

MAG910243

March 2, 2007

Office of Ecosystem Protection
U.S. Environmental Protection Agency
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Attn: Municipal Permits Branch
George Papadopoulos

Re: Request for Approval for Groundwater Discharge
270 Main Street
Medfield, Massachusetts
DEP Site No. 2-16501

Dear Mr. Pappadopoulos:

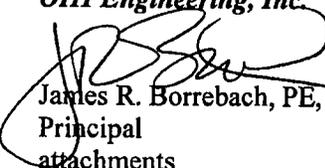
OHI Engineering, Inc. (OHI) is pleased to provide supporting documentation for the Notice of Intent (NOI) for the Remediation General Permit (RGP) on behalf of Gulf Resources Inc (GRI). This NOI is submitted in order to obtain a permit for dewatering of an underground storage tank excavation which is part of a raze and rebuild of a former gasoline station at the above referenced location. A Site Locus and Site Plan is provided as Figures 1 and 2, respectively. A copy of the NOI form along with supporting laboratory documentation is provided as Attachment 1.

Recovered groundwater from the excavation will be pumped into frac tanks to allow silt and sediments to settle out of the water. The water will then be pumped from the frac tank through a bag filter to further reduce any suspended solids in the water. The water will then pass through two 500 Lb liquid phase granular activated carbon units, piped in series, to remove contaminants prior to discharge to an existing on-site storm water collection catch basin. The discharge of treated groundwater will be to a low lying area called Black Cat Swamp. There is no direct discharge to any receiving body of water. Also, the excavation will be controlled by shoring thus, minimizing the amount of groundwater from the UST Installation. The anticipated maximum flow rate of the system is approximately 30 gallons per minute (gpm). A schematic sketch of the proposed system design can be found on page 12 of the NOI form Attachment I.

A Site Locus and Site Plan are provided as Figures 1 and 2, respectively. A copy of the NOI form along with supporting laboratory documentation is provided as Attachment 1.

Please contact us at any time if you have questions, or if we may further facilitate this process, as we are ready to start up the system and begin treatment.

Very truly yours,
OHI Engineering, Inc.


James R. Borrebach, PE, LSP
Principal
attachments

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

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

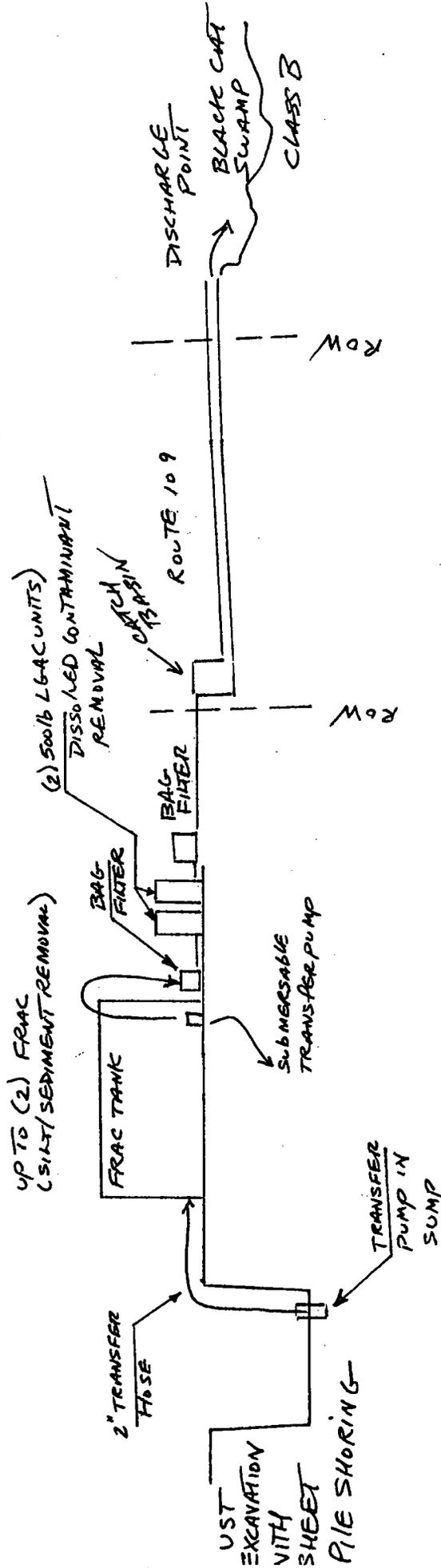
a) Name of facility/site: Precision Automotive		Facility/site address: 270 Main Street		
Location of facility/site: longitude: <u>71-17.463</u> latitude: <u>42-11.597</u>	Facility SIC code(s):	Street: 270 Main Street		
b) Name of facility/site owner: Gulf Resources Inc.		Town: Medfield		
Email address of owner: jcarrigg@charter.net		State: MA	Zip: 02052	County: Norfolk
Telephone no. of facility/site owner: (508) 339-5550				
Fax no. of facility/site owner: (508) 339-5550		Owner is (check one): 1. Federal ___ 2. State/Tribal ___		
Address of owner (if different from site):		3. Private <input checked="" type="checkbox"/> 4. other, if so, describe:		
Street: 291 Middle Street				
Town: Fall River		State: MA	Zip: 02724	County: Bristol
c) Legal name of operator: OHI Engineering Inc.		Operator telephone no: (508) 339-3929		
		Operator fax no.: (508) 339-3140	Operator email: jborrebach@ohiengineering.com	
Operator contact name and title: James R. Borrebach PE/LSP Principal				

Address of operator (if different from owner):		Street: 44 Wood Avenue	
Town: Mansfield	State: MA	Zip: 02048	County: Bristol
d) Check "yes" or "no" for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ___ No <input checked="" type="checkbox"/> , if "yes," number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ___ No <input checked="" type="checkbox"/> , if "yes," date and tracking #: 3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ___ No <input checked="" type="checkbox"/> 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <input checked="" type="checkbox"/> No ___			
e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <input checked="" type="checkbox"/> No ___ If "yes," please list: 1. site identification # assigned by the state of NH or MA: RTN 2-16501 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 storm water general permit? Y ___ N ___, if Y, number: 2. phase I or II construction storm water general permit? Y ___ N ___, if Y, number: 3. individual NPDES permit? Y ___ N <input checked="" type="checkbox"/> , if Y, number: 4. any other water quality related permit? Y ___ N <input checked="" type="checkbox"/> , if Y, number:	

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage: Former Gasoline station, UST's removed in the 80's. Site is being re-developed and includes underground storage tank (UST) installation. UST installation activities include de-watering due to shallow groundwater table, thus requiring a discharge permit.		
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 <u>0.05</u> Average flow <u>0.05</u> Is maximum flow a design value ? Y ___ N ___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <u>71-17.463</u> lat. <u>42-11.597</u> ; pt.2: long. ___ lat. ___; pt.3: long. ___ lat. ___; pt.4: long. ___ lat. ___; pt.5: long. ___ lat. ___; pt.6: long. ___ lat. ___; pt.7: long. ___ lat. ___; pt.8: long. ___ lat. ___; etc.		

4) If hydrostatic testing, total volume of the discharge (gals): NA	5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal <input type="checkbox"/> ? Is discharge ongoing Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> ?
c) Expected dates of discharge (mm/dd/yy): start 04/01/07 end 08/01/07	
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).	



3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for all of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is believed present or believed absent in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids										
2. Total Residual Chlorine										
3. Total Petroleum Hydrocarbons										
4. Cyanide										
5. Benzene										
6. Toluene										
7. Ethylbenzene										
8. (m,p,o) Xylenes										
9. Total BTEX ⁴										

NOTE SEE ATTACHED ANALYTICAL TABLE

⁴BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2- Dibromo-methane)										
11. Methyl-tert-Butyl Ether (MTBE)										
12. tert-Butyl Alcohol (TBA)										
13. tert-Amyl Methyl Ether (TAME)										
14. Naphthalene										
15. Carbon Tetra-chloride										
16. 1,4 Dichlorobenzene										
17. 1,2 Dichlorobenzene										
18. 1,3 Dichlorobenzene										
19. 1,1 Dichloroethane										
20. 1,2 Dichloroethane										
21. 1,1 Dichloroethylene										
22. cis-1,2 Dichloro-ethylene										
23. Dichloromethane (Methylene Chloride)										
24. Tetrachloroethylene										

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane										
26. 1,1,2 Trichloroethane										
27. Trichloroethylene										
28. Vinyl Chloride										
29. Acetone										
30. 1,4 Dioxane										
31. Total Phenols										
32. Pentachlorophenol										
33. Total Phthalates ⁵ (Phthalate esters)										
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]										
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)										
a. Benzo(a) Anthracene										
b. Benzo(a) Pyrene										
c. Benzo(b)Fluoranthene										
d. Benzo(k) Fluoranthene										
e. Chrysene										

⁵The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (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)
f. Dibenzo(a,h)anthracene										
g. Indeno(1,2,3-cd)Pyrene										
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)										
h. Acenaphthene										
i. Acenaphthylene										
j. Anthracene										
k. Benzo(ghi) Perylene										
l. Fluoranthene										
m. Fluorene										
n. Naphthalene-										
o. Phenanthrene										
p. Pyrene										
37. Total Polychlorinated Biphenyls (PCBs)										
38. Antimony										
39. Arsenic										
40. Cadmium										
41. Chromium III										
42. Chromium VI										

MA GW-1 Obs Well
(ug/L) 10/19/2006
100181-2

EPA 8270C Mod

Naphthalene	41	41
2-Methylnaphthalene	7	7
Acenaphthylene	<2.5	<2.5
Acenaphthene	<2.5	<2.5
Fluorene	<2.5	<2.5
Phenanthrene	<2.5	<2.5
Anthracene	<2.5	<2.5
Fluoranthene	<2.5	<2.5
Pyrene	<2.5	<2.5
Benzo[a]anthracene	1	<0.5
Chrysene	2	0.3
Benzo[b]fluoranthene	1	0.6
Benzo[k]fluoranthene	1	<0.5
Benzo[a]pyrene	0.2	0.3
Indeno[1,2,3-c,d]pyrene	0.5	0.3
Dibenzo[a,h]anthracene	0.5	<0.5
Benzo[g,h,i]perylene	300	0.3

MA DEP EPH

n-C9 to n-C18 Aliphatic Hydrocarbons	4,000	<500
n-C19 to n-C36 Aliphatic Hydrocarbons	5,000	<500
n-C11 to n-C22 Aromatic Hydrocarbons	200	150
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons		220

MA DEP VPH

n-C5 to n-C8 Aliphatic Hydrocarbons	400	990
n-C9 to n-C12 Aliphatic Hydrocarbons	4,000	1,100
n-C9 to n-C10 Aromatic Hydrocarbons	200	1,800
Unadjusted n-C5 to n-C8 Aliphatic Hydrocarbons		1,000
Unadjusted n-C9 to n-C12 Aliphatic Hydrocarbons		4,100
Methyl tert-butyl Ether (MTBE)	70	<25
Benzene	5	27
Toluene	1,000	<25
Ethylbenzene	700	240
meta-Xylene and para-Xylene	10,000	810
ortho-Xylene	10,000	82
Naphthalene - - -	140	77
Xylenes (Mixed Isomers) [1]	10,000	892

[1] The result for Xylenes (Mixed Isomers) is calculated as the sum of all quantified values for the analytes meta- and para-Xylene and ortho-Xylene.

1,1-Dichloroethane	70	<1
cis-1,2-Dichloroethene	70	<1
2-Butanone (MEK)	4,000	<10
Chloroform	5	<1
1,1,1-Trichloroethane	200	<1
Carbon Tetrachloride	5	<1
Benzene	5	<1
1,2-Dichloroethane	5	<1
Trichloroethene	5	<1
1,2-Dichloropropane	5	<1
Bromodichloromethane	3	<1
cis-1,3-Dichloropropene	0.5	<1
4-Methyl-2-Pentanone (MIBK)	350	<10
Toluene	1,000	<1
trans-1,3-Dichloropropene	0.5	<1
1,1,2-Trichloroethane	5	<1
Tetrachloroethene	5	<1
2-Hexanone		<10
Dibromochloromethane	2	<1
Chlorobenzene	100	<1
Ethylbenzene	700	31
meta-Xylene and para-Xylene	10,000	75
ortho-Xylene	10,000	4
Styrene	100	<1
Bromoform	4	<1
1,1,2,2-Tetrachloroethane	2	<1
1,3-Dichloropropene [2]	0.5	
Xylenes (Mixed Isomers) [3]	10,000	79

EPA 8270C

N-Nitrosodimethylamine		<5
Pyridine		<5
Phenol	900	<5
Aniline		<5
bis(2-Chloroethyl)ether	30	<5
2-Chlorophenol	10	<5
1,3-Dichlorobenzene	40	<5
1,4-Dichlorobenzene	5	<5
Benzyl Alcohol		<5
1,2-Dichlorobenzene	600	<5
2-Methylphenol		<5
bis(2-Chloroisopropyl)ether 3 and 4-Methylphenol	30	<5
N-Nitrosodi-n-propylamine		<5
Acetophenone		<5
Hexachloroethane	8	<5
Nitrobenzene		<5
Isophorone		<5
2-Nitrophenol		<5

2,4-Dimethylphenol	60	<5
bis(2-Chloroethoxy)methane		<5
2,4-Dichlorophenol	10	<5
1,2,4-Trichlorobenzene	70	<5
4-Chloroaniline	20	<5
Hexachlorobutadiene	0.6	<5
4-Chloro-3-methylphenol		<5
Hexachlorocyclopentadiene		<5
2,4,6-Trichlorophenol	10	<5
2,4,5-Trichlorophenol	200	<5
2-Chloronaphthalene		<5
2-Nitroaniline		<5
1,4-Dinitrobenzene		<5
Dimethylphthalate	30,000	<5
1,3-Dinitrobenzene		<5
2,6-Dinitrotoluene		<5
1,2-Dinitrobenzene		<5
3-Nitroaniline		<5
2,4-Dinitrophenol	200	<5
4-Nitrophenol		<5
Dibenzofuran		<5
2,4-Dinitrotoluene	30	<5
Diethylphthalate	2,000	<5
4-Chlorophenyl phenyl ether		<5
4-Nitroaniline		<5
4,6-Dinitro-2-methylphenol		<5
N-Nitrosodiphenylamine		<5
1,2-Diphenylhydrazine		<5
4-Bromophenyl phenyl ether		<5
Carbazole		<5
Di-n-butylphthalate		<5
Butylbenzylphthalate		<5
3,3-Dichlorobenzidine	80	<5
bis(2-Ethylhexyl)phthalate	6	<5
Di-n-octylphthalate		<5

EPA 8270C Mod

Naphthalene	140	5.7
2-Methylnaphthalene	10	1.8
Acenaphthylene	300	<0.5
Acenaphthene	20	<0.5
Fluorene	300	0.8
Phenanthrene	300	<0.5
Anthracene	2,000	1
Fluoranthene	90	0.7
Pyrene	80	0.2
Benzo[a]anthracene	1	0.4
Chrysene	2	0.6
Benzo[b]fluoranthene	1	0.2

MA GW-1 OBS Well
 (ug/L) 2/22/2007
 104312-1

EPA 6010B

Beryllium, Dissolved	4	<4
Cadmium, Dissolved	5	<4
Chromium, Dissolved	100	<10
Copper, Dissolved	15	<25
Lead, Dissolved	100	12
Nickel, Dissolved	50	<40
Selenium, Dissolved	100	<50
Silver, Dissolved	5,000	<7
Zinc, Dissolved		29,000

EPA 6020A

Antimony, Dissolved	6	<6
Arsenic, Dissolved	10	<5
Thallium, Dissolved	2	<2

EPA 608

Aroclor 1016	0.5	<0.2
Aroclor 1221	0.5	<0.2
Aroclor 1232	0.5	<0.2
Aroclor 1242	0.5	<0.2
Aroclor 1248	0.5	<0.2
Aroclor 1254	0.5	<0.2
Aroclor 1260	0.5	<0.2
Polychlorinated Biphenyls (PCBs)	0.5	

EPA 7470A

Mercury, Total	2	<0.2
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EPA 8260B

Chloromethane		<1
Vinyl Chloride	2	<1
Bromomethane	10	<1
Chloroethane		<1
1,1-Dichloroethene	7	<1
Acetone	3,000	<20
Carbon Disulfide		<10
Methylene Chloride	5	<5
trans-1,2-Dichloroethene	100	<1
Methyl tert-butyl Ether (MTBE)	70	<1

Benzo[k]fluoranthene	1	0.3
Benzo[a]pyrene	0.2	0.3
Indeno[1,2,3-c,d]pyrene	0.5	0.1
Dibenzo[a,h]anthracene	0.5	0.2
Benzo[g,h,i]perylene	300	<0.1
Hexachlorobutadiene	0.6	<0.5
Hexachlorobenzene	1	<0.5
Pentachlorophenol	1	<1

EPA 9012A

Cyanide, Total 200 <10

EPA 9056

Chloride 140,000

SM 2540 D

Solids, Total Suspended 6,800,000

[1] The result for Polychlorinated Biphenyls (PCBs) is calculated as the sum of all quantified values for all analyzed Aroclor analytes.

[2] The result for 1,3-Dichloropropene is calculated as the sum of all quantified values for the analytes cis-1,3-Dichloropropene and trans-1,3-Dichloropropene

[3] The result for Xylenes (Mixed Isomers) is calculated as the sum of all quantified values for the analytes meta- and para-Xylene and ortho-Xylene.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper										
44. Lead										
45. Mercury										
46. Nickel										
47. Selenium										
48. Silver										
49. Zinc										
50. Iron										
Other (describe):										

c) For discharges where metals are believed present, please fill out the following:

<p><i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/></p>	<p>If yes, which metals? ZINC</p>
<p><i>Step 2:</i> For any metals which have reasonable potential to 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? Metals: _____ DF: N/A NO DISCHARGE TO ANY DIRECT WATERBODY</p>	<p>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 <input type="checkbox"/> N <input type="checkbox"/> If "Yes," list which metals:</p>

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:

Petroleum Impacted groundwater will be pumped from the shored UST excavation to a frac. tank (removal of silts/sediments). The water will then be pumped from the frac tanks through either two 500lb or 1000lb LGAC units (to remove the petroleum impact) and then through a final bag filter prior to onsite discharge to an existing catch basin.

b) Identify each applicable treatment unit (check all that apply):

Frac. tank ✓	Air stripper	Oil/water separator	Equalization tanks	Bag filter ✓	GAC filter ✓
Chlorination	Dechlorination	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 30 Maximum flow rate of treatment system 60 Design flow rate of treatment system NA

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

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

a) Identify the discharge pathway:	Direct ✓	Within facility__	Storm drain ✓	River/brook__	Wetlands ✓	Other (describe):
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b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

Treated groundwater will be discharged to an existing on site catch basin that receives surficial runoff from the Site and the outfall discharges across Route 109 to an adjacent low lying wetland. Name of wetland as described by the Town of Medfields Water Superintendent is called Black Cat Swamp. According to the USGS Medfield Quadrangle, this area then drains to Vine Brook. Treated groundwater does not directly discharge to any receiving body of water.

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 NA,

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water NA 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? Yes ___ No If yes, for which pollutant(s)?

Is there a TMDL? Yes ___ No If yes, for which pollutant(s)?

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ___ No
Has any consultation with the federal services been completed? No or is consultation underway? ___ No
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):
a "no jeopardy" opinion? ___ or written concurrence ___ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?
Yes ___ No Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ___ No

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.

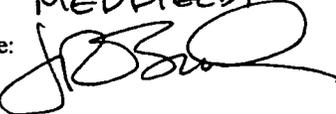
The laboratory analytical report prepared by Groundwater Analytical is provided as an attachment to the NOI and also as backup to the data tables for all compounds analyzed.

Section 3C of NOI

Dilution Factor Calculation, does not apply as there is no direct discharge to any receiving waterbody. Please refer to attached Site diagram for treated groundwater discharge point.

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:

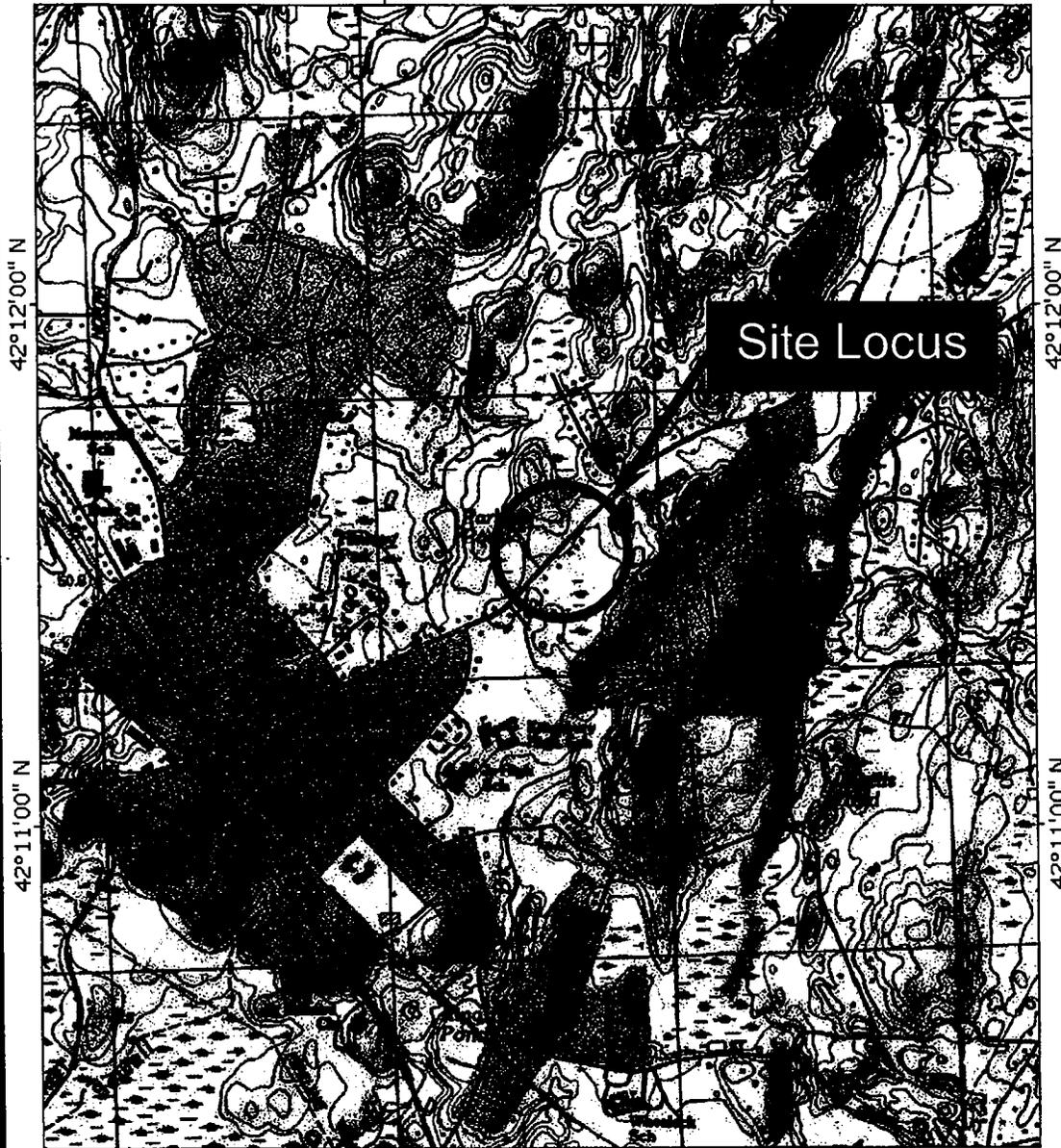
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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:	270 MAIN ST MEDFORD, MA
Operator signature:	
Title:	PRINCIPAL
Date:	3/2/07

TOPOI map printed on 07/17/06 from "Untitled3.tpo"

71°18'00" W

WGS84 71°17'00" W



MN \ TN
15 1/2°

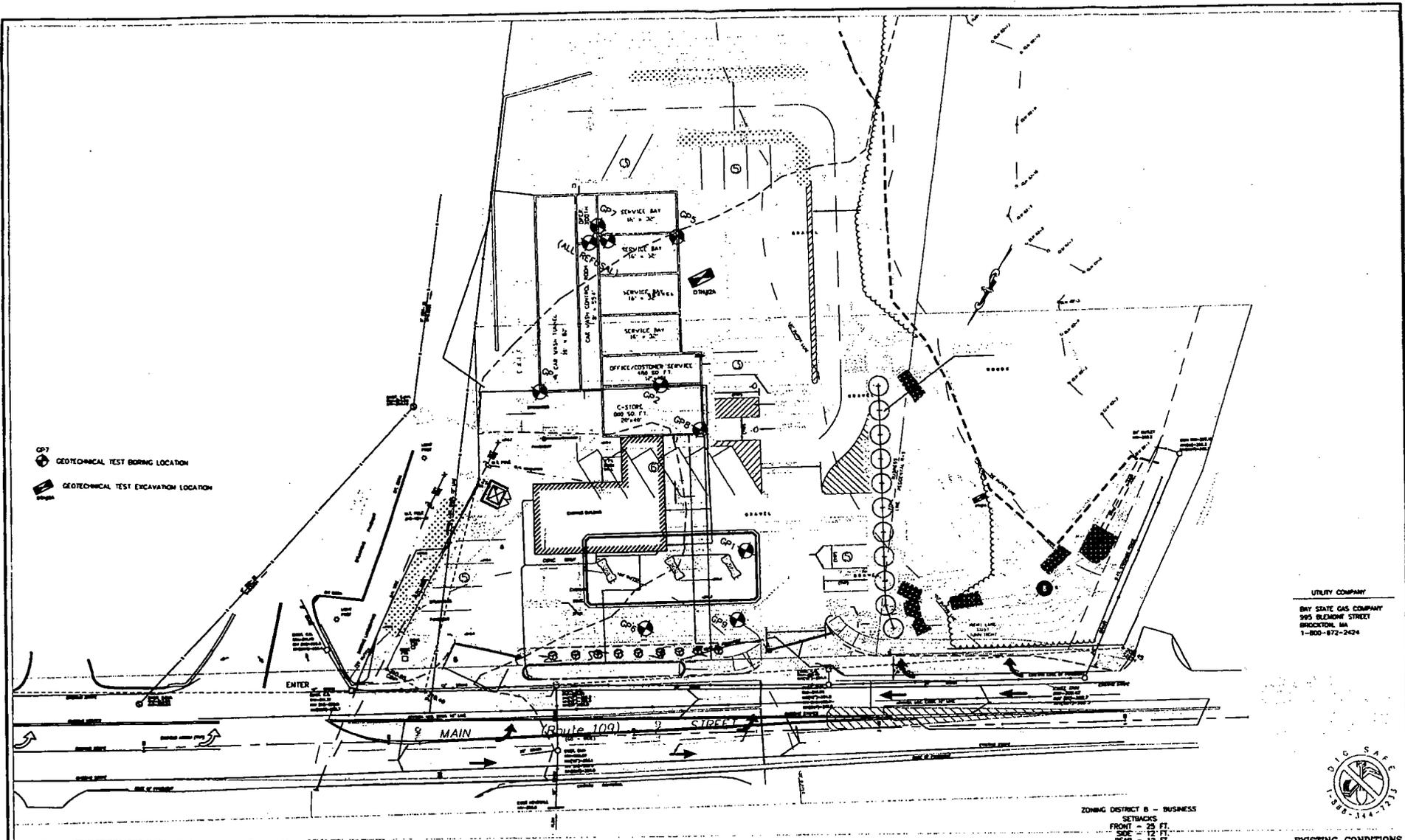


Map created with TOPOI © 2003 National Geographic (www.nationalgeographic.com/topo)

Figure 1. Site Locus
270 Main Street
Medfield, MA

OHI
OHI Engineering, Inc.
Engineers and Environmental Scientists
44 Wood Avenue · Mansfield, MA





UTILITY COMPANY
 DAY STATE GAS COMPANY
 595 BLENDING STREET
 BROCKTON, MA
 1-800-872-2424



ZONING DISTRICT B - BUSINESS
 SETBACKS
 FRONT - 25 FT.
 SIDE - 12 FT.
 REAR - 12 FT.

EXISTING CONDITIONS

REVISIONS				FIELD:	
No.	DATE	DESCRIPTION	DES. CHD.	DESIGN BY:	CHECKED BY:

OHI ENGINEERING, INC.
 44 WOOD AVENUE
 MANSFIELD, MASSACHUSETTS 02048
 (508)339-3829 fax:(508)339-3140

GEOTECHNICAL TEST BORING LOCATIONS
 270 MAIN STREET
 MEDFIELD, MASSACHUSETTS
 OWNER & APPLICANT
 JOAN K. & RALPH MAIDER
 270 MAIN STREET
 MEDFIELD, MA

JOB No. 6-1110
 DATE: JULY 18, 2006
 PLAN No.
 SHEET No.
 1 OF 1

GROUNDWATER ANALYTICAL

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

October 26, 2006

Mr. Douglas Morrison
OHI Engineering, Inc.
44 Wood Avenue
Mansfield, MA 02048

LABORATORY REPORT

Project: **CARRI 99/6-1110**
Lab ID: **100181**
Received: **10-20-06**

Dear Doug:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 3 Business Day turnaround.

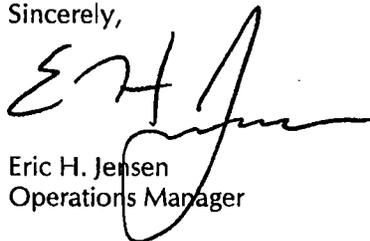
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Eric H. Jensen
Operations Manager

EHJ/jmp
Enclosures

Sample Receipt Report

Project: **CARRI 99/6-1110**
 Client: **OHI Engineering, Inc.**
 Lab ID: **100181**

Delivery: **GWA Courier**
 Airbill: **n/a**
 Lab Receipt: **10-20-06**

Temperature: **4.2'C**
 Chain of Custody: **Present**
 Custody Seal(s): **n/a**

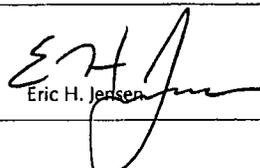
Lab ID	Field ID	Matrix	Sampled	Method				Notes
100181-1	Obs Well	Aqueous	10/19/06 0:00	MA DEP VPH with Targets				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C712863	40 mL VOA Vial	Proline	BX20866	HCl	R-4683B	04-14-06	n/a	
C712839	40 mL VOA Vial	Proline	BX20866	HCl	R-4683B	04-14-06	n/a	

Lab ID	Field ID	Matrix	Sampled	Method				Notes
100181-2	Obs Well	Aqueous	10/19/06 0:00	MA DEP EPH with PAHs by 8270C-Mod SIM				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C796667	1 L Amber Glass	Proline	BX20950	None	n/a	n/a	n/a	

Data Certification

Project: CARRI 99/6-1110
 Client: OHI Engineering, Inc.

Lab ID: 100181
 Received: 10-20-06 17:30

MA DEP Compendium of Analytical Methods					
Project Location:	n/a	MA DEP RTN:	n/a		
This Form provides certifications for the following data set:					
MA DEP VPH:	100181-01				
MA DEP EPH:	100181-02				
Sample Matrices:	Groundwater (X)	Soil/Sediment ()	Drinking Water ()	Other ()	
MCP SW-846	8260B ()	8151A ()	8330 ()	6010B ()	7470A/1A ()
Methods Used	8270C ()	8081A ()	VPH (X)	6020 ()	9012A ² ()
As specified in MA DEP Compendium of Analytical Methods.	8082 ()	8021B ()	EPH (X)	7000 S ³ ()	Other ()
(check all that apply)	1. List Release Tracking Number (RTN), if known. 2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method 3. S - SW-846 Methods 7000 Series. List individual method and analyte.				
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.					
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?				Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?				Yes
D.	<u>VPH and EPH methods only:</u> Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?				Yes
A response to questions E and F below is required for "Presumptive Certainty" status.					
E.	Were all QC performance standards and recommendations for the specified methods achieved?				Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?				Yes
All No answers are addressed in the attached Project Narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature:			Position:	Operations Manager	
Printed Name:	Eric H. Jensen		Date:	10-26-06	

Massachusetts DEP VPH Method Volatile Petroleum Hydrocarbons by GC/PID/FID

Field ID:	Obs Well	Matrix:	Aqueous
Project:	CARRI 99/6-1110	Container:	40 mL VOA Vial
Client:	OHI Engineering, Inc.	Preservation:	HCl/Cool
Laboratory ID:	100181-01	QC Batch ID:	VG1-2571-W
Sampled:	10-19-06 00:00	Instrument ID:	GC-1 HP 5890
Received:	10-20-06 17:30	Sample Volume:	5 mL
Analyzed:	10-24-06 22:48	Dilution Factor:	5
Analyst:	TA		

VPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C5 to n-C8 Aliphatic Hydrocarbons [†] ⊖	990		ug/L	100
n-C9 to n-C12 Aliphatic Hydrocarbons [†] ⊗	1,100		ug/L	100
n-C9 to n-C10 Aromatic Hydrocarbons [†]	1,800		ug/L	100

Unadjusted n-C5 to n-C8 Aliphatic Hydrocarbons [†]	1,000		ug/L	100
Unadjusted n-C9 to n-C12 Aliphatic Hydrocarbons [†]	4,100		ug/L	100

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
1634-04-4	Methyl tert-butyl Ether [⊞]	BRL		ug/L	25
71-43-2	Benzene [⊞]	27		ug/L	5
108-88-3	Toluene [⊞]	BRL		ug/L	25
100-41-4	Ethylbenzene [‡]	240		ug/L	25
108-38-3 and 106-42-3	meta-Xylene and para-Xylene [‡]	810		ug/L	25
95-47-6	ortho-Xylene [‡]	82		ug/L	25
91-20-3	Naphthalene	77		ug/L	25

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2,5-Dibromotoluene (PID)	50	50	99 %	70 - 130 %
2,5-Dibromotoluene (FID)	50	51	102 %	70 - 130 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed? Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.2.1? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Volatile Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

⊖ n-C5 to n-C8 Aliphatic Hydrocarbons range data excludes the method target analyte concentrations.

⊗ n-C9 to n-C12 Aliphatic Hydrocarbons range data excludes the method target analyte concentrations and the concentration for the n-C9 to n-C10 Aromatic Hydrocarbons range.

⊞ Analyte elutes in the n-C5 to n-C8 Aliphatic Hydrocarbons range.

‡ Analyte elutes in the n-C9 to n-C12 Aliphatic Hydrocarbons range.

**Massachusetts DEP EPH Method
Extractable Petroleum Hydrocarbons by GC/FID**

Field ID: **Obs Well**
 Project: **CARRI 99/6-1110**
 Client: **OHI Engineering, Inc.**
 Laboratory ID: **100181-02**
 Sampled: **10-19-06 00:00**
 Received: **10-20-06 17:30**
 Extracted: **10-24-06 14:00**
 Analyzed (AL): **10-25-06 13:19**
 Analyzed (AR): **10-25-06 14:03**
 Analyst: **NS**

Matrix: **Aqueous**
 Container: **1 L Amber Glass**
 Preservation: **Cool**
 QC Batch ID: **EP-1811-F**
 Instrument ID: **GC-9 Agilent 6890**
 Sample Volume: **1000 mL**
 Final Volume: **1 mL**
 Aliphatic Dilution Factor: **1**
 Aromatic Dilution Factor: **1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		ug/L	500
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		ug/L	500
n-C11 to n-C22 Aromatic Hydrocarbons † 0	150		ug/L	150

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	220		ug/L	150
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QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	40	37	94 %	40 - 140 %
	2-Bromonaphthalene	40	38	96 %	40 - 140 %
Extraction:	Chloro-octadecane	40	31	78 %	40 - 140 %
	ortho-Terphenyl	40	37	93 %	40 - 140 %

QA/QC Certification	
1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3?	No
Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.	

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
 Sample extraction performed by separatory funnel technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 † Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
 0 n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

EPA Method 8270C (Modified) MA DEP EPH Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

Field ID: Obs Well
 Project: CARRI 99/6-1110
 Client: OHI Engineering, Inc.
 Laboratory ID: 100181-02
 Sampled: 10-19-06 00:00
 Received: 10-20-06 17:30
 Extracted: 10-24-06 14:00
 Analyzed: 10-26-06 10:44
 Analyst: MJB

Matrix: Aqueous
 Container: 1 L Amber Glass
 Preservation: Cool
 QC Batch ID: EP-1811-F
 Instrument ID: MS-6 HP 6890
 Sample Volume: 1000 mL
 Final Volume: 1 mL
 Dilution Factor: 5

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	41		ug/L	2.5
91-57-6	2-Methylnaphthalene	7.0		ug/L	2.5
208-96-8	Acenaphthylene	BRL		ug/L	2.5
83-32-9	Acenaphthene	BRL		ug/L	2.5
86-73-7	Fluorene	BRL		ug/L	2.5
85-01-8	Phenanthrene	BRL		ug/L	2.5
120-12-7	Anthracene	BRL		ug/L	2.5
206-44-0	Fluoranthene	BRL		ug/L	2.5
129-00-0	Pyrene	BRL		ug/L	2.5
56-55-3	Benzo[a]anthracene	BRL		ug/L	0.5
218-01-9	Chrysene	0.3	j	ug/L	0.5
205-99-2	Benzo[b]fluoranthene	0.6		ug/L	0.5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	0.5
50-32-8	Benzo[a]pyrene	0.3	j	ug/L	0.5
193-39-5	Indeno[1,2,3-c,d]pyrene	0.3	j	ug/L	0.5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	0.5
191-24-2	Benzo[g,h,i]perylene	0.3	j	ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
ortho- Terphenyl	40	37	93 %	40 - 140 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method.
 Method protocol modified to include acidification and the surrogate compound in accordance with the MA DEP Method for the Determination of Extractable Petroleum Hydrocarbons.
 Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 j Indicates an estimated value detected below the reporting limit for the analyte.

Project Narrative

Project: **CARRI 99/6-1110**
Client: **OHI Engineering, Inc.**

Lab ID: **100181**
Received: **10-20-06 17:30**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. MA DEP VPH Note: Sample 100181-1. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
2. MA DEP EPH Non-conformance: Sample 100181-02. Reported results for the analyte are less than the low standard of the associated calibration curve. Results are estimated.
3. MA DEP EPH Note: Sample 100181-02. Sample was diluted prior to analysis. Dilution was required to keep all target analytes within calibration.
4. MA DEP EPH Note: Samples 100181-02. Polynuclear aromatic hydrocarbon (PAH) target analytes were identified and quantified by GC/MS-SIM, in accordance with the method provision for alternate determinative methodologies. GC/MS-SIM was used to achieve low quantification limits necessary for regulatory compliance. Target analytes were determined utilizing the same sample extract used for carbon range determination by GC/FID.