

REMEDIAL ACTION REPORT FOR

SHORT TERM MEASURE

PERFORMED AT THE

PROVIDENCE GAS COMPANY

642 ALLENS AVENUE

PROVIDENCE, RHODE ISLAND

PREPARED FOR:

PROVIDENCE GAS COMPANY

PREPARED BY:

RESOURCE CONTROLS

*(an affiliate of Resource Control Associates, Inc.
and*

Resource Control's Remedial Services, Inc.)

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JUNE 14, 1996

EOIPROV0003598

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PERFORMED AT THE PROVIDENCE GAS COMPANY
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND**

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1.00 INTRODUCTION AND PURPOSE

This report documents the activities performed and the site conditions encountered during performance of a short term remedial measure at the Providence Gas Company facility on 642 Allens Avenue, Providence, Rhode Island. A 10-inch diameter pipe was exposed at the northeast corner of the site near monitoring well RCA-4 during performance of the test pit program conducted in February and March, 1996 (see Figure 1, Short Term Measure Plan in Appendix A). It appeared that the pipe may have been acting as a preferential pathway for the release of oil to the Providence River. Based on our understanding of Site conditions at the time, the most appropriate action was deemed to be removal of the pipe, where it was accessible, conducting of a dye study to access the possible release pathway and plugging of the remainder of the pipe with concrete slurry.

The purpose of this action was to eliminate this pipe as a potential release migration pathway and thereby decrease the potential for oil to reach the Providence River.

2.00 SCOPE OF WORK

A Short Term Measure Work Plan was submitted to the Rhode Island Department of Environmental Management (RIDEM) and a Type A permit application was submitted to the Coastal Resources Management Council (CRMC) for approvals prior to initiation of activities. In the Plan, the activities proposed were as follows.

Resource Controls proposed to excavate and remove the length of pipe as accessible up to the fence line. The Plan did not include excavating north of the fence line due to the presence of a high-pressure natural gas pipeline located under the access road. The pipe to be excavated was believed to extend in a southerly direction from north of the fence line area toward the former separating tank (No. 18). Upon removal, the pipe was to be decontaminated, covered with 6 mil. polyethylene and left on site for disposal at a later date. Upon removal of the accessible pipe, standing water within the pipe that was not excavated would be removed via a vacuum truck and disposed of in accordance with applicable regulations. A fluorescent tracing dye would then be injected into the inground pipe to evaluate migration pathways. The excavation would then be backfilled with previously excavated soils from the site area. Prior to backfilling, the end of the pipe at the fence line would be covered with 6 mil. polyethylene as a temporary migration pathway barricade. Once the dye testing was complete, the pipe would be uncovered again and plugged with a concrete slurry to cut off flow through the pipe.

3.00 SHORT TERM MEASURE ACTIVITIES AND OBSERVATIONS

The following short term remedial activities were conducted on April 12 through April 14, 1996, after receipt of approval to proceed from RIDEM and CRMC. The Site Health and Safety Plan was modified for this project and followed during implementation.

An erosion/siltation control fence was installed around the perimeter of the work area prior to excavation, as required in the CRMC Assent Permit (see Figure 1, Short Term Measure Plan in Appendix A). Hay bales were toed into the ground and staked. The excavation was initiated approximately 18 feet south of the northern fence line using an excavator. The 10-inch diameter steel pipe was encountered at approximately five feet deep in a north to south orientation. The excavation was extended north following the pipe which was expected to extend towards the river. However, at approximately 13 feet south of the fence line, the pipe ended with a swing joint connecting to Cooling Tank (No. 17) at approximately four feet below grade. Further exploratory excavation to the north and west confirmed that the pipe ended at the tank.

Based on the conclusion that the pipe ended at the tank, excavation was resumed to expose and allow removal of the pipe as it extended southward. The soils encountered during excavation were visibly contaminated and exhibited a strong petroleum odor (See Photographs in Appendix B). Air monitoring was conducted using a photoionization detector and Draeger tubes. Air monitoring results at that time prompted an upgrade in personnel protection to Level C. The excavation proceeded in a southerly direction until a break in the pipe was discovered approximately at 60 feet south of the fence line. Sections of the pipe were removed. During the excavation and removal of the pipe, approximately 300 gallons of contaminated water was removed from the open excavation in a vacuum truck and disposed of off-site. A hole was created in Cooling Tank (No. 17) while removing the pipe. The hole was subsequently filled with slurry concrete prior to backfilling.

Fluorescent dye was not utilized as originally planned because actual site conditions were not as expected. The pipe did not extend to the river and therefore could not be explored in the proposed manner.

Exploratory excavation was performed further south and revealed the resumption of the pipe run after a gap of approximately five to 10 feet. Excavation and removal of the pipe was continued to approximately 90 feet south of monitoring well RCA-4 where further exploration was inhibited by an active water line. The soils in this vicinity were found to be relatively free of staining and exhibited no petroleum odors. The depth of the pipe at the end of the excavation was approximately 7.5 feet below grade. The pipe appeared to slope from north to south.

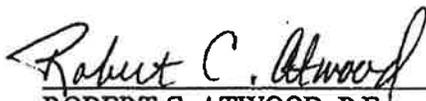
Another 10-inch steel blank flanged pipe was found approximately 84 feet south of monitoring well RCA-4 and was located alongside Separating Tank (No. 18). The pipe was removed and the sections of pipe were decontaminated and covered with 6 mil. polyethylene and stored on site pending disposal at a later date.

The trenches that were excavated were backfilled with the contaminated fill being placed in the excavation first and the cleaner fill being placed to grade. The surface of the excavated area was restored to its previous condition and elevation.

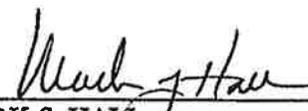
4.00 LIMITATIONS AND REPORT AUTHORIZATION

This report in total has been prepared on behalf of and for the exclusive use of Providence Gas Company. This report or any part thereof, may not be altered, used, relied upon or reproduced by any party without first obtaining written permission from Resource Controls.

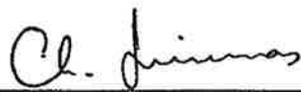
This report has been prepared and reviewed by the undersigned staff in accordance with Resource Controls' standard Quality Control Procedures.



ROBERT C. ATWOOD, P.E.
President



MARK S. HALL
Senior Environmental Scientist



SRINIVAS CHEELA
Project Environmental Engineer

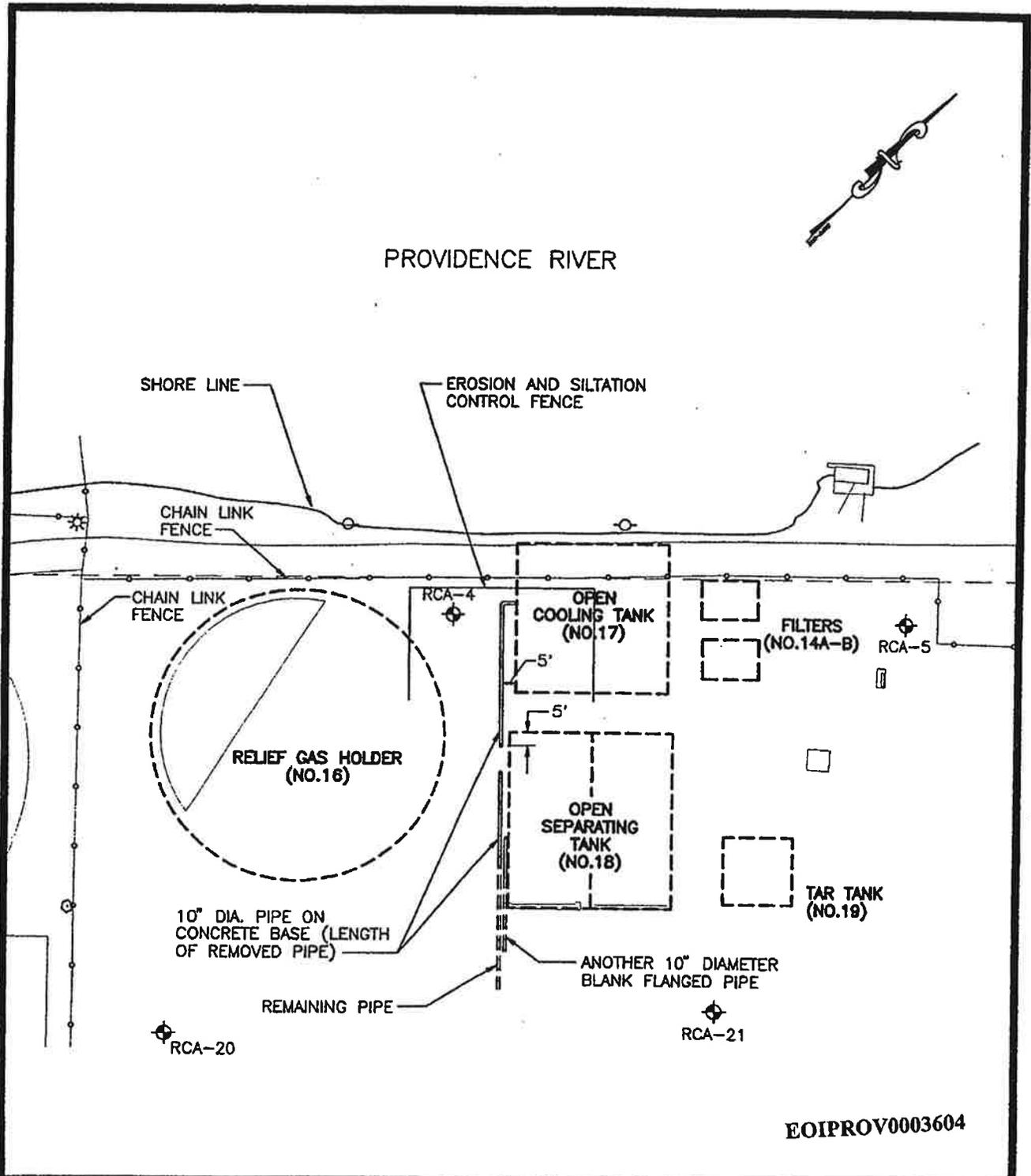
JOB NO.: A2000 SITE: Providence Gas Company
642 Allens Avenue
Providence, Rhode Island

DATE: June 14, 1996

APPENDIX A

Figure

EOIPROV0003603



**RESOURCE
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SHORT TERM MEASURE PLAN

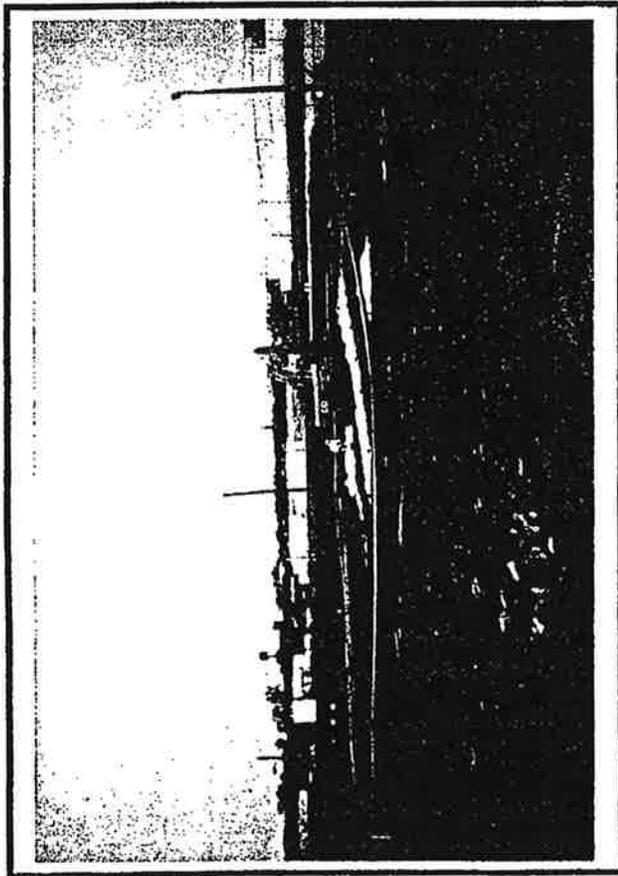
PROVIDENCE GAS COMPANY
 642 ALLENS AVENUE
 PROVIDENCE, RHODE ISLAND

SCALE	PROJECT	FILE	FIGURE	REV.
1" = 50'	A2000 290	PLAN2	1	1

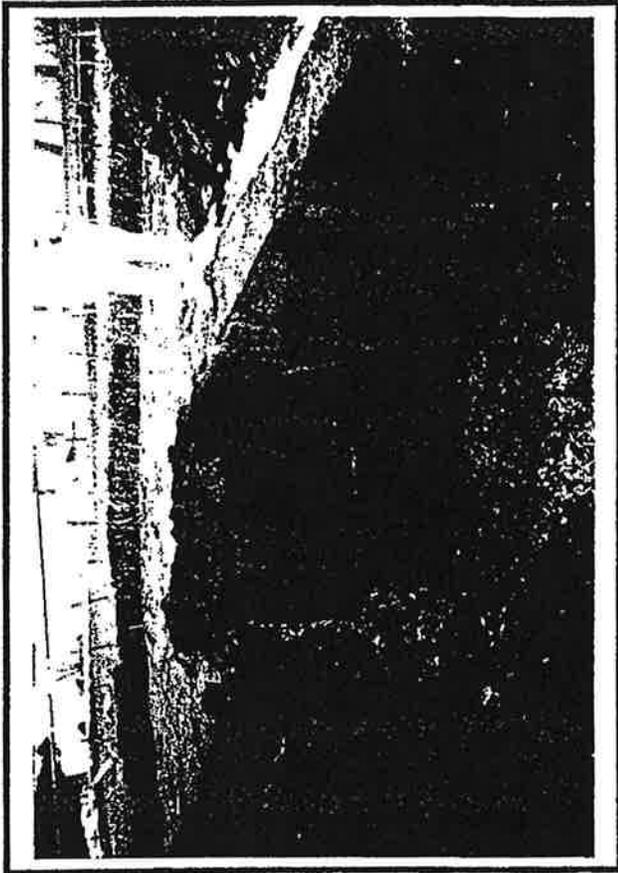
APPENDIX B

Photographs

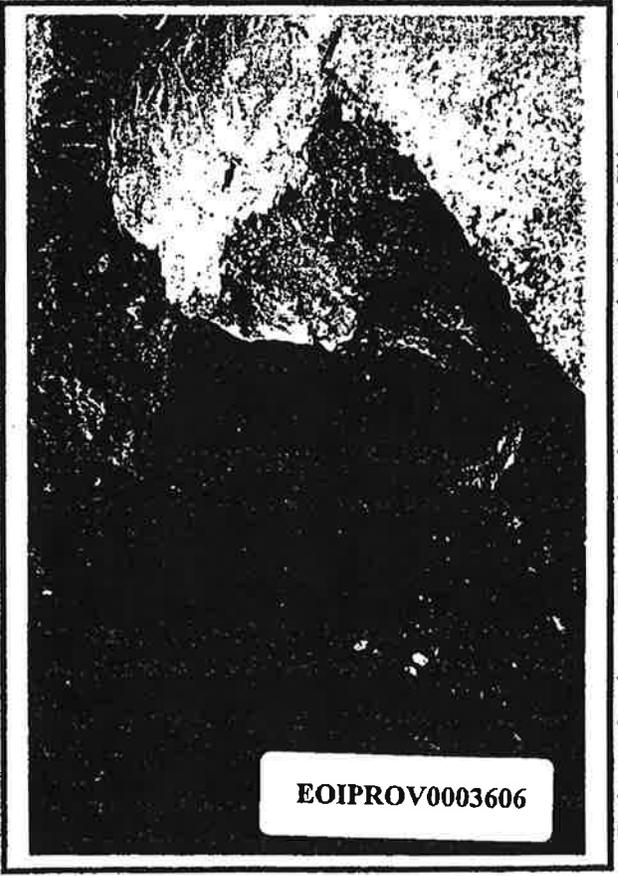
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1) North Algonquin Site Area looking northwest showing Erosion/Siltation Control fence (haybales) and exclusion zone fence (caution tape) around the perimeter of the work area.



2) North end of the pipe where it is connected to the Cooling Tank (No. 17). The soils encountered were visibly contaminated and exhibited a strong petroleum odor.



3) Further north and west of the pipe where it was connected to the tank. This confirmed that the nine entered at the tank. Soils are visibly contaminated.



4) Southern side of pipe trench looking north. The sources of water inside the pit are from an additional source.