

42-B-1

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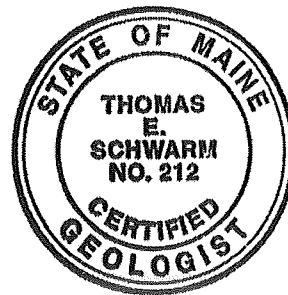
*** Piping Closure Assessment**

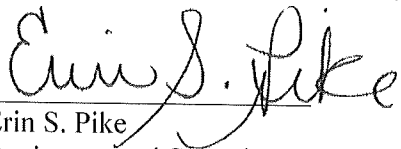
Prepared for:
Irving Oil Corporation
190 Commerce Way
Portsmouth, NH 03801

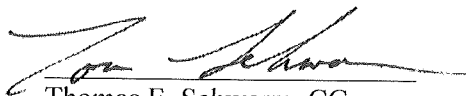
Prepared by:
Acadia Environmental Technology
48 Free Street
Portland, ME 04101

For submittal to:
UST Program Administrator
Maine DEP
17 State House Station
Augusta, ME 04333-0017

Facility Name: Portland Blue Canoe
Address: 270 Riverside Street, Portland, Maine
Owner: Irving Oil Corporation
Contact Person: Stephanie Guay
UST Facility Number: 19550
Date of Site Assessment: October 6-22, 2008
Date of Report: December 20, 2008
Evidence of a Release Found: Yes, Spill No, P-927-08




Erin S. Pike
Environmental Scientist


Thomas E. Schwarm, CG
President-Hydrogeologist

ACADIA
ENVIRONMENTAL TECHNOLOGY

December 20, 2008

Ms. Stephanie Guay
Irving Oil Corporation
190 Commerce Way
Portsmouth, NH 03801

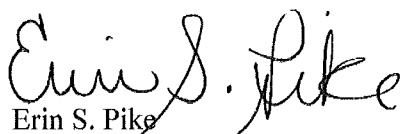
Re: Piping Closure Assessment
Portland Blue Canoe

Dear Ms. Guay:

Acadia Environmental Technology prepared this piping closure assessment for the Portland Blue Canoe, located at 270 Riverside Street, Portland, Maine, on behalf of Irving Oil Corporation. At your request we have forwarded a copy of this report to the Maine Department of Environmental Protection and the City of Portland.

If you have any questions or comments, please call us. Acadia Environmental Technology appreciates working with you on this project.

Sincerely,


Erin S. Pike
Environmental Scientist

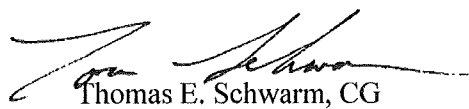

Thomas E. Schwarm, CG
President Hydrogeologist

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PIPING CLOSURE ASSESSMENT

This assessment is intended to meet the requirements of 006-096 DEP Chapter 691 Appendix P. The purpose of this underground storage tank (UST) piping closure site assessment is to evaluate soils in the area of the underground oil storage facility piping and to determine if there is evidence of an oil release requiring notification of the Commissioner. Evidence of a release must be reported within 24 hours. The hotline number is 1-800-482-0777.

This piping assessment and report has been completed in accordance with DEP Regulations, Chapter 691, Appendix P, effective September 16, 1991, as amended March 14, 2004. No other warranty, expressed or implied, is made. This report includes information provided by others, and from public records. Acadia Environmental Technology cannot guarantee that this information is accurate. Should any additional information subsequently become available, Acadia Environmental Technology requests the opportunity to review new data and modify, if appropriate, the assessments, findings, and conclusions given in this report.

1. General Information:

- A. Facility name: Portland Blue Canoe
Address: 270 Riverside Street, Portland, Maine
Owner: Irving Oil Corporation
Operator: Irving Oil Corporation
- B. Tax map: 316
Lot #: 8
- C. USGS site location map, Figure 1, Appendix A
Latitude: 043° 41' 07.0"N
Longitude: 070° 19' 45.8" W
- D. Site plan attached Appendix A.

2. History

A. Site History

Current facility owner: Irving Oil Corporation

Address: 190 Commerce Way, Portsmouth, NH 03801

Current property owner: Irving Oil Corporation

Current operator: Irving Oil Corporation

How long owned: 1 year

Previous owner(s):

1992 Exxon Corporation d.b.a. Humble Oil and Refining Company

1985 Delta Realty Company

1988 William L. Luce

1996 Tidy Up Car Wash

B.

Table 1: Tank History

<i>Tank Number</i>	<i>Size & Construction</i>	<i>Fuel Type</i>	<i>Installation Date</i>	<i>Years In Use</i>	<i>Date Removed</i>
1-1	Fiberglass Jacketed Steel 12000 gallon	Gasoline	12/23/1996	12	Active
2-1	Fiberglass Jacketed Steel 8000 gallon	Gasoline	12/23/1996	12	Active
2-2	Fiberglass Jacketed Steel 4000 gallon	Diesel	12/23/1996	12	Active
3-1	Fiberglass Jacketed Steel 10000 gallon	Diesel	6/22/1999	9	Active

C. Summary of inventory reconciliation: No losses reported to Acadia.

D. Precision tests performed to date: None reported to Acadia

E. Leak detection devices: Continuous electric monitoring

F. Past evidences of a release: None reported to Acadia

G. Summary and Results of Previous Site Assessments:

In August 2007, Ransom Environmental Consultants, Inc. (Ransom) completed a Phase I Environmental Site Assessment (ESA) & Limited Subsurface Investigation (LSI). Ransom concluded that since 1971, the site had been used as an automobile fueling and service station. The LSI consisted of seven soil borings, five of which were made into temporary monitoring wells. The laboratory results from the soil and groundwater samples collected did not exceed the MEDEP Regulatory Action Guidelines or the Baseline-2 guidelines. This report was previously submitted to the MEDEP.

3. Geography

A. Surrounding land use is commercial. To the north is Hammond Lumber, to the south is a Jiffy Lube, to the east is Home Depot, and to the west is Sullivan Tire.

B. Site's water supply is: public water system.

Surrounding properties' water supply is: public water system

Private water supply well within 300 feet: None observed

Public water supply wells within 2,000 feet: None observed

C. Sensitive receptors at or near the site: underground utilities, storm sewers.

4. Piping Inspection: The piping was double wall flexible plastic piping that was in good condition. No evidence of leaks, cracks, or corrosion.

5. Geology:

Fill Material: Fill material consisted of fine to course sand and peastone.

Native Soil: According to the Surficial Geologic Map of Maine, published by the Maine Geological Survey Division of the Maine Department of Conservation, soils at the site are silt, clay, sand and minor amounts of gravel.

Groundwater Table: Groundwater was encountered at approximately 3 feet below grade.

Bedrock: According to the Bedrock Geologic Map of Maine, published by the Maine Geological Survey Division of the Maine Department of Conservation, bedrock at the site consists interbedded sandstone and impure limestone of the Vassallboro Formation.

6. Soil Sampling Methods and Results:

Soil samples were collected and analyzed for volatile organic compounds (VOCs) using a ThermoEnvironmental 580B photoionization detector (PID) with a 10.6 eV lamp. The instrument was calibrated on site each day at the start of testing to an isobutylene standard with a DEP recommended response factor of 2.5 for gasoline and 3.2 for diesel fuel. Soil samples were collected and analyzed by polyethylene bag headspace method according to DEP Chapter 691, Appendix Q methodology. Soil sample locations are shown in Appendix A, Figure 2. The soil types, sample depths, and VOC concentrations are listed in Appendix A, Table III.

7. Department of Environmental Protection notification: Steve Brezinski of the MEDEP was on site October 7, 2008.

8. Remedial Actions: Mr. Brezinski assigned spill number P-927-08 and Baseline-2 clean-up goals. Baseline-2 clean up goals for soil are 500 ppm gasoline or 200 ppm heating oil or kerosene as measured with a PID. Soils met the clean up goals, however, since some soil could not be beneficially reused onsite, approximately 30 yards was transported to Commercial Paving and Recycling Company, for recycling.

Due to the shallow groundwater table, two frac tanks were needed to store the groundwater onsite during the facility upgrade. Groundwater was pumped to the frac tanks by a pump placed in an observation well located at the southwest corner of the tank pad.

In accordance with the City of Portland sewer discharge rules, water from each frac tank was sampled and analyzed for total petroleum hydrocarbons (TPH) by EPA Method 8015, and Metals by EPA Method 200.7, before the water was discharged to the sewer. Results were sent to the City of Portland and approximately 24,000 gallons of water was approved for discharged to the sewer without treatment. Complete laboratory reports are attached in Appendix B.

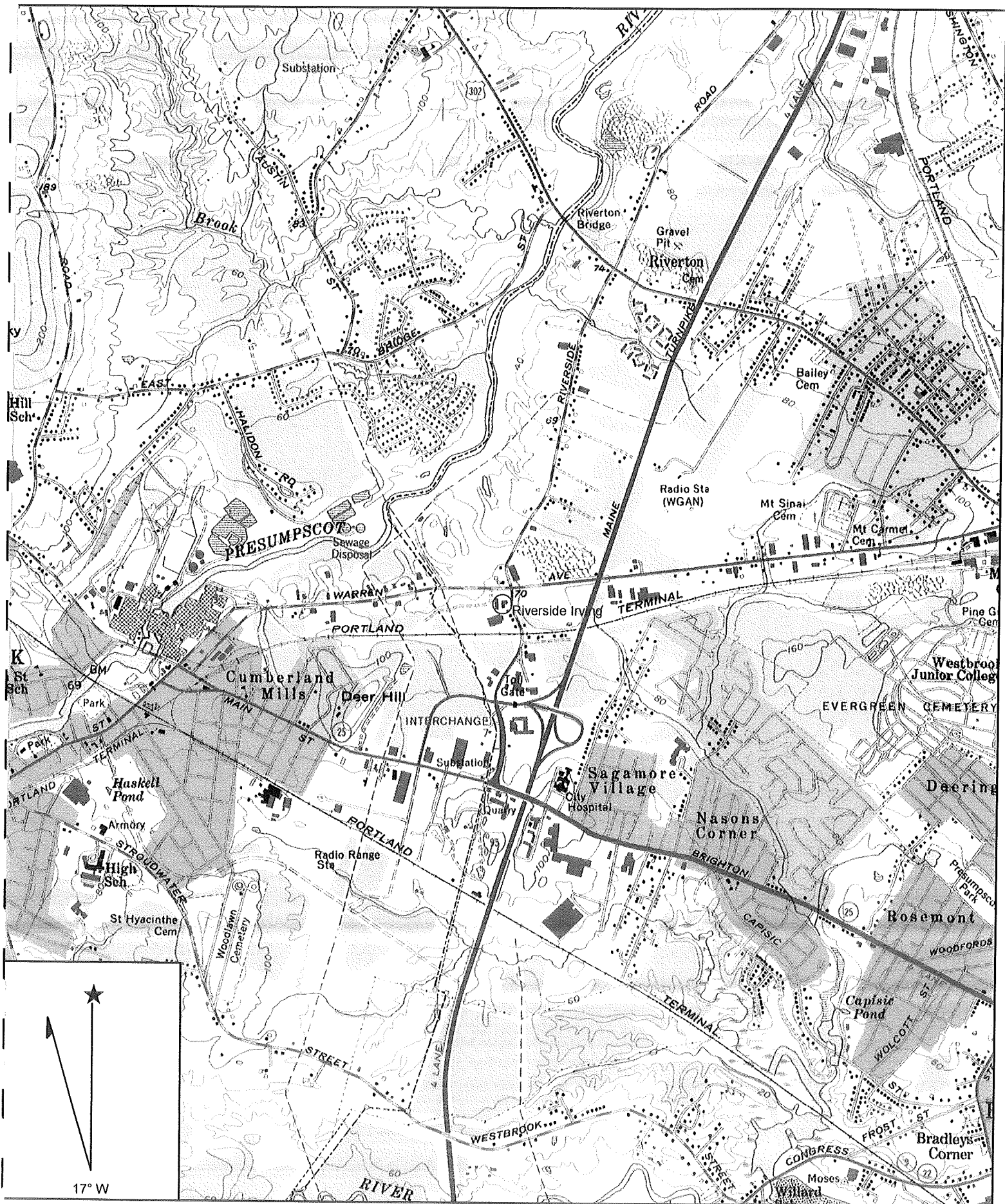
9. Conclusion: On October 6-22, 2008, Acadia conducted this closure assessment of gasoline and diesel piping and the gasoline dispensers at the Portland Blue Canoe, 270 Riverside Street, Portland, Maine. The piping was in good condition. VOCs were detected above 100 ppm around the piping. Steve Brezinski of the MEDEP was onsite October 7, 2008. Mr. Brezinski assigned a Baseline-2 goal. The soils met the clean-up goal, however, since some soil could not be reused, approximately 30 yards of soil was transported to Commercial Paving and Recycling Company. Groundwater was encounter at approximately 3 feet below grade. The water was pumped from an observation well located at the southwest corner of the tank pad and stored onsite in two frac tanks. After samples from each frac tank were analyzed for TPH and metals according to the City of Portland sewer discharge rules, approximately 24,000 gallons of water was approved for discharged without treatment by the City of Portland.

Appendix A

Figures, Photographs, and Tables

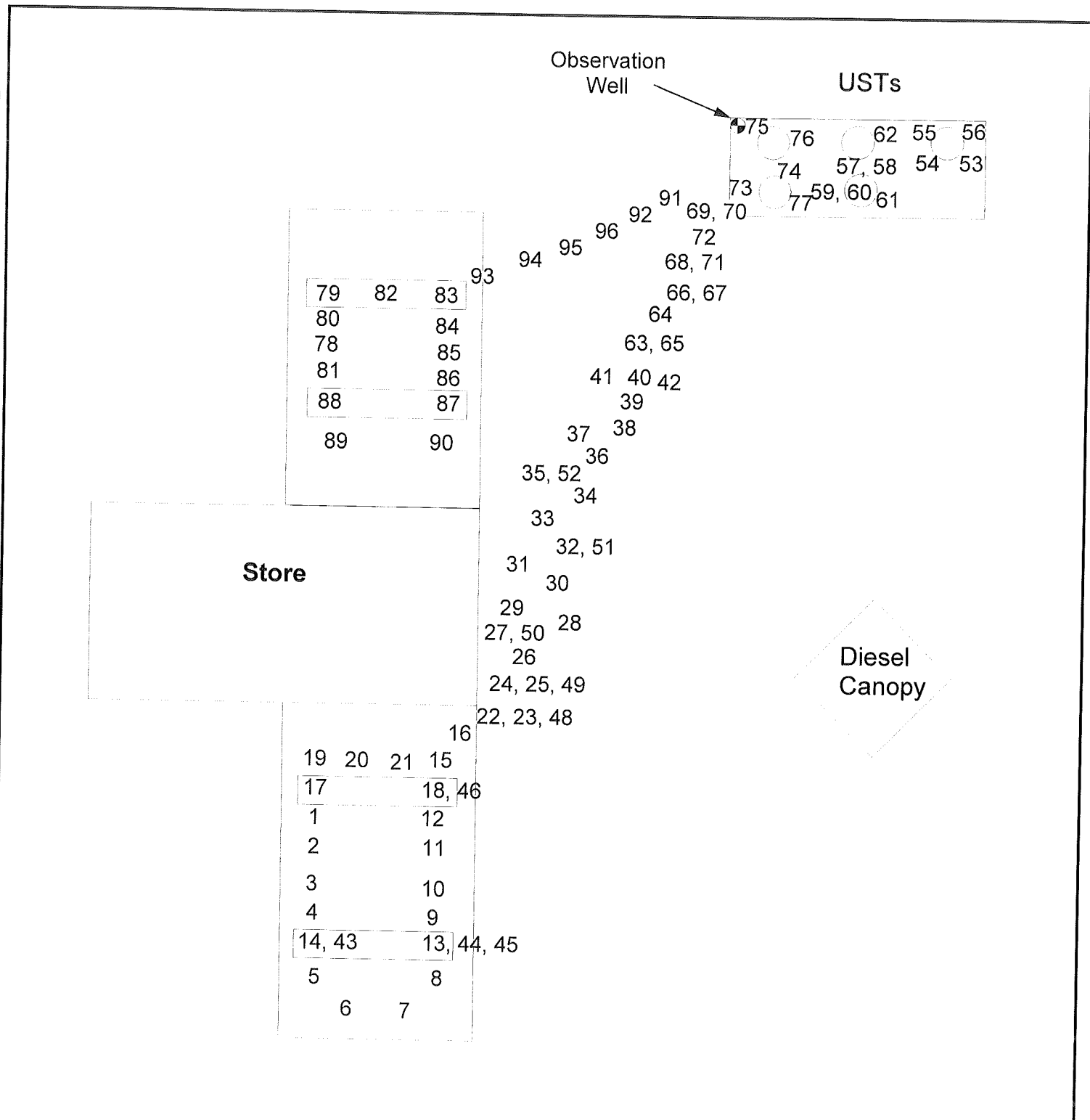
Prepared for:
Irving Oil Corporation
190 Commerce Way
Portsmouth, NH 03801

Prepared by:
Acadia Environmental Technology
48 Free Street
Portland, ME 04101



Name: PORTLAND WEST
 Date: 11/6/2008
 Scale: 1 inch equals 2000 feet

Location: 043° 41' 07.0" N 070° 19' 45.8" W
 Caption: Figure 1: Site Location
 Riverside Irving Blue Canoe
 Portland, ME



Legend

1 Soil Sample ID and Location*

— N —▶

Approximate Scale

┌───┐

20 feet

Figure 2: Site Plan
 Irving Blue Canoe
 270 Riverside Street
 Portland, ME

UST Closure Assessment
 October 6-15, 2008

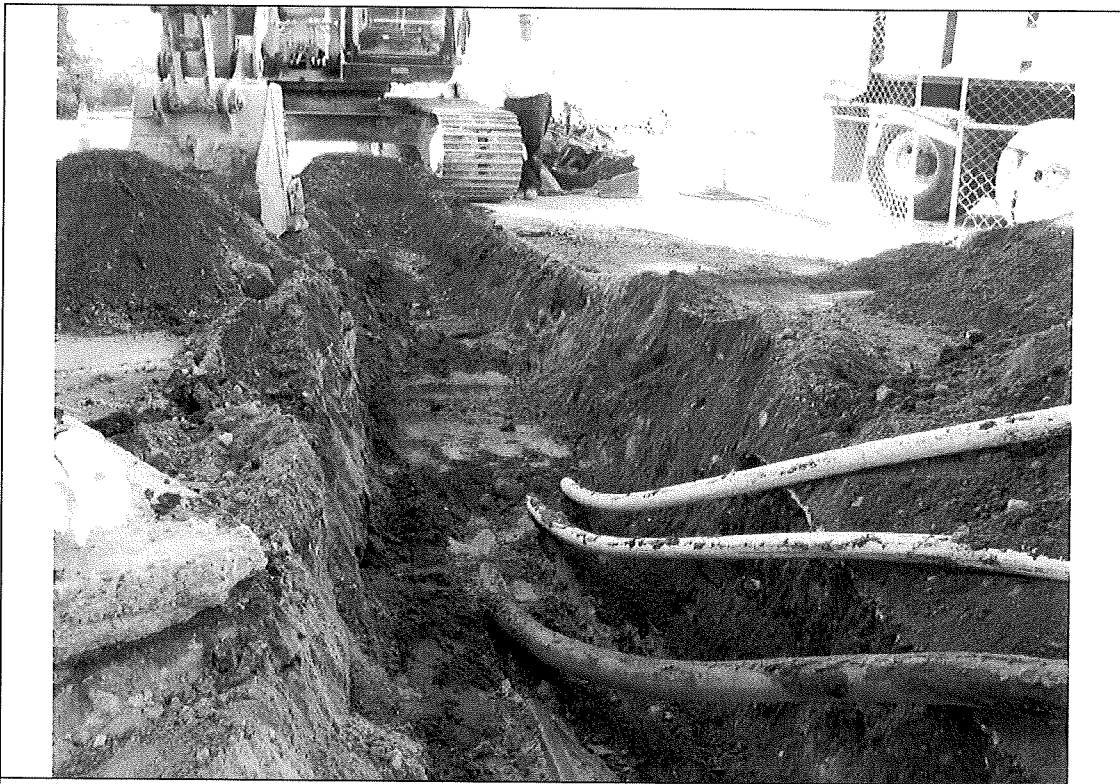
*Result of depths, soil types and PID (ppm) are in Appendix A Table III



Photograph 1: Front Canopy, facing south



Photograph 2: Rear Canopy, facing south



Photograph 3: Product and vapor recovery line from front canopy, facing west



Photograph 4: Product and vapor recovery line to rear canopy, facing south

Table III: Soil Types and Testing Results

<i>Sample #</i>	<i>Sample Depth (ft)</i>	<i>Soil Type</i>	<i>PID (ppm)</i>
1	1-2	Peastone	2
2	1-2	Peastone	2
3	1-2	Peastone	3
4	1-2	Peastone	14
5	1-2	Peastone	11
6	1-2	Peastone	6
7	1-2	Peastone	7
8	1-2	Peastone	16
9	1-2	Peastone	1
10	1-2	Peastone	0
11	1-2	Peastone	13
12	1-2	Peastone	16
13	2-3	Brown, damp, medium to coarse SAND and Peastone	6
14	2-3	Brown, damp, medium to coarse SAND and Peastone	23
15	2-3	Brown, damp, fine to coarse SAND and Peastone	6
16	2-3	Peastone	8
17	2-3	Peastone	34
18	2-3	Peastone	19
19	2-3	Peastone	0
20	2-3	Peastone	0
21	2-3	Peastone	0
22	2-3	Peastone	315
23	1-2	Brown, damp, fine to coarse SAND , trace gravel	1
24	2-3	Brown, black, damp, fine to medium SAND	495
25	2-3	Brown, black, damp, fine to medium SAND	496
26	2-3	Brown, black, damp, fine to medium SAND, trace gravel	128
27	2-3	Brown, damp, fine to medium SAND	56
28	2-3	Brown, damp, fine to medium SAND and Peastone	57
29	2-3	Brown, damp, fine to medium SAND	36
30	2-3	Brown, damp, fine to medium SAND and Peastone	0
31	2-3	Brown, damp, fine to medium SAND	395

Table III: Soil Types and Testing Results (continued)

<i>Sample #</i>	<i>Sample Depth (ft)</i>	<i>Soil Type</i>	<i>PID (ppm)</i>
32	3-4	Brown, damp, fine to medium SAND	499
33	3-4	Brown, damp, fine to medium SAND	238
34	3-4	Brown, damp, fine to medium SAND	303
35	3-4	Brown, damp, fine to medium SAND	31
36	2-3	Black, dry, fine to medium SAND, trace gravel	500
37	2-3	Black, dry, fine to medium SAND, trace gravel	152
38	1-2	Brown, dry, fine to medium SAND	148
39	3-4	Brown, damp, fine to medium SAND	278
40	3-4	Brown, black, damp, fine to medium SAND, trace silt	239
41	3-4	Brown, black, damp, fine to medium SAND, trace silt, trace gravel	128
42	3-4	Brown, black, damp, fine to medium SAND	109
43	3-4	Brown, black, damp, fine to medium SAND	490
44	3-4	Brown, black, damp, fine to medium SAND, trace clay	500
45	3-4	Brown, black, damp, fine to medium SAND, some clay	358
46	3-4	Brown, black, moist, fine to medium SAND, some clay	0
47	Stockpile	Brown, dry, fine to course SAND, trace gravel	0
48	Stockpile	Brown, dry, fine to course SAND, trace gravel	0
49	4-5	Brown, moist, fine to course SAND, trace gravel	8
50	4-5	Brown, wet, fine to course SAND	5
51	4-5	Brown, damp, fine to course SAND	443
52	4-5	Brown, damp, fine to course SAND, some clay	243
53	5-6	Brown, dry, fine to course SAND	132
54	1-2	Brown, dry, fine to course SAND	23
55	1-2	Brown, dry, fine to course SAND	4
56	5-6	Brown, damp, fine to course SAND	10
57	2-3	Brown, dry, fine to course SAND	8
58	4-5	Brown, dry, fine to course SAND	7
59	2-3	Brown, dry, fine to course SAND	1
60	4-5	Brown, dry, fine to course SAND and Peastone	3
61	4-5	Brown, dry, fine to course SAND, trace gravel	0
62	5-6	Brown, dry, fine to course SAND, trace gravel	1
63	3-4	Brown, dry, fine to course SAND	482

Table III: Soil Types and Testing Results (continued)

<i>Sample #</i>	<i>Sample Depth (ft)</i>	<i>Soil Type</i>	<i>PID (ppm)</i>
64	3-4	Brown, dry, fine to course SAND	311
65	4-5	Brown, dry, fine to course SAND	254
66	3-4	Brown, dry, fine to course SAND, trace gravel	21
67	4-5	Black, brown, moist, fine to course SAND	178
68	3-4	Black, brown, moist, fine to course SAND	8
69	3-4	Black, brown, moist, fine to course SAND	0
70	4-5	Black, brown, moist, fine to course SAND	129
71	4-5	Black, brown, moist, fine to course SAND	18
72	4-5	Black, brown, moist, fine to course SAND	5
73	4-5	Black, brown, moist, fine to course SAND	20
74	5-6	Brown, dry, fine to course SAND	91
75	4-5	Brown, dry, fine to course SAND	2
76	5-6	Brown, dry, fine to course SAND	55
77	5-6	Brown, dry, fine to course SAND	479
78	1-2	Peastone	0
79	2-3	Brown, dry, fine to course SAND	0
80	1-2	Peastone	0
81	1-2	Peastone	0
82	2-3	Brown, dry, fine to course SAND, some gravel	37
83	2-3	Brown, dry, fine to course SAND and GRAVEL	0
84	1-2	Peastone	0
85	1-2	Peastone	0
86	1-2	Peastone	0
87	2-3	Peastone	19
88	2-3	Peastone	0
89	1-2	Peastone	1
90	1-2	Peastone	16
91	1-2	Peastone	251
92	3-4	Brown, dry, fine to course SAND and GRAVEL	1
93	3-4	Brown, dry, fine to course SAND and GRAVEL	2
94	3-4	Brown, dry, fine to course SAND and GRAVEL	0
95	3-4	Brown, dry, fine to course SAND and GRAVEL	2
96	3-4	Brown, dry, fine to course SAND and GRAVEL	10

Appendix B

Laboratory Reports

Prepared for:
Irving Oil Corporation
190 Commerce Way
Portsmouth, NH 03801

Prepared by:
Acadia Environmental Technology
48 Free Street
Portland, ME 04101



Cert. No. E87604

October 21, 2008

Mr. Mark Arienti
Acadia Environmental Technology
48 Free Street
Portland, ME 04101

RE: Katahdin Lab Number: SB5878
Project ID: 053-182 Portland
Project Manager: Mrs. Andrea Colby
Sample Receipt Date(s): October 16, 2008

Dear Mr. Arienti:

Please find enclosed the following information:

- * Report of Analysis (Analytical and/or Field)
- * Quality Control Data Summary
- * Chain of Custody (COC)
- * Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

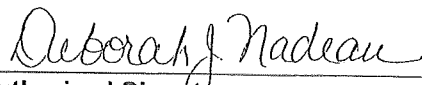
Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Sincerely,

KATAHDIN ANALYTICAL SERVICES



Authorized Signature

10/21/2008

Date

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

- U Indicates the compound was analyzed for but not detected above the laboratory Practical Quantitation Limit.
- * Compound recovery outside of quality control limits.
- D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.
- E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.
- J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Limit (PQL), but above the Method Detection Limit (MDL).
or
- J Used for Pesticide/Aroclor analyte when there is a greater than 40% difference for detected concentrations between the two GC columns.
- B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
- N Presumptive evidence of a compound based on a mass spectral library search.
- A Indicates that a tentatively identified compound is a suspected aldol-condensation product.
- P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

(Refer to BOD Qualifiers Page for BOD footnotes)

- U Indicates the compound was analyzed for but not detected above the laboratory Practical Quantitation Limit.
- E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.
- J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Limit (PQL), but above the Method Detection Limit (MDL).
- I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.
- A-4 Please refer to cover letter or narrative for further information.
- MCL Maximum Contaminant Level
- NL No limit
- NFL No Free Liquid Present
- FLP Free Liquid Present
- NOD No Odor Detected
- H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
- H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
- H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.
- H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Acadia Environmenta
Project: 053-182 Portland
PO No:
Sample Date: 10/16/08
Received Date: 10/16/08
Extraction Date: 10/16/08
Analysis Date: 17-OCT-2008 12:45
Report Date: 10/17/2008
Matrix: WATER
% Solids: NA

Lab ID: SB5878-1
Client ID: WS-3
SDG: SB5878
Extracted by: GN
Extraction Method: SW846 3510
Analyst: JLP
Analysis Method: SW846 M8015B
Lab Prep Batch: WG56861
Units: ug/L

Compound	Flags	Results	DF	PQL	Adj.PQL
Extractable TPH C9-C36		780	1.0	75	76
O-Terphenyl		90%			

Page 01 of 01 ABJ2210.d



REPORT OF ANALYTICAL RESULTS

Client: Mark Arienti
 Acadia Environmental Technology
 48 Free Street
 Portland, ME 04101

Lab Sample ID: SB5878-001
 Report Date: 10/20/2008
 PO No.: 053-182
 Project: 053-182 Portland

Sample Description	Matrix	Filtered	Date Sampled	Date Received
WS-3	AQ	No(Total)	10/16/2008	10/16/2008

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC	U 0.0080	mg/L	0.0080	1	0.008	EPA 200.7	10/16/08	EAM	EPA 200.7	10/16/08	RCT	YJ16ICW0	
BARIUM	0.0514	mg/L	0.0050	1	0.005	EPA 200.7	10/16/08	EAM	EPA 200.7	10/16/08	RCT	YJ16ICW0	
CADMIUM	U 0.0100	mg/L	0.0100	1	0.01	EPA 200.7	10/16/08	EAM	EPA 200.7	10/16/08	RCT	YJ16ICW0	
CHROMIUM	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	10/16/08	EAM	EPA 200.7	10/16/08	RCT	YJ16ICW0	
LEAD	U 0.005	mg/L	0.005	1	0.005	EPA 200.7	10/16/08	EAM	EPA 200.7	10/16/08	RCT	YJ16ICW0	
SELENIUM	U 0.010	mg/L	0.010	1	0.01	EPA 200.7	10/16/08	EAM	EPA 200.7	10/16/08	RCT	YJ16ICW0	
SILVER	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	10/16/08	EAM	EPA 200.7	10/16/08	RCT	YJ16ICW0	

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG56861-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: 053-182 PORTLAND SDG No.: SB5878

Lab File ID: ABJ2207 Lab Sample ID: WG56861-1

Instrument ID: GC10 Date Extracted: 10/16/08

Matrix: (soil/water) WATER Date Analyzed: 10/17/08

Level: (low/med) LOW Time Analyzed: 1052

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG56861-LCS	WG56861-2	ABJ2208	10/17/08	1130
02	WG56861-LCSD	WG56861-3	ABJ2209	10/17/08	1207
03	WS-3	SB5878-1	ABJ2210	10/17/08	1245
04					
05					
06					
07					
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29					
30					

COMMENTS:

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: 053-182 Portland
PO No:
Sample Date:
Received Date:
Extraction Date: 10/16/08
Analysis Date: 17-OCT-2008 10:52
Report Date: 10/17/2008
Matrix: WATER
% Solids: NA

Lab ID: WG56861-1
Client ID: WG56861-Blank
SDG: SB5878
Extracted by: GN
Extraction Method: SW846 3510
Analyst: JLP
Analysis Method: SW846 M8015B
Lab Prep Batch: WG56861
Units: ug/L

Compound	Flags	Results	DF	PQL	Adj.PQL
Extractable TPH C9-C36	U	75	1.0	75	75
O-Terphenyl		87%			

Page 01 of 01 ABJ2207.d

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: 053-182 Portland
PO No:
Sample Date:
Received Date:
Extraction Date: 10/16/08
Analysis Date: 10/17/08
Report Date: 10/17/2008
Matrix: WATER

Lab ID: WG56861-2 & WG56861-3
Client ID: WG56861-LCS & WG56861-LCSD
SDG: SB5878
Extracted by: GN
Extraction Method: SW846 3510
Analyst: JLP
Analysis Method: SW846 M8015B
Lab Prep Batch: WG56861
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Extractable TPH C9-C36	500	500	NA	407	382	81	76	6	30	33-135



PREPARATION BLANK REPORT

Sample ID: PBWYJ16ICW0

Batch ID YJ16ICW0

Element Name	Result	Units	Flag	PQL	File
ALUMINUM	0.03	mg/L	J	0.30	IYJ16A
ANTIMONY	0.002	mg/L	U	0.008	IYJ16A
ARSENIC	0.001	mg/L	U	0.0080	IYJ16A
BARIUM	0.0007	mg/L	U	0.0050	IYJ16A
BERYLLIUM	0.0002	mg/L	U	0.0050	IYJ16A
BORON	0.001	mg/L	U	0.100	IYJ16A
CADMIUM	0.0001	mg/L	U	0.0100	IYJ16A
CALCIUM	0.01	mg/L	J	0.050	IYJ16A
CHROMIUM	0.0006	mg/L	J	0.0150	IYJ16A
COBALT	0.0002	mg/L	U	0.0300	IYJ16A
COPPER	0.0009	mg/L	U	0.0250	IYJ16A
IRON	0.042	mg/L	J	0.100	IYJ16A
LEAD	0.001	mg/L	U	0.005	IYJ16A
MAGNESIUM	0.01	mg/L	U	0.05	IYJ16A
MANGANESE	0.0009	mg/L	U	0.0050	IYJ16A
MOLYBDENUM	0.0004	mg/L	U	0.0100	IYJ16A
NICKEL	0.0006	mg/L	J	0.0400	IYJ16A
POTASSIUM	0.2	mg/L	U	1.0	IYJ16A
SELENIUM	0.002	mg/L	U	0.010	IYJ16A
SILICON	0.03	mg/L	U	0.20	IYJ16A
SILVER	0.0005	mg/L	U	0.0150	IYJ16A
SODIUM	0.08	mg/L	U	1.00	IYJ16A
STRONTIUM	0.0004	mg/L	U	0.100	IYJ16A
THALLIUM	0.002	mg/L	J	0.015	IYJ16A
TIN	0.0008	mg/L	U	0.100	IYJ16A
TITANIUM	0.0004	mg/L	J	0.0150	IYJ16A
VANADIUM	0.0005	mg/L	U	0.0250	IYJ16A
ZINC	0.0011	mg/L	J	0.0250	IYJ16A

- U The analyte was not detected in the sample at a level greater than the instrument detection limit.
- J The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.
- H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSWYJ16ICW0

Batch ID YJ16ICW0

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (%)	File
ALUMINUM	2.00	1.95	mg/L	97.5%		80. 120.	IYJ16A
ANTIMONY	0.500	0.537	mg/L	107.4%		80. 120.	IYJ16A
ARSENIC	0.500	0.528	mg/L	105.6%		80. 120.	IYJ16A
BARIUM	2.00	1.92	mg/L	96.0%		80. 120.	IYJ16A
BERYLLIUM	0.0500	0.0492	mg/L	98.4%		80. 120.	IYJ16A
BORON	0.500	0.527	mg/L	105.4%		80. 120.	IYJ16A
CADMIUM	0.250	0.270	mg/L	108.0%		80. 120.	IYJ16A
CALCIUM	2.50	2.58	mg/L	103.2%		80. 120.	IYJ16A
CHROMIUM	0.200	0.194	mg/L	97.0%		80. 120.	IYJ16A
COBALT	0.500	0.500	mg/L	100.0%		80. 120.	IYJ16A
COPPER	0.250	0.229	mg/L	91.6%		80. 120.	IYJ16A
IRON	1.00	0.951	mg/L	95.1%		80. 120.	IYJ16A
LEAD	0.500	0.544	mg/L	108.8%		80. 120.	IYJ16A
MAGNESIUM	5.00	5.25	mg/L	105.0%		80. 120.	IYJ16A
MANGANESE	0.500	0.494	mg/L	98.8%		80. 120.	IYJ16A
MOLYBDENUM	0.300	0.307	mg/L	102.3%		80. 120.	IYJ16A
NICKEL	0.500	0.498	mg/L	99.6%		80. 120.	IYJ16A
POTASSIUM	10.0	10.2	mg/L	102.0%		80. 120.	IYJ16A
SELENIUM	0.500	0.551	mg/L	110.2%		80. 120.	IYJ16A
SILICON	5.23	5.29	mg/L	101.1%		80. 120.	IYJ16A
SILVER	0.0500	0.0471	mg/L	94.2%		80. 120.	IYJ16A
SODIUM	7.50	7.81	mg/L	104.1%		80. 120.	IYJ16A
STRONTIUM	0.500	0.515	mg/L	103.0%		80. 120.	IYJ16A
THALLIUM	0.500	0.536	mg/L	107.2%		80. 120.	IYJ16A
TIN	0.500	0.533	mg/L	106.6%		80. 120.	IYJ16A
TITANIUM	1.00	1.06	mg/L	106.0%		80. 120.	IYJ16A
VANADIUM	0.500	0.489	mg/L	97.8%		80. 120.	IYJ16A
ZINC	0.500	0.502	mg/L	100.4%		80. 120.	IYJ16A

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

I Laboratory control sample recovery is less than the laboratory's acceptance limit.

Client: <i>Acadia</i>	KAS PM: <i>AJC</i>	Sampled By: <i>client</i>
Project:	KIMS Entry By: <i>DD</i>	Delivered By: <i>client</i>
KAS Work Order#: <i>SB5878</i>	KIMS Review By: <i>DD</i>	Received By: <i>DD</i>
SDG #:	Cooler: <i>N/A</i> of _____	Date/Time Rec.: <i>10-16-08 10:00</i>

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?				✓	
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present?				✓	Temp (°C):
6. Samples received at < 6 °C w/o freezing? Ice or ice packs present? Y or N				✓	Cooler temp. (°C): (if no temp blank)
7. Volatiles free of headspace? Aqueous: No bubble larger than a pea Soil/Sediment: Received in airtight container? Received in methanol? Methanol covering soil?				✓ ✓ ✓ ✓	
8. Trip Blank present in cooler?				✓	
9. Proper sample containers and volume?	✓				
10. Samples within hold time upon receipt?	✓				<i>14 Amber for TPH; Limited volume</i>
11. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2 Sulfide - >9 Cyanide – pH >12	✓			✓ ✓	
12. Corrective Action Report Filed?				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments



600 Technology Way
 Scarborough, ME 04074
 Tel: (207) 874-2400
 Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND
 PRINT LEGIBLY IN PEN

Client: **Acadia Env Tech** Contact: **ERIN PIKE** Phone #: **(207) 712-1629** Fax #: **(207) 780-6357**
 Address: **48 Free St** City: **Portland** State: **ME** Zip Code: **04101**
 Purchase Order #: _____ Proj. Name / No.: **053-182 PORTLAND** Katahdin Quote #: _____

Bill (if different than above) Address _____

Sampler (Print / Sign) _____ Copies To: _____

LAB USE ONLY WORK ORDER #: **SB5878**
 KATAHDIN PROJECT NUMBER _____

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

REMARKS: _____

SHIPPING INFO: FED EX UPS CLIENT

AIRBILL NO: _____

TEMP °C TEMP BLANK INTACT NOT INTACT

* Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON	Filt. OY ON
WS-3	10/14/08 940	AQ	2	X	X									
	/													
	/													
	/													
	/													

COMMENTS **RUSH**

Relinquished By: (Signature) <i>Erin Pike</i>	Date / Time 10/14/08 1000	Received By: (Signature) <i>Don Deo</i>	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

Oct. 16, 2008
01:04 PM

Login Number: SB5878

Account: ACADIA001 Web
Acadia Environmental Technology, Inc.

Project:

Login Information

ANALYSIS INSTRUCTIONS :
CHECK NO. :
CLIENT PO# : 053-182
COOLER TEMPERATURE : n/a
DELIVERY SERVICES : Client
EDD FORMAT :
PM : AJC
PROJECT NAME : 053-182 Portland
QC LEVEL : II
REGULATORY LIST :
REPORT INSTRUCTIONS :
SDG ID :
SDG STATUS :

Primary Report Address:

Mark Arienti
Acadia Environmental Technology
48 Free Street

Portland, ME 04101

marienti@acadiaenvironmental.com

Primary Invoice Address:

Accounts Payable
Acadia Environmental Technology
48 Free Street

Portland, ME 04101

Report CC Addresses:

Invoice CC Addresses:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SB5878-1	WS-3	16-OCT-08 09:40	16-OCT-08		17-OCT-08	23-OCT-08	
Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments		
Aqueous	S E200.7-ARSENIC	14-APR-09	250mL Plastic+HNO3				
Aqueous	S E200.7-BARIUM	14-APR-09	250mL Plastic+HNO3				
Aqueous	S E200.7-CADMIUM	14-APR-09	250mL Plastic+HNO3				
Aqueous	S E200.7-CHROMIUM	14-APR-09	250mL Plastic+HNO3				
Aqueous	S E200.7-LEAD	14-APR-09	250mL Plastic+HNO3				
Aqueous	S E200.7-PREP	14-APR-09					
Aqueous	S E200.7-SELENIUM	14-APR-09	250mL Plastic+HNO3				
Aqueous	S E200.7-SILVER	14-APR-09	250mL Plastic+HNO3				
Aqueous	S SW8015M-TPH	23-OCT-08	1L N-Amber Glass	1			

Total Samples: 1

Total Analyses: 9

Data File: \\Target_server\GG\chem\gc10.i\GC10BJ09B1.b\ABJ2095.d

Date : 09-OCT-2008 12:52

Client ID: WS-1

Sample Info: TPHE022A.H,GC10BJ09B1.B,1,SB5673-1

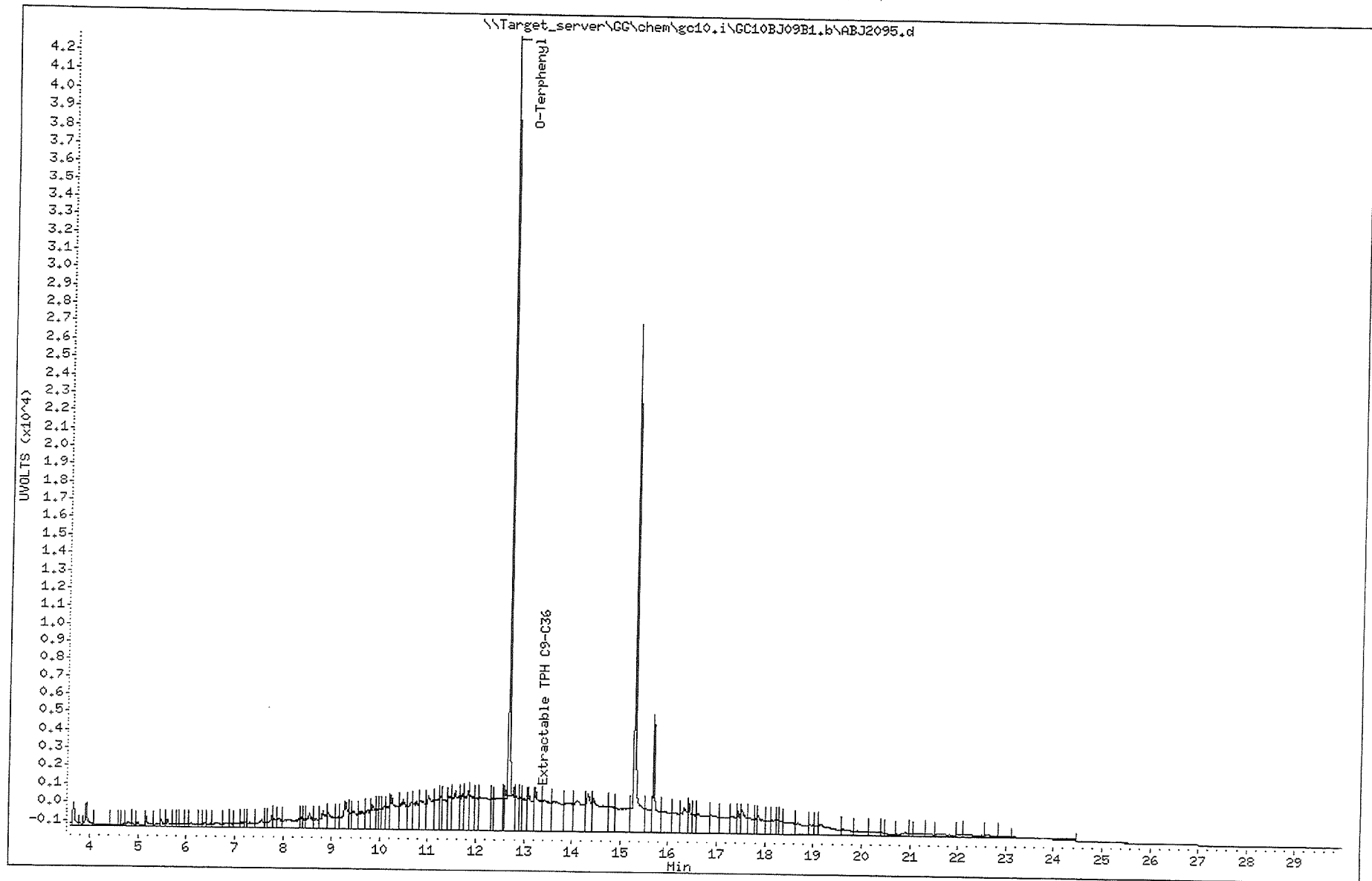
Purge Volume: 1.0

Column phase: ZB-1

Instrument: gc10.i

Operator: KGT

Column diameter: 0.25



KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Acadia Environmenta

Project: Riverside

PO No:

Sample Date: 10/08/08

Received Date: 10/08/08

Extraction Date: 10/08/08

Analysis Date: 09-OCT-2008 12:52

Report Date: 10/09/2008

Matrix: WATER

% Solids: NA

Lab ID: SB5673-1

Client ID: WS-1

SDG: SB5673

Extracted by: CB

Extraction Method: SW846 3510

Analyst: KGT

Analysis Method: SW846 M8015B

Lab Prep Batch: WG56552

Units: ug/L

Compound	Flags	Results	DF	PQL	Adj.PQL
Extractable TPH C9-C36		200	1.0	75	75
O-Terphenyl		68%			

Page 01 of 01 ABJ2095.d

pH = 7.0



REPORT OF ANALYTICAL RESULTS

Client: Mark Arienti
 Acadia Environmental Technology
 48 Free Street
 Portland, ME 04101

Lab Sample ID: SB5673-001
Report Date: 10/13/2008
PO No.: 053-185
Project: Riverside

Sample Description	Matrix	Filtered	Date Sampled	Date Received									
WS-1	AQ	No(Total)	10/08/2008	10/08/2008									
Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC	0.0080	mg/L	0.0080	1	0.008	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	
CADMIUM	U 0.0100	mg/L	0.0100	1	0.01	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	
CHROMIUM	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	
COPPER	U 0.0250	mg/L	0.0250	1	0.025	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	
LEAD	0.041	mg/L	0.005	1	0.005	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	
NICKEL	U 0.0400	mg/L	0.0400	1	0.04	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	
SILVER	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	
ZINC	0.0699	mg/L	0.0250	1	0.025	EPA 200.7	10/9/08	EAM	EPA 200.7	10/9/08	RCT	YJ09ICW0	

Appendix C

MEDEP Hydrocarbon Spill Decision Tree

Prepared for:
Irving Oil Corporation
190 Commerce Way
Portsmouth, NH 03801

Prepared by:
Acadia Environmental Technology
48 Free Street
Portland, ME 04101

DEP HYDROCARBON SPILL DECISION TREE (February 1995)

COPY FOR
Acacia Env.

Spill No. P 72-1

Investigator: E. Brezinski

Date: 1/7/00

Site Name, Address: River St. Irving
270 Irving St.

Town: Portland

	If "Yes" Go To	If "No" Go To
<u>1.</u> Is a public water supply well located within 2000 feet of the leak or discharge site, or is the site located within wellhead protection zones 1 or 2 of a public water supply well?	12	<u>2</u>
<u>2.</u> Is the leak or discharge site located in or over a sand and gravel deposit?	2A	<u>3</u>
<u>2A.</u> Is the entire area, within a 2000 foot radius of the leak or discharge site, a non-attainment zone?	2B	12
<u>2B.</u> Is there potential for vapor problems within buildings or for a confined space fire or explosion hazard?	13	11A
<u>3.</u> Was the release directly into bedrock or is the bedrock groundwater system contaminated?	9	<u>4</u>
<u>4.</u> Was the release directly into a glacial till deposit?	<u>9</u>	5
<u>5.</u> Was the release into a silt or clay deposit?	6	N/A
<u>6.</u> Is there at least 10 feet of silt and/or clay between the contaminated zone and underlying more permeable surficial deposits (such as glacial till or sand and gravel) or bedrock?	7	9
<u>7.</u> Are the area's gradients approximately horizontal (topographic gradient flat or groundwater gradient <1%)?	8	9
<u>8.</u> Does the seasonal low of the water table fall below the top of the underlying aquifer (sand and gravel deposit or bedrock)? If unknown, the answer is yes.	9	10
<u>9.</u> Is the area within 2000 feet downgradient or 1000 feet upgradient served by a public water supply?	<u>10</u>	12
<u>10.</u> Is there potential for vapor problems within buildings or for a confined space explosion hazard?	13	<u>11</u>
<u>11.</u> Is the entire area, within a 2000 foot radius of the leak or discharge site, a non-attainment zone?	11A	<u>13</u>
<u>11A.</u> Is the site now or in the past been in a predominantly industrial land use?	14A	<u>14B</u>

Check clean-up goal decided upon:

- 12. Stringent (ST) Clean-Up Goals Remove all free product. Remove or remediate contaminated soil containing greater than 10 ppm total fuel oil or kerosene, or 5 ppm total gasoline as determined by DEP-approved laboratory methods. Remediate groundwater containing greater than 50 ug/l total hydrocarbons (gasoline, kerosene, or fuel oil by DEP approved laboratory analytical methods or field techniques), 50 ug/l MTBE, and 5 ug/l benzene by DEP or EPA approved methods.
- 13. Intermediate (IN) Clean-Up Goals Remove all free product. Remove or remediate contaminated soil containing greater than 10 mg/kg total fuel oil or kerosene, or 5 mg/kg total gasoline as determined by DEP-approved laboratory methods or equivalent DEP-approved field techniques.
- 14A. Baseline-1 (BL1) Goals Remove all free product. Remove or remediate soil saturated with gasoline, kerosene, or fuel oil.
- 14B. Baseline-2 (BL2) Goals Remove all free product. Remove or remediate contaminated soil to: 500-1,000 ppm gasoline or 200-400 ppm heating oil or kerosene, each as measured by the DEP field headspace analysis or its Department approved equivalent field method.
- Other (Specify): _____ Complete justification below.

Note: Where there is significant uncertainty regarding the identity of the product, the lower oil standards shall apply; and, in the stringent category, groundwater shall be analyzed for MTBE and benzene.

JUSTIFICATION OF ALTERNATE CLEAN-UP GOAL:

No vapor contamination contained in or over building, no groundwater vapor at residence.

NOTE: This form must be included in the case's Spill Report if completed by Division of Response Services staff. Other Bureau staff must include this documentation in the project file.