

42-B-1

JAN 28 2008

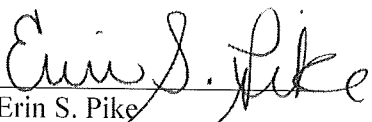
*** UST Tank Top Upgrade Assessment**

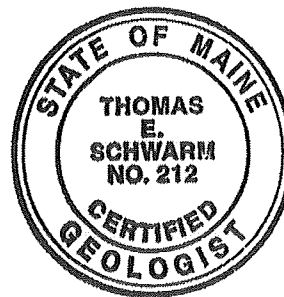
Prepared for:
Irving Oil Corporation
190 Commerce Way
Portsmouth, NH 03801


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: Irving Blue Canoe
Address: 393 Commercial Street, Portland, ME
Owner: Irving Oil Corporation
Contact Person: Stephanie Guay
UST Facility Number: 5320
Date of Site Assessment: December 1, 2008
Date of Report: December 17, 2008
Evidence of a Release Found: Yes, P-1079-2008


Erin S. Pike
Environmental Scientist




Thomas E. Schwarm, CG
President-Hydrogeologist

ACADIA
ENVIRONMENTAL TECHNOLOGY

December 17, 2008

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

Re: UST Tank Top Upgrade Assessment
Irving Blue Canoe
393 Commercial Street
Portland, ME

Dear Ms. Guay:

Acadia Environmental Technology prepared this underground storage tank (UST) tank top upgrade assessment for the Irving Blue Canoe, at 393 Commercial Street, Portland, Maine. At your request we have forwarded a copy of this report to the Maine Department of Environmental Protection and to the City of Portland.

UST Program Administrator
BRWM-Maine DEP
17 State House Station
Augusta, ME 04333-0017

Joseph E. Gray
City of Portland
389 Congress Street
Portland, ME 04101

John Luongo
Maine DEP
312 Canco Road
Portland, ME 04103

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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UST TANK TOP UPGRADE 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) tank top upgrade 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 UST tank top upgrade assessment and report has been completed in accordance with DEP Regulations, Chapter 691, Appendix P, effective September 16, 1991, as amended April 3, 2007. 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: Irving Blue Canoe
Address: 393 Commercial Street
Owner: Irving Oil Corporation
Operator: Irving Oil Corporation
- B. Tax map: 042
Lot #: B001001
- C. USGS site location map, Figure I, Appendix A
Latitude: 43°39'2.07" N
Longitude: 70°15'30.23" W
- D. Site plan attached Appendix A.

2. History

- A. Site History
 - Current facility owner: Irving Oil Corporation
 - Address: 190 Commerce Way, Portsmouth, NH
 - Current property owner: Irving Oil Corporation
 - Current operator: Irving Oil Corporation

How long owned: Since 2005

Previous owner(s): Union Oil Company

B.

Table I: 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	10,000 gallon	Gasoline	3/1/1982		6/23/1997
2-1	10,000 gallon	Gasoline	3/1/1982		6/23/1997
3-1	10,000 gallon	Diesel	3/1/1982		6/23/1997
4-1	12,000 gallon	Gasoline	11/1/1997		Active
5-1	8,000 gallon	Gasoline	11/1/1997		Active
5-2	4,000 gallon	Diesel	11/1/1997		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:

List tank removals, spill numbers, see example below

1997: 3 USTs removed, Baseline-I clean up goals, no soil removed, P-352-97

G. Summary and Results of Previous Site Assessments:

UST Closure Assessment, June 1997: Three 10,000 gallon USTs were removed. Evidence of leakage at a piping junction was observed. Baseline-I clean up goals assigned by MEDEP.

Phase I, January 2005: The site has a greater than 100-year history as a railroad yard, beginning in the mid 1880s. Since 1982 the site has been used for retailing gasoline and diesel fuel. Numerous surrounding sites have hosted petroleum USTs. The site and surrounding area have a low sensitivity to petroleum releases. The site is not on a mapped sand and gravel aquifer and public water and sewer are available and in use throughout the area.

3. Geography

- A. The site is located in an industrial and commercial area adjacent to Portland Harbor. The abutting properties including warehouses, manufacturing facilities, a lumber yard, offices, a restaurant, a four-family residence, and a Citgo gasoline station/convenience store. The abutter across High Street is the Rufus Deering Lumber Company, a lumber and building materials supplier. Directly across Commercial Street are several wharfs supporting a variety of marine-related industries. Along York Street is a strip of vacant land owned by the state. A four-family residence is located at the corner of Park and York Streets.
- 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: basements, underground utilities, surface water.

4. UST and Piping Inspection

The USTs and piping were not visible for inspection during the tank top upgrade work.

5. Geology:

Fill Material: Fill material consisted of light brown fine to coarse sand.

Native Soil: According to the Surficial Geologic Map of Maine, published by the Maine Geological Survey Division of the Maine Department of Conservation, native soils at the site are fine grained glaciomarine deposits composed of silt, sand and clay. According to the Surficial Geologic Map of Maine, published by the Maine Geological Survey Division of the Maine Department of Conservation, native soils at the site are fine grained glaciomarine deposits composed of silt, sand and clay.

Groundwater: Groundwater was encountered at approximately 4 feet below grade in coarse granular backfill around the USTs.

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 of sulfidic and carbonaceous mudstones of the Scarborough and Diamond Island Formations.

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 December 1, 2008, at the start of testing to a 100 parts per million (ppm) isobutylene standard with a DEP recommended response factor of 2.5 for gasoline and 3.2 for diesel. Soil samples were collected and analyzed by polyethylene bag headspace method according to DEP Chapter 691, Appendix Q methodology. Soil sample locations are shown on Figure 2, Appendix A. The soil types, sample depths, and VOC concentrations are listed in Table II, in Appendix A.

7. Department of Environmental Protection notification: John Luongo of the Maine Department of Environmental Protection was notified of a small amount of soil with VOCs detected above 100 ppmv. Mr. Luongo was onsite on December 1, 2008.

8. Remedial Actions: Mr. Luongo assigned spill number P-1079-2008. He allowed the impacted soil to return to the excavation.

Due to the shallow groundwater table, two frac tanks were needed to store the groundwater onsite during the tank upgrade. Groundwater was pumped to the frac tanks from a 12-inch HDPE observation well adjacent to the USTs.

In accordance with the City of Portland 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 36,000 gallons of water was discharged to the city sewer. Approximately 30,000 gallons were transported to the East End Treatment Plant.

Laboratory reports are attached in Appendix A.

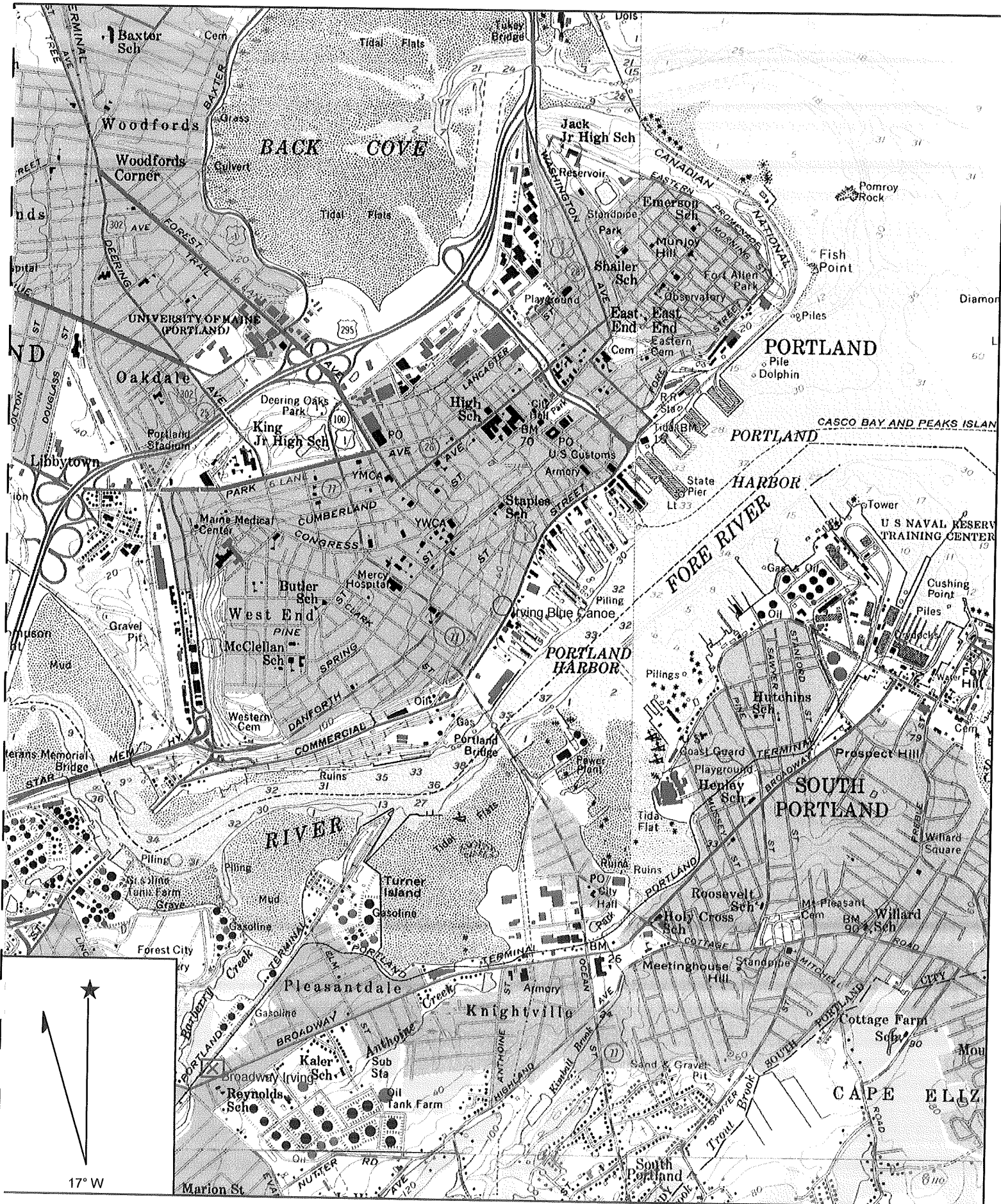
9. Conclusion: On December 1, 2008, Acadia conducted this UST tank top upgrade assessment of at the Irving Blue Canoe at 393 Commercial Street, in Portland. VOCs were detected above 100 ppm in a small amount of soil between two sumps, and John Luongo of the MEDEP was notified. Mr. Luongo assigned spill number P-1079-2008 and allowed the soil to return to the excavation. Groundwater was encountered at approximately feet below grade. The water was pumped from an observation well 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 36,000 gallons of water was approved for discharged without treatment by the City of Portland. Approximately 30,000 gallons were transported to the East End Treatment Plant.

Appendix A

Figures, Photographs, Tables,
and Laboratory Reports

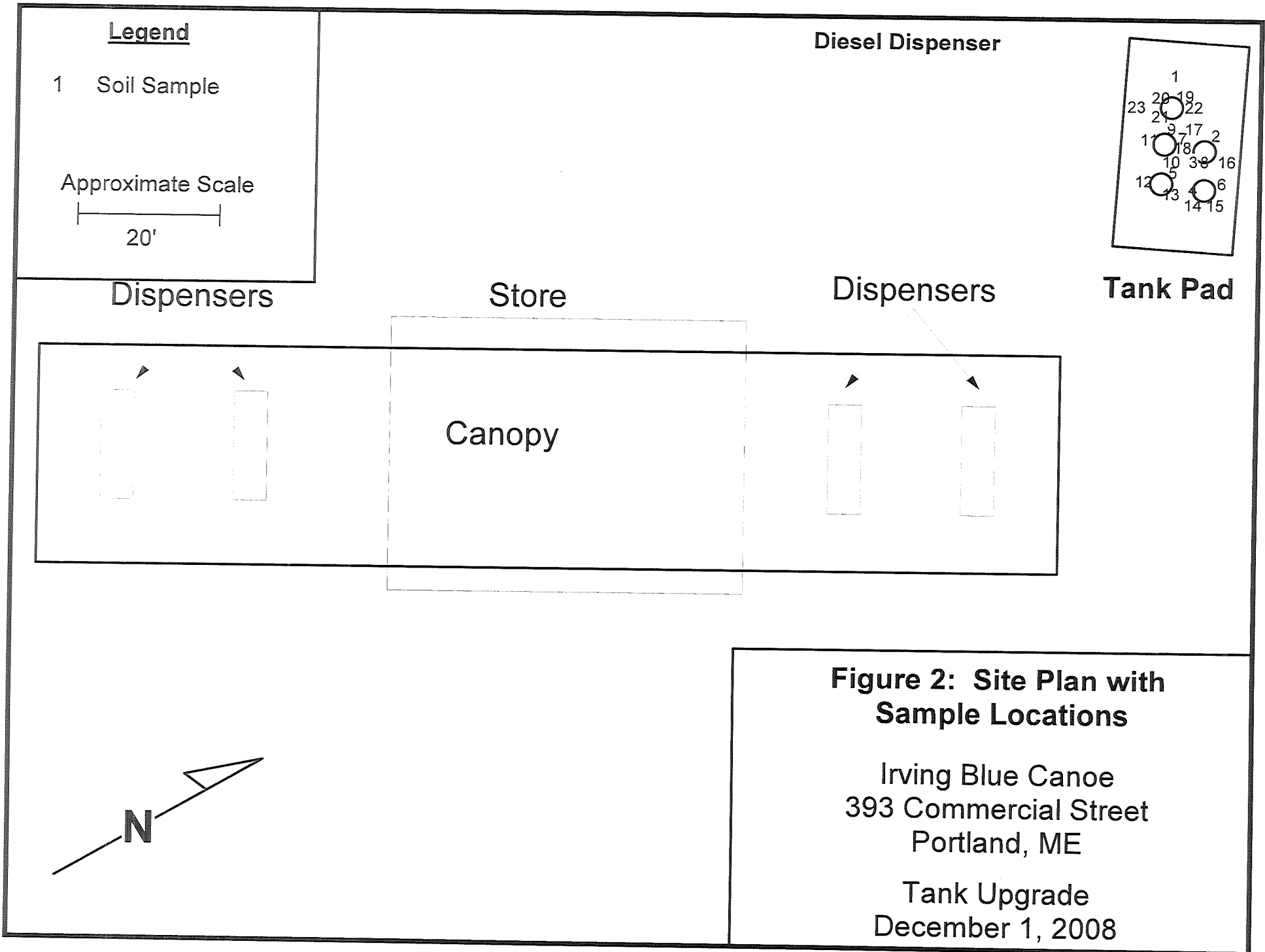
Prepared for:
Irving Oil Corporation
190 Commerce Way
Portsmouth, NH 03801

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



Name: PORTLAND WEST
 Date: 12/18/2008
 Scale: 1 inch equals 2000 feet

Location: 043° 39' 02.1" N 070° 15' 31.4" W
 Caption: Figure 1: Irving Blue Canoe
 Portland, Maine
 USt Closure Assessment December 2008





Photograph 1: Sumps facing south



Photograph 2: Observation well, facing northeast

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Acadia Environmental
Project: Commercial Street
PO No:
Sample Date: 12/01/08
Received Date: 12/01/08
Extraction Date: 12/02/08
Analysis Date: 02-DEC-2008 12:42
Report Date: 12/02/2008
Matrix: WATER
% Solids: NA

Lab ID: SB6883-1
Client ID: WS-1
SDG: SB6883
Extracted by: CB
Extraction Method: SW846 3510
Analyst: JLP
Analysis Method: SW846 M8015B
Lab Prep Batch: WG58640
Units: ug/L

Compound	Flags	Results	DF	PQL	Adj.PQL
Extractable TPH C9-C36		430	1.0	75	71
O-Terphenyl		73%			

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REPORT OF ANALYTICAL RESULTS

Client: Erin Pike
 Acadia Environmental Technology
 48 Free Street
 Portland, ME 04101

Lab Sample ID: SB6883-001
Report Date: 12/2/2008
PO No.:
Project: Commercial Street

Sample Description	Matrix	Filtered	Date Sampled	Date Received									
US-1	AQ	No(Total)	12/01/2008	12/01/2008									
Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
ARSENIC	0.0083	mg/L	0.0080	1	0.008	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	
CADMIUM	U 0.0100	mg/L	0.0100	1	0.01	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	
CHROMIUM	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	
COPPER	U 0.0250	mg/L	0.0250	1	0.025	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	
LEAD	0.008	mg/L	0.005	1	0.005	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	
NICKEL	U 0.0400	mg/L	0.0400	1	0.04	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	
SILVER	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	
ZINC	0.0478	mg/L	0.0250	1	0.025	EPA 200.7	12/2/08	DWM	EPA 200.7	12/2/08	RCT	YL02ICW0	

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Acadia Environmenta
Project: 053-138 Commercial Street
PO No:
Sample Date: 12/04/08
Received Date: 12/04/08
Extraction Date: 12/04/08
Analysis Date: 05-DEC-2008 13:00
Report Date: 12/06/2008
Matrix: WATER
% Solids: NA

Lab ID: SB6965-1
Client ID: WS-2
SDG: SB6965
Extracted by: CB
Extraction Method: SW846 3510
Analyst: KGT
Analysis Method: SW846 M8015B
Lab Prep Batch: WG58771
Units: ug/L

Compound	Flags	Results	DF	PQL	Adj.PQL
Extractable TPH C9-C36		210	1.0	75	71
O-Terphenyl		70%			

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REPORT OF ANALYTICAL RESULTS

Client: Erin Pike
 Acadia Environmental Technology
 48 Free Street
 Portland, ME 04101

Lab Sample ID: SB6965-001
 Report Date: 12/5/2008
 PO No.:
 Project: 053-138 Commercial Street

Sample Description	Matrix	Filtered	Date Sampled	Date Received									
WS-2	AQ	No(Total)	12/04/2008	12/04/2008									
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	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	
CADMIUM	U 0.0100	mg/L	0.0100	1	0.01	EPA 200.7	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	
CHROMIUM	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	
COPPER	U 0.0250	mg/L	0.0250	1	0.025	EPA 200.7	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	
LEAD	U 0.005	mg/L	0.005	1	0.005	EPA 200.7	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	
NICKEL	U 0.0400	mg/L	0.0400	1	0.04	EPA 200.7	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	
SILVER	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	
ZINC	U 0.0250	mg/L	0.0250	1	0.025	EPA 200.7	12/4/08	EAM	SW846 3010	12/4/08	RCT	YL04ICW0	

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Acadia Environmenta
Project: 053-138 Commercial Street
PO No:
Sample Date: 12/08/08
Received Date: 12/08/08
Extraction Date: 12/08/08
Analysis Date: 08-DEC-2008 19:31
Report Date: 12/09/2008
Matrix: WATER
% Solids: NA

Lab ID: SB7040-1
Client ID: WS-3
SDG: SB7040
Extracted by: CB
Extraction Method: SW846 3510
Analyst: KGT
Analysis Method: SW846 M8015B
Lab Prep Batch: WG58907
Units: ug/L

Compound	Flags	Results	DF	PQL	Adj.PQL
Extractable TPH C9-C36	U	71	1.0	75	71
O-Terphenyl		73%			

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REPORT OF ANALYTICAL RESULTS

Client: Erin Pike
 Acadia Environmental Technology
 48 Free Street
 Portland, ME 04101

Lab Sample ID: SB7040-001
Report Date: 12/9/2008
PO No.:
Project: 053-138 Commercial Street

Sample Description	Matrix	Filtered	Date Sampled	Date Received									
WS-3	AQ	No(Total)	12/08/2008	12/08/2008									
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	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	
CADMIUM	U 0.0100	mg/L	0.0100	1	0.01	EPA 200.7	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	
CHROMIUM	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	
COPPER	U 0.0250	mg/L	0.0250	1	0.025	EPA 200.7	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	
LEAD	U 0.005	mg/L	0.005	1	0.005	EPA 200.7	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	
NICKEL	U 0.0400	mg/L	0.0400	1	0.04	EPA 200.7	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	
SILVER	U 0.0150	mg/L	0.0150	1	0.015	EPA 200.7	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	
ZINC	0.0620	mg/L	0.0250	1	0.025	EPA 200.7	12/9/08	EAM	EPA 200.7	12/8/08	DWM	YL08ICW0	