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CONTRACT NO. N62472-94-D-0398	DELIVERY ORDER # 0013	ACTIVITY LOCATION Newport, Rhode Island
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PROJECT TITLE:
Tank Farm 4 at NETC

FROM: Foster Wheeler Environmental Corp/ Program QCM: Mark Miller	DATE January 28, 1999
---	--------------------------

TO: COTR: C. Davis (2 copies)	DATE January 28, 1999
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ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
32b	SD-18, Records; Final Tank 41 Closure Assessment Report	M Miller			

**FINAL
TANK 41 CLOSURE ASSESSMENT REPORT
TANK FARM 4**

**NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, RHODE ISLAND**

**REMEDIAL ACTION CONTRACT (RAC)
CONTRACT NO. N62472-94-D-0398
DELIVERY ORDER NO. 0013**

**Submitted to:
Northern Division
Environmental Branch, Code 18
10 Industrial Highway, Mail Stop #82
Lester, Pennsylvania 19113-2090**

**Submitted by:
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JANUARY 1999 (R1)

PREPARED BY:



For

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APPROVED BY:



for

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H	Soil And Groundwater Analytical Results
I	Chain-Of-Custody Form
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1.0 SITE BACKGROUND

1.1 INTRODUCTION

Foster Wheeler Environmental Corporation, prepared this Tank 41 Closure Assessment Report summarizing the investigation and closure activities conducted at Tank 41, located at Tank Farm 4 at the Naval Education and Training Center (NETC) in Newport, Rhode Island. Foster Wheeler Environmental Corporation is under contract to the Navy to carry out closure activities at Tank 41. This Assessment has been written by Foster Wheeler Environmental Corporation to satisfy the Rhode Island Department of Environmental Management (RIDEM) Regulation DEM-DWM-UST05-93 Section 15.10, as detailed by the July 1992 RIDEM guidance document entitled: Department of Environmental Management UST Closure Assessment Guidelines. This report was prepared at the request of the United States Navy, Northern Division (NORTHDIV) of the Naval Facilities Engineering Command (NAVFAC) under Delivery Order No. 0013 of the Remedial Action Contract N62472-94-D-0398.

The primary objective of this Assessment is to provide sufficient evidence to conclude whether or not a leak or a release has occurred from Tank 41 and to provide documentation necessary to complete a permanent underground storage tank (UST) closure, consistent with RIDEM regulations. The Assessment objectives were met by providing the field screening data of the soil samples collected during excavation activities and an inspection of Tank 41 after the cleaning was completed and using this data to determine if oil stored in Tank 41 has impacted the environment.

B&R Environmental (as Halliburton NUS Corporation) conducted a preliminary assessment of Tank Farm 4 between October 1994 and March 1995, to evaluate the impacts of past activities on soil and groundwater in the immediate vicinity of selected on-site facilities, including twelve large USTs. That information serves as the supporting documentation necessary to complete permanent closures of the 12 USTs evaluated in the assessment, and provides general information about Tank Farm 4 for this report.

This section presents background information concerning Tank 41, including site location, site description, site history, and construction details of structures pertinent to this investigation. A summary of the site geology is also presented in this section. Finally, the technical approach and the investigation and analytical methods are discussed.

1.2 LOCATION

Tank 41 is located in Tank Farm 4 of NETC Newport, which is located in the Towns of Newport, Middletown, and Portsmouth, Rhode Island, approximately 25 miles southeast of Providence (Figure 1-1). Tank Farm 4 is situated at the northern portion of NETC-Newport, in Portsmouth (Figure 1-2). Tank 41 is located in the northern portion of Tank Farm 4 (Figure 1-3).

Tank Farm 4 is bordered by the Defence Highway to the north/northwest; Norman's Brook to the southwest; residential property to the southeast; and undeveloped woodlands to the north/northeast.

1.3 SITE DESCRIPTION

Tank Farm 4 is accessed from Defense Highway; it occupies approximately 90 acres and contains 12 USTs, numbered 37 through 48. These tanks were used to store virgin heavy fuel oil (no. 6 bunker oil). Several tanks were reportedly also used to store No.2 heating oil during the mid-1970s. Access to Tank Farm 4 is unrestricted. An unsecured gate is drawn across the entrance. A paved road leads into the tank farm, passing between the tanks in a loop.

On-site structures include the remnants of a building and a decommissioned electrical substation. Ground elevations across Tank Farm 4 range between 46 feet and 111 feet above mean low water level (mlw). Topography gradually slopes to the west/southwest, toward Narragansett Bay. The central portion of the

tank farm is vegetated with tall grass, dense brush, and trees. Dense brush and woodlands cover the perimeter areas of the tank farm. Brush at each tank has been cleared from work areas.

1.4 SITE HISTORY

In 1941, the U. S. Navy began construction of five tank farms at NETC to store fuel oils and other petroleum products to supply warships. Tank Farm 4 was used to store fuel oil from World War II until it was abandoned in the mid-1970s. For a brief period, from 1974 to 1978, three to four unidentified tanks were reportedly leased to Northeast Petroleum to store No. 2 heating oil. At the end of the lease period Northeast did not require the storage capacity and terminated the lease agreement. Northeast reportedly cleaned the tanks. Tank Farm 4 was not used for petroleum storage thereafter.

As a result of amendments to underground petroleum storage facilities regulations enacted by the State of Rhode Island in 1992, tanks used to store fuel oil also became subject to closure requirements. The Navy has filed an application with RIDEM to permanently close the tanks at Tank Farm 4 (see Appendix A).

1.5 PREVIOUS INVESTIGATIONS

B&R Environmental (as Halliburton NUS Corporation) conducted a preliminary assessment of Tank Farm 4 between October 1994 and March 1995, to evaluate the impacts of past site activities on soil and groundwater in the immediate vicinity of selected on site facilities, including twelve large USTs. This assessment report is the first investigation focusing on potential impacts to soil and groundwater from releases from the on-site USTs.

Previous investigation conducted at Tank Farm 4 from 1982 to 1992 focused on the reported disposal of tank bottom sludge's at the tank farms. Prior investigations are mentioned here for historical information purposes only.

An initial Assessment Study (IAS) was conducted by Envirodyne Engineers, Inc. in 1982 and 1983. Loureiro Engineering Associates conducted a Confirmation Study (CS) between 1983 and 1986. Results of the CS led to the conduct of a Phase 1 Remedial Investigation (RI) as part of the Department of Defense Installation Restoration (IR) Program. The RI included multi-media environmental sampling and analysis.

1.6 SUMMARY OF TANK 41 CONSTRUCTION

Tank 41 has a capacity of 60,000 barrels (standard petroleum), or approximately 2.52 million gallons. This tank was constructed in place, of reinforced concrete. Concrete in tank walls and roof is a nominal 12-inch thick, while the tank floor is a nominal 14-inch thick. Floor and wall joints were caulked at the time of construction. The outside diameter of the tank is 119 feet; the side measures 36 feet from the bottom of the footing to the top of the roof.

The Tank 41 construction sequence began by stripping the soil overburden, and then blasting and excavating between 10 and 30 feet of bedrock to create a steep walled bedrock "socket" in which the tank was built. The tank bottom was then placed 10 to 30 feet below the original bedrock surface as described in the following paragraph. Following tank completion, the annular space between the tank wall and the bedrock was backfilled with crushed bedrock and other locally derived material. Coarse to fine grained material were used, resulting in a general graded backfill with coarse bedrock at the bottom, and finer bedrock at the top. After backfill operations were completed, the tank top was covered with similar fill material.

The tank floor lies on a flat bedrock surface that has been leveled by filling depressions with cement. A 12-inch diameter reinforced concrete perforated drainpipe is embedded in gravel surrounding the base of the tank. Groundwater that infiltrates the pipe can be pumped out of the system, thus managing the water table elevation and limiting buoyant forces on the tank. The drain system is termed a ring-drain.

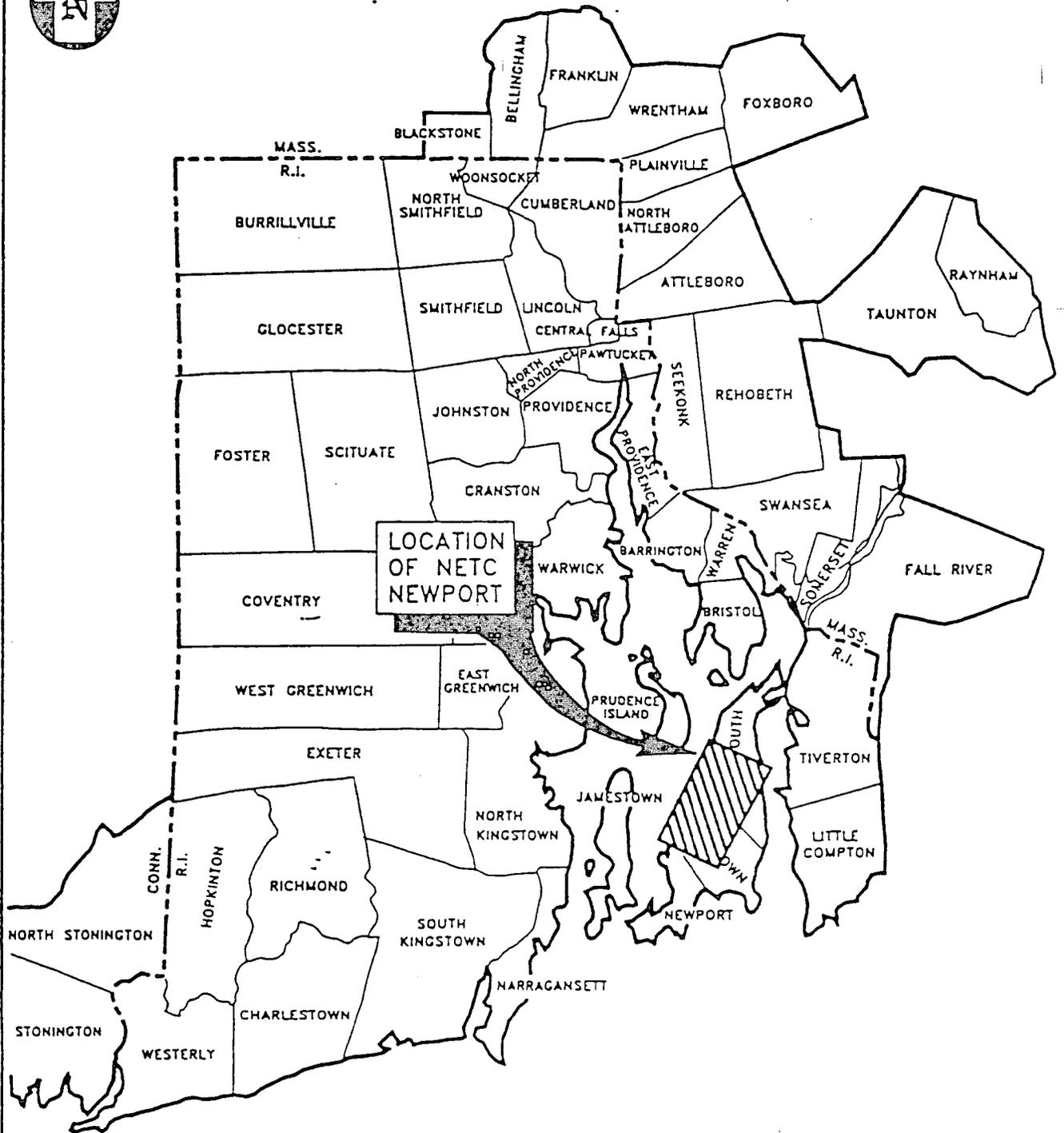
1.7 UNDERGROUND UTILITIES

Underground utilities consist of water, electricity, and telephone service. The exact location of the utilities could not be confirmed by base Dig safe services. Also, the existence of the telephone network shown on base maps could not be confirmed.

The utility lines to Tank 41 are insulated direct burial cable and are buried 5 to 7 feet below ground surface. Consequently, these utilities would be located above the ground water table and therefore would not act as a preferential migration pathway.

1.8 GEOLOGY

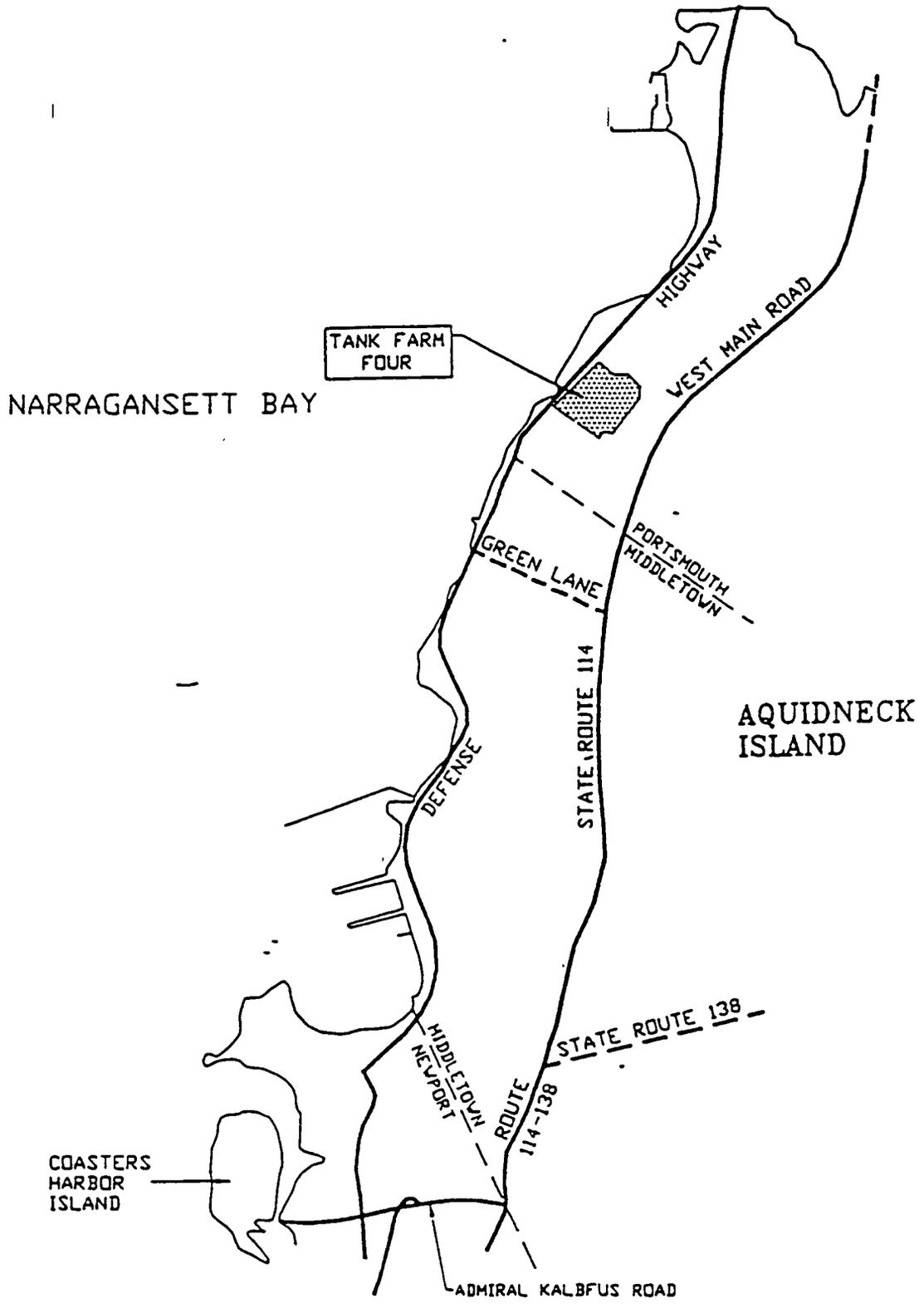
The NETC site, including Tank Farm 4, is located in the southeastern portion of Narragansett Basin. The basin is underlain by Pennsylvanian age non-marine sedimentary and metamorphic rocks, including the Rhode Island Formation. Bedrock at the site is reported to be a weathered shale; phyllites were also observed at borehole refusals. Overburden material consists of unconsolidated glacial sediments ranging from gravel to silt, as well as glacial till. Soil thickness at the tank farm is variable, and is estimated to be no more than 45 feet thick. Soil descriptions from preliminary Closure Assessment investigations indicate the presence of extensive fill materials in the vicinity of the tank because of the widespread disturbance of native soils during tank construction.



NETC LOCATION	
NETC — NEWPORT, RI	
TANK 41 CLOSURE ASSESSMENT REPORT	
DRAWN BY: R.G. DEWSNAP	REV.: 0
CHECKED BY: J. FORRELL	DATE: 21 NOV 95
SCALE:	PROJECT NO.: 4643 CTO #195

FIGURE 1-1

Brown & Root Environmental
 A Division of Halliburton NUS Corporation
 55 Jonakin Road Wilmington, MA 01887 (508)658-7374



TANK FARM 4 LOCATION
 NETC - NEWPORT, RI
 TANK 41 CLOSURE ASSESSMENT REPORT

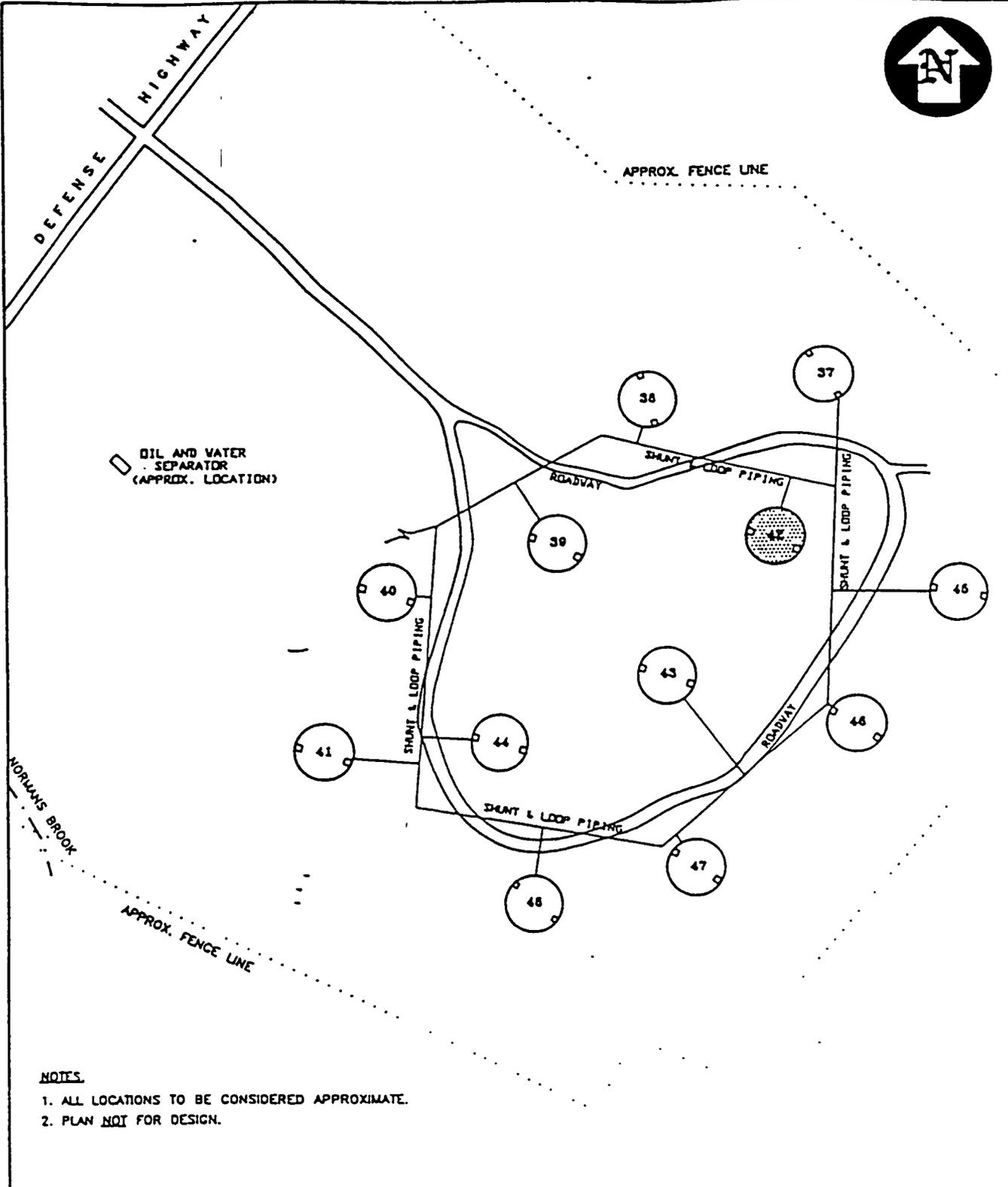
FIGURE 1-2



Brown & Root Environmental

A Division of Halliburton NUS Corporation
 55 Joseph Road, Weymouth, MA 01887 (508)638-7892

DRAWN BY:	R.C. DEWSNAP	REV.:	0
CHECKED BY:	J. FORRELLI	DATE:	21 NOV 95
SCALE:	APPROX. 4800 FT.	PROJECT NO.:	4643 CTO #196:



NOTES

1. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
2. PLAN NOT FOR DESIGN.

TANK FARM 4		FIGURE 1-3	
NETC - NEWPORT, RI			
TANK 41 CLOSURE ASSESSMENT REPORT			
DRAWN BY:	R. DEWSNAP	REV.:	0
CHECKED BY:	J. FORRELLI	DATE:	07 DEC 95
SCALE:	1"=300 FT. (APPROX.)	PROJECT NO.:	4643 CTO #106
		Brown & Root Environmental <i>A Division of Halliburton NUS Corporation</i> 55 Joseph Road Wilmington, MA 01887 (508)638-7899	

W5295102D

2.0 CLOSURE ACTIONS

2.1 MOBILIZATION

Foster Wheeler Environmental Corporation was retained by the Navy to conduct tank closure activities at Tank Farm 4. Following the submittal of all pre-construction documents, Foster Wheeler Environmental Corporation commenced mobilization activities at Tank Farm 4 on May 20, 1996. Consistent with the tank closure work plan and specification, a support zone was set up, the site was cleared and grubbed, temporary fencing was erected to encompass each tank work area.

Tank specific closure activities began on June 3, 1996, by excavating and exposing of the tank tops. Two entry ports (7 feet by 9 feet and 9 feet by 13 feet) were subsequently cut and removed from each tank top to provide access to the tank interior for personnel and equipment. Tank access lid excavation and access port cutting activities were completed by July 10, 1996. Subsequent to tank lid excavation activities, the soil cover for the pump room chamber associated with each tank was excavated and the chamber's lid was exposed.

Tank gauging was conducted by Foster Wheeler Environmental Corporation in June of 1996. For tank gauging activities, the total overall depth of liquids in each tank was measured, liquid phase assumed to be oil/water/sludge were identified, and an attempt was made to determine the thickness, or depth, of each phase of material. Volume estimates for Tank 41 are presented below.

<u>PHASE</u>	<u>VOLUME(gallons)</u>
Oil	20,000
Water	660,000
Sludge	0
<hr/> Total	<hr/> 680,000

A sample of the oil and sludge layer was analyzed for off-site disposal characterization purposes. The analytical results for oil and sludge layer are included In Appendix B.

2.2 SOIL EXCAVATION

During excavation activities conducted to expose the tank tops and pump chamber, all soils were visually observed and screened using a flame-ionization detector (FID). The Foster Wheeler Environmental Corporation soil management plan for Tank Farm 4 activities states that all soils having a FID reading of less than 10 ppm are considered non-impacted and will be reused on site. None of the excavated soils registered FID readings greater than 10 ppm and will be reused in accordance with the soil management plan.

2.3 TANK CONTENTS REMOVAL AND STORAGE

Tank contents removal activities began on August 8, 1996 and were completed by August 28, 1996. The water phase was pumped from the tank directly into Tank 43 for treatment and discharge to the POTW. When all water was removed the oil/sludge layer was pumped to 21,000 gallon above ground frac tanks. The oil/sludge was pumped onto transporters and disposed of off site at an approved facility. Refer to Appendix C for disposal Bill of Lading. All wastewater generated during the tank cleaning was also pumped to Tank 43, including groundwater generated by ring drain pumping operations.

2.4 TANK CLEANING

Tank 41 interior surface cleaning operations commenced on September 4, 1996. The cleaning method employed consisted of a presoak with heated fuel oil and a heated caustic wash. Pertinent features of the unit selected for use included operating temperatures up to 180 degrees Fahrenheit and operating nozzle pressures up to 300 psi with a flow rate of 300 gpm. Caustic vendor information may be found in Appendix D. Pump room 41 cleaning operations consisted of flushing the interior pipe and removal of the pipe. Once the pipe was removed the cleaning process began. The cleaning method consisted of washing the surface with high pressure hot water utilizing a diluted water based industrial degreaser. Degreaser vendor information may be found in Appendix D.

2.5 PIPING, EQUIPMENT, AND DEBRIS REMOVAL

During Tank 41 surface cleaning operations, all piping and equipment was dismantled and decontaminated with high pressure hot water. All decontaminated, salvageable materials were sent to an approved scrap yard. All other debris, including spent personal protective equipment from tank cleaning operations, is currently being disposed of off site at an approved disposal facility. Manifests for shipments to the facility are included in Appendix E.

2.6 TANK CLOSURE

On October 18, 1996, prior to tank inspection (see section 3.2) and after the pipes were cleaned and dismantled, blind flanges were installed at the pipes entrances into the tank. Three pipe entrances were identified and blind flanged. These entrances are identified as follows:

One 16-inch line extending from the bottom of the pump room into the bottom of the tank

One 6-inch line extending from the bottom of the pump room into the bottom of the tank

One 10-inch line extending from the top of the pump room into the top of the tank

All blind flanges are installed on the tank's exterior side, within the pump room, and tank ballasting has been completed.

2.7 TANK DEMOLITION

15 Test Pits were excavated around the perimeter of Tank 41. The Test Pits were excavated to insure that the fill located on and around the tank was not contaminated. The 15 Test Pits were equally spaced around the tank with Test Pit No.1 located on the North side of the tank. The Test Pits were excavated to the tank top and extended the same distance out from the tank. On July 8, 1997 a composite sample was analyzed for VOC's, SVOC's, RCRA 8 Metals and TPH. The results for this sample are included as Appendix J. The tank had 15 feet of sand placed into the bottom and on December 17, 1997 at 1350 the tank top was imploded. The remaining hole was backfilled with clean borrow material. A copy of the Blast Report is included as Appendix K.

3.0 TANK CONDITION

3.1 STRUCTURAL INSPECTION

On October 18, 1996, Mark Gouveia of Foster Wheeler Environmental Corporation inspected the tank's interior to assess the structural integrity of the tank. During the inspection several small cracks were identified (less than 1/8 inch wide) on the tank floor. The columns appeared in good condition. Documentation regarding the inspection may be found in Appendix F.

3.2 CLOSURE INSPECTION

Tank 41 was formally inspected on October 21, 1996. Participating in the inspection were:

RIDEM

Paul Kulpa - Division of Site Remediation

NETC

Ray Roberge - Code 40E, Environmental

Foster Wheeler Environmental

Jon Cary - Site Manager

Roger Beauregard - Site Quality Control

During the inspection, all participants entered the tank's interior and viewed the cleaning surfaces. At the post inspection meeting, all participants agreed that the interior surface cleaning results were satisfactory.

3.3 PIPING INSPECTION

On November 14, 1997, an inspection was conducted for all pipe runs extending into the tank's interior from the pump room. Three pipe runs, each approximately ten feet long, were identified and inspected. The piping was inspected for cleanliness and the condition of each pipe run was noted.

Participating in the inspection were:

Mark Gouveia, Foster Wheeler Environmental- Site Engineer

Roger Beauregard, Foster Wheeler Environmental- Site QA/QC

Inspection observations are as follows:

One 10-inch pipe, located at the top of the pump room was identified and inspected. The pipe interior was clean and in good condition. No scaling, cracks, or holes were observed.

One 16-inch pipe, located at the bottom of the pump room was identified and inspected. The pipe interior was clean and in good condition. No scaling, or holes were observed.

One 6-inch pipe, located at the bottom of the pump room was identified and inspected. The pipe interior was clean and in good condition. No scaling, or holes were observed.

3.4 PUMP ROOM INSPECTION

On November 14, 1997 an inspection of the pump room was conducted for cleanness and over all condition of the walls and floors of the pump room.

Participating in the inspection are as follows:

Mark Gouveia, Foster Wheeler Environmental- Site Engineer

Roger Beauregard, Foster Wheeler Environmental- Site QA/QC

Jon Cary, Foster Wheeler Environmental- Site Manager

During the inspection all participants entered the pump room and viewed the clean surfaces. At the completion of the inspection all participants agreed that the pump room was clean and in good condition.

4.0 DESCRIPTION OF SOIL CONDITIONS SURROUNDING TANK 41

Drilling activities conducted as part of the Preliminary Closure Assessment were completed at Tank 41 on November 9, 1994 (HNUS 1995). At soil boring B-41, continuous split-barrel sampling was conducted from 15 feet below the ground surface (bgs) to refusal, at approximately 40 feet. The boring was completed as groundwater monitoring well MW-116.

The upper 15 feet of the boring was not examined. Soil sampling was initiated at 15 feet based on information suggesting that the water table was approximately this deep. It was presumed that petroleum releases above the water table would migrate vertically downward and be detected in soil and groundwater.

A generalized description of the subsurface follows. Repetitious layers of sandy silty gravel (2 to 4 feet thick) and sandy gravelly silt (2 to 5 feet thick), and a lower gravel layer 2 feet thick. Altered black metamorphic rock with thin quartz veins was observed at refusal. Bedrock reportedly consists of gray highly weathered to competent shale. Tank Farm 4-B-41 was not advanced into bedrock. Boring logs and soil descriptions are present in Appendix G.

5.0 SOIL SAMPLE ANALYTICAL DATA SUMMARY

Consistent with the usage of Tank 41 as storage for virgin No. 6 fuel oil, the Preliminary Closure Assessment investigation at this UST focused on evaluating soils and groundwater for the presence of petroleum components. Soil samples were visually inspected for the presence of petroleum, screened for the presence of petroleum with PIDs and FIDs (as well as an Ensys Petro Risc petroleum field screening immunoassay kit), and subjected to laboratory analysis. Visibly stained soils were not field screened for TPH (using the immunoassay method) because the TPH concentration would exceed the 100 ppm standard, the highest concentration of TPH that could be detected by the screening analysis.

The following section describes the analytical data findings of the investigation activities conducted at this location. Subsurface soils were collected and sent to laboratories to be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbon (TPH) extractable, and eight RCRA metals.

From boring B-41 two subsurface soil samples were taken for laboratory analysis. Samples B4113032 and B413840 were collected from depths of 30 to 32 feet bgs, and 38 to 40 feet bgs, respectively. They consisted of sandy gravel with silt. Although free of visual petroleum contamination, the latter sample yielded a petroleum odor. The MW-116 groundwater sample was collected from the midpoint of the well screen, approximately 36 feet bgs. No contamination was observed during groundwater collection.

Positive laboratory analytical results are reported in Table 5-1 and presented on Figure 5-2. The averaged value of duplicate samples is reported in the summary table. In instances when samples have been re-analyzed, the maximum detected concentration of each compound or metal is reported. Laboratory analytical results are presented in Appendix H. Results for ground water are discussed in greater detail in section 6.0.

5.1 VOLATILE ORGANIC COMPOUNDS (VOCs)

No detection limits were exceeded in subsurface sample B413032. 2-butanone was detected at a concentration of 9 micrograms per kilogram in sample B413840. This compound is a common industrial solvent.

TABLE 5-1
POSITIVE CONTAMINANT DETECTION IN SOIL AND GROUNDWATER
TANK 41 CLOSURE ASSESSMENT REPORT
NETC NEWPORT, RHODE ISLAND

TABLE 3-5
 POSITIVE CONTAMINANT DETECTIONS IN SOIL AND GROUNDWATER
 TANK 41 SUMMARY
 PRELIMINARY CLOSURE ASSESSMENT REPORT
 TANK FARMS 4 & 5
 NETC - NEWPORT, RHODE ISLAND

WS295083F

3-33

MEDIA	BORING NO. OR WELL NO.	DEPTH OR SCREEN INTERVAL	CONTAMINANT	CONCENTRATION	REGULATORY STANDARD(S)	EXCEEDS STANDARD(S) (YES/NO)
Soil	B41	30-32	Bis(2-ethylhexyl)phthalate	97 µg/kg	None	N/A
Soil	B41	30-32	Arsenic	15.9 mg/kg	None	N/A
Soil	B41	30-32	Barium	8.0 mg/kg	None	N/A
Soil	B41	30-32	Cadmium	2.2 mg/kg	None	N/A
Soil	B41	30-32	Chromium	14.6 mg/kg	None	N/A
Soil	B41	38-40	2-Butanone	9 µg/kg	None	N/A
Soil	B41	38-40	2-Methylnaphthalene	49 µg/kg	None	N/A
Soil	B41	38-40	N-Nitrosodiphenylamine	63 µg/kg	None	N/A
Soil	B41	38-40	Phenanthrene	100 µg/kg	None	N/A
Soil	B41	38-40	Pyrene	51 µg/kg	None	N/A
Soil	B41	38-40	Bis(2-ethylhexyl)phthalate	60 µg/kg	None	N/A
Soil	B41	38-40	Arsenic	14.9 mg/kg	None	N/A
Soil	B41	38-40	Barium	12.5 mg/kg	None	N/A
Soil	B41	38-40	Cadmium	2.1 mg/kg	None	N/A
Soil	B41	38-40	Chromium	11.8 mg/kg	None	N/A
Soil	B41	38-40	TPH-Bunker Oil	110 mg/kg	300 ppm (6) TPH	No
Groundwater	MW116	33-38	2-Butanone	2 µg/L	None	N/A

WS295063F

**TABLE 3-5 (CONTINUED)
POSITIVE CONTAMINANT DETECTIONS IN SOIL AND GROUNDWATER
TANK 41 SUMMARY
PRELIMINARY CLOSURE ASSESSMENT REPORT
TANK FARMS 4 & 5, NETC - NEWPORT, RHODE ISLAND
PAGE 2**

Legend:

-
ppm-parts per million
 $\mu\text{g/L}$ -micrograms per liter
mg/kg-milligrams per kilogram
 $\mu\text{g/kg}$ -micrograms per kilogram
N/A-Not Applicable

Notes:

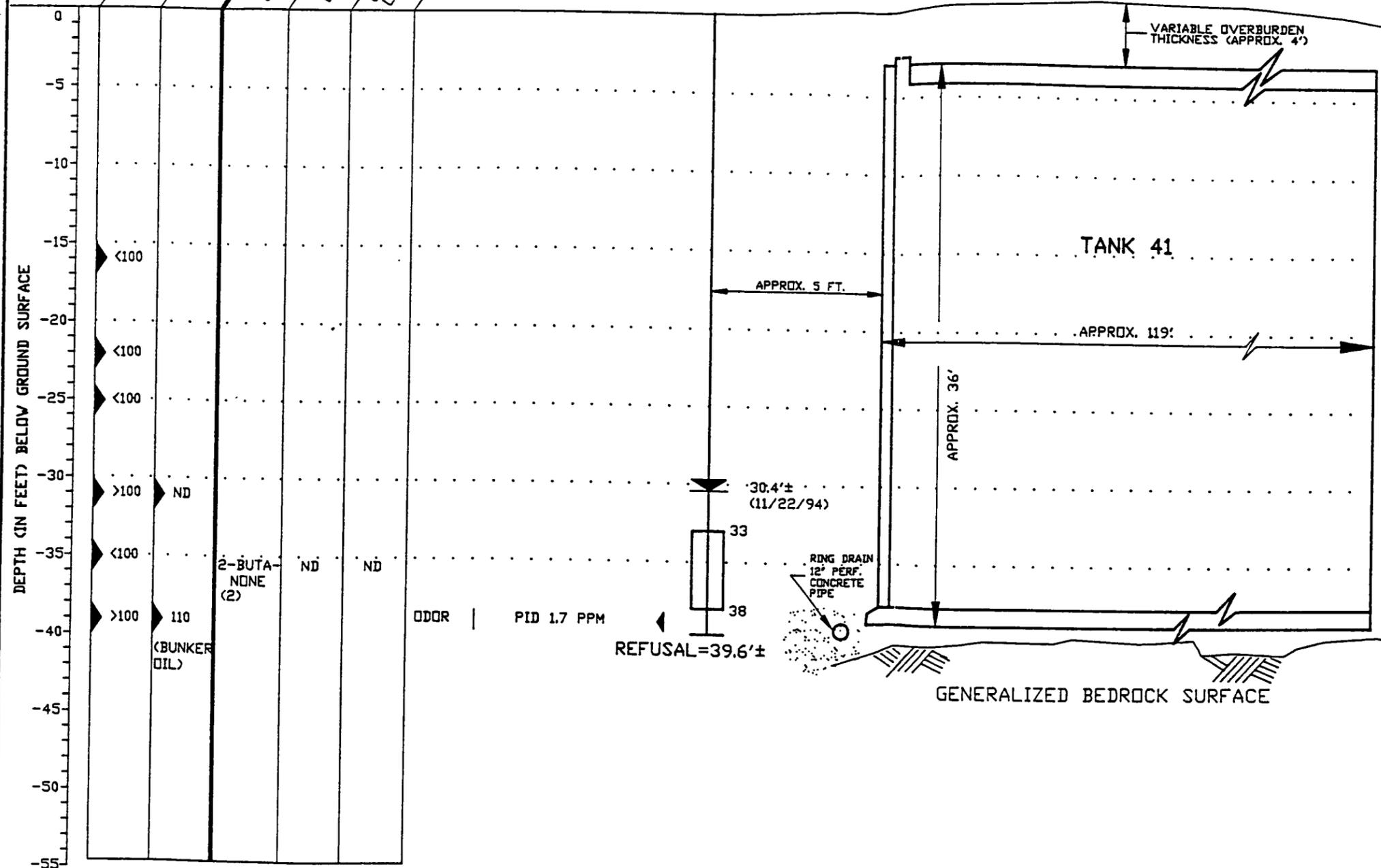
3-34

- 1) U.S. EPA Drinking Water Regulations and Health Advisories, EPA 822-R-94-001, May 1994.
 - 2) State of Rhode Island Department of Environmental Management, Rules No. 12-100-006, Rule and Regulations for Groundwater Quality, Section 10, July 1993.
 - 3) Rhode Island Department of Health - Environmental Lead Program, [R23-24.6-PB], Rules and Regulations for Lead Poisoning Prevention, February 1992 (with amendments).
 - 4) OSWER Directive 9355.4-12- Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities.
 - 5) 40 CFR Part 264 - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart F, Sections 264.92 - 264.94, July 1991.
 - 6) State of Rhode Island criteria established for clean-up of TPH in non-sensitive environmental areas.
- MW116 was installed in boring location B41.
 - Sample valves were averaged with applicable duplicates.
- In cases where samples were reanalyzed, the maximum detected concentration was reported.
For comparative purposes only, mg/kg unit designations and ppm unit designations were considered to be equivalent.
For comparative purposes only, Regulatory Standard unit designations have been converted to the unit of the detected contaminant
Regulatory Standards are typically expressed in milligrams per liter (mg/l).

**FIGURE 5-1
TANK 41 DATA SHEET
TANK 41 CLOSURE ASSESSMENT REPORT
NETC NEWPORT, RHODE ISLAND**

ANALYTICAL RESULTS

TF4-MW116
GR. ELEV.=46.6 MLW



LEGEND

- WATER TABLE (FEET BELOW GROUND SURFACE)
- MONITORING WELL
SCREEN DEPTH (FEET BELOW GROUND SURFACE)
- UG/L MICROGRAMS PER LITER
- PPM PARTS PER MILLION
- MG/KG MILLIGRAMS PER KILOGRAM
- MG/L MILLIGRAMS PER LITER
- TPH TOTAL PETROLEUM HYDROCARBON
- VOCs VOLATILE ORGANIC COMPOUNDS
- SVOCs SEMI-VOLATILE ORGANIC COMPOUNDS
- TF4 TANK FARM 4
- MW101 GROUNDWATER MONITORING WELL NO.
- MLW MEAN LOW WATER
- PID PHOTOIONIZATION DETECTOR-SCREENING OF SOIL SAMPLE PRIOR TO REMOVING FROM SPLIT BARREL SAMPLER
- ND NOT DETECTED

DATA SHEET - TANK 41

NETC-NEWPORT, RI

PRELIMINARY CLOSURE ASSESSMENT REPORT

DRAWN BY:	R.G. DEWSNAP	REV.:	1
CHECKED BY:	J.B. HOLDEN	DATE:	5 JUN 95
SCALE:	1" = 8' (APPROX.)	FILE NO.:	C:\DWG\NETC\FIG_3-5

FIGURE 3-5



55 Jonspin Road
Wilmington, MA 01887
(508)658-7899

5.2 SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

Bis (2-ethylhexyl) phthalate was detected in samples B413032 and B413840, at a concentrations of 97 and 60 micrograms per kilogram respectively. Phthalates are typically used as plasticizers in the manufacturing of PVC and other plastic (Howard 1989; Sittig 1981) including plastics used in analytical laboratories.

2-methylnaphthalene, phenantherene, and pyrene were detected in B413840 at concentrations ranging from 49 to 100 micrograms per kilogram. These compounds are polynuclear aromatic hydrocarbons (PAH) typically derived from coal tar. It is also a common chemical identified in fuel oil. N-nitrosodiphenylamine was also detected at a concentration of 63 micrograms per kilogram in sample B413840. This compound has been used in the rubber industry as a vulcanizing retarder (Clayton and Clayton, 1981). The source of this compound has not been evaluated.

5.3 RCRA METALS

Arsenic, barium, cadmium and chromium were detected in both of the subsurface soil samples collected from B-41. Concentrations of these metals ranging from 2.1 to 15.9 milligrams per kilogram were reported. The source of these metals has not been evaluated. However, metals are not typically associated with storage of virgin fuel oil.

5.4 TOTAL PETROLEUM HYDROCARBONS (TPH)

A low concentration of TPH (110 mg/kg) was detected in soil sample B413840 by laboratory analysis.

Subsurface soil samples B411517, B412123, B413032, B413436 and B413840 were field screened for TPH. These samples were collected from 15 to 17 feet, 21 to 23 feet, 30 to 32 feet, 34 to 36 feet, and 38 to 40 feet bgs, respectively. Concentrations were greater than 100 ppm in samples B413032 and B413840, with all other results being less than the detection limit.

6.0 SITE GROUNDWATER DESCRIPTION

Water levels in Tank Farm 4 monitoring wells were measured to a hundredth-of-a-foot accuracy using an electronic measuring device. The relative elevation of each monitoring well was determined by a land surveyor registered in the State of Rhode Island, and the depth of the water table was established using measurements made from November 2 to 29, 1994. From these data, groundwater flow direction was characterized and a water table map (Figure 6-1) was created for Tank Farm 4. Groundwater generally flows west-southwest toward Narragansett Bay and is slightly affected by Norman's Brook.

MW-116 is approximately 5 feet from the perimeter of Tank 41 and was installed on the hydraulically downgradient side of the tank. It is assumed that petroleum resulting from a release would accumulate in the ring drain. A well installed in the ring drain would therefore serve as a monitoring point for a release of petroleum product from this tank. The MW-116 well screen was set 33 to 38 feet bgs to correspond with the estimated depth of the ring drain, based on available information, the ring drain typically extends from the bedrock surface to a point approximately 1 to 2 feet above the tank bottom. Refusal was interpreted as the bedrock surface. Therefore the ring drain was estimated to be approximately 37 feet bgs. The well boring log is presented in Appendix G.

The depth to groundwater table was 29.27 feet bgs on May 10, 1996. Seasonal and precipitation effects on groundwater levels have not been evaluated at the site. Therefore, this single measurement may not be representative of the actual groundwater table.

Groundwater samples were collected from MW-116 and were analyzed for VOC's, SVOC's, and the eight RCRA metals. The results of these are summarized below and presented in Table 5-1 and Appendix H.

6.1 VOLATILE ORGANIC COMPOUNDS (VOC's)

2-Butanone was detected at a concentration of 2 micrograms per liter in the groundwater sample collected from MW-116.

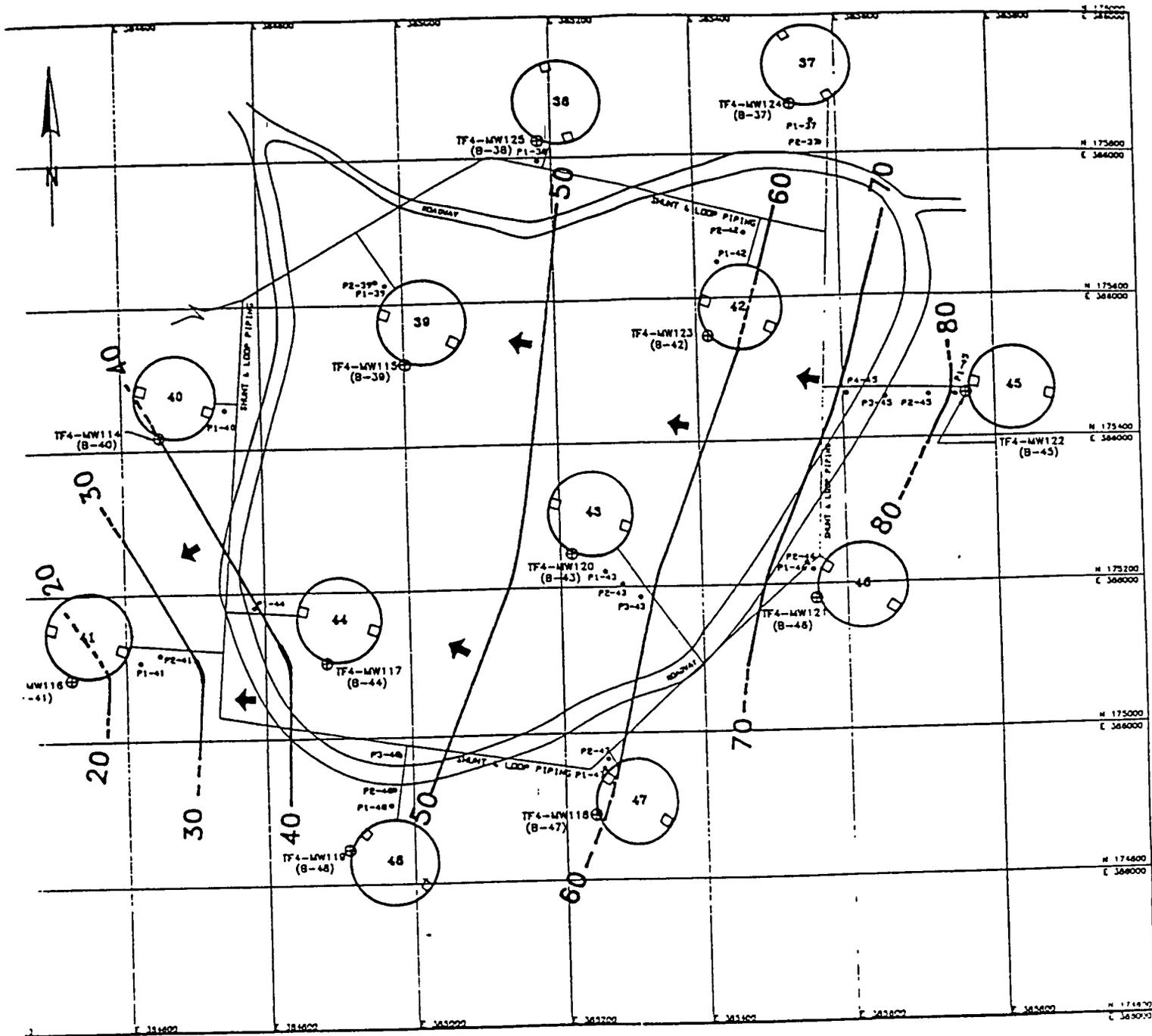
6.2 SEMI-VOLATILE ORGANIC COMPOUNDS (SVOC's)

No analytes exceeded detection limits in the groundwater sample collected from MW-116.

6.3 RCRA METALS

Metals concentrations were below detection limits in the groundwater sample collected from MW-116.

FIGURE 6-1
TANK FARM 4 GROUNDWATER CONTOURS
TANK 41 CLOSURE ASSESSMENT REPORT
NETC NEWPORT, RHODE ISLAND



TANK FARM 4

MONITORING WELLS AT TANK FARM #4		REV.. 0	
NETC-NEWPORT, RI		DATE. 5 JUN 95	
TANK 41 CLOSURE ASSESSMENT REPORT			
DRAWN BY	R G. DEWSNAP	FILE NO.	C:\DWG\NETC\TNK_FM4.DWG
CHECKED BY	K JALKUT		
SCALE.	1" = 200'		

FIGURE 2-1



Halliburton NUS
CORPORATION

55 Janspin Road

Wilmington, MA 01897

(508)658-7899

7.0 ANALYTICAL SAMPLE COLLECTION AND HANDLING

Soil and groundwater samples were collected and analyzed to Naval Facilities Engineering Services Center requirements. All environmental samples collected as part of this tank closure were stored and shipped in accordance with the chain-of-custody procedures outlined in the Quality Assurance/Quality Control Plan.

Sample chain-of-custody forms are presented in Appendix I. Sample analyses were conducted by Ceimic Laboratories of Narragansett, Rhode Island and Nytest Environmental of Port Washington, New York. Analytical results are presented in Appendix H.

8.0 SITE WELLHEAD PROTECTION STATUS

Tank 41 is not within a designated wellhead protection area.

9.0 SITE GROUNDWATER CLASSIFICATION AND USE

The groundwater beneath Tank 41 is classified by RIDEM as "GA". GA classified groundwater is primarily located in recreational or agricultural areas and, in areas of sources of potable water. Groundwater classified as GA is categorized as or presumed to be suitable as drinking water without treatment.

Tank Farm 4 and all land hydraulically downgradient of the tank farm is owned by the federal government. A review of Newport Water Department records by HNUS in March 1995 indicates that no private or public potable water wells are located on or in the vicinity of the site.

10.0 POTENTIAL RECEPTORS

The potential receptor of a release from Tank 41 is Narragansett Bay. Tank Farm 4 groundwater generally flows west-southwest toward Narragansett Bay and shallow groundwater in the southern portion of the site may flow toward Norman's Brook. Petroleum dissolved in and migrating with groundwater may discharge to both of these surface waters. No private wells or basements that could be affected by a release from Tank Farm 4 are known to exist (see section 9.0).

11.0 FINDINGS AND CONCLUSIONS

11.1 FINDINGS

Tank 41 has been emptied of its contents, cleaned, demolished, and backfilled. This tank has passed both the Navy structural integrity inspection and RIDEM post-closure inspection for completeness of oil removal. Following the inspections the tank was demolished and backfilled to final closure.

Laboratory analytical results of the site soils and groundwater collected immediately adjacent to Tank 41 were evaluated with respect to one or more of the following regulatory standards:

Rhode Island Department of Health Lead Poisoning Prevention Standard

U.S. EPA Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities

Rhode Island Department of Environmental Management (RIDEM) Groundwater Quality Standard and Preventative Action Limits

U.S. EPA Safe Drinking Water Act (SDWA) Maximum Contaminant Levels (MCLs)

RCRA Groundwater Protection Standard

Rhode Island Department of Environmental Management (RIDEM) Action Levels for TPH in Soils

All of the TPH samples concentrations were below the detection limits in the subsurface soil samples. Where detected, VOC, SVOC, and metals soil concentrations were below applicable standards.

Groundwater beneath Tank Farm 4 has been assigned a "GA" classification, which identifies it as a groundwater resource that is suitable for drinking water use (RIDEM1993). When available, RIDEM GA Groundwater Standards are used for comparison. In cases where RIDEM has not established standards, SDWA "MCL's for Chemicals Detected in Groundwater" are used for comparison.

11.2 CONCLUSIONS

Based on an evaluation of the above data, there is evidence to indicate that a petroleum release has occurred at Tank 41. However, contaminant concentrations are below RIDEM action levels. The absence of fuel-related compounds in the groundwater adjacent to Tank 41 indicates that groundwater is not a significant migration pathway for heavy fuel oil. No further action is required.

REFERENCES

REFERENCES

Halliburton NUS Corporation, 1995b. "Preliminary Closure Assessment Report of Tank Farms 4 and 5, Naval Education and Training Center, Newport Rhode Island" March 1995.

Halliburton NUS Corporation, "Site Investigation Report Tanks 38, 42, 45, and 48 Tank Farm 4, Naval Education and Training Center, Newport Rhode Island" February 1996.

Rhode Island Department of Environmental Management, 1992. "UST Closure Assessment Guidelines"

Brown and Root Environmental "Tank 42 Closure Assessment Report Tank Farm 4, Naval Education and Training Center, Newport, Rhode Island" December 1995.

Rhode Island Department of Environmental Management, 1993. "Rules and Regulations for Groundwater Quality", Rule No. 12-100-006

Rhode Island Department of Health, 1992. "Rules and Regulations for Lead Poisoning Prevention, R23-24.6-PB"

U.S. EPA, 1994b. "Drinking Water Regulations and Health Advisories", EPA 822-R-94-001

APPENDIX A
PERMANENT CLOSURE APPLICATION FOR UNDERGROUND STORAGE FACILITIES

I. DESCRIPTION OF TANKS TO BE CLOSED

TANK NO.	AGE	DATE LAST USED	VOLUME	CONSTRUCTION MATERIAL	STORED MATERIAL
037	48	79	2,500,000	Concrete	#6 Fuel Oil
038	48	79	2,500,000	Concrete	#6 Fuel Oil
039	48	79	2,500,000	Concrete	#6 Fuel Oil
040	48	79	2,500,000	Concrete	#6 Fuel Oil
041	48	79	2,500,000	Concrete	#6 Fuel Oil
042	48	79	2,500,000	Concrete	#6 Fuel Oil
043	48	79	2,500,000	Concrete	#6 Fuel Oil

(If there are more tanks being closed please list on attachment)

J. FEES:

Closure: NUMBER OF TANKS 7 X \$75.00 PER TANK = 525
 Registration: NUMBER OF TANKS _____ X \$35.00 PER TANK = _____

K. Have these tanks ever held non-petroleum, hazardous materials

_____ YES x NO

If yes, then list materials: _____

L. After the closure(s) have been completed on the aforementioned tanks, will there be any underground storage tanks remaining in existence at this facility? _____ YES x NO

Will any new UST(s) be installed on the site?

_____ YES x NO

CLOSURE PROCEDURE (SELECT ONE):

1. _____ Precision test and fill with iner material.
 (Section 15.12).

Material used for filling tank: _____

NOTE: APPROVED PRECISION TEST METHOD MUST BE CONDUCTED BY A LICENSED TESTER AND RESULTS MUST BE SUBMITTED TO DEM PRIOR TO FILLING THE TANK IN PLACE.

2. x Excavate, clean, and dispose (Section 15.11)

(Note: Tanks to be demolished and left in place following tank cleaning.)

a. Specify method of tank cleaning: Power Wash

I. DESCRIPTION OF TANKS TO BE CLOSED

TANK NO.	AGE	DATE LAST USED	VOLUME	CONSTRUCTION MATERIAL	STORED MATERIAL
044	48	79	2,500,000	Concrete	#6 Fuel Oil
045	48	79	2,500,000	Concrete	#6 Fuel Oil
046	48	79	2,500,000	Concrete	#6 Fuel Oil
047	48	79	2,500,000	Concrete	#6 Fuel Oil
048	48	79	2,500,000	Concrete	#6 Fuel Oil

(If there are more tanks being closed please list on attachment)

J. FEES:

Closure: NUMBER OF TANKS 5 X \$75.00 PER TANK = 375
Registration: NUMBER OF TANKS _____ X \$35.00 PER TANK = _____

b. Specify method of disposing of tank sludge or waste generated by cleaning process. List name of waste hauler. Tank sludges will be characterized and disposed of accordingly. Hauler yet to be determined. Cleaning wastes will be treated on site in water treatment facility.

c. Specify whether cleaning will take place:
on site x off-site _____

i. If off-site, indicate location of final tank cleaning
Firm/Address: _____

ii. Indicate firm which will transport tank(s) to site indicated in c(i) above:

Firm/Address: N/A _____

NOTE: FIRMS TRANSPORTING TANK SLUDGE AND WASTE OR TANKS WHICH REQUIRE FURTHER CLEANING MUST BE PERMITTED BY DEM (DIVISION OF AIR & HAZARDOUS MATERIALS) AS HAZARDOUS WASTE TRANSPORTERS.

D. Will tanks(s) be...

rendered unfit for use and disposed of x or reused _____?

(Note: Tanks to be demolished and left in place following tank cleaning.)

NOTE: REUSE OF A TANK IN THE GROUND REQUIRES COMPLIANCE WITH SECTION 12.03 OF STATE UST REGULATIONS.

Location for final tank(s) disposal:

Tanks to be left in place
following partial demolition

If tank is to be reused, specify:

Proposed use: _____

Name/Address of intended user: _____

CERTIFICATION BY TANK OWNER

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the infomation submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information, submitted is, to the best of my knowledge and belief, true, accurate, and completed. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME OF OWNER: (Please print) J.C. Wyman, Capt, CEC, USN
SIGNATURE: _____
TITLE Director for Public Works
ADDRESS: NETC, PWD, Bldg 1, 1 Simonpietri Dr, Newport, RI 02841
TELEPHONE: 841-3841

NOTIFICATION OF LOCAL FIRE DEPARTMENT

The authorization signature of the local fire department below indicates that the local fire officials have been notified that you are planning to close an underground storage tank at the above location. YOU MUST NOTIFY THE LOCAL FIRE DEPARTMENT OF THE EXACT CLOSURE DATE AFTER YOU HAVE CONFIRMED THIS DATE WITH DEM.

Authorized Local Fire Department Representative	Date
NETC Fire Department	841-2225
Name of Local Fire Department	Telephone Number

This signature dose not serve as notice to the town, dose not guarantee town approval, and dose not relieve you of your obligations to other applicable town officials. Any violation, deficiency or requirement which may have been overlooked is also subject to correction under the provision of any applicable code.

DEM
DIVISION OF BUSINESS AFFAIRS

A. NO. OF TANKS _____ X 75.00 = _____

B. NO. OF TANKS _____ X 35.00 = _____

TOTAL FEE = _____ (A) - _____ (B) = _____

FULL PAYMENT RECEIVED ON _____ (DATE)

SUPPLEMENT TO THE PERMANENT CLOSURE APPLICATION FOR USTs

This supplement must accompany all Permanent Closure Applications for USTs (as revised 2/93 and earlier) received by the Rhode Island Department of Environmental Management on or after August 25, 1993. .

FACILITY NAME: Tank Farm 4

FACILITY ADDRESS: NETC, PWD Bldg 1
1 Simompietri Drive
Newport, RI 02841

PROPOSED CLOSURE DATE: 10 June 96

FACILITY REGISTRATION #: 15007

* Please note that the UST registration fee has increased to \$50.00 per tank. Payment of all unregistered tanks must be submitted with this application.

1. Has a check in the total amount of \$50.00 per unregistered tank been submitted with this application? N/A
(Previously submitted with original application)
2. In the space provided below, please draw an informal sketch of the location of each UST to be permanently closed. Number each tank to coincide with the tank numbers on your UST registration form.

(See attached site plan)

(Note: for questions 3-7 please refer to Tank Farm 4 Work Plan)

3. Describe the method to be used to empty the tank(s) prior to excavation. _____
4. Describe the method to be used to remove the tank from excavation. _____
5. Describe the method(s) to be used to properly and safely vent the tank(s) and properly make openings in the tank(s).

* NOTE: Appropriate venting must be carried out both before the cutting of any tank and before off-site transport of any tank which has not been completely cleaned per Rule 15.11(c) of the UST Regs.

6. Describe the instruments used to verify that the tank(s) have been properly vented. _____
7. Describe how any residues remaining in the tank(s) will be managed. _____

**APPENDIX B
DATA FOR TANK CONTENTS**

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

41OIL

Lab Name: NYTEST ENV INC

Contract: 9622627

Lab Code: NYTEST

Case No.: 28473

SAS No.:

SDG No.: TANK2

Matrix: (soil/water) WATER

Lab Sample ID: 2847304

Sample wt/vol: 1.0 (g/mL) ML

Lab File ID: P1733.D

Level: (low/med) LOW

Date Received: 07/25/96

% Moisture: not dec. _____

Date Analyzed: 08/02/96

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (mg/L or mg/Kg) MG/L	Q
75-01-4-----	Vinyl Chloride	0.05	U
75-35-4-----	1,1-Dichloroethene	0.05	U
67-66-3-----	Chloroform	0.05	U
107-06-2-----	1,2-Dichloroethane	0.05	U
78-93-3-----	2-Butanone	0.05	U
56-23-5-----	Carbon Tetrachloride	0.05	U
79-01-6-----	Trichloroethene	0.05	U
71-43-2-----	Benzene	0.05	U
127-18-4-----	Tetrachloroethene	0.05	U
108-90-7-----	Chlorobenzene	0.05	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract: 9622627
 Lab Code: NYTEST Case No.: 28473 SAS No.: SDG No.: 28473
 Matrix: (soil/water) WATER Lab Sample ID: 2847304
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: R1950.D
 Level: (low/med) LOW Date Received: 07/25/96
 % Moisture: not dec. 0 dec. Date Extracted: 07/30/96
 Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/02/96
 GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

41OIL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (mg/L or mg/Kg) MG/L	Q
95-48-7-----	2-Methylphenol	0.01	UUUUUUUU
-----	3+4-Methylphenol	0.00	
121-14-2-----	2,4-Dinitrotoluene	0.01	
118-74-1-----	Hexachlorobenzene	0.01	
87-68-3-----	Hexachlorobutadiene	0.01	
67-72-1-----	Hexachloroethane	0.01	
98-95-3-----	Nitrobenzene	0.01	
87-86-5-----	Pentachlorophenol	0.05	
110-86-1-----	Pyridine	0.01	
95-95-4-----	2,4,5-Trichlorophenol	0.01	
88-06-2-----	2,4,6-Trichlorophenol	0.01	
106-46-7-----	1,4-Dichlorobenzene	0.01	

REPORT OF ANALYSIS

Log in No.: 28473

We find as follows:

Sample Identification

Parameter(s)

	Ignitability degrees F	Reactivity S ppm	Reactivity Cn ppm
2847301 40OIL	>212	1.0 U	1.0 U
2847302 39OIL	>212	1.0 U	1.0 U
2847303 39SLG	>212	1.0 U	1.0 U
2847304 41OIL	>212	1.0 U	1.0 U
2847305 47OIL	>212	1.0 U	1.0 U
2847306 47SLG	>212	1.0 U	1.0 U
2847307 46OIL	>212	1.0 U	1.0 U
2847308 46SLG	>212	1.0 U	1.0 U
2847309 38OIL	>212	1.0 U	1.0 U
2847310 37OIL	>212	1.0 U	1.0 U
2847311 38SLG	>212	1.0 U	1.0 U
2847312 44OIL	>212	1.0 U	1.0 U
2847313 44SLG	>212	1.0 U	1.0 U
2847314 37SLG	>212	1.0 U	1.0 U
Method blank	NA	1.0 U	1.0 U

NA = Not Applicable

U = below method blank / method detection limit

PCB - FORM 1
NYTEST ENVIRONMENTAL INC.

TCL PCB ORGANICS ANALYSIS DATA SHEET

SAMPLE MATRIX MISC SAMPLE ID. 410IL
CONC LEVEL MED LAB SAMPLE ID 2847304
EXTRACTION DATE 07/29/96 DIL FACTOR 1.00
ANALYSIS DATE 08/02/96 * MOISTURE NA

UG/L

CMPD #	CAS Number	PCB COMPOUND	UG/L
1	12674-11-2	Aroclor-1016	1.0 U
2	11104-28-2	Aroclor-1221	1.0 U
3	11141-16-5	Aroclor-1232	1.0 U
4	53469-21-9	Aroclor-1242	1.0 U
5	12672-29-6	Aroclor-1248	1.0 U
6	11097-69-1	Aroclor-1254	1.0 U
7	11096-82-5	Aroclor-1260	1.0 U

TCLP PEST - FORM 1
NYTEST ENVIRONMENTAL INC

TCLP PESTICIDE ORGANICS ANALYSIS DATA SHEET

SAMPLE MATRIX WATER SAMPLE ID 410IL
CONC LEVEL LOW LAB SAMPLE ID 2847304
EXTRACTION DATE 08/01/96 DIL FACTOR 1 00
ANALYSIS DATE 08/15/96 % MOISTURE NA

COMPD #	CAS Number	TCLP PESTICIDE COMPOUNDS	MG/L
1	57-74-9	Chlordane	0.00050 U
2	70-20-8	Endrin	0.00085
3	76-44-8/1024-57-3	Heptachlor & Heptachlor Epoxide	0.00005 U
4	58-89-9	gamma-BHC (Lindane)	0.00005 U
5	72-43-5	Methoxychlor	0.00050 U
6	8001-35-2	Toxaphene	0.00500 U

TCLP HERB - FORM 1
NYTEST ENVIRONMENTAL INC.

TCLP HERBICIDES ORGANICS ANALYSIS DATA SHEET

SAMPLE MATRIX: WATER	SAMPLE ID: 4101L
CONC LEVEL: LOW	LAB SAMPLE ID 2847304
EXTRACTION DATE 07/30/96	DIL FACTOR 1.00
ANALYSIS DATE 08/09/96	% MOISTURE: NA

COMP #	CAS Number	TCLP HERBICIDE COMPOUNDS	MG/L
1	94-75-7	2,4-D	0.01 U
2	93-71-1	2,4,5-TP (Silvex)	0.001 U



R.I. Analytical

Specialists in Environmental Services

FACSIMILE TRANSMITTAL FORM

TO: Mark Goveia
Foster Wheeler

FROM: K. Suran

DATE: 8-21-96 FAX #: 842-6970

NUMBER OF PAGES: 1

COMMENTS: A 5073 - Report will follow 8/22

Sample ID	BTU Btu/lb	% Chlorine	% Sulfur	BWS %	Flashpt °F
BK-1-41	9,765	<0.15	0.56	60	>200
TK-41	15,016	<0.15	0.85	32	>200

Note: This message is intended only for the use of the individual or entity named above, and may contain information that is privileged, confidential, and exempt from disclosure by the applicable law. If you are not the intended recipient this message, please notify us by telephone.

APPENDIX C
DISPOSAL MANIFESTS/BILL-OF-LADINGS

Clean Harbors

STRAIGHT BILL OF LADING

Check One:
 Non-Hazardous Material
 Hazardous Material

NETC *017

DATE 8 / 26 / 96		VEHICLE NUMBER: 268 7216	
FROM: Shipper NETC CODE 40E		TO: Consignee CLEAN HARBORS ENV. SERVICES, INC.	
Street ONE SIMONPIETRI DRIVE		Street 37 RUMELY ROAD	
City NEWPORT State RI		City SOUTH PORTLAND State ME	
Zip Code 02841	US EPA ID Number RI11170024243	Zip Code 04106	
Name of Carrier: J.P. NOONAN TRANSPORTATION			
US DOT Description: (Include Proper Shipping Name, Hazard Class, and ID Number) NON-REGULATED LIQUID (OIL)			
Total Quantity 8 0 0 0	Unit Wt/Vol Gal.	EMERGENCY NUMBER: 1-800-OIL-TANK	
WASTE OIL ANALYSIS: (ACTUAL)		LAB #	
ARSENIC <u>N.D.</u> PPM.	LEAD <u>6.5</u> PPM.	BTU's/LB. <u>15,016</u>	
CADMIUM <u>N.D.</u> PPM.	PCB'S <u>N.D.</u> PPM.	BTU's/GAL. _____	
CHROMIUM <u>N.D.</u> PPM.	TOTAL HALOGENS <u>350</u> PPM.	FLASH POINT <u>> 200</u> °F	
N.D. = NOT DETECTED		SULFUR <u>0.85%</u>	
WASTE OIL SPECIFICATION: (LIMITS)			
ARSENIC 5.0 PPM. MAX.	LEAD 100 PPM. MAX.		
CADMIUM 2.0 PPM. MAX.	PCB'S N.D. PPM. MAX.		
CHROMIUM 10.0 PPM. MAX.	TOTAL HALOGENS 1,000 PPM. MAX.	FLASH POINT <u>> 100</u> °F	
Shipper's Signature <i>[Signature]</i> R-2 THE NEW	Consignee Signature	Transporter's Signature <i>[Signature]</i> 307	
COMMENTS: OIL FROM TANK # 41			

CleanHarbors

STRAIGHT BILL OF LADING

Check One:
 Non-Hazardous Material
 Hazardous Material

NETC # 018

DATE <u>8 / 26 / 96</u>		VEHICLE NUMBER: <u>177 / TR 36A</u>	
FROM: Shipper <u>NETC CODE 40E</u>		TO: Consignee <u>Clean Harbors Env. Services, Inc.</u>	
Street <u>ONE SMOONPIETRI DRIVE</u>		Street <u>37 RUMERY ROAD</u>	
City <u>NEWPORT</u> State <u>RI</u>		City <u>SOUTH PORTLAND</u> State <u>ME</u>	
Zip Code <u>02841</u>	US EPA ID Number <u>RI11170024243</u>	Zip Code <u>04106</u>	
Name of Carrier: <u>J. P. Noonan Transportation</u>			
US DOT Description: (Include Proper Shipping Name, Hazard Class, and ID Number) <u>NON-REGULATED LIQUID (OIL)</u>			
Total Quantity	Unit Wt/Vol	EMERGENCY NUMBER:	
<u>17060</u>	Gal.	1-800-OIL-TANK	
WASTE OIL ANALYSIS: (ACTUAL)		LAB # _____	
ARSENIC <u>N.D.</u> PPM.	LEAD <u>6.5</u> PPM.	BTU's/LB. <u>15,016</u>	
CADMIUM <u>N.D.</u> PPM.	PCB'S <u>N.D.</u> PPM.	BTU's/GAL. _____	
CHROMIUM <u>N.D.</u> PPM.	TOTAL HALOGENS <u>350</u> PPM.	FLASH POINT <u>> 200 °F</u>	
N.D. = NOT DETECTED		SULFUR <u>0.65 %</u>	
WASTE OIL SPECIFICATION: (LIMITS)			
ARSENIC 5.0 PPM. MAX.	LEAD 100 PPM. MAX.		
CADMIUM 2.0 PPM. MAX.	PCB'S N.D. PPM. MAX.		
CHROMIUM 10.0 PPM. MAX.	TOTAL HALOGENS 1,000 PPM. MAX.	FLASH POINT <u>> 100 °F</u>	
Shipper's Signature <u>[Signature]</u> For To Ray	Consignee Signature	Transporter's Signature <u>[Signature]</u>	
COMMENTS: <u>OIL FROM TANK # 41</u>			

CleanHarbors

STRAIGHT BILL OF LADING

Check One:
 Non-Hazardous Material
 Hazardous Material

NETC # 019

DATE <u>8 / 26 / 96</u>		VEHICLE NUMBER: <u>1139 / 12344</u>	
FROM: Shipper <u>NETC CODE 40E</u>		TO: Consignee <u>CLEAN HARBORS ENV. SERVICES, INC.</u>	
Street <u>ONE SIMONPIETRI DRIVE</u>		Street <u>37 RUMFELLY ROAD</u>	
City <u>NEWPORT</u> State <u>RI</u>		City <u>SOUTH PORTLAND</u> State <u>ME</u>	
Zip Code <u>02841</u>	US EPA ID Number <u>RI11170024243</u>	Zip Code <u>04106</u>	
Name of Carrier: <u>CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. MAD0393222SD</u>			
US DOT Description: (Include Proper Shipping Name, Hazard Class, and ID Number) <u>NON-REGULATED LIQUID (OIL)</u>			
Total Quantity <u>115000</u>	Unit Wt/Vol <u>Gal.</u>	EMERGENCY NUMBER: 1-800-OIL-TANK	
WASTE OIL ANALYSIS: (ACTUAL)		LAB # _____	
ARSENIC <u>N.D.</u> PPM.	LEAD <u>6.5</u> PPM.	BTU's/LB. <u>15,016</u>	
CADMIUM <u>N.D.</u> PPM.	PCB'S <u>N.D.</u> PPM.	BTU's/GAL. _____	
CHROMIUM <u>N.D.</u> PPM.	TOTAL HALOGENS <u>350</u> PPM.	FLASH POINT <u>>200</u> °F	
N.D. = NOT DETECTED		SULFUR <u>0.55%</u>	
WASTE OIL SPECIFICATION: (LIMITS)			
ARSENIC 5.0 PPM. MAX.	LEAD 100 PPM. MAX.		
CADMIUM 2.0 PPM. MAX.	PCB'S N.D. PPM. MAX.		
CHROMIUM 10.0 PPM. MAX.	TOTAL HALOGENS 1,000 PPM. MAX.	FLASH POINT <u>>100</u> °F	
Shipper's Signature <u>[Signature]</u>	Consignee Signature _____	Transporter's Signature <u>[Signature]</u>	
COMMENTS: <u>OIL FROM TANK #41</u>			

APPENDIX D
DEGREASER/VENDOR INFORMATION



"Maintenance
Chemicals
For Your
Environment"

HAZARD RATING 4 = EXTREME 3 = HIGH 2 = MODERATE 1 = SLIGHT 0 = INSIGNIFICANT * = CHRONIC HEALTH HAZARD - SEE SECTION V	Fire	Reactivity
	0	
	1	
	1	
	Special	
	Toxicity	

MATERIAL SAFETY DATA SHEET

(Essentially Similar to Form OSHA-20)

SECTION I

REVISED: 06-15-87

CHEMICAL NAME AND SYNONYMS N/A	TRADE NAME AND SYNONYMS ENVIRO 2000S
CHEMICAL FAMILY Detergent	FORMULA Proprietary

SECTION II - HAZARDOUS INGREDIENTS

MATERIAL	CAS #	%	TLV (units)
Sodium Hydroxide	1310-73-2		2 mg/m ³ 200 mg/m ³ IDLH

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	216°F	SPECIFIC GRAVITY (H ₂ O = 1)	1.04
VAPOR PRESSURE (mm Hg)	NIL	PERCENT VOLATILE BY VOLUME (%)	94
VAPOR DENSITY (AIR = 1)	NOT EST.	EVAPORATION RATE (_____ = 1)	1
SOLUBILITY IN WATER	COMPLETE	pH	12.0
APPEARANCE AND ODOR	Clear red liquid / minimal odor.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used)	Boils without flashing.	FLAMMABLE LIMITS	LeI N/A	UeI N/A
EXTINGUISHING MEDIA	Use carbon dioxide, alcohol foam, dry chemicals in areas where chemicals stored.			
SPECIAL FIRE FIGHTING PROCEDURES	Aqueous solutions of product are alkaline.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	None.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	See Section II.
EFFECTS OF OVEREXPOSURE	<p><u>Inhalation</u>: Airborne concentrations of mist or spray may cause irritation of upper respiratory tract, nose and throat, hemolysis, hemoglobinuria.</p> <p><u>Skin</u>: Dermatitis may result from repeated or prolonged exposure due to defatting of tissue.</p> <p><u>Eye</u>: Product is destructive to eye tissue. May cause severe irritation.</p> <p><u>Ingestion</u>: Product can cause irritation of mouth, throat, esophagus and stomach.</p>
EMERGENCY AND FIRST AID PROCEDURES	<p><u>Eyes</u>: Irrigate immediately with running water for at least 15 minutes. Seek medical attention if irritation persists. <u>Skin</u>: Flush with soap and water immediately. Remove impervious clothing immediately when skin is wet or contaminated. Seek medical attention if irritation persists. <u>Inhalation</u>: If person exposed to large amounts of mist or vapor, move the exposed person to fresh air at once and perform artificial respiration. <u>Ingestion</u>: If ingested, seek medical attention immediately. Give large quantities of water.</p>
FOR MEDICAL EMERGENCY CALL COLLECT (713) 734-1656	

SECTION VI — REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
Acids, organic halogens, reactive metals such as zinc, tin, aluminum, leather and wool.			
HAZARDOUS DECOMPOSITION PRODUCTS			
None.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
<p><u>Small Spill</u>: Mop or wipe up or absorb on sawdust or clay and dispose of in accordance with RCRA Regulations. Flush any residue with water.</p> <p><u>Large Spill</u>: Wear goggles, coveralls, and impervious gloves and boots. Add dry absorbant shovel, or sweep up, and place in a D.O.T. approved container and seal. Flush any residue with water.</p>	
WASTE DISPOSAL METHOD	
Treat and dispose of in accordance with regulations under the RCRA as administered by the USEPA or other appropriate state agency.	

SECTION VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)					
Use NIOSH approved respirator for mists and vapors.					
VENTILATION	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">LOCAL EXHAUST To maintain below TLV guidelines.</td> <td style="width: 50%;">SPECIAL</td> </tr> <tr> <td>MECHANICAL (General)</td> <td>OTHER</td> </tr> </table>	LOCAL EXHAUST To maintain below TLV guidelines.	SPECIAL	MECHANICAL (General)	OTHER
LOCAL EXHAUST To maintain below TLV guidelines.	SPECIAL				
MECHANICAL (General)	OTHER				
PROTECTIVE GLOVES	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Rubber or Neoprene</td> <td style="width: 50%;">EYE PROTECTION Goggles or Safety Glasses</td> </tr> </table>	Rubber or Neoprene	EYE PROTECTION Goggles or Safety Glasses		
Rubber or Neoprene	EYE PROTECTION Goggles or Safety Glasses				
OTHER PROTECTIVE EQUIPMENT					
Impervious boots, and coveralls, to minimize skin contact.					

SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store in cool dry place in original sealed container. Avoid temperatures above 140°F. Avoid freezing conditions.	
OTHER PRECAUTIONS	
Read all directions and cautions on label before use. Keep out of reach of children.	

FOR MEDICAL EMERGENCY CALL COLLECT (713) 734-1656

All statements, information and data given are believed to be accurate and reliable as of the data hereof, but are presented without guaranty warranty or responsibility of any kind. expressed or implied on our part. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other or additional considerations. Information regarding the proper course of treatment in the event of an accident or misuse of this product is properly the domain of the attending physician.



"Maintenance
Chemicals
For Your
Environment"

HAZARD RATING	<table border="1"> <tr> <td colspan="2">Fire</td> </tr> <tr> <td>Toxicity</td> <td>Reactivity</td> </tr> <tr> <td>1</td> <td>1</td> </tr> <tr> <td colspan="2">Special</td> </tr> </table>		Fire		Toxicity	Reactivity	1	1	Special	
Fire										
Toxicity	Reactivity									
1	1									
Special										
4 = EXTREME										
3 = HIGH										
2 = MODERATE										
1 = SLIGHT										
0 = INSIGNIFICANT										
* = CHRONIC										
HEALTH HAZARD - SEE SECTION V										

MATERIAL SAFETY DATA SHEET

(Essentially Similar to Form OSHA-20)

SECTION I

REVISED: 06-15-87

CHEMICAL NAME AND SYNONYMS N/A	TRADE NAME AND SYNONYMS ENVIRO 2000S
CHEMICAL FAMILY Detergent	FORMULA Proprietary

SECTION II - HAZARDOUS INGREDIENTS

MATERIAL	CAS #	%	TLV (unrts)
Sodium Hydroxide	1310-73-2		2 mg/m ³ 200 mg/m ³ IDLH

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	216°F	SPECIFIC GRAVITY (H ₂ O = 1)	1.04
VAPOR PRESSURE (mm Hg.)	NIL	PERCENT VOLATILE BY VOLUME (%)	94
VAPOR DENSITY (AIR = 1)	NOT EST.	EVAPORATION RATE (_____ = 1)	1
SOLUBILITY IN WATER	COMPLETE	pH	12.0

APPEARANCE AND ODOR Clear red liquid / minimal odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used) Boils without flashing.	FLAMMABLE LIMITS	Lel N/A	Uel N/A
EXTINGUISHING MEDIA Use carbon dioxide, alcohol foam, dry chemicals in areas where chemicals stored.			
SPECIAL FIRE FIGHTING PROCEDURES Aqueous solutions of product are alkaline.			
UNUSUAL FIRE AND EXPLOSION HAZARDS None.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II.
--

EFFECTS OF OVEREXPOSURE

Inhalation: Airborne concentrations of mist or spray may cause irritation of upper respiratory tract, nose and throat, hemolysis, hemoglobinuria.
Skin: Dermatitis may result from repeated or prolonged exposure due to defatting of tissue
Eye: Product is destructive to eye tissue. May cause severe irritation.
Ingestion: Product can cause irritation of mouth, throat, esophagus and stomach.

EMERGENCY AND FIRST AID PROCEDURES

Eyes: Irrigate immediately with running water for at least 15 minutes. Seek medical attention if irritation persists. Skin: Flush with soap and water immediately. Remove impervious clothing immediately when skin is wet or contaminated. Seek medical attention if irritation persists. Inhalation: If person exposed to large amounts of mist or vapor, move the exposed person to fresh air at once and perform artificial respiration. Ingestion: If ingested, seek medical attention immediately. Give large quantities of water.

FOR MEDICAL EMERGENCY CALL COLLECT (713) 734-1656

SECTION VI — REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
Acids, organic halogens, reactive metals such as zinc, tin, aluminum, leather and wool.			
HAZARDOUS DECOMPOSITION PRODUCTS			
None.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
<p><u>Small Spill:</u> Mop or wipe up or absorb on sawdust or clay and dispose of in accordance with RCRA Regulations. Flush any residue with water.</p> <p><u>Large Spill:</u> Wear goggles, coveralls, and impervious gloves and boots. Add dry absorbant shovel, or sweep up, and place in a D.O.T. approved container and seal. Flush any residue with water.</p>	
WASTE DISPOSAL METHOD	
Treat and dispose of in accordance with regulations under the RCRA as administered by the USEPA or other appropriate state agency.	

SECTION VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		
Use NIOSH approved respirator for mists and vapors.		
VENTILATION	LOCAL EXHAUST To maintain below TLV guidelines.	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES	Rubber or Neoprene	EYE PROTECTION Goggles or Safety Glasses
OTHER PROTECTIVE EQUIPMENT	Impervious boots, and coveralls, to minimize skin contact.	

SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store in cool dry place in original sealed container. Avoid temperatures above 140°F. Avoid freezing conditions.	
OTHER PRECAUTIONS	
Read all directions and cautions on label before use. Keep out of reach of children.	

FOR MEDICAL EMERGENCY CALL COLLECT (713) 734-1656

All statements, information and data given are believed to be accurate and reliable as of the data hereof, but are presented without guaranty warranty or responsibility of any kind, expressed or implied on our part. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations. Information regarding the proper course of treatment in the event of an accident or misuse of this product is properly the domain of the attending physician.

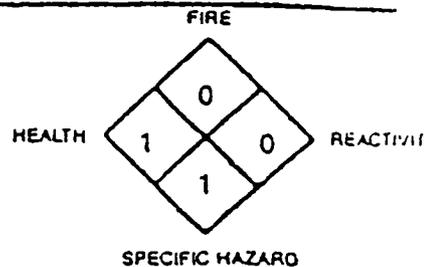
Material Safety Data Sheet

QUICK IDENTIFIER (In Plain Common Name)

SW 1000

Manufacturer's Name (201) 437-7775
 Heritage Labs, Inc.
 Address P.O. Box 4141
 Bayonne, NJ 07002
 Signature of Person Responsible for Preparation
 10/10/89 Donald J. Adone

HAZARD RATING
 4 - Extreme
 3 - High
 2 - Moderate
 1 - Slight
 0 - Insignificant



See Section (5)

SECTION 1 - IDENTITY

Common Name (used on label) (Trade Name & Synonyms) SW 1000
 Chemical Name n.a.
 Formula Proprietary

SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical & common name(s))	CAS #	%	ACGIH TLV	Other Limits Recommended
Sodium metasilicate	6834-93-0	<5%	n.a.	
Isopropanol	67-63-0	<5%	(TWA 400 ppm, STEL 500 ppm)	
Sodium hydroxide	1310-73-2	<1%	(C 2 mg/m ³)	

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

Boiling Point	213°F	Specific Gravity (H ₂ O = 1)	1.036	Vapor Pressure (mm Hg)	n.a.
Percent Volatile by Volume (%)	0	Vapor Density (Air = 1)	n.a.	Evaporation Rate (water = 1)	<1%
Solubility in Water	completely	Reactivity in Water	none		
Appearance and Odor	clear liquid / non objectionable odor				

Flash Point	none	Flammable Limits in Air % by Volume	Lower n.a. Upper n.a.	Extinguisher Media	none required	Auto-ignition Temperature	none
Special Fire Fighting Procedures	none	Unusual Fire and Explosion Hazards	none				

SECTION 4 - REACTIVITY DATA

Unstable		Conditions to Avoid	none
Stable	X		

Incompatibility (Materials to Avoid) Only those materials incompatible with water.

Hazardous Decomposition or Byproducts n.a.

Hazardous Polymerization	May Occur	Conditions to Avoid	none
	Does Not Occur	X	

SECTION 5 - HEALTH HAZARDS

Route(s) of Entry: Inhalation? unlikely Skin? likely Ingestion? unlikely

Health Hazards (Acute and Chronic) Skin irritation may develop if repeated exposure occurs or if it is used for long periods of time.
Avoid eye contact.

Carcinogenicity: None known

Signs and Symptoms of Exposure None known

Emergency and First Aid Procedures n.a.

1. Inhalation Move to more adequate ventilation.
2. Eyes Rinse thoroughly with water, if irritation develops --see physio
3. Skin Same as above.
4. Ingestion Drink juices, milk or water - consult a physician.

SECTION 6 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) n.a. provide proper ventilation.

Ventilation Local Exhaust Mechanical (General) Special Other
Should be adequate

Protective Gloves water resistant gloves. Eye Protection Goggles or safety glasses.

Other Protective Clothing or Equipment

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage Store in temperatures ranging from 30°F to 110°F / 0°-43

Other Precautions None

Steps to be Taken in Case Material is Released or Spilled Hose down with water.

Waste Disposal Methods Biodegradable. Refer to applicable regulations. Special disposal may not be required.

The information on this data sheet represents our current data and best opinion as to the proper use in the handling of this product under normal conditions. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for particular use. Any use of this product which is not in conformance with this data or which involves using the product in combination with any other product or any other process is the responsibility of the user.

APPENDIX E
MANIFESTS (DEBRIS DISPOSAL)



DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

SB-3621
72-1140

TRUCK FROM #4
FOSTER WHEELER N62472-94-0-0398 D.O. 2013

Can # 89202

Please print or type. (Form designed for use on elite (12-pitch) typewrite)

In case of emergency or spill, immediately call The National Response Center (800) 424-8802

UNIFORM HAZARDOUS WASTE MANIFEST		1 Generator's US EPA ID No RI1170024243		Manifest Document No 50437		2 Page 1 of 1		Information in the shaded areas is not required by Federal law					
3 Generator's Name and Mailing Address NETC, code 40E Attn: Raymond Roberge 1 Simonpietri Drive Newport, RI 02841						A. State Manifest Document Number MAJ 631551		B. State Gen ID SAME					
4 Generator's Phone 401-841-3735		5 Transporter 1 Company Name Clean Harbors Env. Services, Inc		6. US EPA ID Number MA0039322250		C. State Trans. ID 621097 ME		D. Transporter's Phone 617-849-1800					
7 Transporter 2 Company Name		8. US EPA ID Number		9 Designated Facility Name and Site Address Clean Harbors Of Braintree Inc 385 Quincy Avenue Braintree, MA 02184		10. US EPA ID Number MA0053452637		E. State Trans. ID					
11 US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) a NON D.O.T. REGULATED OILY SOLIDS, NONE, N/A						12 Containers NO Type 001 CM		13 Total Quantity 22		14 Unit Wt/Vol Y		1. Waste No MA01	
J Additional Descriptions for Materials Listed Above (include physical state and hazard code) (S)MA Regulated						K. Handling Codes for Wastes Listed Above							
a.						b.		c.		d.			
15 Instructions and Additional Information Can # 39202 SB 3627						IN EMERGENCY, CALL CHES 1-800-645-8265 WORK D 136334							
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 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 TIM SPILLANE				Signature <i>Tim Spillane</i>				Date Month Day Year 02 18 97					
17 Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Robert Feezel				Signature <i>Robert Feezel</i>				Date Month Day Year 02 18 97					
18 Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Date Month Day Year					
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			Date Month Day Year				

Approved OMB No. 2050-0039 Expires 1-30-96
Form 3720-22 (Rev. 9-88) Previous editions are obsolete

Clean Harbors has appropriate permits for & will accept the waste the generator is shipping.
COPY 1: FACILITY MAILS FOR DESTINATION STATE

17:17 No.029 P.01

FEB 18 '97

ID:6173561544

CLEAN HARBORS

Clean Harbors of Braintree Inc.
385 Quincy Avenue
Braintree, MA 02184

(617) 849-1800

Date - 2/18/97

Operator - NETA, Code
40E
Newport RI

H.W.F. Clean Harbors
of Braintree

Can # 1140, 39202 Gross

TARE

48400

ifest # MAT 631551 NET

9,900

Name - Co # BOB Fergel

Driver

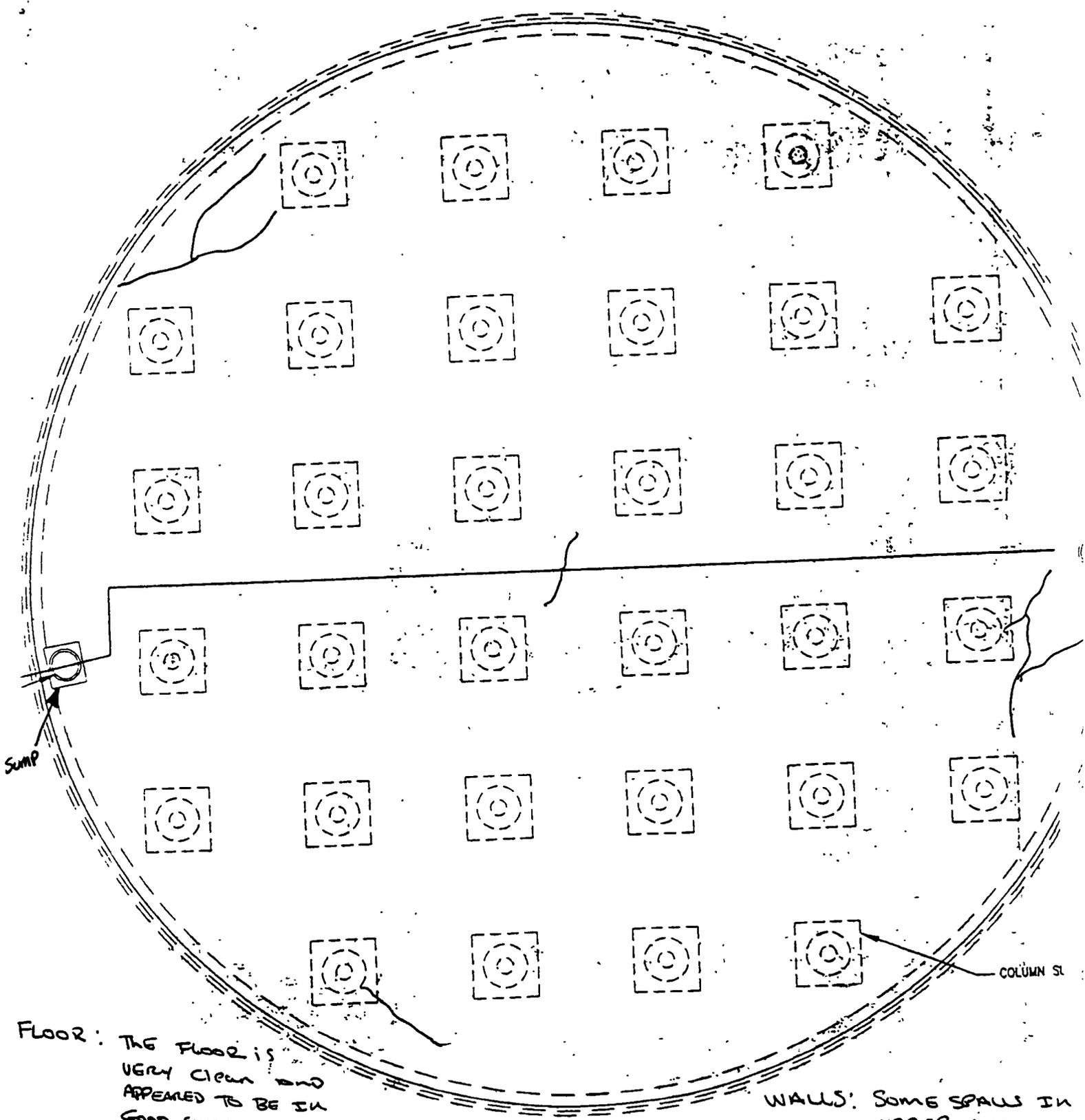
Recorded

ON OFF

To Roger Beauregard

**APPENDIX F
STRUCTURAL INSPECTION**

NOTE: TANK IS DRY AND CLEAN. THIS IS THE FIRST TANK CLEANED BY PSI NO REPAIR NEEDED.



FLOOR: THE FLOOR IS VERY CLEAN AND APPEARED TO BE IN GOOD CONDITION.

COLUMNS: VERY MINOR SPALLS IN SOME OF THE COLUMNS

WALLS: SOME SPALLS IN UPPER LOCATION SMALL CRACKS NO REPAIRS NEE

PLAN VIEW

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

UST ID 03644

LUST ID _____

CLOSURE INSPECTION SHEET
 FOR UNDERGROUND STORAGE FACILITIES

On the 21ST OF OCTOBER 1996 I, PAUL KULPA
 (date) (inspector)

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

NETC TANK FARM #4
 (owner/operator)

and located at

PORTSMOUTH, R.I.
 (address)

TANK ID	VOLUME	STORED MATERIAL	TANK STATUS (F = Filled / R = Removed)
<u>041</u>	<u>2.5 MG</u>	<u>#6 FUEL OIL</u>	<u>F*</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* TANK TO BE DEMOLISHED

Signature: *F. Daniel Bursell / Paul Kulpa*
 Title: ENVIRONMENTAL SCIENTIST
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.

**APPENDIX G
BORING LOGS**

PROJECT: 171143 LOCATION: 1172 DRILLED BY: 1172 BORING NO.: TF4-116
 DATE STARTED: 11/1/94 INCLINATION: Vertical LOGGED BY: K. Schubert GROUND ELEV.: 4616 MLV
 DATE COMPLETED: 11/4/94 BEARING: _____ CHECKED BY: _____ TOTAL DEPTH: 39' 8"

ELEV. (feet)	DEPTH (feet)	SAMPLE			REMARKS ON ADVANCE OF BORING	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
		TYPE-NO.	BLOWS PER 6"	PEN. in.			
17	15-17	S-1 32-37 55-33	24	20	1435 hrs ND on sample	17	S-1 (20 in) sandy gravelly SILT - poorly graded mostly silt, some coarse angular to subangular gravel up to 1 1/4 in length x 1/2 in width, little fine angular gravel up to 1/2 in x 1/4 in, little fine sand, trace medium sand, brown, dry (SM)
19	17-19	S-2 37-20 58-16	24	21	1440 hrs ND on sample coarse angular gravel up to top 2 1/4 x 2"	19	S-2 (21 in) sandy silty GRAVEL - poorly graded mostly coarse angular gravel up to 2 1/4 x 2 in (8 min. or less), some silt, little fine sand, few medium sand, damp, brown (EM)
21	19-21	S-3 37-32 38-39	24	15	1456 hrs no instrument no on sample	21	S-3 (15 in) silty SAND - poorly graded mostly fine sand, little medium sand, some silt, few fine angular to subangular gravels up to 1/2 in x 1/4 in, brown, loose, dry (SM) 1 > 3 in gravel stuck in hole
23	21-23	S-4 21-15 15-23	24	21	1500 hrs possible water table NOT TRAP SATURATED	23	S-4 (21 in) sandy silty GRAVEL - poorly graded mostly silt, some coarse angular gravel up to 2 in x 1 in, rock fragments, fine gravel up to 1/2 in x 1/4 in, little fine sand, trace red sand, brown, moist in nose of spoon (SM)
24	23-24	S-5 21-25	12	12	0750 hrs no instrument moist - not saturated	24	S-5 (12 in) sandy gravelly SILT - poorly graded, mostly silt, little coarse angular gravel up to 1 in x 1/2 in, few fine subangular gravels up to 3/4 in, little fine sand, trace red sand, brown, moist, rock fragments (chips of slate & pyrite) (ML)
26	24-26	S-6 7-6 8-8	24	23	0806 hrs no instrument moist - not saturated	26	S-6 (23 in) sandy gravelly SILT - poorly graded mostly silt, some coarse angular to subangular gravels up to 1 1/2 in x 1 in, little fine sand, few medium sand, brown, fragments.
28	26-28	S-7 8-4 10-12	24	24	0810 hrs very moist not saturated no instrument	28	S-7 (12 in) sandy gravelly SILT - poorly graded, mostly silt, little coarse angular gravel up to 1 in x 1/2 in, few fine subangular gravels up to 3/4 in, little fine sand, trace red sand, brown, moist, rock fragments (chips of slate & pyrite) (ML)
30	28-30	S-8 8-10 15-18	24	15	0836 hrs no instrument very moist	30	S-8 (23 in) sandy gravelly SILT - poorly graded mostly silt, some coarse angular to subangular gravels up to 1 1/2 in x 1 in, little fine sand, few medium sand, brown, fragments.

LEGEND:
 TYPE-NO - type of sample
 RC - rock core sample
 SB - soil barrel sample
 BLOWS PER 6" - 40 lb hammer
 using 30" drive
 3 soil barrel sampler:
 spring time per foot of rock
 PEN - penetration length of sampler
 REC - length of sample recovered
 Z - natural ground water table

NOTES: HSA 6 1/4 ID augers
 10 1/4 OD augers
 3" barrel
 140 lb hammer
 23-24 - chattered up so didn't count

DATE: 11/8/94 PROJECT NO.: 171143
 PAGE: 1 OF 2 BORING NO.: TF4

BORING LOG

NUS CORPORATION

PROJECT: 210 143 LOCATION: W-11 - 11/11/94 DRILLED BY: L. M. ... - E.D. BORING NO.: TF4-B-41
 DATE STARTED: 11/1/94 INCLINATION: Vertical LOGGED BY: ... GROUND ELEV.: ...
 TO COMPLETED: 11/8/94 BEARING: ... CHECKED BY: ... TOTAL DEPTH: 29' 8"

ELEV. feet	DEPTH feet	SAMPLE			REMARKS ON ADVANCE OF BORING	SOIL AND ROCK DESCRIPTIONS	
		TYPE- NO.	BLOWS PER 8" in.	PEN. in.			REC. in.
100.2	30	S-7	15-17	24	11	0845 hrs visibly saturated no instrument (visibly wet)	S-7 (24in) Sandy gravelly Silt - poorly graded mostly silt, some coarse angular gravel up to 1/4 in by 1/2 in, subrounded gravel up to 1 in x 1 in little fine sand, few red sand, brown, very moist (MC) <i>active</i> chips - slate to phyllite
100.0	32	S-8	9-8	24	15	0848 hrs ND on sample	S-8 (15in) Sandy silty GRAVEL - poorly graded, mostly coarse (angular to subangular) gravels up to 3/4 in x 2 in, less subrounded gravels up to 1 1/4 in, few fine subrounded gravels up to 1/2 x 1/4 in, some silt, little fine sand, few red sand, brown, v. moist, rock chips, 2 quartz pebbles up to 2 in x 1 1/2 in - angular (GM)
99.8	34	S-9	28-18	24	16	0903 hrs ND on sample	S-9 (11in) Sandy silty GRAVEL - similar to S-8 w/ more gravel, no quartz pebbles (GM) SATURATED
99.6	36	S-10	24-25	24	8	0909 hrs possibly very clean upon sample	S-10 (15in) sandy gravelly Silt - poorly graded, mostly silt, some coarse angular to subangular gravel up to 1 3/4 in x 1 1/2 in, little fine sand, few red sand, brown, saturated (MC)
99.4	38	S-11	27-23	20	16	0915 hrs 1.7 ppm oil red oil and kerosene + petroleum clot	S-11 (6in) sandy silty GRAVEL - poorly graded mostly coarse angular gravel up to 2 in diameter coarse silt little fine sand, few red sand also - angular to subangular - fine gravel up to 1/2 in x 1/4 in, brown, saturated (GM)
99.2	40	S-12	21-21	21	21	0918 hrs oil slots #1 sand.	S-12 (8in) GRAVEL - poorly graded mostly coarse angular to subangular gravel up to 1 3/4 in diameter, some angular fine gravel up to 1/2 in x 1/4 in, rock fragments, no soil - gravel, and not slate-like (GP)
99.0	42	S-13	21-21	21	21	0920 hrs oil slots #1 sand.	S-13 (14in) sandy gravelly silt - poorly graded mostly coarse angular gravel up to 2 in x 1 3/4 in fine angular gravel up to 1/4 in, little sand (fine) few medium, brown, saturated petroleum (MC)
98.8	44	S-14	21-21	21	21	0922 hrs oil slots #1 sand.	S-14 (2in) rock. fissile, black, thin layers - altered w/ thin quartz veins. Shiny. And grains - phyllite & slate ?? Refusal w/ barrel

100.2
100.0
99.8
99.6
99.4
99.2
99.0
98.8

100.2
100.0
99.8
99.6
99.4
99.2
99.0
98.8

100.2
100.0
99.8
99.6
99.4
99.2
99.0
98.8

100.2
100.0
99.8
99.6
99.4
99.2
99.0
98.8

LEGEND:
 TYPE-NO - Code of sample
 1 - Rock core sample
 2 - Split barrel sample
 3 - Split barrel sampler
 BLOWS PER 8" - 40 lb hammer
 "swing 30" to drive
 3 split barrel sampler
 PEN - penetration length of sampler
 REC - length of sample recovered

NOTES:
 See page 1
 rock - rock @ 39.5

PID ammeter w/ LEL - operating
 S-10

DATE: 11/8/94 PROJECT NO: 2288
 PAGE: 2 OF 2 BORING NO.: TF4-41

BORING LOG TANK FARM 4 - P1 - TANK 41

NUS CORPORATION

PROJECT: _____ LOCATION: _____ DRILLED BY: _____ BORING NO.: TF-PI-4
 DATE STARTED: 11/14/94 INCLINATION: Vertical LOGGED BY: Sakbut GROUND ELEV.: _____
 TIME COMPLETED: 11/14/94 BEARING: _____ CHECKED BY: _____ TOTAL DEPTH: 8 FT

ELEV. feet	DEPTH feet	SAMPLE				REMARKS ON ADVANCE OF BORING	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
		TYPE- NO.	BLOWS PER 8"	PEN. in.	REC. in.			
0	0							
	2							
	4	S-1	7-11 10-9	24	13	1038 hrs ND on sample		NO SAMPLES 0-4'
	6	S-2	15-11 11-12	24	21	1043 hrs ND on sample		
	8					EOB @ 8'		

NO DS
1 TPH
1 TPH
NO DS
1 TPH
1 TPH

S-1 (13 in) silty SAND - poorly graded, mostly fine sand, trace medium sand, some little silt, dry, loose, brown, few coarse subangular gravel up to 3/4 in (5 in)

S-2 (21 in) Sandy SILT - mostly silt, little fine sand, trace med sand, few coarse subangular to angular gravel up to 1 1/2 in diameter, black, dry. (MC)

Backfilled w/natural soil.

LEGEND:
 TYPE-NO - Type of sample
 R - Rock core sample
 S - Soil barrel sample
 BLOWS PER 8" - 40 lb. hammer
 along 30" to drive
 3 soil barrel sampler:
 - Spring time per foot of rock
 PEN - Penetration length of sampler
 REC - Length of sample recovered
 ? - Natural ground water table

NOTES. SSA
 140 lb hammer 2" barrel
 No samples 0-4 FT
 Continuous 4-8'

DATE: 11/14/94 PROJECT NO.: 023
 PAGE: 1 OF 1 BORING NO.: TF-PI-4

BORING LOG

TANK FARM 4 - P2 - TANK 41

NUS CORPORATION

PROJECT: _____ LOCATION: _____ DRILLED BY: _____ BORING NO: ~~TF4~~ PL-41
 DATE STARTED: 11/14/94 INCLINATION: vertical LOGGED BY: J. Kent GROUND ELEV: NM
 TIME COMPLETED: 11/14/94 BEARING: _____ CHECKED BY: _____ TOTAL DEPTH: 8

ELEV. feet	DEPTH feet	SAMPLE			REMARKS ON ADVANCE OF BORING	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
		TYPE- NO.	BLOWS PER 6"	PEN. in.			
	0						NO SAMPLES 0-4 FT
	2						
	4	S-1	1245 1516	24	12	1024 hrs NO duplicate collected (#1)	S-1 (12 in) silty SAND - poorly graded mostly fine sand, trace med sand, little silt, brown, loose, dry, few coarse subangular gravel up to 3/4" x 1/2 in (SM)
	6	S-2	1414 116-11	24	16	1027 hrs NO (#2) duplicate collected.	S-2 (16 in) sandy SILT - poorly graded mostly silt with some fine sand, trace medium sand, dry, loose, black (ML).
						EDS @ 8 FT	Backfilled w/ natural soil

NO DS
2 TPAH-4
2 TPAH-5

NO DS
2 TPAH-6
2 TPAH-8

LEGEND:
 PE-NO - Type of sample
 ... - Rock core sample
 S - Soil barrel sample
 BLOWS PER 6" - 140 lb. hammer
 * along 10" to drive
 3 soil barrel sampler:
 boring time per foot of rock
 PEN - Penetration length of sampler
 REC - Length of sample recovered
 ? - Natural ground water table

NOTES. SUSA - 3 7/8 ID auger
 140 lb hammer
 solid stem auger 2" barrel

Duplicate lot 0406
 Continuous 4-8'

DATE: 11/14/94 PROJECT NO: 0288
 PAGE: 1 OF 1 BORING NO: TF5-12

APPENDIX H
SOIL AND GROUNDWATER ANALYTICAL RESULTS

ASE NO. CTO143

EIMIC CORPORATION

CL SOIL VOLATILE ORGANICS (ug/Kg)

LABORATORY ID:

SOTF4B413032
940980-18

SOTF4B413840
940980-19

SOTF4B432830
940980-20

SOTF4B433638
940980-21

SOTF4B442224
940980-22

ANALYTE	CRQL	MDL/IDL	SOTF4B413032 940980-18	SOTF4B413840 940980-19	SOTF4B432830 940980-20	SOTF4B433638 940980-21	SOTF4B442224 940980-22
Chloromethane	10	2	12 U	13 U	11 U	11 U	11 U
Bromomethane	10	2	12 U	13 U	11 U	11 U	11 U
Methyl Chloride	10	2	12 U	13 U	11 U	11 U	11 U
Chloroethane	10	2	12 U	13 U	11 U	11 U	11 U
Methylene Chloride	10	2	12 U	33 U	11 U	11 U	11 U
Acetone	10	2	12 U	13 U	11 U	11 U	11 U
Carbon Disulfide	10	2	12 U	13 U	11 U	11 U	11 U
1,1-Dichloroethene	10	2	12 U	13 U	11 U	11 U	11 U
1,1-Dichloroethane	10	2	12 U	13 U	11 U	11 U	11 U
1,2-Dichloroethene (total)	10	2	12 U	13 U	11 U	11 U	11 U
Chloroform	10	2	12 U	13 U	11 U	11 U	11 U
1,2-Dichloroethane	10	2	12 U	9 U	11 U	11 U	11 U
2-Butanone	10	2	12 U	13 U	11 U	11 U	11 U
1,1,1-Trichloroethane	10	2	12 U	13 U	11 U	11 U	11 U
Carbon Tetrachloride	10	2	12 U	13 U	11 U	11 U	11 U
Bromodichloromethane	10	2	12 U	13 U	11 U	11 U	11 U
1,2-Dichloropropane	10	2	12 U	13 U	11 U	11 U	11 U
cis-1,3-Dichloropropene	10	2	12 U	13 U	11 U	11 U	11 U
Trichloroethene	10	2	12 U	13 U	11 U	11 U	11 U
Dibromochloromethane	10	2	12 U	13 U	11 U	11 U	11 U
1,1,2-Trichloroethane	10	2	12 U	13 U	11 U	11 U	11 U
Benzene	10	2	12 U	13 U	11 U	11 U	11 U
trans-1,3-Dichloropropene	10	2	12 U	13 U	11 U	11 U	11 U
Bromoform	10	2	12 U	13 U	11 U	11 U	11 U
4-Methyl-2-Pentanone	10	2	12 U	13 U	11 U	11 U	11 U
2-Hexanone	10	2	12 U	13 U	11 U	11 U	11 U
Tetrachloroethene	10	2	12 U	13 U	11 U	11 U	11 U
1,1,2,2-Tetrachloroethane	10	2	12 U	13 U	11 U	11 U	11 U
Toluene	10	2	12 U	13 U	11 U	11 U	11 U
Chlorobenzene	10	2	12 U	13 U	11 U	11 U	11 U
Ethylbenzene	10	2	12 U	13 U	11 U	11 U	11 U
Styrene	10	2	12 U	13 U	11 U	11 U	11 U
Xylene (total)	10	2	12 U	13 U	11 U	11 U	11 U
DILUTION FACTOR:			1	1	1	1	1
% SOLIDS			84	76	87	89	89

ASE NO CTO143

EIMIC CORPORATION

CL AQUEOUS VOLATILE ORGANICS (ug/L)

STATION ID:
LABORATORY ID.

↓

GW-TF4-MW114 941027-01	GW-TF4-MW115 941027-02	GW-TF4-MW116 941027-03	GW-TF4-MW117 941027-04	GW-TF4-MW118 941027-05
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ANALYTE	CRQL	MDL/DL	GW-TF4-MW114 941027-01	GW-TF4-MW115 941027-02	GW-TF4-MW116 941027-03	GW-TF4-MW117 941027-04	GW-TF4-MW118 941027-05
Chloroethane	10	2	10 U				
Bromomethane	10	2	10 U				
Methyl Chloride	10	2	10 U				
Chloroethane	10	2	10 U				
Ethylene Chloride	10	2	13 U	14 U	18 U	21 U	25 U
Acetone	10	2	10 U				
Carbon Disulfide	10	2	10 U				
1,1-Dichloroethene	10	2	10 U				
1,1-Dichloroethane	10	2	10 U				
1,2-Dichloroethene (total)	10	2	10 U				
Chloroform	10	2	10 U				
1,2-Dichloroethane	10	2	10 U	2 J	2 J	2 J	2 J
2-Butanone	10	2	10 U				
1,1,1-Trichloroethane	10	2	10 U				
Carbon Tetrachloride	10	2	10 U				
Bromodichloromethane	10	2	10 U				
1,2-Dichloropropane	10	2	10 U				
trans-1,3-Dichloropropane	10	2	10 U				
Trichloroethene	10	2	10 U				
Bromochloromethane	10	2	10 U				
1,1,2-Trichloroethane	10	2	10 U				
Benzene	10	2	10 U				
trans-1,3-Dichloropropene	10	2	10 U				
Bromoform	10	2	10 U				
1-Methyl-2-Pentanone	10	2	10 U				
2-Hexanone	10	2	10 U				
Tetrachloroethene	10	2	10 U				
1,1,2,2-Tetrachloroethane	10	2	10 U				
Toluene	10	2	10 U				
Chlorobenzene	10	2	10 U				
Ethylbenzene	10	2	10 U				
Styrene	10	2	10 U				
Xylene (total)	10	2	10 U				

DILUTION FACTOR:

1 1 1 1 1

CASE NO. CTO143

CEMEX CORPORATION

FCL SOIL SEMI-VOLATILE ORGANICS (ug/kg)

STATION ID:
LABORATORY ID:

SOTF4B413032
940980-18

SOTF4B413840
940980-19

SOTF4B432830
940980-20

SOTF4B433638
940980-21

SOTF4B442224
940980-22

ANALYTE	CRQL	MDL/IDL	SOTF4B413032	SOTF4B413840	SOTF4B432830	SOTF4B433638	SOTF4B442224
PHENOL	300	30	380 U				
BIS(2-CHLOROETHYL)ETHER	300	30	380 U				
2-CHLOROPHENOL	300	30	380 U				
1,3-DICHLOROBENZENE	300	30	380 U				
1,4-DICHLOROBENZENE	300	30	380 U				
1,2-DICHLOROBENZENE	300	30	380 U				
2-METHYLPHENOL	300	30	380 U				
2,2'-OXYBIS(1-CHLOROPROPANE)	300	30	380 U				
4-METHYLPHENOL	300	30	380 U				
N-NITROSO-DI-n-PROPYLAMINE	300	30	380 U				
HEXACHLOROETHANE	300	30	380 U				
NITROBENZENE	300	30	380 U				
ISOPHORONE	300	30	380 U				
2-NITROPHENOL	300	30	380 U				
2,4-DIMETHYLPHENOL	300	30	380 U				
BIS(2-CHLOROETHOXY)METHANE	300	30	380 U				
2,4-DICHLOROPHENOL	300	30	380 U				
1,2,4-TRICHLOROBENZENE	300	30	380 U				
NAPHTHALENE	300	30	380 U				
4-CHLOROANILINE	300	30	380 U				
HEXACHLOROBUTADIENE	300	30	380 U				
4-CHLORO-3-METHYLPHENOL	300	30	380 U	49 J	380 U	380 U	380 U
2-METHYLNAPHTHALENE	300	30	380 U				
HEXACHLOROCYCLOPENTADIENE	300	30	380 U				
2,4,6-TRICHLOROPHENOL	800	80	930 U	920 U	930 U	380 U	920 U
2,4,5-TRICHLOROPHENOL	300	30	380 U	380 U	930 U	930 U	920 U
2-CHLORONAPHTHALENE	800	80	930 U	920 U	380 U	380 U	380 U
2-NITROANILINE	300	30	380 U				
DIMETHYLPHTHALATE	300	30	380 U				
ACENAPHTHYLENE	300	30	380 U				
2,6-DINITROTOLUENE	300	30	380 U				
3-NITROANILINE	800	80	930 U	920 U	930 U	930 U	920 U

CASE NO. CTO143

CEIMIC CORPORATION

TCL SOIL SEMI-VOLATILE ORGANICS (ug/kg)

STATION ID:

LABORATORY ID:

SOTF4B413032
940980-18

SOTF4B413840
940980-19

SOTF4B432830
940980-20

SOTF4B433638
940980-21

SOTF4B442224
940980-22

ANALYTE	CRQL	MDL/ADL	SOTF4B413032 940980-18	SOTF4B413840 940980-19	SOTF4B432830 940980-20	SOTF4B433638 940980-21	SOTF4B442224 940980-22
ACENAPHTHENE	300	30	380 U				
2,4-DINITROPHENOL	800	80	930 U	920 U	930 U	930 U	920 U
4-NITROPHENOL	800	80	930 U	920 U	930 U	930 U	920 U
DIBENZOFURAN	300	30	380 U				
2,4-DINITROTOLUENE	300	30	380 U				
DIETHYL PHTHALATE	300	30	380 U				
4-CHLOROPHENYL-PHENYL ETHER	300	30	380 U				
FLUORENE	300	30	380 U				
4-NITROANILINE	800	80	930 U	920 U	930 U	930 U	920 U
4,6-DINITRO-2-METHYLPHENOL	800	80	930 U	920 U	930 U	930 U	920 U
N-NITROSODIPHENYLAMINE	300	30	380 U	63 J	380 U	380 U	380 U
4-BROMOPHENYL-PHENYL ETHER	300	30	380 U				
HEXACHLOROBENZENE	300	30	380 U				
PENTACHLOROPHENOL	800	80	930 U	920 U	930 U	930 U	920 U
PHENANTHRENE	300	30	380 U	100 J	380 U	380 U	380 U
ANTHRACENE	300	30	380 U				
DI-n-BUTYLPHTHALATE	300	30	380 U				
FLUORANTHENE	300	30	380 U				
CARBAZOLE	300	30	380 U				
PYRENE	300	30	380 U	51 J	380 U	380 U	380 U
BUTYLBENZYLPHTHALATE	300	30	380 U				
3,3'-DICHLOROBENZIDINE	300	30	380 U				
BENZO(a)ANTHRACENE	300	30	380 U				
CHRYSENE	300	30	97 J	60 J	85 J	66 J	870
BIS(2-ETHYLHEXYL)PHTHALATE	300	30	380 U				
DI-n-OCTYLPHTHALATE	300	30	380 U				
BENZO(b)FLUORANTHENE	300	30	380 U				
BENZO(k)FLUORANTHENE	300	30	380 U				
BENZO(a)PYRENE	300	30	380 U				
INDENO(1,2,3-cd)PYRENE	300	30	380 U				
DIBENZO(a,h)ANTHRACENE	300	30	380 U				
BENZO(g,h,i)PERYLENE	300	30	380 U				
DILUTION FACTOR:			1	1	1	1	1
% SOLIDS			86	86	86	86	86

CASE NO. CTO143

CEIMIC CORPORATION

TCL AQUEOUS SEMI-VOLATILE ORGANICS (ug/L)

STATION ID:

LABORATORY ID:

GW-TF4-MW114
941027-01

GW-TF4-MW115
941027-02

GW-TF4-MW116
941027-03

GW-TF4-MW117
941027-04

GW-TF4-MW118
941027-05

ANALYTE	CRQL	MDL/IDL	GW-TF4-MW114 941027-01	GW-TF4-MW115 941027-02	GW-TF4-MW116 941027-03	GW-TF4-MW117 941027-04	GW-TF4-MW118 941027-05
PHENOL	10	1	10 U				
BIS(2-CHLOROETHYL)ETHER	10	1	10 U				
2-CHLOROPHENOL	10	1	10 U				
1,3-DICHLOROBENZENE	10	1	10 U				
1,4-DICHLOROBENZENE	10	1	10 U				
1,2-DICHLOROBENZENE	10	1	10 U				
2-METHYLPHENOL	10	1	10 U				
2,2'-OXYBIS(1-CHLOROPROPANE)	10	1	10 U				
4-METHYLPHENOL	10	1	10 U				
N-NITROSO-DI-n-PROPYLAMINE	10	1	10 U				
HEXACHLOROETHANE	10	1	10 U				
NITROBENZENE	10	1	10 U				
ISOPHORONE	10	1	10 U				
2-NITROPHENOL	10	1	10 U				
2,4-DIMETHYLPHENOL	10	1	10 U				
BIS(2-CHLOROETHOXY)METHANE	10	1	10 U				
2,4-DICHLOROPHENOL	10	1	10 U				
1,2,4-TRICHLOROBENZENE	10	1	10 U				
NAPHTHALENE	10	1	10 U				
4-CHLOROANILINE	10	1	10 U				
HEXACHLOROBTADIENE	10	1	10 U				
4-CHLORO-3-METHYLPHENOL	10	1	10 U				
2-METHYLNAPHTHALENE	10	1	10 U				
HEXACHLOROCYCLOPENTADIENE	10	1	10 U				
2,4,6-TRICHLOROPHENOL	25	25	25 U				
2,4,5-TRICHLOROPHENOL	10	1	10 U				
2-CHLORONAPHTHALENE	25	25	25 U				
2-NITROANILINE	10	1	10 U				
DIMETHYLPHTHALATE	10	1	10 U				
ACENAPHTHYLENE	10	1	10 U				
2,6-DINITROTOLUENE	25	25	25 U				
3-NITROANILINE							

ASE NO CTO143

EIMIC CORPORATION

CL AQUEOUS SEMI-VOLATILE ORGANICS (ug/L)

STATION ID.
LABORATORY ID.

GW-TF4-MW114
941027-01

GW-TF4-MW115
941027-02

GW-TF4-MW116
941027-03

GW-TF4-MW117
941027-04

GW-TF4-MW118
941027-05

ANALYTE

CRQL MDL/IDL

ACENAPHTHENE	10	1	10 U				
2,4-DINITROPHENOL	25	2.5	25 U				
1-NITROPHENOL	25	2.5	25 U				
DIBENZOFURAN	10	1	10 U				
2,4-DINITROTOLUENE	10	1	10 U				
DIETHYL PHTHALATE	10	1	10 U				
1-CHLOROPHENYL-PHENYL ETHER	10	1	10 U				
FLUORENE	10	1	10 U				
1-NITROANILINE	25	2.5	25 U				
1,6-DINITRO-2-METHYLPHENOL	25	2.5	25 U				
N-NITROSODIPHENYLAMINE	10	1	10 U				
1-BROMOPHENYL-PHENYL ETHER	10	1	10 U				
HEXACHLOROBENZENE	10	1	10 U				
PENTACHLOROPHENOL	25	2.5	25 U				
PHENANTHRENE	10	1	10 U				
ANTHRACENE	10	1	10 U				
DI-n-BUTYLPHTHALATE	10	1	10 U				
FLUORANTHENE	10	1	10 U				
CARBAZOLE	10	1	10 U				
PYRENE	10	1	10 U				
BUTYLBENZYLPHTHALATE	10	1	10 U				
3,3'-DICHLOROBENZIDINE	10	1	10 U				
BENZO(a)ANTHRACENE	10	1	10 U				
CHRYSENE	10	1	10 U				
BIS(2-ETHYLHEXYL)PHTHALATE	10	1	10 U				
DI-n-OCTYLPHTHALATE	10	1	10 U				
BENZO(b)FLUORANTHENE	10	1	10 U				
BENZO(k)FLUORANTHENE	10	1	10 U				
BENZO(a)PYRENE	10	1	10 U				
INDENO(1,2,3-cd)PYRENE	10	1	10 U				
DIBENZO(a,h)ANTHRACENE	10	1	10 U				
BENZO(g,h,i)PERYLENE	10	1	10 U				

DILUTION FACTOR

1 1 1 1 1

CASE NO CT0143

CEIMIC CORPORATION
TOTAL
RCRA SOIL METALS (mg/Kg)

STATION ID.
LABORATORY ID.

SOTF4B391719
940980-11

SOTF4B394042
940980-12

SOTF4B402628
940980-13

SOTF4B404042
940980-14

↓
SOTF4B413032
940980-18

↓
SOTF4B413840
940980-19

ANALYTE	CRDL	IDL											
ARSENIC	1	0.2	16.1		21.6		18.0		17.3		15.9		14.9
BARIUM	20	0.3	9.3		9.7		6.5		9.2		8.0		12.5
CADMIUM	0.5	0.4	1.7		2.2		2.3		2.3		2.2		2.1
CHROMIUM	1	0.7	7.3		8.5		11.0		13.2		14.6		11.8
LEAD	0.3	0.1	5.5	U	6.2	U	6.6	U	8.3	U	6.3	U	7.3
MERCURY	0.1	0.05	0.05	U	0.08								
SELENIUM	0.5	0.2	0.46	U	0.46	U	0.38	U	0.47	U	0.19	U	0.31
SILVER	1	0.4	1.1	U	1.2	U	1.7	U	1.4	U	1.5	U	1.4
% SOLID			85.9		87.8		86.2		84.1		82.9		85.6

SE NO. CTO143

IMIC CORPORATION
TAL
RA AQUEOUS METALS (ug/L)

ATION ID
BORATORY ID:

↓

GW-TF4-MW114	GW-TF4-MW115	GW-TF4-MW116	GW-TF4-MW117	GW-TF4-MW118	GW-TF5-MW102
941027-01	941027-02	941027-03	941027-04	941027-05	941027-06

ANALYTE	CRDL	IDL	GW-TF4-MW114	GW-TF4-MW115	GW-TF4-MW116	GW-TF4-MW117	GW-TF4-MW118	GW-TF5-MW102
ARSENIC	10	2	20 U	20 U	20 U	20 U	26 B	26 B
BARIUM	200	1	152 U	10.9 U	175 U	88 U	184 U	89 U
CADMIUM	5	3	30 U					
CHROMIUM	10	5	5.0 U	5.0 U	50 U	50 U	50 U	50 U
COPPER	3	1	1.0 U	1.0 U	1.1 B	1.0 U	10 U	10 U
MERCURY	0.2	0.1	0.13 UJ	0.15 UJ	0.14 UJ	0.14 UJ	0.13 UJ	0.14 UJ
SELENIUM	5	2	20 U	2.0 U	20 U	20 U	20 U	20 U
ZINC	10	4	40 U	4.3 UJ	40 U	40 U	40 U	40 U

Total Petroleum Hydrocarbons
(Extractables)

EPA Method 8015B
GC/FID Fingerprint

Client: Halliburton NUS

Client Sample ID: SO-TF4-P2-41-0608

Date Sample Received: 11/15/94

Date Sample Analyzed: 12/01/94

Laboratory ID: 940996-02

Date Sample Prepared: 11/22/94

Concentration in: mg/kg^T

Target Analyte	Sample Concentration	Method Reporting Limits
Mineral Spirits (Paint Thinner)	ND	11
JP-4 Jet Fuel	ND	11
Kerosene	ND	11
Jet Fuel A	ND	11
JP-5 Jet Fuel	ND	11
JP-8 Jet Fuel	ND	11
Mineral Oil	ND	11
Naphtha	ND	11
Diesel Fuel	ND	11
Fuel Oil #2	ND	11
Fuel Oil #4	ND	11
Fuel Oil #5	ND	11
Fuel Oil #6	ND	11
Bunker Oil	ND	11
Motor Oil	ND	11
Hydraulic Jack Oil	ND	11
Transmission Fluid	ND	11
Lubncating Oil	ND	11
Compressor Oil	ND	11
Creosote	ND	5.5
Diesel Range Organics (C10 to C28)	ND	5.5
Residual Range Organics (C28 to C40)	ND	5.5

ND = Not detected

- = dry weight basis, solids = 91%

The sample chromatogram was compared to the Target Analytes listed. The reported analyte concentrations are estimated from the most closely matching target analytes.

Reported by: _____

AZ

Approved by: _____

HL

**Total Petroleum Hydrocarbons
(Extractables)**

EPA Method 8015B
GC/FID Fingerprint

Client: Halliburton NUS

Client Sample ID: SO-TF4-P1-41-0608

Date Sample Received: 11/15/94

Date Sample Analyzed: 12/01/94

Laboratory ID: 940996-01

Date Sample Prepared: 11/22/94

Concentration in: mg/kg⁺

Target Analyte	Sample Concentration	Method Reporting Limits
Mineral Spints (Paint Thinner)	ND	11
JP-4 Jet Fuel	ND	11
Kerosene	ND	11
Jet Fuel A	ND	11
JP-5 Jet Fuel	ND	11
JP-8 Jet Fuel	ND	11
Mineral Oil	ND	11
Naphtha	ND	11
Diesei Fuel	ND	11
Fuel Oil #2	ND	11
Fuel Oil #4	ND	11
Fuel Oil #5	ND	11
Fuel Oil #6	ND	11
Bunker Oil	ND	11
Motor Oil	ND	11
Hydraulic Jack Oil	ND	11
Transmission Fluid	ND	11
Lubricating Oil	ND	11
Compressor Oil	ND	11
Creosote	ND	5.6
Diesel Range Organics (C10 to C28)	ND	5.6
Residual Range Organics (C28 to C40)	ND	5.6

ND = Not detected

+ = dry weight basis, solids = 90%

The sample chromatogram was compared to the Target Analytes listed. The reported analyte concentrations are estimated from the most closely matching target analytes.

Reported by: AL

Approved by: HL

**APPENDIX I
CHAIN-OF-CUSTODY FORMS**

APPENDIX J
TEST PIT ANALYTICAL RESULTS

Analysis Report: Total Petroleum Hydrocarbons

Client: Foster Wheeler Environmental Corp.
Analysis: Method 418.1
Matrix: Soil
Concentration in: mg/kg, dry weight basis

<u>Lab ID</u>	<u>Client ID</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>% Solid</u>	<u>Analysis Date</u>
D1111-01	TPTK-38	150	23	94	7/21/97
D1111-02	TPTK-41	ND	24	92	7/21/97

QA/QC

Method Blank I0716-B2	ND	22	7/21/97
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Lab Control Spike (% Recovery) I0716-LCS2	105	7/21/97
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Analysis Report: Semivolatile Organic Compounds

Client: Foster Wheeler Environmental Corp.
 Client ID: D1111-02
 Lab ID: TPTK-41
 Analysis: Method 8270

Analysis Date: 7/16/97
 Matrix: Soil, 92% solids
 Concentration in: ug/kg, dry weight basis
 Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Phenol	ND	360
bis(2-Chloroethyl)ether	ND	360
2-Chlorophenol	ND	360
1,3-Dichlorobenzene	ND	360
1,4-Dichlorobenzene	ND	360
1,2-Dichlorobenzene	ND	360
2-Methylphenol	ND	360
2,2'-oxybis(1-Chloropropane)	ND	360
4-Methylphenol	ND	360
n-Nitroso-di-n-propylamine	ND	360
Hexachloroethane	ND	360
Nitrobenzene	ND	360
Isophorone	ND	360
2-Nitrophenol	ND	360
2,4-Dimethylphenol	ND	360
bis(2-Chloroethoxy)methane	ND	360
2,4-Dichlorophenol	ND	360
1,2,4-Trichlorobenzene	ND	360
Naphthalene	ND	360
4-Chloroaniline	ND	360
Hexachlorobutadiene	ND	360
4-Chloro-3-methylphenol	ND	360
2-Methylnaphthalene	ND	360
Hexachlorocyclopentadiene	ND	360
2,4,6-Trichlorophenol	ND	360
2,4,5-Trichlorophenol	ND	900
2-Chloronaphthalene	ND	360
2-Nitroaniline	ND	900
Dimethylphthalate	ND	360
Acenaphthylene	ND	360
2,6-Dinitrotoluene	ND	360
3-Nitroaniline	ND	900
Acenaphthene	ND	360
2,4-Dinitrophenol	ND	900
4-Nitrophenol	ND	900
Dibenzofuran	ND	360
2,4-Dinitrotoluene	ND	360

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Diethylphthalate	ND	360
Fluorene	ND	360
4-Chlorophenyl-phenylether	ND	360
4-Nitroaniline	ND	900
4,6-Dinitro-2-methylphenol	ND	900
n-Nitrosodiphenylamine	ND	360
4-Bromophenyl-phenylether	ND	360
Hexachlorobenzene	ND	360
Pentachlorophenol	ND	900
Phenanthrene	ND	360
Anthracene	ND	360
Di-n-butylphthalate	ND	360
Carbazole	ND	360
Fluoranthene	ND	360
Pyrene	ND	360
Butylbenzylphthalate	ND	360
Benzo(a)anthracene	ND	360
Chrysene	ND	360
3,3'-Dichlorobenzidine	ND	360
bis(2-Ethylhexyl)phthalate	ND	360
Di-n-octylphthalate	ND	360
Benzo(b)fluoranthene	ND	360
Benzo(k)fluoranthene	ND	360
Benzo(a)pyrene	ND	360
Indeno(1,2,3-cd)pyrene	ND	360
Dibenz(a,h)anthracene	ND	360
Benzo(g,h,i)perylene	ND	360

QC Batch: S0716-B1

Surrogate Recovery:

2-Fluorophenol	63%
Phenol-d5	70%
2-Chlorophenol-d4	63%
2,4,6-Tribromophenol	74%
1,2-Dichlorobenzene-d4	61%
Nitrobenzene-d5	67%
2-Fluorobiphenyl	72%
p-Terphenyl-d14	78%

ND = Not detected

007

Analysis Report: Volatile Organic Compounds

Client: Foster Wheeler Environmental Corp.
 Client ID: D1111-02
 Lab ID: TPTK-41
 Analysis: Method 8260

Analysis Date: 7/16/97
 Matrix: Soil, 92% solids
 Concentration in: ug/kg, dry weight basis
 Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Carbon disulfide	ND	5
Iodomethane	ND	5
Acetone	5	5
Methylene chloride	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Vinyl acetate	ND	5
2,2-Dichloropropane	ND	5
cis-1,2-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Bromochloromethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
1,1-Dichloropropene	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Dibromomethane	ND	5
Bromodichloromethane	ND	5
2-Chloroethyl vinyl ether	ND	5
cis-1,3-Dichloropropene	ND	5
4-Methyl-2-pentanone	ND	5
Toluene	ND	5

013

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethan	ND	5
Tetrachloroethene	ND	5
1,3-Dichloropropane	ND	5
2-Hexanone	ND	5
Dibromochloromethane	ND	5
1,2-Dibromoethane (EDB)	ND	5
Chlorobenzene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Ethylbenzene	ND	5
Xylenes, total	ND	5
Styrene	ND	5
Bromoform	ND	5
Isopropylbenzene	ND	5
Bromobenzene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,2,3-Trichloropropane	ND	5
n-Propylbenzene	ND	5
2-Chlorotoluene	ND	5
4-Chlorotoluene	ND	5
1,3,5-Trimethylbenzene	ND	5
tert-Butylbenzene	ND	5
1,2,4-Trimethylbenzene	ND	5
sec-Butylbenzene	ND	5
1,3-Dichlorobenzene	ND	5
4-Isopropyltoluene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5
n-Butylbenzene	ND	5
1,2-Dibromo-3-chloropropane	ND	5
1,2,4-Trichlorobenzene	ND	5
Hexachlorobutadiene	ND	5
1,2,3-Trichlorobenzene	ND	5
MTBE	ND	5
Naphthalene	ND	5
Surrogate Recovery:		QC Batch: V2B0716A
1,2-Dichloroethane-d4	97%	
Toluene-d8	97%	
Bromofluorobenzene	90%	

ND = Not detected

Analysis Report: Total Metals

Client: Foster Wheeler Environmental Corp.
Client ID: TPTK-41
Lab ID: D1111-02
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil, 92% Solids
Concentration in: mg/kg, dry weight basis
Analysis Date: 7/18/97

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Arsenic	12	1
Barium	18	1
Cadmium	0.6	0.1
Chromium	14	1
Lead	11	1
Mercury	ND	0.3
Selenium	ND	2
Silver	ND	1

QC Batch: 0717PBS1

ND = Not detected

Analysis Report: Semivolatile Organic Compounds

Client: Foster Wheeler Environmental Corp.
 Client ID:
 Lab ID: Method Blank, S0716-B1
 Analysis: Method 8270

Analysis Date: 7/22/97
 Matrix: Soil
 Concentration in: ug/kg
 Dilution: 10

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
2,2'-oxybis(1-Chloropropane)	ND	330
4-Methylphenol	ND	330
n-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	330
2,4-Dimethylphenol	ND	330
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	830
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	830
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	830
Acenaphthene	ND	330
2,4-Dinitrophenol	ND	830
4-Nitrophenol	ND	830
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330

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<u>Analyte</u>	<u>Results</u>	<u>R porting Limits</u>
Diethylphthalate	ND	330
Fluorene	ND	330
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	830
4,6-Dinitro-2-methylphenol	ND	830
n-Nitrosodiphenylamine	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	830
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Carbazole	ND	330
Fluoranthene	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
Benzo(a)anthracene	ND	330
Chrysene	ND	330
3,3'-Dichlorobenzidine	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

QC Batch: S0716-B1

Surrogate Recovery:

2-Fluorophenol	64%
Phenol-d5	72%
2-Chlorophenol-d4	64%
2,4,6-Tribromophenol	72%
1,2-Dichlorobenzene-d4	71%
Nitrobenzene-d5	76%
2-Fluorobiphenyl	76%
p-Terphenyl-d14	76%

ND = Not detected

Analysis Report: Semivolatile Organic Compounds

Client: Foster Wheeler Environmental Corp.
Lab ID: S0716-L1
Analysis: Method 8270

Matrix: Solid
Analysis Date: 7/22/97

<u>Analyte</u>	<u>% Recovery</u>
Phenol	72
2-Chlorophenol	59
1,4-Dichlorobenzene	68
n-Nitroso-di-n-propylamine	73
1,2,4-Trichlorobenzene	89
4-Chloro-3-methylphenol	89
Acenaphthene	72
4-Nitrophenol	76
2,4-Dinitrotoluene	78
Pentachlorophenol	70
Pyrene	71

QC Batch: S0716-B1

010

Analysis Report: Volatile Organic Compounds

Client: Foster Wheeler Environmental Corp.
 Client ID: D1111-03
 Lab ID: TK4-TBS
 Analysis: Method 8260

Analysis Date: 7/16/97
 Matrix: Aqueous
 Concentration in: ug/L
 Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Carbon disulfide	ND	5
Iodomethane	ND	5
Acetone	ND	5
Methylene chloride	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Vinyl acetate	ND	5
2,2-Dichloropropane	ND	5
cis-1,2-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Bromochloromethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
1,1-Dichloropropene	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Dibromomethane	ND	5
Bromodichloromethane	ND	5
2-Chloroethyl vinyl ether	ND	5
cis-1,3-Dichloropropene	ND	5
4-Methyl-2-pentanone	ND	5
Toluene	ND	5

015

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,3-Dichloropropane	ND	5
2-Hexanone	ND	5
Dibromochloromethane	ND	5
1,2-Dibromoethane (EDB)	ND	5
Chlorobenzene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Ethylbenzene	ND	5
Xylenes, total	ND	5
Styrene	ND	5
Bromoform	ND	5
Isopropylbenzene	ND	5
Bromobenzene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,2,3-Trichloropropane	ND	5
n-Propylbenzene	ND	5
2-Chlorotoluene	ND	5
4-Chlorotoluene	ND	5
1,3,5-Trimethylbenzene	ND	5
tert-Butylbenzene	ND	5
1,2,4-Trimethylbenzene	ND	5
sec-Butylbenzene	ND	5
1,3-Dichlorobenzene	ND	5
4-Isopropyltoluene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5
n-Butylbenzene	ND	5
1,2-Dibromo-3-chloropropane	ND	5
1,2,4-Trichlorobenzene	ND	5
Hexachlorobutadiene	ND	5
1,2,3-Trichlorobenzene	ND	5
MTBE	ND	5
Naphthalene	ND	5

Surrogate Recovery:

1,2-Dichloroethane-d4	114%
Toluene-d8	109%
Bromofluorobenzene	102%

QC Batch: V2B0716A

ND = Not detected

Analysis Report: Volatile Organic Compounds

Client: Foster Wheeler Environmental Corp.
 Client ID:
 Lab ID: Method Blank, V1B0716A
 Analysis: Method 8260

Analysis Date: 7/16/97
 Matrix: Aqueous
 Concentration in: ug/L
 Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Carbon disulfide	ND	5
Iodomethane	ND	5
Acetone	ND	5
Methylene chloride	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Vinyl acetate	ND	5
2,2-Dichloropropane	ND	5
cis-1,2-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Bromochloromethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
1,1-Dichloropropene	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Dibromomethane	ND	5
Bromodichloromethane	ND	5
2-Chloroethyl vinyl ether	ND	5
cis-1,3-Dichloropropene	ND	5
4-Methyl-2-pentanone	ND	5
Toluene	ND	5

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<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,3-Dichloropropane	ND	5
2-Hexanone	ND	5
Dibromochloromethane	ND	5
1,2-Dibromoethane (EDB)	ND	5
Chlorobenzene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Ethylbenzene	ND	5
Xylenes, total	ND	5
Styrene	ND	5
Bromoform	ND	5
Isopropylbenzene	ND	5
Bromobenzene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,2,3-Trichloropropane	ND	5
n-Propylbenzene	ND	5
2-Chlorotoluene	ND	5
4-Chlorotoluene	ND	5
1,3,5-Trimethylbenzene	ND	5
tert-Butylbenzene	ND	5
1,2,4-Trimethylbenzene	ND	5
sec-Butylbenzene	ND	5
1,3-Dichlorobenzene	ND	5
4-Isopropyltoluene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5
n-Butylbenzene	ND	5
1,2-Dibromo-3-chloropropane	ND	5
1,2,4-Trichlorobenzene	ND	5
Hexachlorobutadiene	ND	5
1,2,3-Trichlorobenzene	ND	5
MTBE	ND	5
Naphthalene	ND	5

Surrogate Recovery:	
1,2-Dichloroethane-d4	111%
Toluene-d8	107%
Bromofluorobenzene	107%

QC Batch: V2B0716A

ND = Not detected

Analysis Report: Volatile Organic Compounds

Client: Foster Wheeler Environmental Corp.
 Client ID:
 Lab ID: Method Blank, V2B0716A
 Analysis: Method 8260

Analysis Date: 7/16/97
 Matrix: Soil
 Concentration in: ug/kg, dry weight basis
 Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Carbon disulfide	ND	5
Iodomethane	ND	5
Acetone	ND	5
Methylene chloride	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Vinyl acetate	ND	5
2,2-Dichloropropane	ND	5
cis-1,2-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Bromochloromethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
1,1-Dichloropropene	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Dibromomethane	ND	5
Bromodichloromethane	ND	5
2-Chloroethyl vinyl ether	ND	5
cis-1,3-Dichloropropene	ND	5
4-Methyl-2-pentanone	ND	5
Toluene	ND	5

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
trans-1,3-Dichloropropen	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,3-Dichloropropane	ND	5
2-Hexanone	ND	5
Dibromochloromethane	ND	5
1,2-Dibromoethane (EDB)	ND	5
Chlorobenzene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Ethylbenzene	ND	5
Xylenes, total	ND	5
Styrene	ND	5
Bromoform	ND	5
Isopropylbenzene	ND	5
Bromobenzene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,2,3-Trichloropropane	ND	5
n-Propylbenzene	ND	5
2-Chlorotoluene	ND	5
4-Chlorotoluene	ND	5
1,3,5-Trimethylbenzene	ND	5
tert-Butylbenzene	ND	5
1,2,4-Trimethylbenzene	ND	5
sec-Butylbenzene	ND	5
1,3-Dichlorobenzene	ND	5
4-Isopropyltoluene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5
n-Butylbenzene	ND	5
1,2-Dibromo-3-chloropropane	ND	5
1,2,4-Trichlorobenzene	ND	5
Hexachlorobutadiene	ND	5
1,2,3-Trichlorobenzene	ND	5
MTBE	ND	5
Naphthalene	ND	5

Surrogate Recovery:

1,2-Dichloroethane-d4

97%

Toluene-d8

100%

Bromofluorobenzene

98%

QC Batch: V2B0716A

ND = Not detected

Analysis Report: Total Metals

Client: Foster Wheeler Environmental Corp.

Client ID:

Lab ID: Prep Blank, 0717PBS1

Analysis Method: 7471A (Mercury)
6010A (Others)

- Concentration in: mg/kg

Analysis Date: 7/18/97

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Arsenic	ND	1
Barium	ND	1
Cadmium	ND	0.1
Chromium	ND	1
Lead	ND	1
Mercury	ND	0.3
Selenium	ND	2
Silver	ND	1

QC Batch: 0717PBS1

ND = Not detected

Analysis Report: Total Metals

Client: Foster Wheeler Environmental Corp.

Client ID:

Matrix: Soil

Lab ID: Lab Control Sample, 0717LCSS1

Analysis Method: 7471A (Mercury)

Analysis Date: 7/18/97

6010A (Others)

Analyte

% Recovery

Arsenic	93
Barium	99
Cadmium	89
Chromium	101
Lead	87
Mercury	73
Selenium	79
Silver	100

QC Batch: 0717PBS1

MITKEM CORPORATION

Lab Project #: D1111
 Client Name: Foster Wheeler
 Client Proj #: DO# 13F
 Client PO #: 003195
 Project Name: Tank Farm #4
 Date Due: 7/22/97
 Total Price: \$
 Project Mgr: EL
 Salesman: PAS
 Del Req'd: NA
 Completed?: YES

Logged In By: MAM

Reviewed By: _____

Date: 7-16-97 Time: 8:41

<u>Lab ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Analysis</u>	<u>Price</u>	<u>Sampled</u>	<u>Received</u>	<u>TPH</u>	<u>IR</u>	<u>BNA</u>	<u>Herb</u>	<u>P/P</u>	<u>Wet</u>	<u>Met</u>	<u>V-GC</u>	<u>V</u>
-01	TPTK-38	SL	RCRA 8 SVOC 8270 TPH 418.1 VOC 8260		7/15/97	7/15/97									1
-02	TPTK-41	SL	RCRA 8 SVOC 8270 TPH 418.1 VOC 8260		7/15/97	7/15/97									1
-03	TK4-TBS	AQ	VOC 8260												

TPH IR BNA Herb P/P Wet Met V-GC V
 0 2 2 0 0 0 2 0

ORIGINAL REPORT GOES TO:

Foster Wheeler Environmental Corp.
 P.O. Box 4749
 Middletown, R.I. 02842

Attn: Mark Gouveia
 Phone: 401 842-6940
 Fax: 401 842-6970

INVOICE GOES TO:

Same



175 Metro Center Boulevard • Warwick, Rhode Island 02886-1755
 (401) 732-3400 • Fax (401) 732-3499
 1232 East Broadway Road, Suite 210 • Tempe, Arizona 85282
 (602) 303-9535 • Fax (602) 921-2883

CHAIN-OF-CUSTODY RECORD

REPORT TO:							INVOLVED TO:											
COMPANY FOSTER wheeler				PHONE 842-6940			COMPANY FOSTER wheeler				PHONE 842-6940			LAB REF#				
NAME MARK GONVEIA				FAX 842-6970			NAME				FAX 842-6970			TURNAROUND				
ADDRESS P.O. Box 4749							ADDRESS P.O. Box 4749							I WE				
CITY/ST/ZIP MIDDLETOWN RT 02842							CITY/ST/ZIP MIDDLETOWN RT 02842											
CLIENT PROJECT NAME: TANK FARM # 4			CLIENT PROJECT #: DO # 13F			CLIENT P O #: 003195		REQUESTED ANALYSES										
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	REQUESTED ANALYSES								COMMENTS	
									VOC's	SIX's	TPH	PCRA 8 METALS						
TPTK 38	7/15/97/1400	x	x		x			2	✓	✓	✓	✓						
TPTK 41	7/15/97/1145	x	x		x			2	✓	✓	✓	✓						
TK4-TB2	/							1	✓									
/	/																	
/	/																	
/	/																	
/	/																	
/	/																	
/	/																	
/	/																	
/	/																	
/	/																	
TSF#	RELINQUISHED BY	DATE/TIME			ACCEPTED BY			DATE/TIME		ADDITIONAL REMARKS:								CC
1st	<i>[Signature]</i>	7-15-97/			<i>[Signature]</i>			7-15-97/1600										
2nd		/						/										
		/						/										

Last Page of Data Report

TANK NO. 41			
SUBSTANCE	RESIDENTIAL (mg/kg)	GA Leachability (mg/kg except as ther wise noted)	FIELD ANALYTICAL DETECTIONS (mg/kg except as therwis noted)
<u>VOLATILE ORGANICS</u>			
Acetone	7,800		5(PPB)
Benzene	2.5	0.2	
Bromodichloromethane	10		
Bromoform	81		
Bromomethane	0.8		
Carbon tetrachloride	1.5	0.4	
Chlorobenzene	210	3.2	
Chloroform	1.2		
Dibromochloromethane	7.6		
Dibromochloropropane (DBCP)	0.5		
Dichloroethane (1,1-)	920		
Dichloroethane (1,2-)	0.9	0.1	
Dichchloroethylene (1,1-)		0.7	
Dichloroethene (1,1-)	0.2		
Dichloroethylene (cis-1,2,-)		1.7	
Dichloroethene (cis-1,2,-)	630		
Dichloroethylene (trans-1,2,-)		3.3	
Dichloroethene (trans-1,2,-)	1,100		
Dichloropropane (1,2)	1.9	0.1	
Ethyl benzene	71	27	
Ethylene dibromode (EDB)	0.01	5.00E-04	
Isopropyl benzene	27		
Methyl ethyl ketone	10,000		
Methyl isobutyl ketone	1200		
Methyl-tert-butyl-ether	390	0.9	
Methylene chloride	45		
Styrene	13	2.9	
Tetrachloroethane,1,1,1,2	2.2		
Tetrachloroethane,1,1,2,2	1.3		
Tetrachloroethylene	12	0.1	
Toluene	190	32	
Trichloroethane,1,1,1,-	540	11	
Trichloroethane,1,1,2,-	3.6	0.1	
Trichloroethylene	13	0.2	
Vinyl chloride	0.02	0.3	
Xylenes		540	
Xylenes (total)	110		
<u>SEMIVOLATILES</u>			
Acenaphthene	43		
Acenaphthylene	23		
Anthracene	35		
Benzo(a)anthracene	0.9		

Benzo(a)pyrene	0.4	240	
Benzo(b)fluoranthene	0.9		
Benzo(g,h,i)perylene	0.8		
Benzo(k)fluoranthene	0.9		
Biphenyl, 1,1-	0.8		
Bis(2-ethylhexyl)phthalate	46		
Bis(2-chloroethyl)ether	0.6		
Bis(2-chloroisopropyl)ether	9.1		
Chloroaniline, 4- (p-)	310		
Chlorophenol, 2-	50		
Chrysene	0.4		
Dibenzo(a,h)anthracene	0.4		
Dichlorobenzene (all isomers)			
Dichlorobenzene, 1,2- (o-DCB)	510	41	
Dichlorobenzene, 1,2- (o-DCB)	430		
Dichlorobenzene, 1,4- (p-DCB)	27		
Dichlorobenzidine, 3,3-	1.4		
Dichlorophenol, 2,4-	30		
Diethylhexyl phthalate			
Diethyl phthalate	340	120	
Dimethyl phenol, 2,4-	1,400		
Dimethyl phthalate	1,900		
Dinitrophenol, 2,4-	160		
Dinitrotoluene, 2,4-	0.9		
Fluoranthene	20		
Fluorene	28		
Hexachlorobenzene	0.4		
Hexachlorobutadiene	8.2		
Hexachloroethane	46		
Ideno(1,2,3-cd)pyrene	0.9		
Methyl naphthalene, 2-	123		
Naphthalene	54		
Pentachlorophenol	5.3	0.8	
Phenanthrene	40	7.1	
Phenol	6,000		
Pyrene	13		
Trichlorobenzene, 1,2,4-	96		
Trichlorophenol, 2,4,5-	330	140	
Trichlorophenol, 2,4,6-	58		
PESTICIDES/PCBs			
Chlorodane	0.5		
Dieldrin	0.04	1.4	
Polychlorinated biphenyls (PCBs)	10		
INORGANICS		10	
Antimony	10		
Arsenic	1.7	0.05	12
Barium	5,500		18
Beryllium	0.40	23	
Cadmium	39	0.03	0.6

Chromium		0.03	14
Chromium III (Trivalent)	1,400	1.1	
Chromium VI (Hexavalent)	390		
Copper	3,100		
Cyanide	200		
Lead	150	2.4	11
Manganese	390	0.04	
Mercury	23		
Nickel	1,000	0.02	
Selenium	390	1	
Silver	200	0.6	
Thallium	5.5		
Vanadium	550	0.005	
Zinc	6,000		
TPH	500	500	

**APPENDIX K
BLAST REPORT**

BLAST REPORT

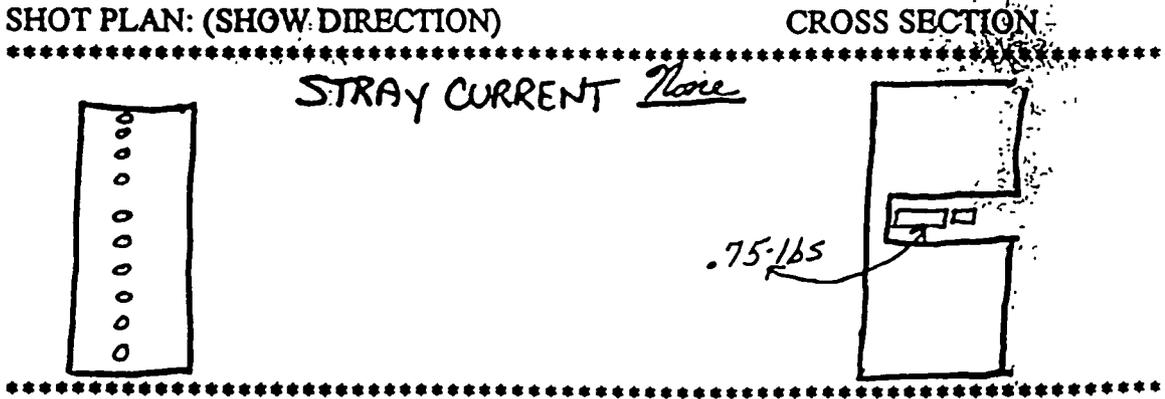
DATE: 12/17/97 BLAST TIME: 13:54

CUSTOMER: FOSTER WHEELER ENV CORP. JOB # 9800-005
PROJECT LOCATION: TANK FARM 4 UNIT DEFENSE HIGHWAY, WATSMITH
SPECIFIC BLAST LOCATION: TANK # 41
BLASTER: JIM MCALINDEN BLASTERS LIC # 37-36
TYPE OF PROJECT: TANK DEMOLITION
TYPE OF MATERIAL BLASTED: CONCRETE
WEATHER INFO: SKY Clear TEMP 52° WIND SP & DIR: 5-27

DRILL HOLE INFO: HOLE SIZE: 1 3/8" NO. HOLES 328 NO. ROWS: 6
DEPTH RANGE: 15" FT. TO 18" FT.
SUB DRILL 0 FT. BURDEN 1 FT. SPACING 1.5 FT

DISTANCE TO NEAREST STRUCTURE: 500+ FT.

EXPLOSIVE INFO: TOTAL OF EXPLOSIVES USED 238 LBS.
BRAND AND TYPE ICI POWER DITCH
MIN. LBS/HOLE .5 MAX. LBS/HOLE 1
MAX. LBS/DELAY 20 DECK SOLID STEM MIN 5"
INITIATION: BRAND/TYPE ICI MASTRO DETS NO. CAPS USED 324
NO. DELAY USED 16 DELAY INTERVALS 25ms.
TOTAL TIME FOR INITIATION 400ms.
PRIMACORD: NO. OF FT. 100 SHOT LINE 0 FT
CONTROL: QUANTITY DISTANCE DS. _____ SEISMIC FT.
MATS USED? NO, BACKFILL



EXPLOSIVE LOAD LIST NORTHAMERICAN INDUSTRIAL SERVICES

DATE 12-17-97 LOCATION Red Foster Wheel JOB# 9800-005

Powerditch 1000 EXPLOSIVES

TYPE	LOT NUMBER	QTY OUT	QTY IN	QTY USED
<u>1 1/4 x 8</u>	<u>010097</u>	<u>84.5</u>	<u>0</u>	<u>84.5</u>
	<u>1500797</u>	<u>253.5</u>	<u>100</u>	<u>153.5</u>
<u>DETCORD</u>	<u>131270, 1996</u>	<u>984</u>	<u>984</u>	<u>0</u>
<u>25GRAMS</u>				

>238.0 LBS

DETONATORS

TYPE	LOT NUMBER	QTY OUT	QTY IN	QTY USED
<u>inst</u>	<u>06 MAY 97</u>	<u>28</u>	<u>24</u>	<u>4</u>
<u>1</u>	<u>080097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>2</u>	<u>030097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>3</u>	<u>180097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>4</u>	<u>090897 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>5</u>	<u>160597 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>6</u>	<u>090597 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>7</u>	<u>030097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>8</u>	<u>100597 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>9</u>	<u>050097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>10</u>	<u>070097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>11</u>	<u>010097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>12</u>	<u>150597 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>13</u>	<u>050097 R2</u>	<u>30</u>	<u>10</u>	<u>20</u>
<u>14</u>	<u>080097 R2</u>	<u>40.50</u>	<u>30</u>	<u>20</u>
<u>15</u>	<u>170497 R2</u>	<u>30</u>	<u>10</u>	<u>20</u>
<u>16</u>	<u>140097 R2</u>	<u>17</u>	<u>0</u>	<u>17</u>
<u>16</u>	<u>170097 R2</u>	<u>13</u>	<u>10</u>	<u>3</u>



INDUSTRIAL EXPLOSIVES • WATER BLASTING • VACUUM TRUCK SERVICES

N.A.I.S.

Shipping Papers

Date 12-17-97

Drivers Name Basil Touant

Drivers Signature Basil Touant

Destination: North American Industrial Services From: North American Industrial
4000 T. Defence Highway 1240 Saratoga Rd
Trailer #2 Ballston Spa N.Y.
Portsmouth, RI 02871 - 12020

Route to job site: NY 67-87-77F7-40-20

Mass 20-9-495-24
RI 24

No. of boxes	HM	Description of articles and exceptions	Hazard Class	I.D. Number	Group Packing	Weight	Class or Rate	Labels Required (or exemption)	Color
6	✓	Power Ditch 1000	1.1D	UN0081	II	330 ^{lbs}	A	172.411	C
17	✓	Detonator Electric	1.1B	UN0030	II	55 ^{lbs}	A	172.411	C
1	✓	Cord Detonating	1.1D	UN0069	II	20 ^{lbs}	A	172.411	C

This is to certify that the above-named materials are properly classified, described, packed, marked and labeled/placarded and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

Per Donald W. Houser Placards Required Yes Placards supplied (YES)/ NO

Drivers Signature Basil Touant

EMERGENCY RESPONSE TELEPHONE NUMBER (800) 424-9300



INDUSTRIAL EXPLOSIVES • WATER BLASTING • VACUUM TRUCK SERVICES

N.A.I.S.

Shipping Papers

Date 12-17-97

Drivers Name Basit Touart

Drivers Signature Basit Touart

Destination: North American
1240 Saratoga Rd
Ballston Spa NY
12020

From: North American Industrial services
4000T Defence Highway
Trailer # 2
Portsmouth, R.I. 02871

Route to job site: RF. 24 MossH495 - 9-20. N.Y. 20-90-787-7-87-

No. of boxes	HM	Description of articles and exceptions	Hazard Class	I.D. Number	Group Packing	Weight	Class or Rate	Labels Required (or exemption)	Co
2	✓	POWER DITCH SCREW	1.1D	UN0281	"	100	A	172.411	✓
16	✓	DETONATOR ELECTRIC	1.1D	UN0230	"	.5	A	172.411	✓
1	✓	CORD DETONATING	1.1D	UN0265	"	945.	A	172.41	✓

This is to certify that the above-named materials are properly classified, described, packed, marked and labeled / placarded and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

Placards Required Yes Placards supplied YES / NO

Drivers Signature Basit Touart

EMERGENCY RESPONSE TELEPHONE NUMBER (800) 424-9300