

#1352



**UST CLOSURE ASSESSMENT**  
**PROVIDENCE GAS COMPANY**  
**624 ALLENS AVENUE**  
**PROVIDENCE, RHODE ISLAND**

RIDEM Facility ID 01352

Prepared by:

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A handwritten signature in black ink, appearing to read "R. L. Hoffman", written over a horizontal line.

Robert L. Hoffman, P.E.

October 1995

**Site:** Providence Gas Company  
642 Allens Avenue  
Providence, Rhode Island

**Contact:** Edward Bolduc

**Facility ID:** 01352

**Project:** Excavation and removal of two (2) 4,000 gallon underground gasoline storage tanks (USTs)

**Contractor:** E.R. Pickett  
836 Eddy Street  
Providence, RI  
(401) 781-3455

**Property Description:** The subject site, located at 642 Allens Avenue, Providence, RI, is a centrally located portion of the Providence Gas Company, Supply Division, facility. The facility extends from Allens Avenue to the Providence River. The subject underground storage tanks were situated approximately 500' east of Allens Avenue and 1,500 feet west of the Providence River.

Site features include a single story natural gas pump house building, asphalt parking, and above-ground natural gas storage vessels. A 30" overhead gas pipeline connect the pumphouse and storage vessels. Railroad sidetracks traverse the facility in an east to west direction abutting the area of the tank excavation to the south. Site access is restricted by a chain link fence and security.

The subject underground storage tanks (USTs) and associated single pump dispenser were located along the northern side of the natural gas pump house building.

U.S. Geologic Survey Mapping (Providence, RI Quadrangle) shows the subject property set at an elevation of about 25 feet above mean sea level. The topography of the subject site is generally flat with no discernible change in grade. Regionally, topography slopes towards the Providence Harbor to the east.

The property and surrounding area is serviced by public sewer and water. A site locus map is presented as Figure 1.

**Groundwater Description:** Groundwater in the vicinity of the subject property is classified by RIDEM as GB which assumes it is not suitable for drinking without treatment. Groundwater flow often reflects local topography and is influenced by surface body waters. As such, groundwater is expected to flow in an easterly direction towards the Providence Harbor.

No subsurface explorations were conducted to confirm this inference. It should be noted that localized groundwater flow can be affected by such parameters as seasonal groundwater table fluctuation, private wells, surface water bodies, bedrock and regional topography.

**UST Description & Background:** The subject USTs, two, 4,000 gallon single-wall steel gasoline tanks, were installed in 1974 and utilized for vehicle refueling. The tanks were precision tested by E.R. Pickett on August 17, 1994 and found to be "tight". A copy of the test results are attached.

The tank was fitted with a suction type pump and utilized a single pump dispenser equipped with a 1.5" pipe, supply and return system. The dispensing pump was located approximately 14' from the northwest corner of the building. The USTs (Tank 1 and 2) were located perpendicular to the side of the building, at a distance of approximately 11.5' and 10', respectively. (See Figure 2).

**Field Activities:** UST removal activities were performed on October 5, 1995. UST tank excavations and removal was performed by E.R. Pickett Company, Inc. and witnessed by HEI. Mr. Patrick Hogan was the RIDEM Inspector for the project.

Following inspection, the tank was transported off-site for final cleaning and then sent for scrap recycling. The tank excavation was then back-filled.

**UST Conditions:** Both tank appeared to be in good condition. No holes or other evidence of product release was noted. The associated piping was found to be in good condition with no evidence of leakage or failure. Photographs of the tanks are presented as Figure 3.

There were no obvious signs of leakage or failure surrounding the tank. No evidence of leakage was noted around and beneath the pump dispenser.

**Soils:** Both tanks were set approximately 4 feet below grade. Soils consisted of fine silty sand to a depth of 10 feet. Groundwater was not encountered in the excavation.

**Soil Screening:** Excavated soils were screened in the field with a ThermoEnvironmental Instrument Model 580B portable organic vapor meter (OVM), equipped with a 10.6 eV lamp

and calibrated to an isobutyl propane standard. Samples were collected in glass jars,  $\frac{3}{4}$  full and capped. The jars were then agitated just prior to headspace measurement. Instrument readings provide total VOCs in parts per million (ppm).

Soils were screened at the bottom of each tank grave and at 3' intervals on the east and west sides of each tank. Additionally, soils were screened under the dispensing pump. Soils screened in both tank graves exhibited non-detectable OVM readings.

Soils screened in the area of the dispensing pump exhibited initial readings of 179 ppm. The readings were a result of minor spillage. In order to remediate the area, the contractor excavated approximately 2 yards of soils. Confirmation readings with the OVM indicated non detectable levels after the removal of the 2 cubic yards.

These low OVM readings in the dispensing pump area most likely are due to minor spillage during pump operations, and not long term pump leakage. These levels are not considered significant.

**Laboratory Analysis:** Since no significant OVM readings were detected in the soils screened, no analytical testing was warranted.

**Conclusions:** Two 4,000 gallon gasoline underground storage tanks and associated single pump dispenser were excavated and removed from the subject site. Soils were screened with an OVM. Evidence of minor spillage was observed in the area of the dispensing pump. Approximately 2 yards of contaminated soil was removed and subsequent screening achieved non-detectable OVM readings. This minor spillage did not warrant further excavation of soils or further investigations. Analytical testing was not warranted due to insignificant OVM readings in the tanks excavation.

Based on these field observations and information gathered during the UST closure, it is HEI's opinion that no significant environmental impact has occurred from tank failure or leakage and further investigation is not warranted.

**Limitations:** The work reported herein was conducted to determine the presence of subsurface contamination as a result of leakage 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. The potential presence of subsurface contamination (if any) from other sources, both on and off-site, were not addressed as part of this Closure Assessment.



**HEI**

HOFFMAN ENGINEERING INC.  
NORTH KINGSTOWN, RHODE ISLAND

**LOCUS PLAN**

UST CLOSURE

PROVIDENCE GAS COMPANY

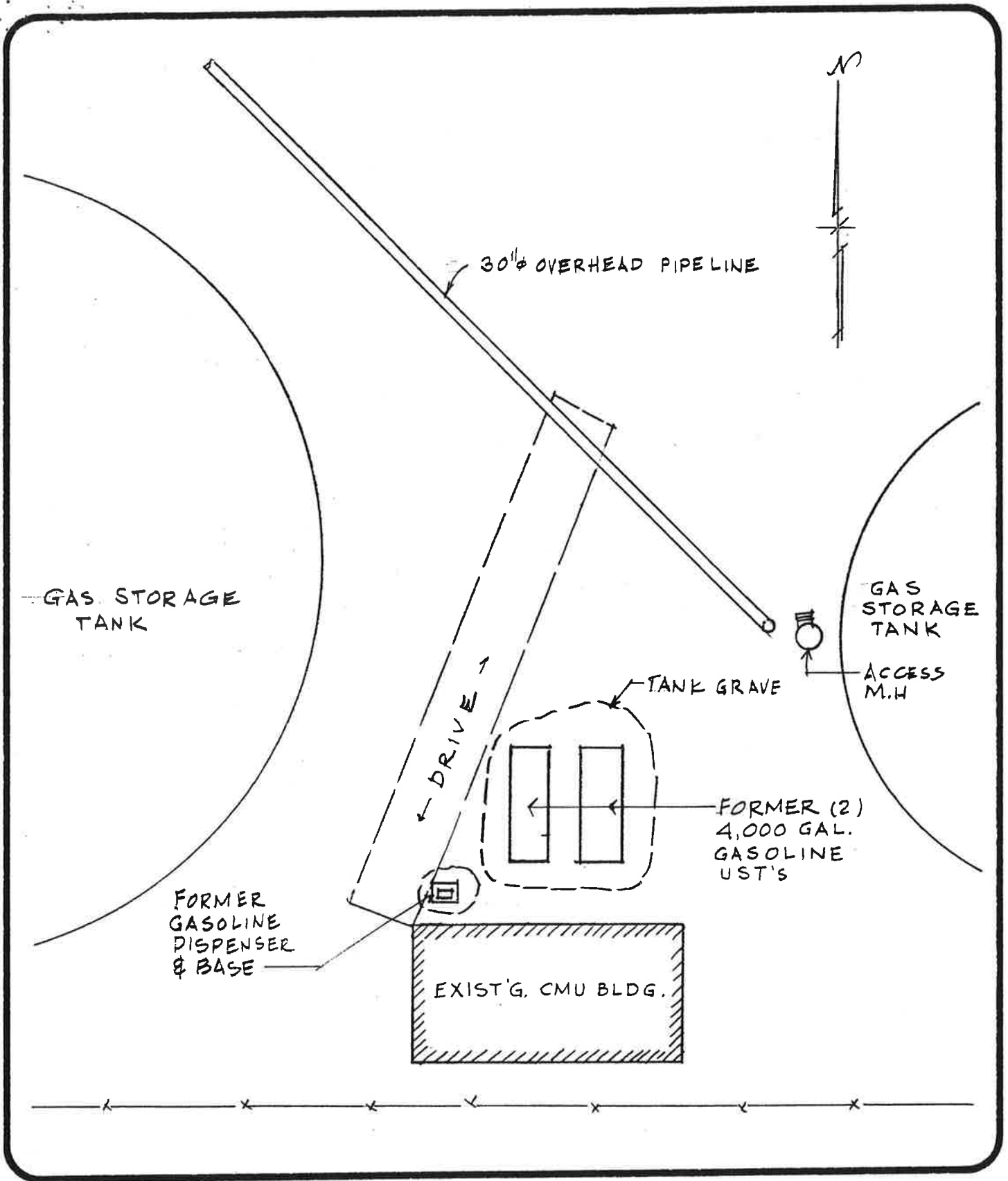
642 ALLENS AVENUE PROVIDENCE, R. I.

Scale: 1"=2000'

Date: OCT. 11, 1995

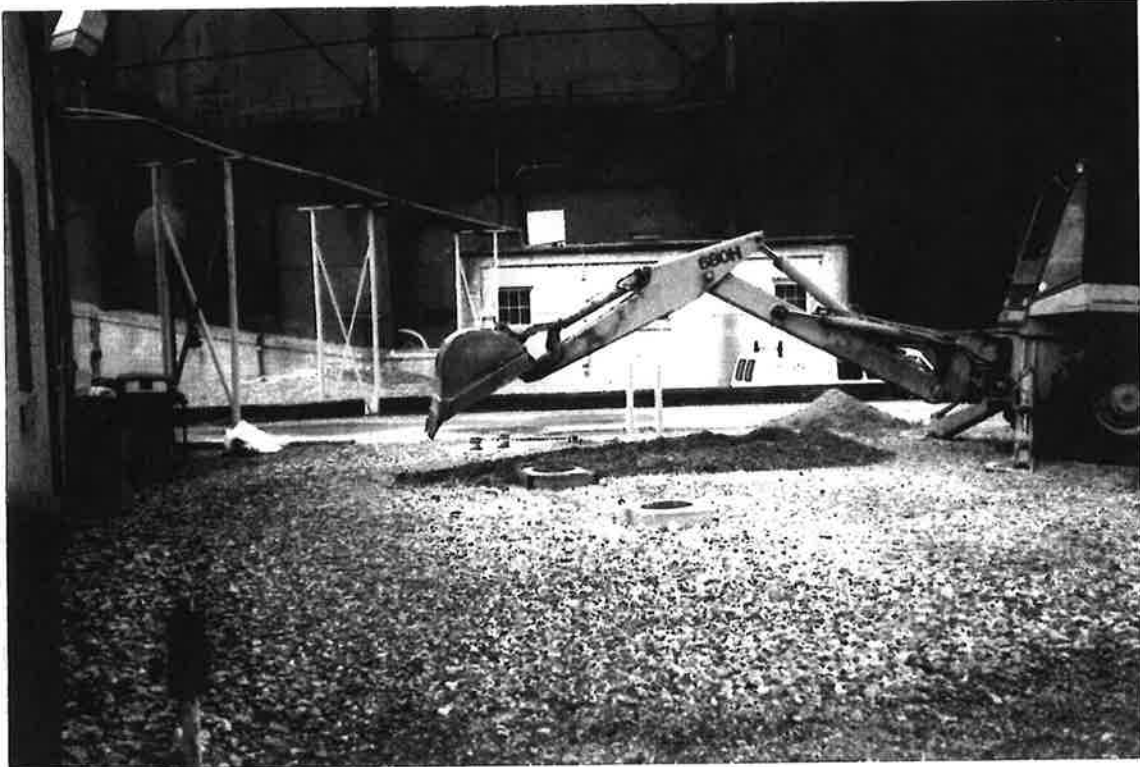
By: C. B.

**FIGURE 1**



<b>HEI</b> HOFFMAN ENGINEERING INC. NORTH KINGSTOWN, RHODE ISLAND	<b>SITE PLAN</b> UST CLOSURE PROVIDENCE GAS COMPANY 642 ALLENS AVENUE PROVIDENCE, R. I.	Scale: AS NOTED
		Date: OCT. 11, 1995
		By: C. B.
		<b>FIGURE 2</b>

## Site Photographs - RLH/JS



Area of tank and pump prior to excavation.



Excavated Tank #1 in good condition.

## Site Photographs - RLH/JS



Excavated Tank #2 in good condition.



Tank grave