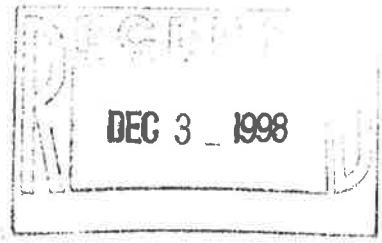
#1352



UST CLOSURE ASSESSMENT

PROVIDENCE GAS-GAS SUPPLY DIVISION
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

ID# 1353

Prepared by:

Hoffman Engineering Inc.
North Kingstown, Rhode Island
(401) 294-9032

Robert L. Hoffman, P.E.

September 1998

Facility Name:	Providence Gas Company/Gas Supply Division Building #2 642 Allens Avenue Providence, RI
Contact Name:	Ed Bolduc, Facility Manager
Facility ID:	# 1352
Project:	Closure-in-Place of one 2,500 gallon diesel underground storage tank (UST)
Contractor:	ER Pickett Company 836 Eddy Street Providence, RI

PROPERTY DESCRIPTION

The subject site, located at 642 Allens Avenue, is situated in the southeastern section of Providence, Rhode Island. The Providence Gas facility is located adjacent to the Harbor Junction Wharf and the Providence River. The Site is occupied by the Providence Gas Company. Access to the Site is via Allens Avenue and is restricted via fencing and security. A site locus map is provided as Figure 1.

Several industrial warehouse buildings, overhead natural gas piping, tanks, and associated pavement comprise the Providence Gas site.

The surrounding area north, south and west the Site is comprised primarily of chemical and petroleum storage facilities, as well as other industrial properties; the Providence River abuts the Site to the East. Municipal water and sewer service the Site.

A 2,500 diesel underground storage tank (UST) was located beneath the concrete floor of Building #2. This tank was used to store diesel fuel for the diesel engine utilized to run a compressor. Figure 2 depicts Site features.

TOPOGRAPHY

Based on U.S. Geological Survey mapping (Providence-RI Quadrangle, 1975), the Site is situated approximately 10 feet above mean sea level (MSL). The Site topography is relatively flat. Regional topography in the surrounding area slopes gradually in an easterly direction toward the Providence River, which abuts the facility.

FIELD ACTIVITIES

UST closure activities for a 2,500 gallon diesel underground storage tank (UST) commenced on August 11, 1998. UST closure activities were performed by ER Pickett Company of Providence, RI. ER Pickett personnel pumped the remaining product (approximately 1,000 gallons) from tank into a newly installed aboveground tank located behind the building. Due to its location beneath the building, permission to close the tank in-place was granted by RIDEM via a letter dated July 22, 1998. Associated piping, including the remote fill and vent, were removed by ER Pickett.

On August 11, 1998, ER Pickett Company cut and cleaned the tank. A small amount of residual sludge was removed from the tank during cleaning. This material was placed in one 55-gallon drum and transported to the Providence Gas facility at 477 Dexter Street to be shipped off-site with residual product and contaminated materials generated concurrently from the UST removals at that facility. A copy of the disposal slip is attached. The tank was filled with 10 cubic yards of concrete slurry on September. A copy of the concrete slips is attached.

Mr. Pat Hogan was the RIDEM inspector for the project.

UST DESCRIPTION & LOCATION

According to RIDEM records, the subject tank, a 2,500 gallon single-wall steel tank which utilized a remote fill equipped with spill containment was installed in 1984. The tank utilized a remote fill and vent which were surrounded by concrete pads. The tank was located beneath the concrete floor, approximately 16 feet in from the western edge of the building.

The tank had been utilized to store diesel fuel for the diesel engine utilized for the compressor.

UST CONDITION

The tank appeared to be in good condition with no apparent holes detected. No water had leaked into the tank.

SOIL DESCRIPTION & CONDITION

The subject UST was set approximately 2 feet below grade beneath approximately 1 foot of concrete and 1 foot of soil.

SOIL SCREENING

Excavated soils were screened in the field utilizing a ThermoEnvironmental Instrument Model 580B portable organic vapor meter (OVM), equipped with a 10.6 eV photoionization detector (PID) lamp and calibrated to an isobutyl propane standard. Samples were collected in glass jars, 3/4 full and capped. The jars were then agitated just prior to headspace measurement. Instrument readings provide total VOCs in parts per million volume (ppmv).

Soils samples collected from the tank were screened and no detectable VOC levels were detected in any of the soil samples.

There was no visual or olfactory evidence (i.e. staining, odor, etc.) of leakage from the tank or spillage in the visible soils surrounding the upper portion of the tank. No visual or olfactory evidence (i.e. staining, odor) of spillage was noted on the concrete surrounding the previous fill and vent.

With RIDEM's approval, no core soil samples were collected from beneath the tank, based on the good condition of the tank and the high water table in the area. Groundwater samples were obtained for analytical testing as discussed below.

MONITORING WELLS

Two existing monitoring wells were located in the vicinity of the UST. One monitoring well is located approximately 12 feet west of the west side of the building where the fill and vent pipes exited the building and one monitoring well was located approximately 3 feet north of the north.

Groundwater samples were collected from the two monitoring wells using factory wrapped, disposable polyethylene bailers. A bailer was lowered halfway into the standing water column and a static sample removed. This sample was inspected for the presence of free product. No floating product, or visual sheen or odor, was noted in any of the groundwater samples collected from the monitoring wells.

Three times the standing volume of water was evacuated from each well. Withdrawing three volumes is the recommended EPA procedure to develop a well and obtain a representative groundwater sample. To avoid cross contamination between wells, a separate bailer was dedicated to each well and the groundwater level indicator carefully decontaminated between measurements. Samples were placed in clean, laboratory bottles and packed in an ice chest for transport under chain-of-custody to the testing laboratory.

- **Analytical Results**

The two groundwater samples were transported on ice under chain-of-custody to RI Analytical Laboratories , Inc. (RIAL) in Warwick, Rhode Island and submitted for analytical testing. Both

samples were analyzed for Total Petroleum Hydrocarbons, including polyaromatic hydrocarbons (PAHs) by EPA Method 8100.

Analytical results indicated TPH levels in MW-1 at 350 ug/l and MW-2 at 200 ug/l; non-detectable levels of PAHs were indicated in both samples.

SUMMARY

Closure activities for a 2,500 gallon No. 2 diesel UST commenced on August 11, 1998. Due to placement of the tank beneath the concrete of the site building, RIDEM granted permission to close the tank in-place. Cleaning, cutting, and filling activities took place on August 11, 1998. Based on the good condition of the tank; the lack of water in-flow into the tank, even in the presence of a very high water table; no core soil samples were warranted. Approximately 10 cubic yards of flow fill concrete was used to fill the tank.

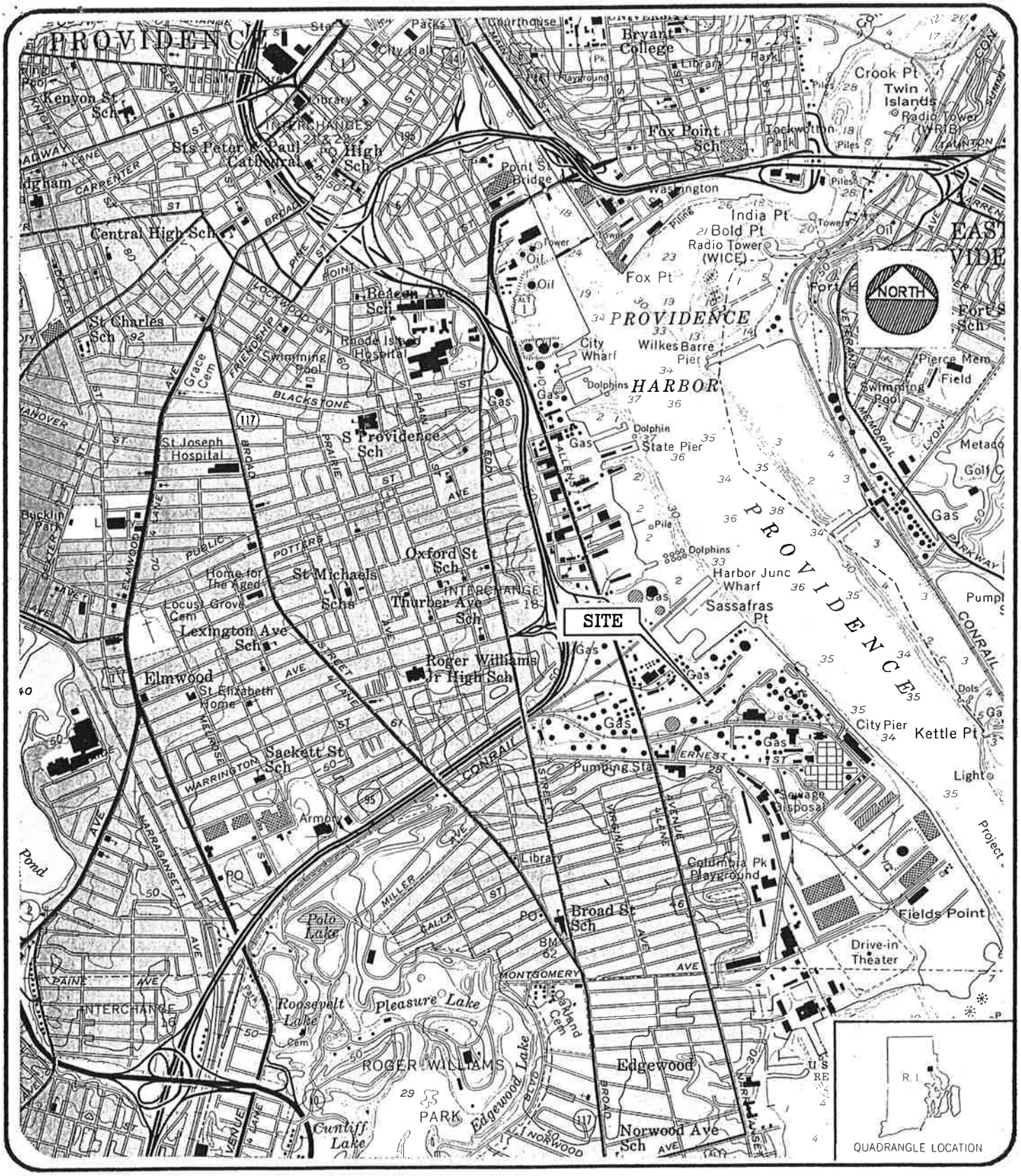
Analytical results of groundwater samples, collected from existing monitoring wells in the vicinity of the USTs, indicated only trace levels of TPH and no detectable PAH levels. These levels are indicative of the industrial setting in which the facility is located and not of a UST release.

CONCLUSIONS & RECOMMENDATIONS

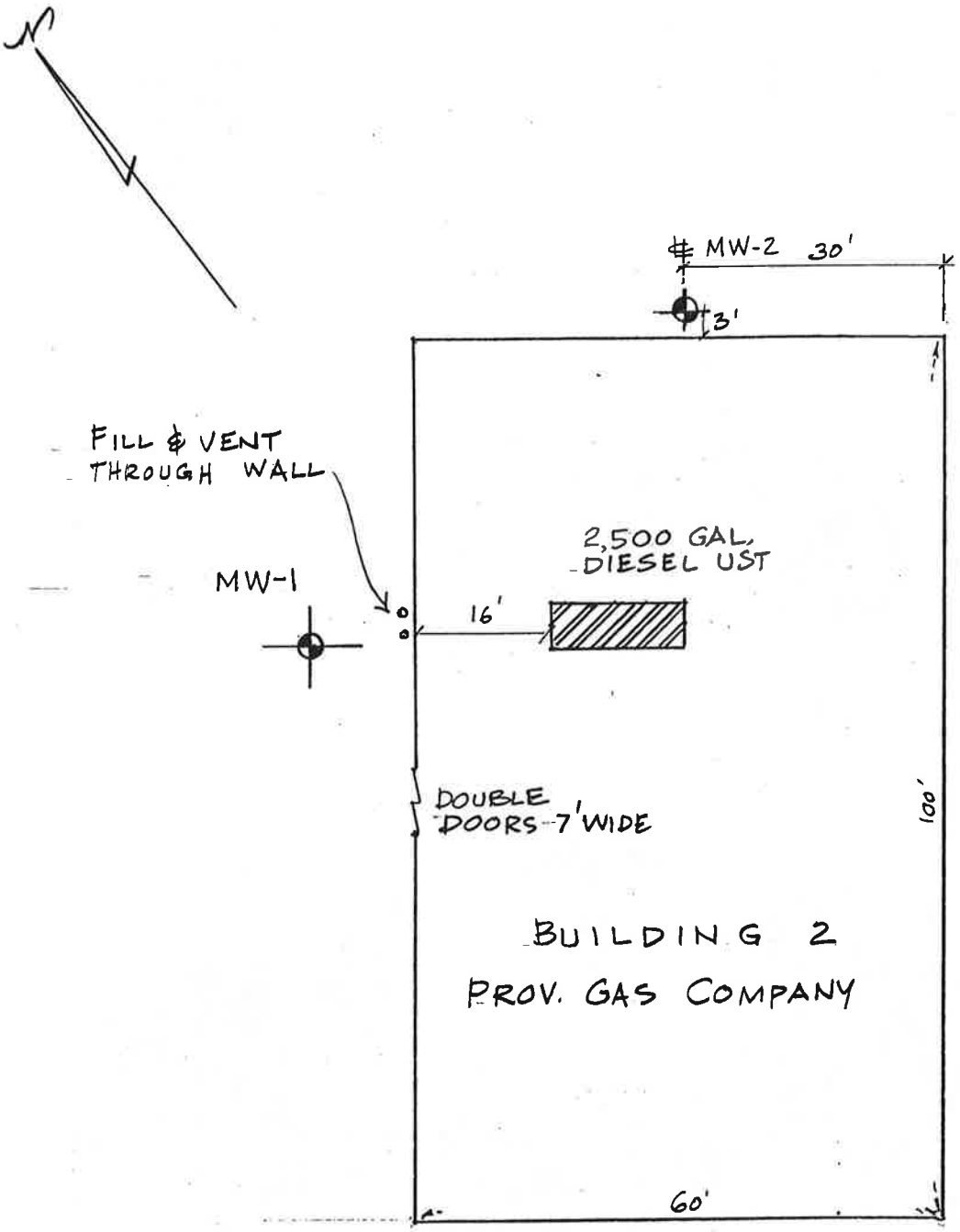
Based on field observations, field screening results, and information gathered during the UST closure, it is HEI's opinion that there is no evidence that environmental impact has occurred from failure or leakage of the subject tank and no further investigation or remediation is warranted at this time.

LIMITATIONS

The work reported herein was conducted to determine the presence of subsurface contamination as a result of leakage/spillage from the subject underground storage tank. The information presented in this report is based on visual observations and soil screening conducted by HEI personnel in the field during the closure activities. If additional information becomes available, portions of this report and opinions stated may require modifications. The potential presence of subsurface contamination (if any) from other sources, both on and off-site, were not addressed or investigated, as part of this Closure Assessment.



HEI HOFFMAN ENGINEERING INC. NORTH KINGSTOWN, R.I.	LOCUS PLAN PROVIDENCE GAS CO. – CLOSURE–IN–PLACE 642 ALLENS AVENUE PROVIDENCE, RHODE ISALND	Scale: 1"=2000' Date: 10–22–98 By: BERGDEN FIGURE 1



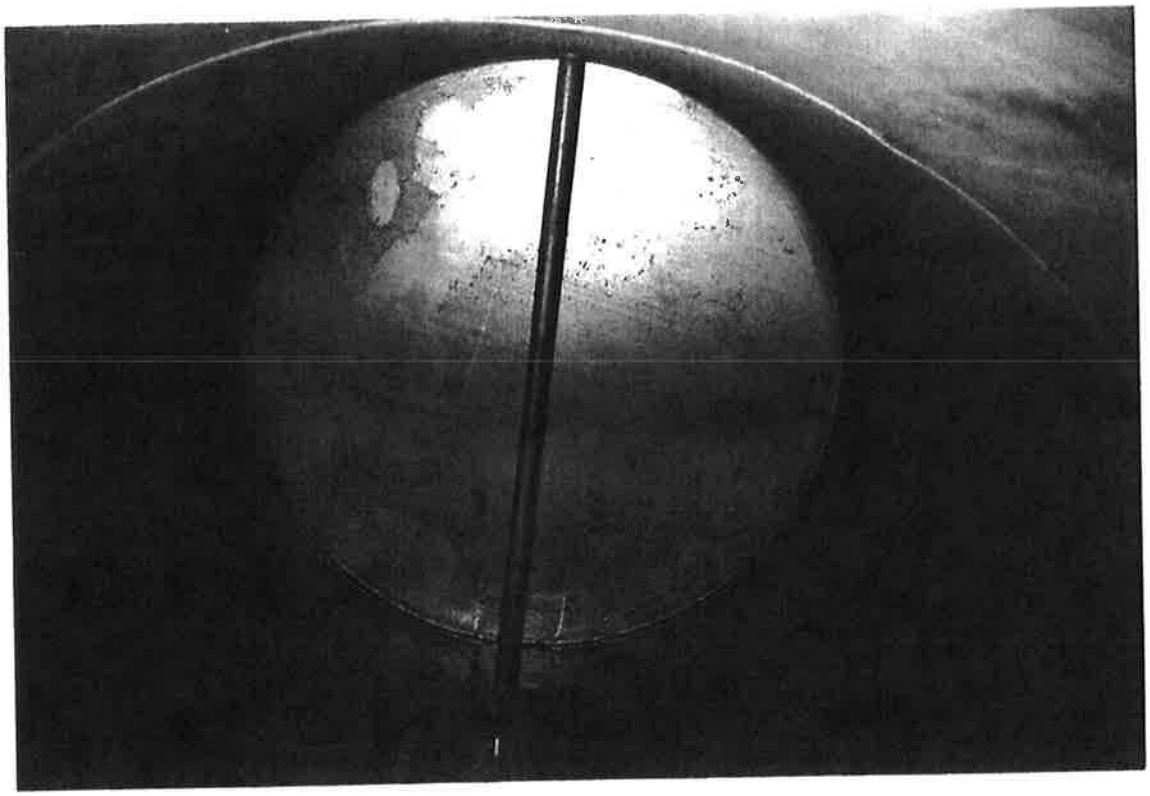
KEY

GROUNDWATER MONITORING WELL

HEI HOFFMAN ENGINEERING INC. NORTH KINGSTOWN, R.I.	SITE PLAN PROVIDENCE GAS CO. – CLOSURE-IN-PLACE 642 ALLENS AVENUE PROVIDENCE, RHODE ISALND	Scale: N.T.S. Date: 10-22-98 By: BERGDEN FIGURE 2

Site Photographs - RLH/JS

P-1 UST area prior to cleaning and filling.



P-2 2,500 diesel UST after cleaning.

R.I. Analytical

Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
Attn: Mr. Robert Hoffman
640 Ten Rod Road
North Kingstown, RI 02852

Date Received: 8/28/98
Date Reported: 9/04/98
P.O. #:
Work Order #: 9808-06865

DESCRIPTION: PROVIDENCE GAS, ALLENS AVE

Subject sample(s) has/have been analyzed by our laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies. The specific methodologies are listed in the methods column of the Certificate Of Analysis

If you have any questions regarding this work, or if we may be of further assistance, please contact us.

Approved by:

James E. Mich
Vice President

Michael J. Hobin
Quality Control Coordinator

enc: Chain of Custody

41 Illinois Avenue, Warwick, RI 02888
Tel: (401) 737-8500 Fax: (401) 738-1970

950 Boylston Street, Unit 102, Newton Highlands, MA 02161
Tel: (617) 965-5133 Fax: (617) 965-5624

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
Date Received: 8/28/98
Work Order # 9808-06865

Approved by: _____
R.I. Analytical

Sample #: 001
SAMPLE DESCRIPTION: MW-1 8/28/98

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
TPH GC/FID	350	80	ug/l	SW846 8100M	9/04/98 12:28	JRN
POLYNUCLEAR AROMATIC HYDROCARBONS						
Naphthalene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
2-Methylnaphthalene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Acenaphthylene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Acenaphthene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Dibenzofuran	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Fluorene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Phenanthrene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Anthracene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Fluoranthene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Pyrene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Benzo(a)anthracene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Chrysene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Benzo(b)fluoranthene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Benzo(k)fluoranthene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Benzo(a)pyrene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Indeno(1,2,3-cd)pyrene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Dibenzo(a,h)anthracene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
Benzo(g,h,i)perylene	<5	5	ug/l	SW-846 8100	9/04/98 12:28	JRN
SURROGATE			RANGE	SW-846 8100	9/04/98 12:28	JRN
2-Fluorobiphenyl	84		%	SW-846 8100	9/04/98 12:28	JRN

Sample #: 002
SAMPLE DESCRIPTION: MW-2 8/28/98

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
TPH GC/FID	200	80	ug/l	SW846 8100M	9/04/98 13:09	JRN
POLYNUCLEAR AROMATIC HYDROCARBONS						
Naphthalene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
2-Methylnaphthalene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Acenaphthylene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Acenaphthene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Dibenzofuran	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Fluorene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Hoffman Engineering, Inc.
Date Received: 8/28/98
Work Order # 9808-06865

Approved by: _____
R.I. Analytical

Sample #: 002
MW-2 8/28/98

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	ANALYZED DATE/TIME	ANALYST
Phenanthrene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Anthracene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Fluoranthene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Pyrene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Benzo(a)anthracene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Chrysene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Benzo(b)fluoranthene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Benzo(k)fluoranthene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Benzo(a)pyrene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Indeno(1,2,3-cd)pyrene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Dibenzo(a,h)anthracene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
Benzo(g,h,i)perylene	<5	5	ug/l	SW-846 8100	9/04/98 13:09	JRN
SURROGATE			RANGE	SW-846 8100	9/04/98 13:09	JRN
2-Fluorobiphenyl	84		%	SW-846 8100	9/04/98 13:09	JRN

White Copy Original (Accompanies Samples) | Yellow Copy — Collector | Pink Copy — Customer's Copy

R. I. ANALYTICAL LABORATORIES, INC.
41 Illinois Avenue · Warwick, Rhode Island 02888
(401) 737-8500 Fax (401) 738-1970

Date Collected	Time Collected	Sample ID	Sample Type	8166 TPH Fuc. PAH's	Remarks	Total # of Cont.
8-28-98		MW-1	Water	X		1
		MW-2	"	X		1
					Total Numbers of Cont.	2

Company Name: HEI | P.O. #

Address:

City / State / Zip:

Phone / Fax:

Contact: BOB

Collected by: J. SEKAPIGLIA

Turn Around Time: ☑ Normal ☐ Rush _____

RIAL: 6065

☐ — Pick-Up Only

☐ — Sampled _____ Hours

☑ — Shipped on Ice

Comments:

PROV. GAS. Allen Ave

E. R. DICKETT Project

UST Filled in PLACE

Relinquished by:	Date / Time	Received by:
[signature]	8/28/98 1226	[signature]
Relinquished by:	Date / Time	Received by:
Relinquished by:	Date / Time	Received by:

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
UNDERGROUND STORAGE TANK SECTION
235 Promenade Street
Providence, Rhode Island 02908
(401) 277-2797

UST ID 1352

LUST ID _____

CLOSURE INSPECTION SHEET
FOR UNDERGROUND STORAGE FACILITIES

On the AUGUST 12, 1998 (date) I, PATRICK HOGAN (inspector)

witnessed the permanent closure of the following underground storage tanks owned/operated by

PROVIDENCE GAS COMPANY (BLDG. # 2) (owner/operator)

and located at

642 ALLENS AVENUE, PROVIDENCE (address)

TANK ID	VOLUME	STORED MATERIAL	TANK STATUS (F = Filled / R = Removed)
1	2000 gallon	DIESEL	(F)

Signature: Pat Hogan

Title: SENIOR SANITARY ENGINEER
Underground Storage Tank Section/Leaking Underground Storage Tank Section
Department of Environmental Management

✓ A closure assessment must be submitted to the Division of Site Remediation, Leaking Underground Storage Tank Section within 30 working days.

NOTE: **This is not a document to approve or certify that tanks are safe or clean to transport.**

CLOINSPR.MST

MAIN OFFICE—PAWTUCKET
75 School Street
27-0400

EAST GREENWICH OFFICE
400 Frenchtown Road
385-4010

PRM CONCRETE CORPORATION

Mailing Address:
P.O. Box 2190—Darlington Station Pawtucket, Rhode Island 02861

PLANT LOCATIONS:
Pawtucket
East Greenwich
Cranston
North Smithfield

DISPATCHER
724-1010
884-6600

y cause eye or skin injury. Contains Portland cement. Freshly mixed
ment, mortar, concrete, or grout may cause skin injury.
TAKE THESE PRECAUTIONS:
Avoid all contact with eyes.
Wear rubber boots and gloves, and avoid prolonged contact directly with skin or through porous materials.
In case of contact with skin or eyes, FLUSH THOROUGHLY WITH WATER.
If irritation persists, get medical attention promptly.
Keep children away.
SAFETY DATA SHEETS AVAILABLE UPON REQUEST

Drivers are not permitted to add water to the mix to exceed the designated slump. Purchaser shall assume the risk and any liability in the event additional water is requested. Company rules require that all jobsite water additions be recorded on this ticket. _____ gals.

The purchaser is required to provide safe and legal access to the discharge area. Delivery will be made beyond the curb line only upon purchaser's authorization and assumption of liability for any damage to curbs, driveways, sidewalks, or other property occurring from such delivery.

By: _____
CUSTOMER'S SIGNATURE

STOMER #	SOLD TO	PROJECT #	P.O. #
5025	PICKETT, E R		11409

LIVERY ADDRESS	ZONE #	INTENDED USE	ORDERED BY
LLENS AVE., PROV.	17	LCFA	

TRUCTIONS	MAX. SLUMP
PROVIDENCE GAS-GO STRAIGHT THRU GATE-1ST RIGHT	4.00

QTY.	CUMULATIVE QUANTITY	ORDER QUANTITY	MIX CODE	DESCRIPTION	UNIT PRICE	EXTENSION	TAX CODE
10.00	10.00	10.00	1012	FILLCRETE CHUTE	CY	2	
				Mix ID: 1012			

LOADING TIME	ARRIVE JOB	START UNLOADING	FINISH UNLOADING	LEAVE JOB	ARRIVE PLANT
7:30	7:50	8:05	10:15	:	:

ADDITIONAL UNLOADING TIME WILL BE BILLED AT PREVAILING RATE.

SUB TOTAL
TAX
TICKET TOTAL

CUSTOMER

10/9/98 MADE COPY FOR DRAWER & FILE

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PETROLEUM CLEANUP PROGRAM

Hartford, CT 06102-5066

Please type

FOR STATE USE ONLY

UNIFORM HAZARDOUS WASTE MANIFEST

1. EPA/State ID Number 39784

2. Page 1 of 1

Information in the shaded areas is not required by Federal law, but may be required by State law.

3. Generator's Name and Mailing Address
PROVIDENCE [illegible]
100 [illegible] PROVIDENCE, RI 02903

4. Generator's Phone (401) 272-5040 ATTN: ED ROLDUP

5. Transporter 1 Company Name: UNITED INDUSTRIAL SERVICES

6. US EPA ID Number: C T D 0 2 1 8 1 6 8 8 9

7. Transporter 2 Company Name: UNITED INDUSTRIAL SERVICES

8. US EPA ID Number: C. T. D 0 2 1 8 1 6 8 8 9

9. Designated Facility Name and Site Address
UNITED OIL RECOVERY INC.
135 SPACEY AVENUE
MERIDEN, CT 06451

10. US EPA ID Number: C T D 0 2 1 8 1 6 8 8 9

F. Transporter Phone ( )

G. State Facility's ID (Not Required) 203 238 6745

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE COMBUSTIBLE LIQUID NOS COMBUSTIBLE LIQUID, NA1993, PGIII	0.01	D, M	XXX55	G	EPA NONE STATE R000
b. STATE REGULATED WASTE NONE, NONE	0.01	D, M	XX.1.1.0	G	EPA NONE STATE R000
c.					EPA STATE
d.					EPA STATE

J. Additional Descriptions for Materials Listed Above
a. FUEL OIL R1HW R000
b. NON HAZARDOUS SPENT SOIL MATERIAL R1HW R000

K. Handling Codes for Wastes Listed Above

Interim	Final	Interim	Final
a. 802	T50	c.	
b. 801		d.	

15. Special Handling Instructions and Additional Information
000204H EMERGENCY RESPONSE GUIDE #128 EMERGENCY PHONE # (203)238-6745
000130L EMERGENCY RESPONSE PHONE #(203)238-6745

Point of Departure:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State laws and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
X Michael V. Rose	X [signature]	09	23	98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Thomas Ryan	Thomas Ryan	09	23	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
DANIEL J. MENARD	Daniel J. Menard	09	24	98

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Malachi Cochran	[signature]	09	24	98

EPA Form 8700-22 (Rev. 8/91) Form Approved OMB No.2050-0039.

GENERATOR — TRANSPORTER — FACILITY

COPY 1: FACILITY MAILS TO DESTINATION STATE

CT F0739084

COPY 1: FACILITY MAILS TO DESTINATION STATE