detected above laboratory reporting limits, and the arsenic, copper, lead, or iron detected in the groundwater at the Site was therefore entrained in sediment. Analytical data are summarized in **Table 1**. The laboratory analytical reports supporting this NOI are included in **Attachment B**.

As such, the proposed solids removal system components, which consist of bag filter units and cartridge filter units, are expected to remove total iron, which exceeded applicable Total Recoverable Metal Limitations published in Appendix IV of the RGP, from groundwater.

Suffolk County is located within National Heritage & Endangered Species Program Estimated Rare Wetland Habitat associated with the piping plover, hawksbill sea turtle, leatherback sea turtle, green sea turtle, and the loggerhead sea turtle. According to the RGP Appendix II, the piping plover is not located within the area of the discharge; however, the specific location of the habitat for the remaining species is unknown. Therefore, as specified in the RGP, consultation with the U.S. Fish and Wildlife Service is being conducted. A copy of the letter sent to the U.S. Fish and Wildlife Service is included in **Attachment C**.

According to the National Park Service's National Register Information System (NRIS) (http://www.nps.gov/nr/research/) eight historical sites are located in Revere, Massachusetts. The nearest listed historical site is the Church of Christ, located at 265 Beech Street, approximately 9,500 feet southeast of the Site. In addition, the Massachusetts Historical Commission's Massachusetts Cultural Resource Information System (MACRIS) (http://www.sec.state.ma.us/mhc/) listed more than 157 sites in Revere. The nearest Massachusetts-listed site, Saint Mary of the Assumptioon Catholic Church, located at 670 Washington Street, approximately 2,500 feet south of the Site. The discharge point is located between Washington Avenue and Squire Road, as shown on the attached Discharge Location Plan (**Figure 2**). Based on the distances to the Site, the discharge will not likely adversely affect federal or state-listed historical sites. Copies of the NRIS and MACRIS listings are included in **Attachment D**.

The excavation and dewatering will be conducted as a Post-Response Action Outcome (RAO) Response Action pursuant to post-RAO provisions of the Massachusetts Contingency Plan as set forth at 310 CMR 40.1067(4)(b). Therefore, completion and submittal of Massachusetts Application Form BRPWM 12 or payment of a state fee are not required.

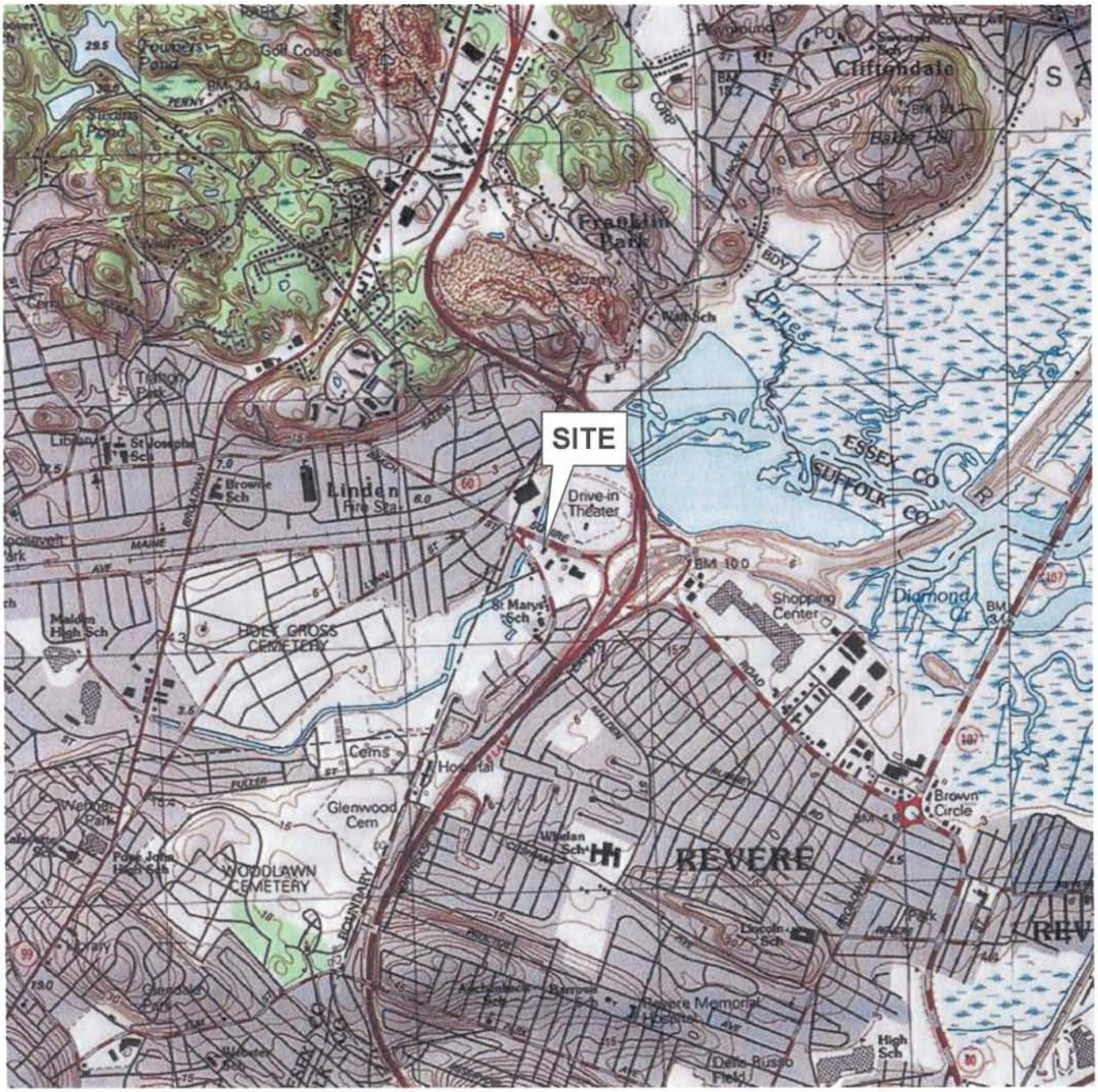
If you have any questions or require further information, please contact the undersigned at (781) 793-0074.

Sincerely,
EnviroTrac Ltd.

Patrick D. Corcoran, LSP
Senior Project Manager

cc.: MassDEP Northeast Regional Office
Dan Rizzo, Mayor, City of Revere
City of Revere Conservation Commission
Michael Matri, Hess Corporation

FIGURES



Scale: 1:24,000

Hess Station #21212
630 Squire Road
Revere, MA 02151-1864

FIGURE 1

SITE LOCUS MAP
UNITED STATES GEOLOGICAL SURVEY
BOSTON NORTH, MA QUADRANGLE

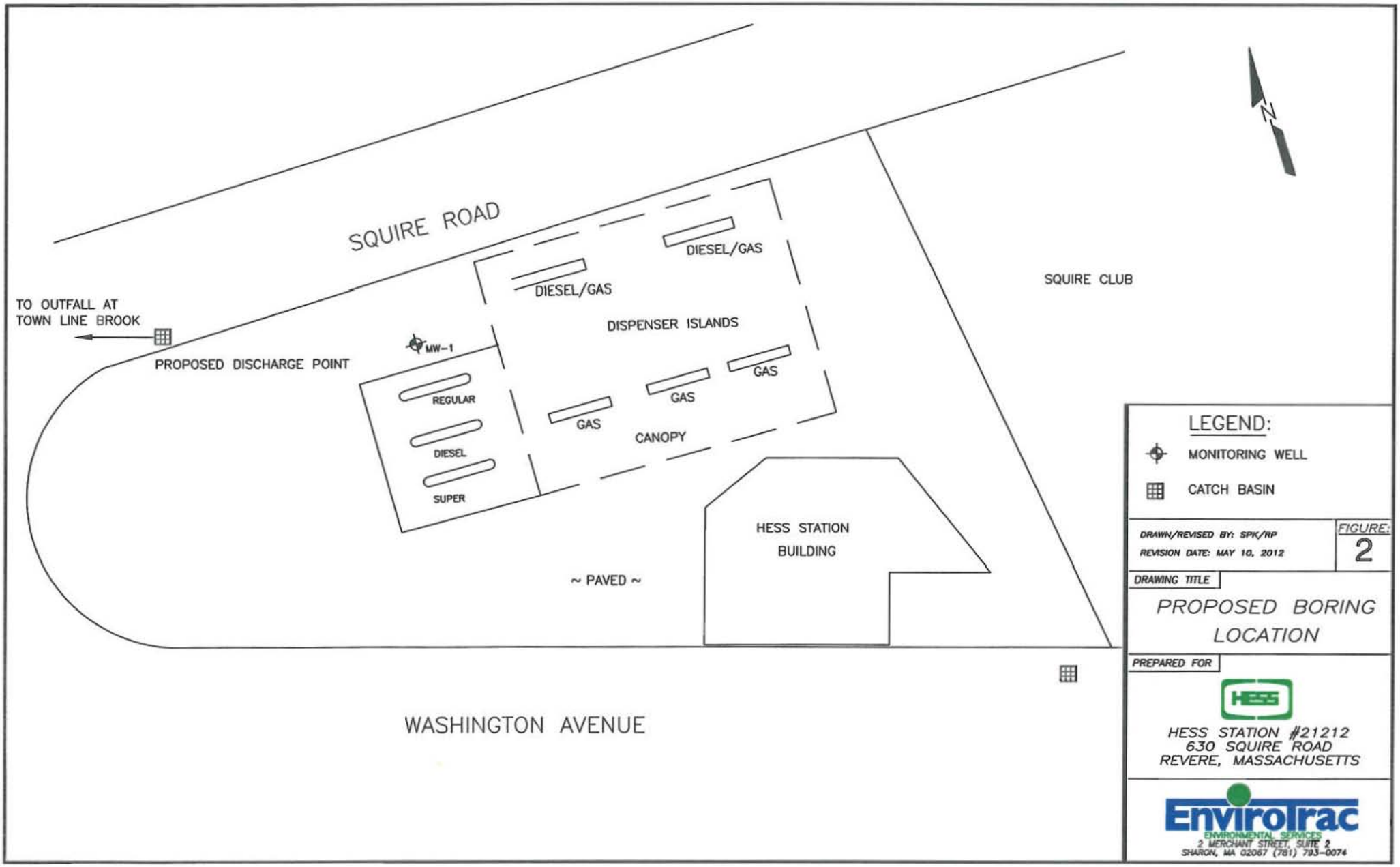
Contour Interval: 3 m

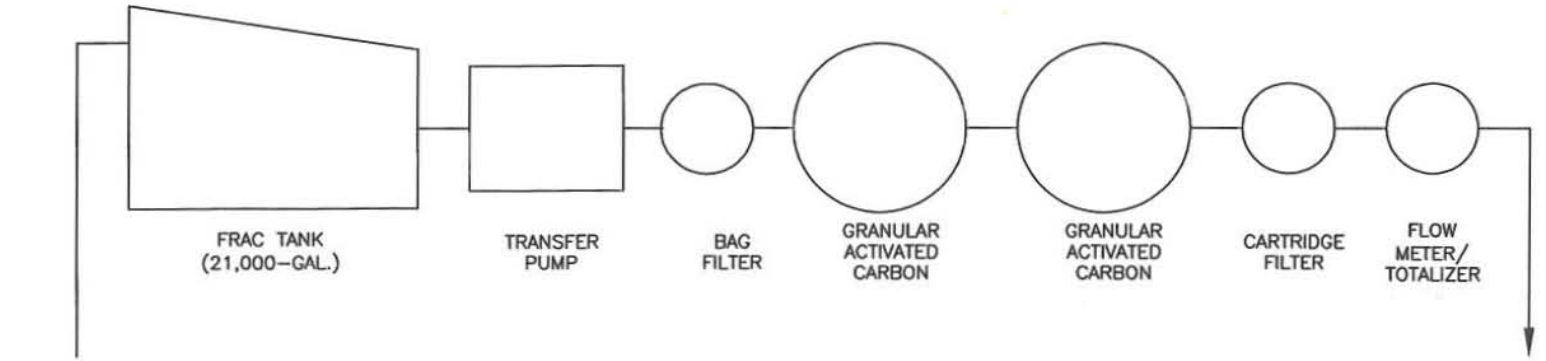
UTM Coordinaters:
4,602,400 m Northing
336,610 m Easting

Latitude/Longiitude:
42° 25' 51" North
71° 01' 20" West

N
W E
S

EnviroTrac
Environmental Services


SQUIRE ROAD
DIESEL/GAS
DIESEL/GAS
SQUIRE CLUB
TO OUTFALL AT
TOWN LINE BROOK
DISPENSER ISLANDS
MW-1
PROPOSED DISCHARGE POINT
GAS
GAS
REGULAR
GAS
CANOPY
DIESEL
SUPER
HESS STATION
BUILDING
~ PAVED ~
WASHINGTON AVENUE
N
LEGEND:
MONITORING WELL
CATCH BASIN
DRAWN/REVISED BY: SPK/RP
REVISION DATE: MAY 10, 2012
FIGURE:
2
DRAWING TITLE
PROPOSED BORING
LOCATION
PREPARED FOR
HESS STATION #21212
630 SQUIRE ROAD
REVERE, MASSACHUSETTS
EnviroTrac
ENVIRONMENTAL SERVICES
2 MERCHANT STREET, SUITE 2
SHARON, MA 02067 (781) 793-0074



PROCESS FLOW DIAGRAM
DEWATERING TREATMENT
SYSTEM (TYP.)

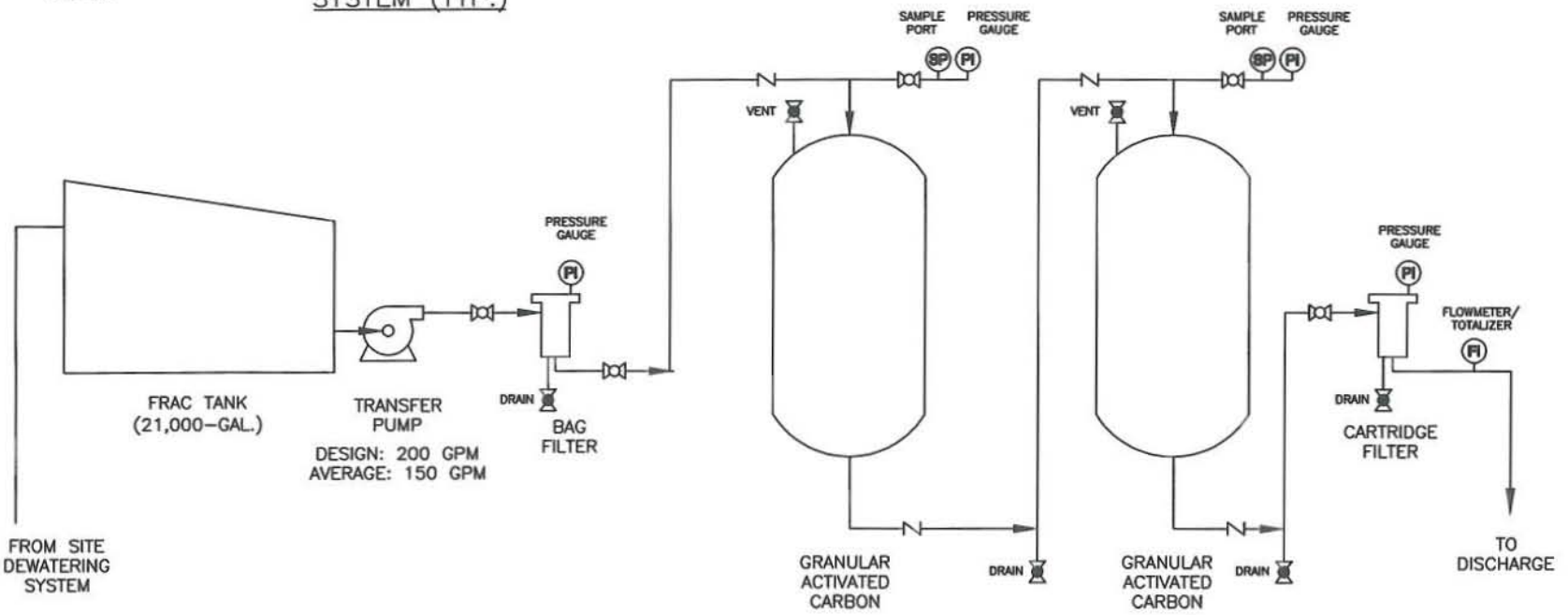


FIGURE # 3	PROCESS FLOW DIAGRAM			HESS STATION #21212 630 SQUIRE ROAD REVERE, MASSACHUSETTS	EnviroTrac 2 Merchant Street, Suite 2, Sharon, Massachusetts PHONE: (781) 793-0074 FAX: (781) 793-7877
	CREATED BY: PDC DATE: 02/29/2008	NOT TO SCALE	REVISED BY: RP DATE: 05/10/2012		

TABLE

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL DATA

Hess Station #21212
630 Squire Road
Revere, Massachusetts

Sample ID	MW-301		RGP Appendix III	RGP Appendix IV Effluent Limits
Sample Date	3/6/2012		Effluent Limits	Dilution Factor Range >100
Volatile Organic Compounds (µg/L)				
Benzene	0.71		5	NA
Toluene	<0.50		NE	NA
Ethylbenzene	6.5		NE	NA
Xylenes	<0.50		NE	NA
Total BTEX	7.21		100	NA
Naphthalene	<0.50		20	NA
n-Butylbenzene	<0.50		NE	NA
sec-Butylbenzene	<0.50		NE	NA
cis-1,2-Dichloroethylene	1.5		70	NA
Isopropylbenzene	0.87		NE	NA
p-Isopropyltoluene	<0.50		NE	NA
Methyl Tert Butyl Ether	61.7		70.0	NA
n-Propylbenzene	1.5		NE	NA
1,2,4-Trimethylbenzene	0.61		NE	NA
1,3,5-Trimethylbenzene	<0.50		NE	NA
All other VOCs	ND		NE	NA
Metals (µg/L)	(Total Metals)	(Dissolved Metals)		
Antimony	<1.7	--	5.6	NA
Arsenic	**26.7**	<4.0	10	540
Cadmium	**0.6**	--	0.2	20
Copper	**28.1**	<25	3.7	520
Iron	30,700	<100	1,000	5,000
Lead	**14.7**	<5.0	1.3	132
Mercury	<0.20	--	0.9	2.3
Nickel	**26.1**	--	8.2	2,380
Selenium	<2.0	--	5	NA
Silver	<1.3	--	1.2	NA
Zinc	60.1	--	66.6	1,480
General Chemistry (mg/L)				
Chloride	2,770		NE	NA
Total Suspended Solids	**597**		30	NA
HEM Oil and Grease	<4.1		5	NA

NOTES:

RGP is Remediation General Permit
mg/L is milligrams per liter
µg/L is micrograms per liter
< Indicates that the compound was not detected at the laboratory detection limit listed
ND is not detected
NE is not established
NA is not applicable
HEM is n-Hexane Extractable Material
BOLD indicates concentrations greater than RGP Appendix III effluent limits
RED indicates concentrations greater than RGP Appendix IV effluent limits
A Dilution Facotr of 180 was calculated based on the following equation:
(Maximum Flow Rate of Discharge + 7Q10 of receiving water)/Maximum Flow Rate of Discharge
= (0.466 cfs + 80 cfs) / 0.466 cfs = 180.37, where cfs is cubic feet per second
For all metals which exceeded RGP Appendix III effluent limits, the Dilution Factor was used to determine the RGP Appendix IV effluent limits

EnviroTrac
Environmental Services

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**: Hess Petroleum Retail Sta. #21212		**Facility/site** mailing address:		
Location of **facility/site**: longitude: -71.023279 latitude: 42.431070	Facility SIC code(s): 5541	Street: 630 Squire Road		
b) Name of **facility/site owner:** Hess Corporation Attn: Michael Matri		Town: Revere		
Email address of facility/site owner: mmatri@hess.com		State: MA	Zip: 02151	County: Suffolk
Telephone no. of facility/site **owner**: (750) 732-6432				
Fax no. of facility/site **owner**:		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):				
Street: 1 Hess Plaza				
Town: Woodbridge	State: NJ	Zip: 07095	County: Middlesex	
c) Legal name of **operator**:	**Operator** telephone no: (781) 793-0074			
EnviroTrac Ltd.	**Operator** fax no.: (781) 793-7877	**Operator** email: patrickc@envirotrac.com		
Operator contact name and title: Patrick D. Corcoran, LSP				
Address of **operator** (if different from owner):	Street: 2 Merchant Street, Suite 2			
Town: Sharon	State: MA	Zip: 02067	County: Norfolk	

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:
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:

Approx. 150 gpm of groundwater will be pumped into a fractionation tank, then treated through a bag filter, two 2,000-pound liquid phase carbon units arranged in series, followed by cartridge filters. The effluent will be discharged to a catch basin that discharges to Town Line Brook.

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 0.466 Is maximum flow a **design value**? Y ⊙ N ○
Average flow (include units) 0.334 cfs Is average flow a design value or estimate? estimate

3) Latitude and longitude of each discharge within 100 feet:
pt.1: lat 42.431312 long -71.023387 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 June 2012 end August 2013

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 Process Flow Diagram (Figure 3) attached.

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	2540D	20,000	0.597	6.52E-4	0.597	4.89E-4
2. Total Residual Chlorine (TRC)		☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	Grab	1664	4.1	0	0	0	0
4. Cyanide (CN)	57125	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
5. Benzene (B)	71432	☐	☒	1	Grab	524.2	5.0	0.71	7.75E-4	0.71	5.87E-4
6. Toluene (T)	108883	☒	☐	1	Grab	524.2	5.0	0	0	0	0
7. Ethylbenzene (E)	100414	☐	☒	1	Grab	524.2	5.0	6.5	7.10E-3	6.5	5.32E-3
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	Grab	524.2	5.0	0	0	0	0
9. Total BTEX [2]	n/a	☐	☒	1	Grab	524.2	N/A	7.21	7.87E-3	7.21	5.90E-3
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	1	Grab	524.2	5.0	0	0	0	0
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☐	☒	1	Grab	524.2	5.0	61.7	6.74E-2	61.7	5.05E-2
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0

* 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	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
14. Naphthalene	91203	☒	☐	1	Grab	524.2	5.0	0	0	0	0
15. Carbon Tetrachloride	56235	☒	☐	1	Grab	524.2	5.0	0	0	0	0
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	Grab	524.2	5.0	0	0	0	0
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	Grab	524.2	5.0	0	0	0	0
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	Grab	524.2	5.0	0	0	0	0
18a. Total dichlorobenzene		☒	☐	1	Grab	524.2	5.0	0	0	0	0
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	Grab	524.2	5.0	0	0	0	0
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	Grab	524.2	5.0	0	0	0	0
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	Grab	524.2	5.0	0	0	0	0
22. cis-1,2 Dichloroethene (DCE)	156592	☐	☒	1	Grab	524.2	5.0	1.5	1.64E-3	1.5	1.23E-3
23. Methylene Chloride	75092	☒	☐	1	Grab	524.2	5.0	0	0	0	0
24. Tetrachloroethene (PCE)	127184	☒	☐	1	Grab	524.2	5.0	0	0	0	0
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	Grab	524.2	5.0	0	0	0	0
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	Grab	524.2	5.0	0	0	0	0
27. Trichloroethene (TCE)	79016	☒	☐	1	Grab	524.2	5.0	0	0	0	0

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	524.2	5.0	0	0	0	0
29. Acetone	67641	☒	☐	N/A	N/A	N/A	N/A	0	0	0	
30. 1,4 Dioxane	123911	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
31. Total Phenols	108952	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
32. Pentachlorophenol (PCP)	87865	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
33. Total Phthalates (Phthalate esters) [4]		☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
a. Benzo(a) Anthracene	56553	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
b. Benzo(a) Pyrene	50328	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
c. Benzo(b)Fluoranthene	205992	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
d. Benzo(k)Fluoranthene	207089	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
e. Chrysene	21801	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
f. Dibenzo(a,h)anthracene	53703	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	N/A	N/A	N/A	N/A	0	0	0	0

[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	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
i. Acenaphthylene	208968	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
j. Anthracene	120127	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
k. Benzo(ghi) Perylene	191242	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
l. Fluoranthene	206440	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
m. Fluorene	86737	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
n. Naphthalene	91203	☒	☐	1	Grab	524.2	5.0	0	0	0	0
o. Phenanthrene	85018	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
p. Pyrene	129000	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	N/A	N/A	N/A	N/A	0	0		0
38. Chloride	16887006	☐	☒	1	Grab	SM21 4500CL	1,000	2.770	3.02E-3	2.770	2.27E-3
39. Antimony	7440360	☒	☐	1	Grab	3010A	0	0	0	0	0
40. Arsenic	7440382	☐	☒	1	Grab	3010A	4.0	26.7	2.92E-2	26.7	2.19E-2
41. Cadmium	7440439	☐	☒	1	Grab	3010A	4.0	0.6	6.55E-4	0.6	04.91E-4
42. Chromium III (trivalent)	16065831	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
43. Chromium VI (hexavalent)	18540299	☒	☐	N/A	N/A	N/A	N/A	0	0	0	0
44. Copper	7440508	☐	☒	1	Grab	3010A	25	28	3.07E-2	28	2.30E-2
45. Lead	7439921	☐	☒	1	Grab	3010A	5.0	14.7	1.60E-2	14.7	1.20E-2
46. Mercury	7439976	☒	☐	1	Grab	3010A	0.20	0	0	0	0
47. Nickel	7440020	☐	☒	1	Grab	3010A	40	26.1	2.85E-2	26.1	2.14E-2
48. Selenium	7782492	☒	☐	1	Grab	3010A	10	0	0	0	0
49. Silver	7440224	☒	☐	1	Grab	3010A	5.0	0	0	0	0
50. Zinc	7440666	☐	☒	1	Grab	3010A	20	60.1	6.56E-2	60.1	4.92E-2
51. Iron	7439896	☐	☒	1	Grab	3010A	100	30,700	3.35E+1	30,700	2.51E+1
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? As, Cd, Cu, Fe, Ni, and Pb
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: As, Cd, Cu, Fe, Ni, and Pb DF: 180 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: Fe

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:

Approximately 150 gpm of groundwater will be pumped into , a fractionation tank for settlement, then treated through a bag filter, two 2,000-pound liquid phase carbon units arranged in series, and followed by cartridge filters as a final process to remove suspended sediments. See attached process flow diagram.

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 150 gpm Maximum flow rate of treatment system 200 gpm
Design flow rate of treatment system 150 gpm

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

No chemical additives will 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):

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

Treated water will be discharged to a storm drain south of the facility. Storm drain system discharges to Town Line Brook.

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 Class SA –

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 80 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)? Fecal Coliform Taste and Odor

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 ○ Determined via consultation with the federal services

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 ◉ Awaiting reply letter.

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.

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:	Hess Petroleum Retail Station #21212
Operator signature:	
Printed Name &Title:	Patrick D. Corcoran, LSP
Date:	05/16/2012

Remediation General Permit – Notice of Intent
Maximum Daily Value and Dilution Factor Calculations

Maximum Daily Value

To calculate the maximum daily value in kilograms of each parameter believed to be present, the following formula was used:

0.288 MGD * concentration of parameter in mg/L * 8.34 = kg

Example:

Total Suspended Solids:

0.288 MGD * 597 mg/L * 8.34 = 1.43E+03 kg

Dilution Factor

To calculate the dilution factor the following formula was used:

DF = (Qd +Qs)/Qd where: Qd = Maximum flow rate of discharge in cfs
Qs = Receiving water 7Q10 flow in cfs

DF = (0.466 cfs + 80 cfs) / 0.466 cfs = 180.37

Note: The 7Q10 of the Pines River in Revere, MA was obtained from the Feasibility Report – Draft Environmental Impact Statement/Report by US Army Corps of Engineers New England Division dated January 17, 1990.

System Flow

Max. Flow	200 gpm	0.445 cfs
Min. Flow	150 gpm	0.334 cfs

Dilution Factor
DF = (Qd+Qs)/Qd

Max. Flow	200 gpm	0.446 cfs
Min. Flow	150 gpm	0.335 cfs

Qs*=	80 cfs
Qd=	0.446 cfs
DF=	180.372197

1 MGD = 1.55 cfs

* 1990 Feasibility Report - Draft Environmental Impact Statement/Report by US Army Corps of Engineers

Based on Appendix IV: Discharge Limitations

Arsenic Limitation for >100 DF range	540 µg/L	
Iron Limitation for >100 DF range	5,000 µg/L	
Lead Limitation for >100 DF range	132 µg/L	
Zinc Limitation for >100 DF range	1,480 µg/L	
Nickel Limitation for >100 DF range	2,380 µg/L	
Chromium III >100	1,710.00 µg/L	1.71

Max and Daily Amount of COCs

Max Flow	200 gpm	0.288 MGD
Min Flow	150 gpm	0.216 MGD

	Value from Table 1	Max. Daily Value	Min. Daily Value
Benzene	0.71 µg/L	7.75E-04 kg	5.81E-04 kg
Ethylbenzene	6.5 µg/L	7.10E-03 kg	5.32E-03 kg
Total Btex	7.21 µg/L	7.87E-03 kg	5.90E-03 kg
cis-1,2-Dichloroethylene	1.5 µg/L	1.64E-03 kg	1.23E-03 kg
Isopropylbenzene	0.87 µg/L	9.50E-04 kg	7.12E-04 kg
MTBE	61.7 µg/L	6.74E-02 kg	5.05E-02 kg
n-Propylbenzene	1.5 µg/L	1.64E-03 kg	1.23E-03 kg
1,2,4-Trimethylbenzene	0.61 µg/L	6.66E-04 kg	4.99E-04 kg
Arsenic	26.7 µg/L	2.92E-02 kg	2.19E-02 kg
Iron	30,700 µg/L	3.35E+01 kg	2.51E+01 kg
Copper	28 µg/L	3.07E-02 kg	2.30E-02 kg
Lead	14.7 µg/L	1.60E-02 kg	1.20E-02 kg
Zinc	60.1 µg/L	6.56E-02 kg	4.92E-02 kg
Silver	1.3 µg/L	1.42E-03 kg	1.06E-03 kg
Total Suspended Solids	0.597 µg/L	6.52E-04 kg	4.89E-04 kg
Chloride	2.770 µg/L	3.02E-03 kg	2.27E-03 kg
Cadmium	**0.6** µg/L	6.55E-04 kg	4.91E-04 kg
Nickel	**26.1** µg/L	2.85E-02 kg	2.14E-02 kg

EnviroTrac
Environmental Services

ATTACHMENT B

New England ACCUTEST LABORATORIES

05/03/12

Technical Report for

EnviroTrac

HESS:#21212, 630 Squire Road, Revere, MA

Accutest Job Number: MC8540

Sampling Date: 03/06/12

Report to:

EnviroTrac

RachelP@envirotrac.com

ATTN: Rachel Patenaude

Total number of pages in report: 56

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)

Test results relate only to samples analyzed.

Table of Contents

Sections: 1 2 3 4 5 6 7

Sample Summary

EnviroTrac

Job No: MC8540

HESS:#21212, 630 Squire Road, Revere, MA

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC8540-1	03/06/12	10:45	FM	03/08/12	AQ	Ground Water	MW-301

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-301		
Lab Sample ID:	MC8540-1	**Date Sampled:**	03/06/12
Matrix:	AQ - Ground Water	**Date Received:**	03/08/12
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	HESS:#21212, 630 Squire Road, Revere, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T23524.D	1	03/13/12	AT	n/a	n/a	MST841
Run #2	T23553.D	5	03/15/12	AT	n/a	n/a	MST842

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

VOA List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.71	0.50	ug/l	
108-86-1	Bromobenzene	ND	0.50	ug/l	
74-97-5	Bromochloromethane	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
74-83-9	Bromomethane	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	0.50	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
74-87-3	Chloromethane	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
74-95-3	Dibromomethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	

ND = Not detected
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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-301		
Lab Sample ID:	MC8540-1	**Date Sampled:**	03/06/12
Matrix:	AQ - Ground Water	**Date Received:**	03/08/12
Method:	EPA 524.2 REV 4.1	**Percent Solids:**	n/a
Project:	HESS:#21212, 630 Squire Road, Revere, MA		

VOA List

CAS No.	Compound	Result	RL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.5	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	6.5	0.50	ug/l	
87-68-3	Hexachlorobutadiene	ND	0.50	ug/l	
98-82-8	Isopropylbenzene	0.87	0.50	ug/l	
99-87-6	p-Isopropyltoluene	ND	0.50	ug/l	
75-09-2	Methylene chloride	ND	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	61.7 [a]	2.5	ug/l	
91-20-3	Naphthalene	ND	0.50	ug/l	
103-65-1	n-Propylbenzene	1.5	0.50	ug/l	
100-42-5	Styrene	ND	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.61	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
	m,p-Xylene	ND	0.50	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	
1330-20-7	Xylenes (total)	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	114%	98%	70-130%
460-00-4	4-Bromofluorobenzene	95%	81%	70-130%

(a) Result is from Run# 2

ND = Not detected
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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-301		
Lab Sample ID:	MC8540-1	**Date Sampled:**	03/06/12
Matrix:	AQ - Ground Water	**Date Received:**	03/08/12
Method:	EPA 625 EPA 625	**Percent Solids:**	n/a
Project:	HESS:#21212, 630 Squire Road, Revere, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W0196.D	1	03/20/12	KR	03/12/12	OP28200	MSW12
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

ABN PPL List

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.1	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	20	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.1	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
83-32-9	Acenaphthene	ND	5.1	ug/l	
208-96-8	Acenaphthylene	ND	5.1	ug/l	
120-12-7	Anthracene	ND	5.1	ug/l	
92-87-5	Benzidine	ND	20	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	ug/l	
85-68-7	Butyl benzyl phthalate	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
218-01-9	Chrysene	ND	5.1	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.1	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.1	ug/l	

ND = Not detected
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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-301		
Lab Sample ID:	MC8540-1	**Date Sampled:**	03/06/12
Matrix:	AQ - Ground Water	**Date Received:**	03/08/12
Method:	EPA 625 EPA 625	**Percent Solids:**	n/a
Project:	HESS:#21212, 630 Squire Road, Revere, MA		

ABN PPL List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.1	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	ug/l	
84-74-2	Di-n-butyl phthalate	ND	10	ug/l	
117-84-0	Di-n-octyl phthalate	ND	10	ug/l	
84-66-2	Diethyl phthalate	ND	10	ug/l	
131-11-3	Dimethyl phthalate	ND	10	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	10	ug/l	
206-44-0	Fluoranthene	ND	5.1	ug/l	
86-73-7	Fluorene	ND	5.1	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.1	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	ug/l	
78-59-1	Isophorone	ND	5.1	ug/l	
91-20-3	Naphthalene	ND	5.1	ug/l	
98-95-3	Nitrobenzene	ND	5.1	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	ug/l	
85-01-8	Phenanthrene	ND	5.1	ug/l	
129-00-0	Pyrene	ND	5.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	59%		30-130%
321-60-8	2-Fluorobiphenyl	57%		30-130%
1718-51-0	Terphenyl-d14	78%		30-130%

ND = Not detected
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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-301		
Lab Sample ID:	MC8540-1	**Date Sampled:**	03/06/12
Matrix:	AQ - Ground Water	**Date Received:**	03/08/12
		Percent Solids:	n/a
Project:	HESS:#21212, 630 Squire Road, Revere, MA		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	1.7 U	6.0	1.7	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Arsenic	26.7	4.0	1.9	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Cadmium	0.60 B	4.0	0.17	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Copper	28.1	25	1.4	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Iron	30700	100	11	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Lead	14.7	5.0	2.1	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Mercury	0.062 U	0.20	0.062	ug/l	1	03/13/12	03/14/12	EM	EPA 245.1 [1]	EPA 245.1 [4]
Nickel	26.1 B	40	0.70	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Selenium	2.0 U	10	2.0	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Silver	1.3 U	5.0	1.3	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]
Zinc	60.1	20	4.0	ug/l	1	03/12/12	03/13/12	EAL	EPA 200.7 [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA14063
(2) Instrument QC Batch: MA14069
(3) Prep QC Batch: MP18713
(4) Prep QC Batch: MP18721

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-301		
Lab Sample ID:	MC8540-1	**Date Sampled:**	03/06/12
Matrix:	AQ - Ground Water	**Date Received:**	03/08/12
		Percent Solids:	n/a
Project:	HESS:#21212, 630 Squire Road, Revere, MA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	2770	50	mg/l	50	03/12/12	CF	SM21 4500CL C
HEM Oil And Grease	< 4.1	4.1	mg/l	1	03/14/12	HS	EPA 1664
Solids, Total Suspended	597	4.0	mg/l	1	03/13/12	BF	SM21 2540D

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Parameter Certifications (MA)
- Chain of Custody

Parameter Certifications

Job Number: MC8540
Account: ENVTRAC EnviroTrac
Project: HESS:#21212, 630 Squire Road, Revere, MA

The following parameters included in this report are certified by the state of MA.

Parameter	CAS#	Method	Mat	Certification Status
Benzene	71-43-2	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Bromobenzene	108-86-1	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Bromochloromethane	74-97-5	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Bromodichloromethane	75-27-4	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Bromoform	75-25-2	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Bromomethane	74-83-9	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
n-Butylbenzene	104-51-8	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
sec-Butylbenzene	135-98-8	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
tert-Butylbenzene	98-06-6	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Carbon tetrachloride	56-23-5	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Chlorobenzene	108-90-7	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Chloroethane	75-00-3	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Chloroform	67-66-3	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Chloromethane	74-87-3	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
o-Chlorotoluene	95-49-8	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
p-Chlorotoluene	106-43-4	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,1-Dichloroethane	75-34-3	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,1-Dichloroethylene	75-35-4	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,1-Dichloropropene	563-58-6	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,2-Dibromo-3-chloropropane	96-12-8	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,2-Dibromoethane	106-93-4	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,2-Dichloroethane	107-06-2	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,2-Dichloropropane	78-87-5	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
1,3-Dichloropropane	142-28-9	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
2,2-Dichloropropane	594-20-7	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Dibromochloromethane	124-48-1	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Dibromomethane	74-95-3	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Dichlorodifluoromethane	75-71-8	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
cis-1,2-Dichloroethylene	156-59-2	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
cis-1,3-Dichloropropene	10061-01-5	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
m-Dichlorobenzene	541-73-1	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
o-Dichlorobenzene	95-50-1	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
p-Dichlorobenzene	106-46-7	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
trans-1,2-Dichloroethylene	156-60-5	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
trans-1,3-Dichloropropene	10061-02-6	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Ethylbenzene	100-41-4	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Hexachlorobutadiene	87-68-3	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Isopropylbenzene	98-82-8	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
p-Isopropyltoluene	99-87-6	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Methyl Tert Butyl Ether	1634-04-4	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Methylene chloride	75-09-2	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.
Naphthalene	91-20-3	EPA 524.2 REV 4.1	AQ	Accutest is certified for this parameter.

Parameter Certifications

Job Number: MC8540
Account: ENVTRAC EnviroTrac
Project: HESS:#21212, 630 Squire Road, Revere, MA

The following parameters included in this report are certified by the state of MA.

Parameter	CAS#	Method	Mat	Certification Status
n-Propylbenzene	103-65-1	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Styrene	100-42-5	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,1,1,2-Tetrachloroethane	630-20-6	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,1,1-Trichloroethane	71-55-6	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,1,2,2-Tetrachloroethane	79-34-5	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,1,2-Trichloroethane	79-00-5	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,2,3-Trichlorobenzene	87-61-6	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,2,3-Trichloropropane	96-18-4	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,2,4-Trichlorobenzene	120-82-1	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,2,4-Trimethylbenzene	95-63-6	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
1,3,5-Trimethylbenzene	108-67-8	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Tetrachloroethylene	127-18-4	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Toluene	108-88-3	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Trichloroethylene	79-01-6	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Trichlorofluoromethane	75-69-4	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Vinyl chloride	75-01-4	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Xylenes (total)	1330-20-7	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
m,p-Xylene		**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
o-Xylene	95-47-6	**EPA 524.2 REV 4.1**	AQ	Accutest is certified for this parameter.
Antimony	7440-36-0	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Arsenic	7440-38-2	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Cadmium	7440-43-9	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Copper	7440-50-8	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Iron	7439-89-6	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Lead	7439-92-1	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Mercury	7439-97-6	**EPA 245.1**	AQ	Accutest is certified for this parameter.
Nickel	7440-02-0	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Selenium	7782-49-2	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Silver	7440-22-4	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Zinc	7440-66-6	**EPA 200.7**	AQ	Accutest is certified for this parameter.
Chloride	16887-00-6	**SM21 4500CL C**	AQ	Accutest is certified for this parameter.
HEM Oil And Grease		**EPA 1664**	AQ	Accutest is certified for this parameter.
Solids, Total Suspended		**SM21 2540D**	AQ	Accutest is certified for this parameter.

CHAIN OF CUSTODY

Fresh Ponds Corporate Village, Building B
2235 Route 130, Dayton, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

Accutest Job #: MC8540
Accutest Quote #:

Client Information

EnviroTrac, LTD
Name: 2 Merchant St., Suite 2
Address: Sharon MA 02067
City / State / Zip
Send Report to: Jesse Krawiec
Phone #: 781-793-0074

Facility Information

Hess 21212 Revere
Project Name
Location
Project/PO #:
FAX #: 781-793-7877

Analytical Information

MC8540 Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	Preservation HCl	NaOH	HNO3	H2SO4	None	VPH	w/target VOCs	EPH	w/4 PAHs	w/17 PAHs	TSS, TRC & Chloride	TPH by Oil & Grease (1664A)	VOCs (524.2)	Chromium III & VI	Total Metals (Sb, As, Cd, Cu, Pb, Hg, Se, Ag, Zn, Fe, Ni)	SVOCs (625)
1 MW-301	3/6/2012	10:45	FM	GW	15	X		X		X						✓	✓	✓	✓	✓	✓
				GW																	
				GW																	
				GW																	
				GW																	
				GW																	
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				GW																	
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				GW																	
				GW																	

Turnaround Information

- [ ] 21 Day Standard — Approved By:
- [x] 14 Day
- [ ] 7 Days EMERGENCY
- [ ] Other _____ (Days)

RUSH TAT is for FAX data unless previously approved.

Data Deliverable Information

- [ ] MA MCP
- [ ] NJ Full
- [ ] FULL CLP
- [ ] Disk Deliverable
- [ ] Other (Specify)
- [ ] Commercial "A"
- [x] Commercial "S"
- [ ] ASP Category B
- [ ] State Forms

Comments / Remarks

Bill Hess Directly c/o Michael Matri.
1 500 ml plastic on hold for dissolved metals pending results of totals analysis.

Lor. 43, 16BB
5F, 2C, 3M3

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	3/6/2012 2:[illegible]pm	1 Secure ET Fridge	2	3/8/2012 4:00	2
3	3/8/12 1730	3	4		4
5		5	Seal #	Preserved where applicable	On Ice: 1.2°c

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC8540 **Client:** ENVIROTRAC **Immediate Client Services Action Required:** Yes

Date / Time Received: 3/8/2012 **Delivery Method:**

Project: **No. Coolers:** **Airbill #'s:**

Cooler Security	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	Infared gun
3. Cooler media:	Ice (bag)

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample rec'd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

-1 Containers for EPH/ VPH recd. Not checked on COC. Hex CR,TRC rec. past hold.

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC8540

CSR: Matt Morrell **Response Date** 3/13/2012

Response: Client was notified of extra sample bottles. Client indicated that they do not want samples run for EPH/VPH. Please disregard. See phone log.

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

New England ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC8540
Account: ENVTRAC - EnviroTrac
Project: HESS:#21212, 630 Squire Road, Revere, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GN38093	1.0	0.0	mg/l	10	10.5	105.0	80-120%
HEM Oil And Grease	GP14263/GN38112	4.0	0.0	mg/l	40.00	32.7	81.8	78-114%
Solids, Total Suspended	GN38098	4.0	0.0	mg/l				

Associated Samples:
Batch GN38093: MC8540-1
Batch GN38098: MC8540-1
Batch GP14263: MC8540-1
(*) Outside of QC limits

7.1
7

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC8540
Account: ENVTRAC - EnviroTrac
Project: HESS:#21212, 630 Squire Road, Revere, MA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GN38093	MC8539-1	mg/l	295	295	0.0	0-20%
HEM Oil And Grease	GP14263/GN38112	MC8539-2	mg/l	1.5 U	0.0	0.0	0-18%
Solids, Total Suspended	GN38098	MC8539-1	mg/l	14.0	14.0	0.0	0-5%

Associated Samples:
Batch GN38093: MC8540-1
Batch GN38098: MC8540-1
Batch GP14263: MC8540-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC8540
Account: ENVTRAC - EnviroTrac
Project: HESS:#21212, 630 Squire Road, Revere, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GN38093	MC8539-1	mg/l	295	100	395	100.0	75-125%
HEM Oil And Grease	GP14263/GN38112	MC8539-1	mg/l	1.5 U	40.00	33.0	82.5	78-114%

Associated Samples:
Batch GN38093: MC8540-1
Batch GP14263: MC8540-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

7.3
7

EnviroTrac
Environmental Services

May 16, 2012

Thomas Chapman, Supervisor
U.S. Fish and Wildlife Service
New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087

Re: Hess Station # 21212
630 Squire Road, Revere, Massachusetts, 02151-1864
MassDEP RTN 3-22782

Dear Mr. Chapman:

EnviroTrac Ltd. (EnviroTrac) plans to prepare a Notice of Intent for coverage of a temporary discharge under the National Pollutant Discharge Elimination System (NPDES) Remediation & Miscellaneous Contaminated Sites General Permit (RGP) on behalf of Hess Corporation (Hess). The temporary discharge is expected to be less than two months in duration and will consist of treated groundwater generated during construction dewatering associated with the replacement of underground storage tanks (USTs). A site locus map is provided as **Figure 1**.

EnviroTrac plans to direct treated groundwater removed during dewatering activities to the catch basin located northwest of the facility in Squire Road. This catch basin drains to Town Line Brook approximately 50 feet southeast of the facility. Town Line Brook ultimately discharges to the Pines River. Suffolk County is located within National Heritage & Endangered Species Program Estimated Rare Wetland Habitat associated with the piping plover, hawksbill sea turtle, leatherback sea turtle, green sea turtle, and the loggerhead sea turtle. Groundwater will be sampled prior to dewatering and during dewatering in accordance with RGP requirements.

Please advise whether the location of the proposed discharge is located within an area where any of the species listed above have been identified, or whether the proposed discharge is unlikely to affect the listed species. Should you have any questions, please contact the undersigned at (781) 793-0074.

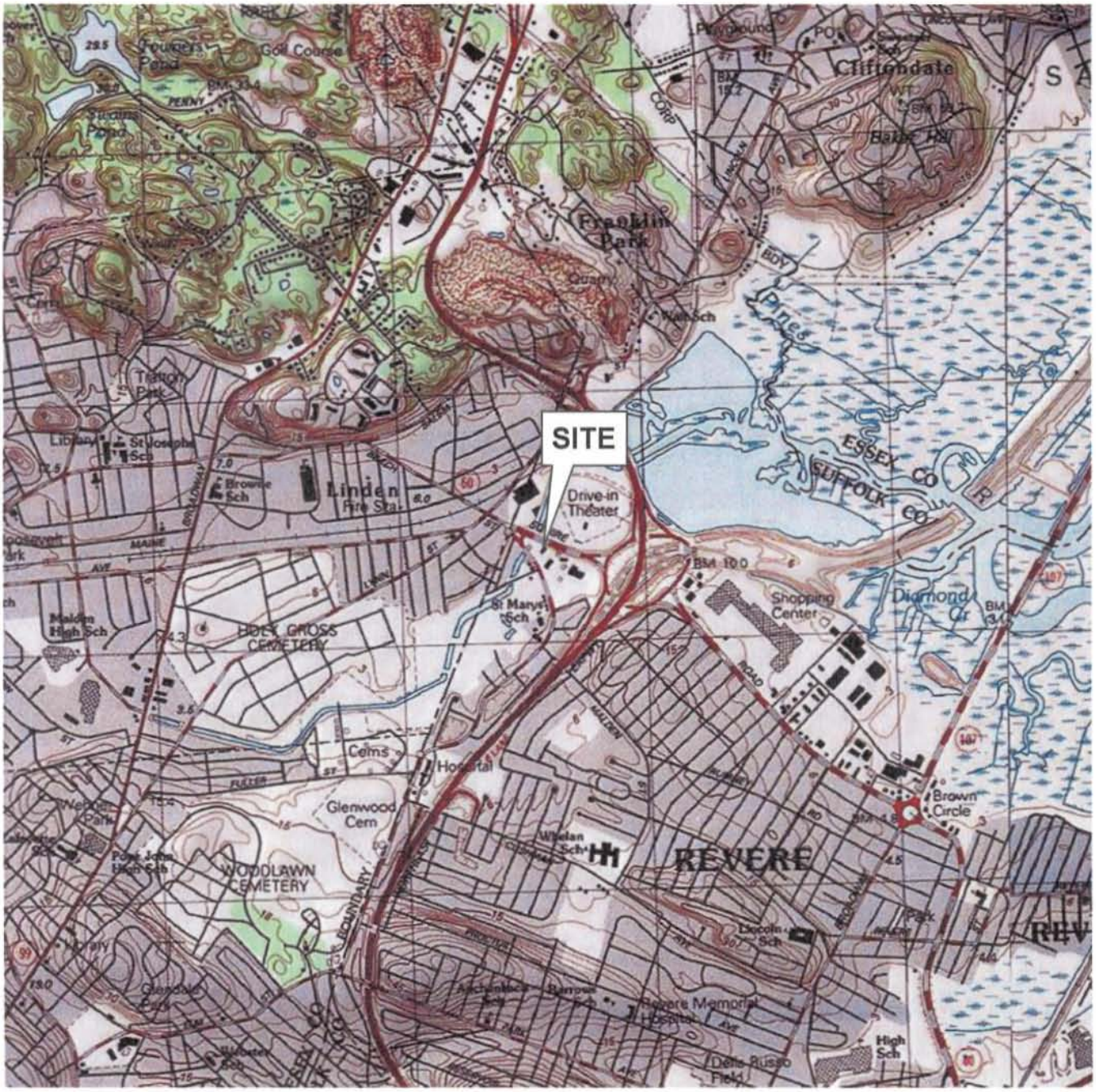
Sincerely,
EnviroTrac Ltd.

Jesse Krawiec
Senior Project Manager

cc: Mike Matri, Hess Corporation

Attachment: Site Locus Map

2 Merchant Street, Sharon, MA 02067 (781) 793-0074 Fax: (781) 793-7877
www.envirotrac.com



Scale: 1:24,000

Hess Station #21212
630 Squire Road
Revere, MA 02151-1864

FIGURE 1

SITE LOCUS MAP
UNITED STATES GEOLOGICAL SURVEY
BOSTON NORTH, MA QUADRANGLE

Contour Interval: 3 m

UTM Coordinaters:
4,602,400 m Northing
336,610 m Easting

Latitude/Longiitude:
42° 25' 51" North
71° 01' 20" West

N
W E
S

EnviroTrac
Environmental Services

ATTACHMENT D

nps.gov

National Park Service
U.S. Department of the Interior

National Register of Historic Places

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Education & Interpretation

TITLE LIST DISPLAY
From: NPS Digital Library
Term(s) Searched: Massachusetts and Revere
Records Displayed: 1 to 8 of 8

Go back to: Revise Search

Sort By: **Title** | Relevancy | Modified

Church of Christ *[Image]*	8%
Immaculate Conception Rectory *[Image]*	8%
Revere Beach Reservation *[Image]*	8%
Revere Beach Reservation *[Image]*	8%
Revere Beach Reservation Historic District *[Image]*	8%
Ronan, Mary, T., School *[Image]*	8%
Rumney Marsh Burying Ground *[Image]*	8%
Winthrop Parkway, Metropolitan Parkway System of Greater Boston *[Image]*	8%

Prev | 1 | Next

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Last updated: 05/01/12

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Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): Revere; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
REV.A	Metropolitan Park System of Greater Boston		Revere	
REV.B	Revere Beach Reservation Historic District		Revere	
REV.C	Rumney Marsh Burying Ground		Revere	
REV.D	Metropolitan Park System of Greater Boston		Revere	
REV.E	Winthrop Parkway		Revere	
REV.F	Rowe Quarry		Revere	
REV.G	Our Lady of Lourdes Roman Catholic Church Complex		Revere	
REV.H	Revere Beach Parkway		Revere	
rev.i	Revere City Hall and Police Station		Revere	
REV.44	Immaculate Conception Catholic Church	Beach St	Revere	1873
REV.908	Church of Christ Marker	Beach St	Revere	1930
REV.909	Church of Christ Marker	Beach St	Revere	1930
REV.916	Beach Street Bridge over B & M Railroad	Beach St	Revere	1932
REV.917	Beach Street Bridge #128	Beach St	Revere	1922
REV.52	Alger, Horatio House	88 Beach St	Revere	1820
REV.51		89 Beach St	Revere	
REV.43	Immaculate Conception Rectory	108 Beach St	Revere	1901
REV.53	Revere Public Library	179 Beach St	Revere	1902
REV.46	Pinkham, Vincent House	221 Beach St	Revere	1800
REV.45	Old Orthodox Church	230 Beach St	Revere	1849
REV.47	Church of Christ	265 Beach St	Revere	1710
REV.48	Saint Ann's Episcopal Church	280 Beach St	Revere	1910
REV.49	Eustis, William House	281 Beach St	Revere	1805
REV.6	Ronan, Mary T. School	154 Bradstreet Ave	Revere	1896
REV.915	Broadway Bridge over Diamond Creek	Broadway	Revere	1941
REV.23	Speakeasy, The	120 Broadway	Revere	1895

Inv. No.	Property Name	Street	Town	Year
REV.36	Fenno's Corner Restaurant	189-197 Broadway	Revere	1835
REV.906	Grand Army of the Republic Statue	249 Broadway	Revere	1931
REV.907	Spanish War Veterans Memorial	249 Broadway	Revere	1931
REV.38	Revere City Hall	281 Broadway	Revere	1897
REV.24	U. S. Post Office - Revere Main Branch	300 Broadway	Revere	1937
REV.39	Hall's Block	311-317 Broadway	Revere	1901
REV.25	Revere Central Fire Station	400 Broadway	Revere	1912
REV.50	Revere Water Company Pump House	467 Broadway	Revere	1885
REV.15	Tuttle, John House	655 Broadway	Revere	1690
REV.800	Rumney Marsh Burying Ground	Butler St	Revere	1693
REV.930	Rumney Marsh Burying Ground Perimeter Stone Wall	Butler St	Revere	1940
REV.931	Rumney Marsh Burying Ground Iron Gate	Butler St	Revere	1940
REV.932	Rumney Marsh Burying Ground - Haugh, Marcy Stone	Butler St	Revere	1702
REV.933	Rumney Marsh Burying Ground - Cutler, Mary Stone	Butler St	Revere	1703
REV.934	Rumney Marsh Burying Ground - Winthrop, Dean Stone	Butler St	Revere	1703
REV.935	Rumney Marsh Burying Ground - Watts, Edward Stone	Butler St	Revere	1714
REV.936	Rumney Marsh Burying Ground - Whittemore, J. Stone	Butler St	Revere	1735
REV.937	Rumney Marsh Burying Ground - Eustis Family Stones	Butler St	Revere	1736
REV.938	Rumney Marsh Burying Ground - Oliver, Sarah Stone	Butler St	Revere	1769
REV.939	Rumney Marsh Burying Ground - Oliver, John Stone	Butler St	Revere	1769
REV.940	Rumney Marsh Burying Ground - Oliver, H. Stone	Butler St	Revere	1769
REV.941	Rumney Marsh Burying Ground - Oliver, Joanna Stone	Butler St	Revere	1865
REV.942	Rumney Marsh Burying Ground - Belcher Family Stone	Butler St	Revere	1800
REV.943	Rumney Marsh Burying Ground - Cary Family Plot	Butler St	Revere	1914
REV.944	Rumney Marsh Burying Ground Footpath System	Butler St	Revere	
REV.945	Rumney Marsh Burying Ground - Civil War Monument	Butler St	Revere	1920
REV.946	Rumney Marsh Burying Ground - War Memorial	Butler St	Revere	1930
REV.947	Rumney Marsh Burying Ground - Signboard	Butler St	Revere	1975

Inv. No.	Property Name	Street	Town	Year
REV.10		243 Campbell Ave	Revere	
REV.37	Revere American Legion Post 61	Cheever St	Revere	1930
REV.79		47 Columbia St	Revere	1930
REV.1	Howe, Julia Ward School	Crescent Ave	Revere	1893
REV.16	Shurtleff, J. B. House	133R Cushman Ave	Revere	
REV.18	Shurtleff, Benjamin House	133A Cushman Ave	Revere	1863
REV.63	Revere Beach Reservation Superintendents House	1 Eliot Cir	Revere	1905
REV.958	Our Lady of Lourdes Garden and Shrine	Endicott Ave	Revere	1960
REV.83	Our Lady of Lourdes Roman Catholic Church Rectory	1 Endicott Ave	Revere	1910
REV.84	Our Lady of Lourdes Roman Catholic Rectory Garage	1 Endicott Ave	Revere	1950
REV.7	Our Lady of Lourdes Roman Catholic Church	2 Endicott Ave	Revere	1902
REV.78		3 Genoa St	Revere	1900
REV.17	Cubertson, Gardner House	26 High St	Revere	1870
REV.54	First Baptist Church of Revere	6 Library St	Revere	1898
REV.55	Farnsworth, Edward M. House	20 Library St	Revere	1869
REV.27	Barrows, Cassandra M. School	Mountain Ave	Revere	1898
REV.8	Methodist Episcopal Church	43 Nahant Ave	Revere	1892
REV.9		47 Nahant Ave	Revere	
REV.903	Edwards, Gen. Clarence R. Memorial Bridge	North Shore Rd	Revere	1934
REV.904	Horse Watering Trough	North Shore Rd	Revere	
REV.65	Revere Beach Reservation Restroom	Oak Island St	Revere	1937
REV.26		318-320 Park Ave	Revere	1894
REV.910	MBTA Rail Bridge #8.41 over Pines River	Pines River	Revere	1916
REV.61		10 Pleasant St	Revere	1930
REV.40		16 Pleasant St	Revere	1835
REV.41	Revere Police Station	23 Pleasant St	Revere	1909
REV.42	Wilkinson, Eliza House	66 Pleasant St	Revere	1840
REV.66		27 Proctor Ave	Revere	
REV.22		33 Prospect Ave	Revere	
REV.901	Kiln Chimney	Railroad St	Revere	
REV.919	Railroad Street Bridge over B & M Railroad	Railroad St	Revere	1976
REV.80		14 Ravena St	Revere	1930
REV.30	General Edwards Inn	10 Raymond Carey Cir	Revere	1923
REV.921	Revere Beach	Revere Beach	Revere	
REV.905	Revere Beach Reservation - Revere Street Pavilions	Revere Beach Blvd	Revere	1905

Inv. No.	Property Name	Street	Town	Year
REV.922	Revere Beach Reservation Bandstand	Revere Beach Blvd	Revere	1897
REV.923	Revere Beach Reservation - Bandstand Pavilions	Revere Beach Blvd	Revere	1897
REV.924	Revere Beach Reservation - Bath House Pavilions	Revere Beach Blvd	Revere	1897
REV.925	Revere Beach Reservation - Oak Island Pavilions	Revere Beach Blvd	Revere	1905
REV.926	Revere Beach Reservation Seawall	Revere Beach Blvd	Revere	1965
REV.927	Revere Beach Reservation Post Clock	Revere Beach Blvd	Revere	1994
REV.928	Revere Beach Reservation Concrete Sculpture	Revere Beach Blvd	Revere	1994
REV.929	Revere Beach Reservation Reproduction Lampposts	Revere Beach Blvd	Revere	1994
REV.31	Metropolitan District Commission Police Station	220 Revere Beach Blvd	Revere	1899
REV.957	Tree Of Life Sculpture	420 Revere Beach Blvd	Revere	1978
REV.29		700 Revere Beach Blvd	Revere	1912
REV.902	Battle of Chelsea Creek Marker	Revere Beach Pkwy	Revere	1900
REV.913	Revere Beach Parkway Bridge over B & M Railroad	Revere Beach Pkwy	Revere	1903
REV.959	Revere Beach Parkway	Revere Beach Pkwy	Revere	1899
REV.960	O'Brien, Alan J. Bridge	Revere Beach Pkwy	Revere	1957
REV.961	Broadway Bridge	Revere Beach Pkwy	Revere	1931
REV.962	North Access Ramp System of Broadway Bridge	Revere Beach Pkwy	Revere	1903
REV.963	South Access Ramp System of Broadway Bridge	Revere Beach Pkwy	Revere	1931
REV.964	Route 1A Bridge over Revere Beach Parkway	Revere Beach Pkwy	Revere	1933
REV.965	Revere Beach Parkway Bridge over Sales Creek	Revere Beach Pkwy	Revere	1899
REV.966	Revere Beach Parkway Bridge over MBTA Blue Line	Revere Beach Pkwy	Revere	1898
REV.967	Revere Beach Parkway Median System	Revere Beach Pkwy	Revere	1899
REV.35	Slade Spice Mill	770 Revere Beach Pkwy	Revere	1823
REV.20	Revere, Paul School	Revere St	Revere	1880
REV.912	Revere Street Bridge	Revere St	Revere	1938
REV.21		137 Revere St	Revere	
REV.19	Saint Anthony of Padua Roman Catholic Church	250 Revere St	Revere	1905
REV.955	Columbus, Christopher Statue	250 Revere St	Revere	1892
REV.956	Saint Anthony of Padua Statue	250 Revere St	Revere	1954
REV.28	Saint Theresa's Roman Catholic Church	500 Revere St	Revere	1926
REV.920	Route 1 Bridge over Lynn Street	Rt 1	Revere	1937
REV.34	Kidder, Lucy Slade House	109 Salem St	Revere	1820
REV.81		136 Salem St	Revere	1880
REV.67	Rowe Quarry Barn	1500 Salem St	Revere	1880

Inv. No.	Property Name	Street	Town	Year
REV.68	Rowe Quarry Garage	1500 Salem St	Revere	1900
REV.69	Rowe Quarry Scale House	1500 Salem St	Revere	1950
REV.70	Rowe Quarry Business Office	1500 Salem St	Revere	1907
REV.71	Rowe Quarry Old Compressor House	1500 Salem St	Revere	1907
REV.72	Rowe Quarry Old Scale House	1500 Salem St	Revere	1907
REV.73	Rowe Quarry Crusher Repair Shop	1500 Salem St	Revere	1907
REV.76	Rowe Quarry Blacksmith Shop - Drill Repair Shop	1500 Salem St	Revere	1950
REV.77	Rowe Quarry Loader and Shovel Repair Shop	1500 Salem St	Revere	1960
REV.911	Rowe Quarry Rock Crusher Electrical Service Bldg.	1500 Salem St	Revere	1907
REV.951	Rowe Quarry Old Explosives Storage Bunker	1500 Salem St	Revere	1980
REV.952	Rowe Quarry Screen	1500 Salem St	Revere	1970
REV.953	Rowe Quarry Vehicle Fuel Stand	1500 Salem St	Revere	1980
REV.954	Rowe Quarry Tunnel and Conveyor	1500 Salem St	Revere	1980
REV.914	Salem Turnpike Bridge over Pines River	Salem Tpk	Revere	1941
REV.60	Tewksbury - Smith House	22 School St	Revere	1690
REV.58	Shurtleff School	55 School St	Revere	1892
REV.13		197-199 School St	Revere	
REV.14	Fenno House	219 School St	Revere	1840
REV.64	Revere Beach Reservation Restroom	Shirley Ave	Revere	1935
REV.918	Shirley Avenue Bridge #195	Shirley Ave	Revere	1922
REV.900	Wonderland Dog Racing Track	190 V. F. W. Pkwy	Revere	1935
REV.85	Walden Street Fire Station	Walden St	Revere	1907
REV.12	Congregation Ahavus Achim	89 Walnut Ave	Revere	1922
REV.32	Saint Mary of the Assumptioon Catholic Church	670 Washington Ave	Revere	1947
REV.56	New England Telephone Exchange Building	25 Winthrop Ave	Revere	1924
REV.57	New England Telephone Exchange Building	57 Winthrop Ave	Revere	1913
REV.59	Winthrop Center Grammar School	196 Winthrop Ave	Revere	1885
REV.2	Trinity Congregational Church	887 Winthrop Ave	Revere	1882
REV.3	Saint Paul's Episcopal Church	890 Winthrop Ave	Revere	1887
REV.4	Winthrop Avenue Fire Station	931 Winthrop Ave	Revere	1925
REV.948	Winthrop Parkway - Segment One	Winthrop Pkwy	Revere	1909
REV.949	Winthrop Parkway - Segment Two	Winthrop Pkwy	Revere	1909
REV.950	Winthrop Parkway Tide Gates	Winthrop Pkwy	Revere	1946
REV.62	McKinley, William School	Yeamans St	Revere	1902