

Process Piping Closure Assessment Report Tank Farm 5

**Naval Education and Training Center
Newport, Rhode Island**



**Northern Division
Naval Facilities Engineering Command
Contract Number N62472-90-D-1298
Contract Task Order 0196**

October 1995



Brown & Root Environmental

A Division of Halliburton NUS Corporation

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**PROCESS PIPING CLOSURE ASSESSMENT REPORT
TANK FARM 5**

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

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
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Environmental Branch, Code 1812PFB
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop No. 2
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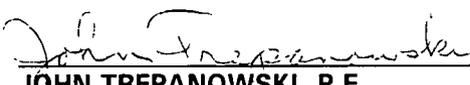
October 1995

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TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
1.0	SITE BACKGROUND	1-1
1.1	INTRODUCTION	1-1
1.2	LOCATION	1-2
1.3	SITE DESCRIPTION	1-2
1.4	SITE HISTORY	1-2
1.5	SUMMARY OF TANK FARM 5 PROCESS PIPING	1-6
	CONSTRUCTION	
1.6	UNDERGROUND UTILITIES	1-8
1.7	GEOLOGY	1-9
1.8	PREVIOUS INVESTIGATIONS	1-9
2.0	CLOSURE ACTIONS	2-1
2.1	EXCAVATION AND SOILS SCREENING AND MANAGEMENT	2-1
2.2	ASBESTOS ABATEMENT	2-1
2.3	PIPE AND CT CHAMBER CLEANING	2-3
2.4	PIPE AND CT CHAMBER DEMOLITION	2-3
2.5	IN-SITU CLOSURE	2-4
2.6	BACKFILL	2-4
3.0	CLOSURE CONDITIONS	3-1
3.1	SOILS SCREENING	3-1
3.2	SOILS SAMPLING AND ANALYSIS	3-1
3.3	PIPING	3-1
3.4	CT CHAMBERS	3-5
4.0	SITE GROUNDWATER DESCRIPTION	4-1
5.0	SITE GROUNDWATER CLASSIFICATION AND USE	5-1
6.0	POTENTIAL RECEPTORS	6-1
7.0	FINDINGS AND CONCLUSIONS	7-1
7.1	FINDINGS	7-1
7.2	CONCLUSIONS	7-2

REFERENCES

TABLES

<u>NUMBER</u>		<u>PAGE</u>
3-1	LOOP AND SHUNT EXCAVATION SAMPLE LOCATIONS	3-2
3-2	LOOP AND SHUNT PROCESS PIPING SOIL SAMPLE TPH	3-4
	DETECTION SUMMARY	

TABLE OF CONTENTS (Continued)

FIGURES

<u>NUMBER</u>		<u>PAGE</u>
1-1	NETC LOCUS MAP	1-3
1-2	TANK FARM 5 LOCATION MAP	1-4
1-3	TANK FARM 5 - PRE-CLOSURE	1-5
2-1	TANK FARM 5 - PROCESS PIPING CLOSED	2-2
3-1	SOIL SAMPLING LOCATIONS AND TPH DETECTIONS	3-3
4-1	TANK FARM 5 - WATER TABLE MAP	4-2

APPENDICES

A	OHM's SOIL MANAGEMENT PLAN
B	ASBESTOS DISPOSAL DOCUMENTATION FORMS
C	WEIGHT TICKETS FOR SALVAGEABLE MATERIALS
D	FIELD SCREENING LOGS
E	LABORATORY ANALYSES DATA SHEETS

1.0 SITE BACKGROUND

1.1 INTRODUCTION

Brown & Root Environmental (B&R Environmental), a division of Halliburton NUS Corporation, prepared this Process Piping Closure Assessment (Assessment) Report summarizing the investigation and closure activities conducted for the process piping, also referred to as the loop and shunt piping, located in Tank Farm 5 at the Naval Education and Training Center (NETC) in Newport, Rhode Island. OHM Remediation Services Corporation (OHM) is under contract to the Navy to carry out closure activities at Tank Farm 5. This Assessment has been written by B&R Environmental 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 (NORTH DIV) of the Naval Facilities Engineering Command (NAVFAC) under Contract Task Order (CTO) Number 196 of the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract Number N62472-90-D-1298.

Tank Farm 5 consists of eleven 2.5 million gallon concrete underground storage tanks (USTs) and adjacent pump chambers along with the associated process piping system. Assessment reports have been submitted to RIDEM for each UST and its pump chamber. The primary objective of this Assessment is to provide sufficient evidence to conclude whether or not a release has occurred from Tank Farm 5 process piping and to provide documentation necessary to complete a permanent Tank Farm 5 closure consistent with RIDEM regulations. The Assessment objectives were met by evaluating information collected during pipe cleaning and closure activities to determine whether oil transferred through the Tank Farm 5 process piping has impacted the environment. This information consists of soil analytical data and visual observations.

Information gathered during other investigations serves as supporting documentation necessary to complete permanent closures of the process piping evaluated in this assessment, and provides general information about Tank Farm 5 for use in this report. The process piping, which is the focus of this report, was not specifically evaluated as part of the preliminary closure assessment or other previous investigations conducted at Tank Farm 5.

The remainder of this section presents background information concerning the process piping, 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.

1.2 LOCATION

Tank Farm 5 is located at 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 5 is situated at the northern portion of NETC-Newport, in Middletown (Figure 1-2).

Tank Farm 5 is bordered by the Defense Highway to the north/northwest; a cemetery to the southwest; woodlands and residential property to the southeast; and Greene's Lane to the north/northeast. Gomes Brook transects the northern portion of the tank farm. The brook flows westerly, to Narragansett Bay, and provides surface drainage for the northern portion of the facility.

1.3 SITE DESCRIPTION

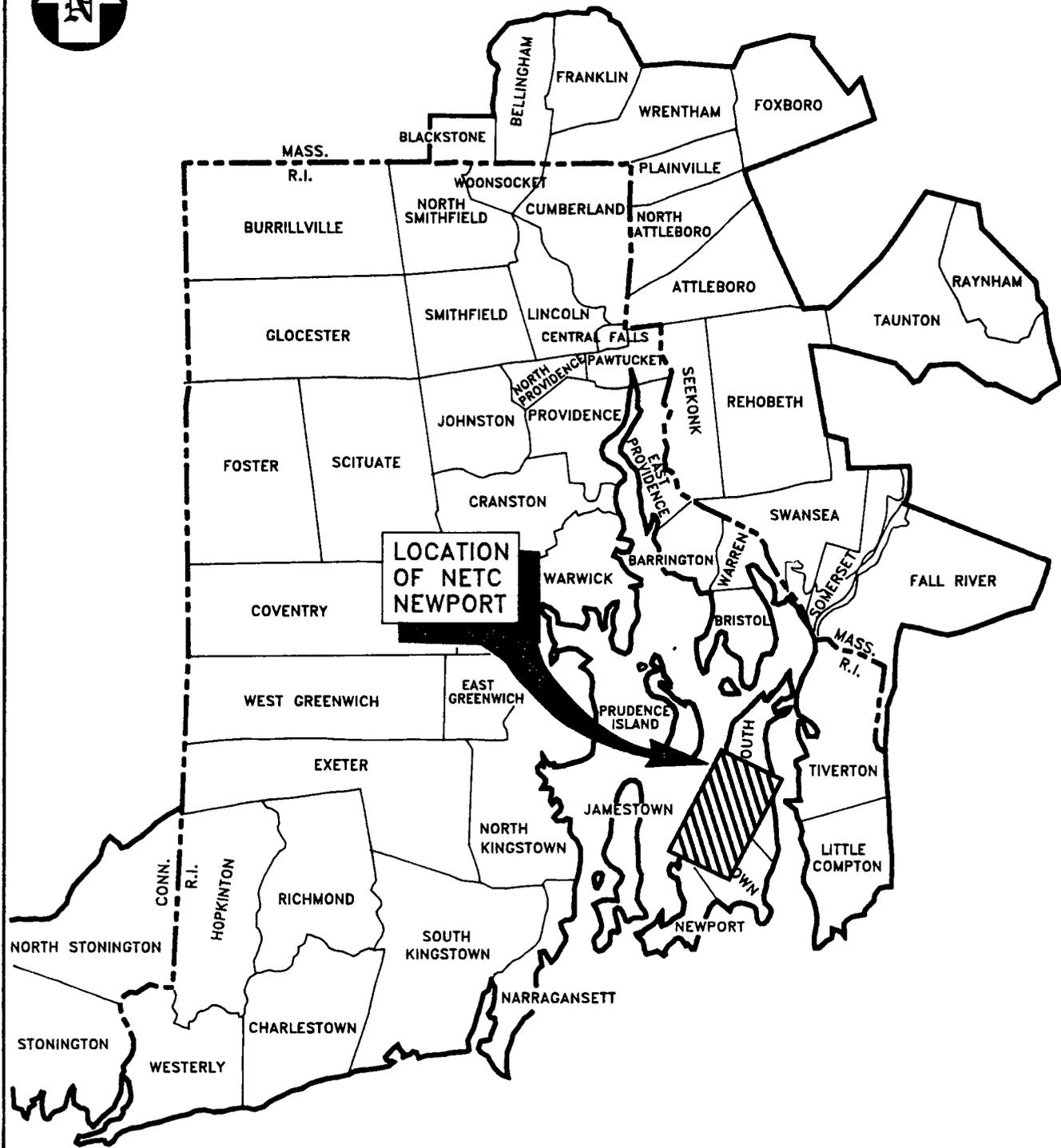
Tank Farm 5 occupies approximately 85 acres and is the site of 11 USTs, numbered 49 through 59 (see Figure 1-3). Tanks 53 and 56 (which are being remediated under a RCRA action) were used to store fuel oil and waste oil. The remaining USTs were used only to store virgin heavy fuel oil.

Access to Tank Farm 5 is unrestricted and is gained via the Defense Highway. A paved road leads into the farm, passing between the tanks in a loop. With the exception of Tank 53, there is no secured perimeter fence on the farm. On-site structures include a Fire Fighting Training Area, a water treatment facility used to treat groundwater at Tank 53, a temporary water treatment plant used to treat water pumped from USTs prior to cleaning, and an oil-water separator/sand filter system that was used to separate tank bottom sediments and water collected from sumps in the floor of each tank.

Ground elevations at Tank Farm 5 range between 58 feet and 93 feet above mean low water. Topography generally slopes to the west and north from a high point near Tank 54 toward low areas at the perimeter of the farm. Vegetation, consisting of grass, dense brush, trees, and woodlands is found between the tanks and on the farm perimeter. Vegetation in the vicinity of the tanks has been cleared for construction.

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 (TRC 1993) to supply warships.



NETC LOCUS MAP
NETC - NEWPORT, RI

FIGURE 1-1

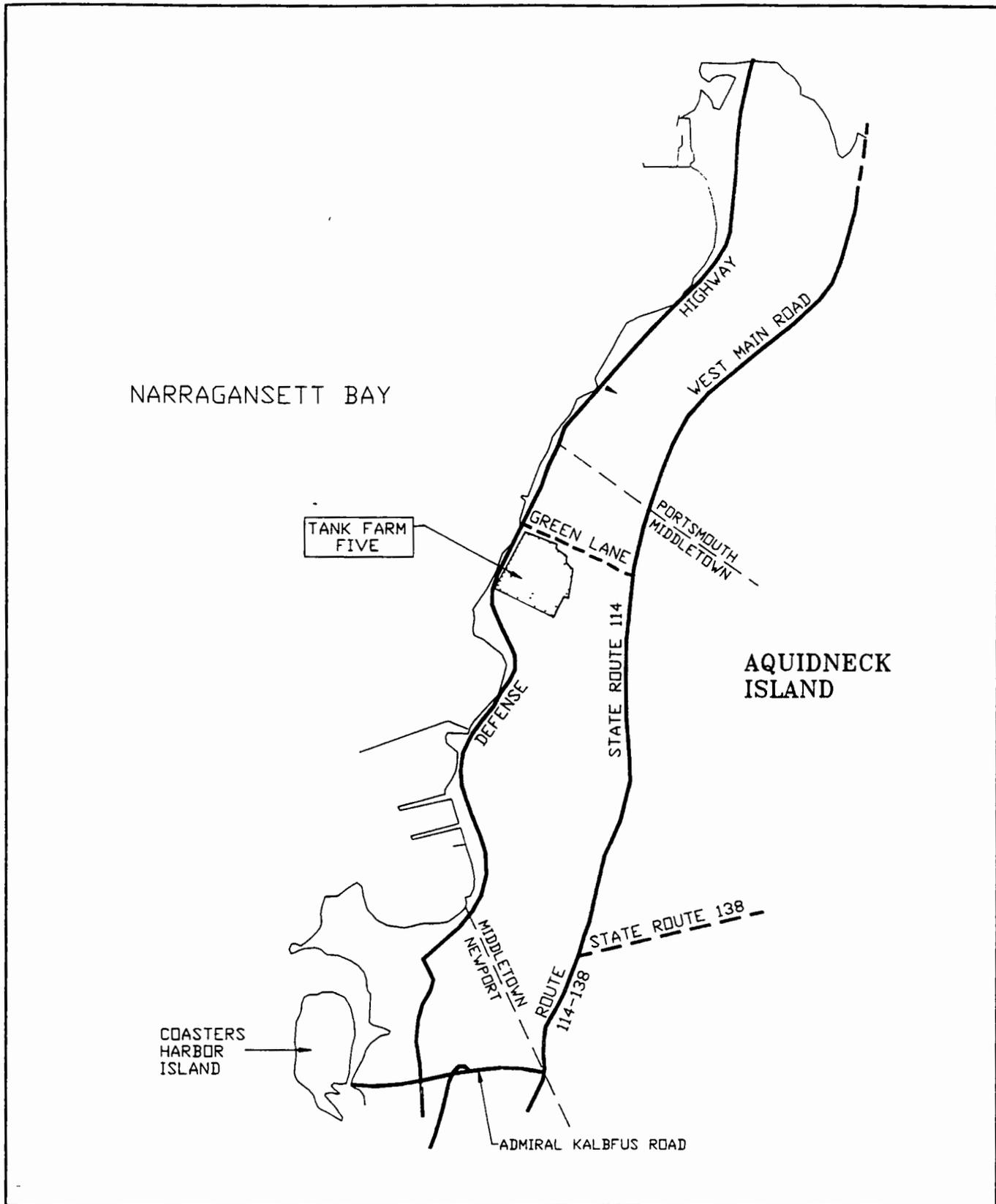
PROCESS PIPING CLOSURE ASSESSMENT REPORT

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SCALE:	PROJECT NO.: 2288 CTO #196:		



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TANK FARM 5 LOCATION MAP

NETC - NEWPORT, RI

FIGURE 1-2

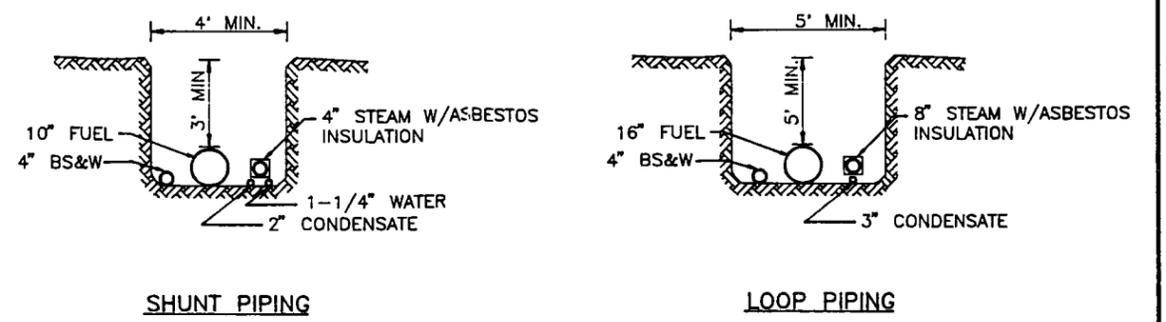
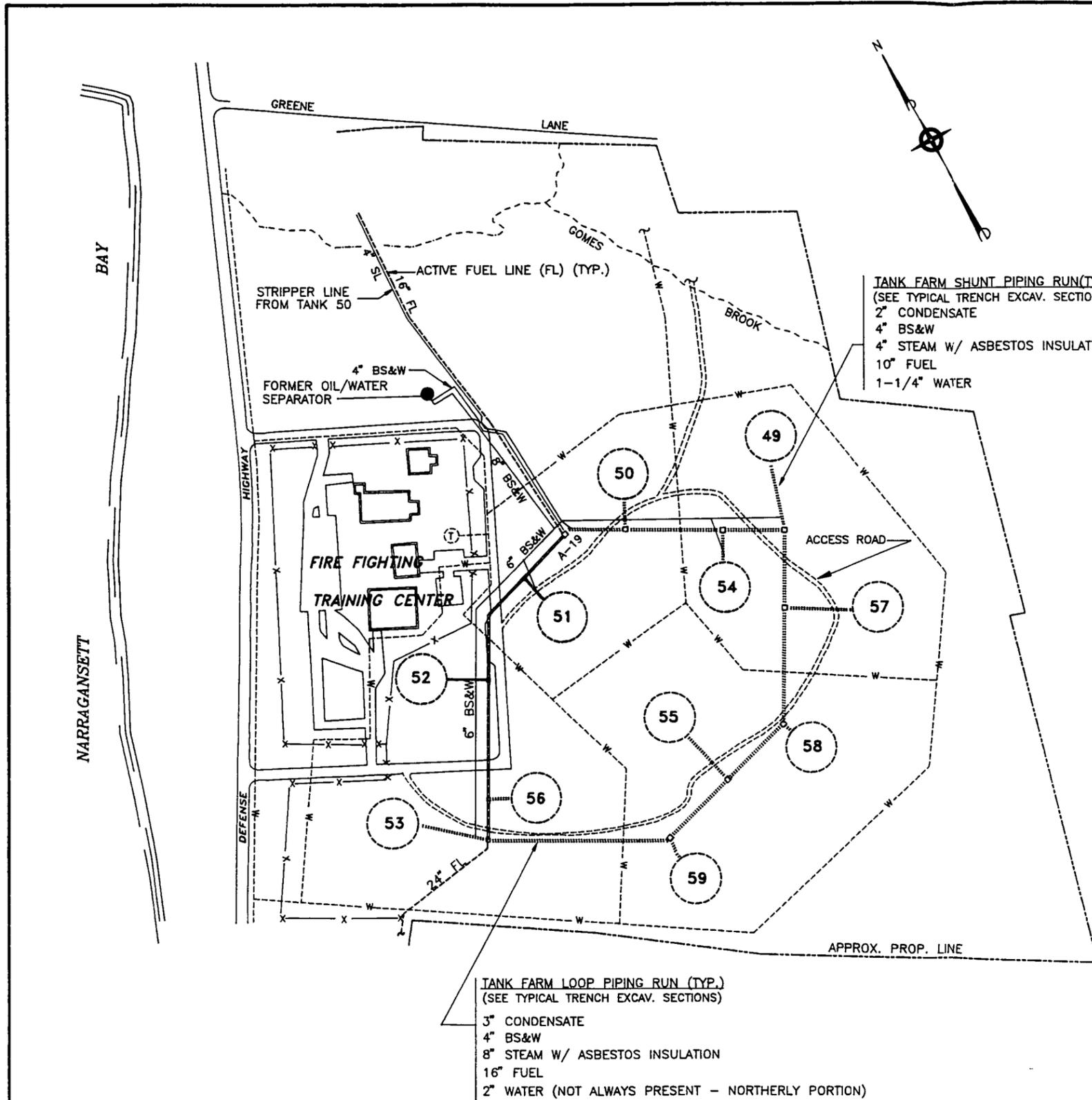


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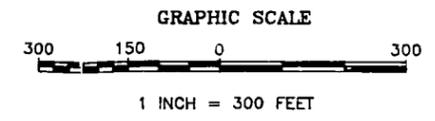
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TYPICAL TRENCH EXCAVATION SECTIONS
 NTS

- LEGEND**
- APPROX. PROPERTY LINE
 - - - - - WATER LINE
 - CHAMBER
 - LOOP PIPING - DOTTED LINES INDICATES PIPING REMOVAL WITH SOLID LINES INDICATING ABANDONED IN PLACE (SEE ABOVE SECTIONS)
 - SHUNT PIPING - DOTTED LINES INDICATES PIPING REMOVAL WITH SOLID LINES INDICATING ABANDONED IN PLACE (SEE ABOVE SECTIONS)
 - UST WITH TANK NUMBER



NOTES:

1. PLAN LOCATIONS DEVELOPED FROM A PLAN BY TRC ENVIRONMENTAL CORPORATION, DATED JUNE 18, 1993, ENTITLED: "PROCESS PIPING SYSTEM", DWG. NO. C-2.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
3. PLAN NOT TO BE USED FOR DESIGN.

TANK FARM 5 - PRE-CLOSURE	
PROCESS PIPING CLOSURE ASSESSMENT REPORT	
NETC - NEWPORT, RHODE ISLAND	
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FIGURE 1-3

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The USTs at Tank Farm 5 were constructed between 1942 and 1943, and used for fuel storage from World War II to 1974. By 1974, the tank farm was abandoned except for Tanks 53 and 56. In 1975, the U.S. Navy began using Tanks 53 and 56 for waste oil storage as part of an oil recovery and recycling program. Between 1975 and 1982, this waste oil was used as an alternate heating fuel (TRC 1993). When decommissioned, all of the tanks were filled with water for ballast, without prior cleaning. As a result of amendments to underground petroleum storage facilities regulations enacted by Rhode Island in 1992, tanks used to store virgin product also became subject to closure requirements. In 1995, the Navy filed applications with RIDEM to permanently close all 11 tanks at Tank Farm 5. The tank closure activities were completed in October 1995; separate closure assessment reports were submitted to RIDEM for each UST.

1.5 SUMMARY OF TANK FARM 5 PROCESS PIPING CONSTRUCTION

Tank Farm Process Piping

The following description of the process piping presented in the Tank Farm 5 UST Closure Plan and Conceptual Design (TRC, February 1994) was modified based on observation made during the closure action.

The piping system at Tank Farm 5 allowed fuel to be pumped into, out of, and between tanks as well recirculated within the tanks for heating purposes. For this purpose, a loop piping system was buried a minimum of 3 to 5 feet below ground surface around the tank farm with individual tanks connected into the loop at concrete chambers (CT chambers). A diagram of the piping system is provided on Figure 1-3. The loop piping system consisted of a 16-inch fuel line, an 8-inch steam line, a 3-inch condensate line, and a 4-inch bottom sediments and water (BS&W) line, with a 2-inch water line in the southern piping runs. A discrete 4-inch oil stripper line shown on construction plans to extend from Tank 50 to Boiler House #3, located off site west of the Defense Highway, was not found. Each separate process pipe line is described below. A combined total length of nearly three miles (15,700 linear feet) of process piping was present in Tank Farm 5. In addition, a separate 8-inch cast iron water line network with hydrants is located at Tank Farm 5 for fire protection.

16-inch Fuel Line

A 16-inch main fuel line connected Tank Farm 5 to the Midway and Area #1 fuel piers of the Newport Naval Base. The 16-inch fuel line loop was connected to each tank through a 10-inch shunt line, which branched into the storage tank pump rooms for individual tanks via concrete junction chambers containing various valving arrangements.

Currently, a portion of the 16-inch fuel line through Tank Farm 5 remains active, as shown on Figure 1-3. The shunt lines to the individual storage tanks had previously been taken out of service by removing connection valves and inserting blind flanges at the concrete chambers along the active pipeline loop. The active portion of the fuel line continues from the northwestern portion of the tank farm to concrete chamber A-19, at which point the line enters the Tank Farm 4 pipeline loop. From this point the active pipeline extends to concrete chamber CT-53 and then exits the Tank Farm 5 pipeline loop and extends off site to the southwest. The fuel line reportedly increases in diameter to 24 inches at chamber CT-53 and is a directly buried, cathodically protected pipe from this point to the south. Additional information on the active portion of the 16-inch fuel line is presented at the end of this section.

8-inch Steam Line

An 8-inch steam line was used to transfer steam from Boiler House #3 (no longer present at NETC) to each of the tanks. Steam was used in individual pump rooms at the tank farm to drive a steam turbine and supply energy to heat fuel oil, which became viscous during periods of cold weather. The 8-inch steam line in the piping loop is reduced to 4-inch steam shunt lines prior to entering the pump room associated with each tank. This line is insulated with an asbestos-containing material (ACM). The insulated steam line was encased in a wooden conduit.

3-inch Condensate Line

Condensation produced from steam usage was removed from individual pump rooms by a motor-driven condensate removal pump. The condensate was discharged out of the pump room into a 2-inch diameter pipe that discharged into a 3-inch diameter pipeline within the main piping loop around Tank Farm 5. The 3-inch condensate line routed the condensate back to Boiler House #3. This line was not insulated with ACM as indicated by previously available information.

4- or 6-inch BS&W Line

A 4- or 6-inch BS&W line was connected to each tank to transfer tank bottom sediments and water to a sand filter bed. Tank bottom sediments and water were periodically collected from a 4-foot square and 12-inch deep sump located in the floor of each tank. The tank bottom sediments and water were pumped to an approximately 40- by 45-foot sand filter bed, where the water was ultimately discharged to Gomes Brook. The oily films or residuals that remained on the top of the sand layer were subsequently burned. This area was subsequently modified to incorporate an approximately 40- by

20-foot oil/water separator system. The location of the oil water separator associated piping is provided on Figure 1-3.

8-inch Water Line

An 8-inch cast iron water main and hydrants are located at the tank farm for fire protection purposes. Water from this system was used to activate a foam-based fire extinguishing system previously stored at the tank farm.

Current Conditions - Active Process Piping

Information available from Navy plans dated July 1979 indicates an active 16-inch fuel line enters the Tank Farm 5 piping network at chamber A-19. From this point, the active fuel line passes between Tanks 51 and 52 and Tanks 53 and 56 and exits the Tank Farm at chamber CT-53. This active portion of the fuel line passes through a total of four chambers. Each of these chambers CT-51, CT-52, CT-56, and CT-53 are connected to piping for Tanks 51, 52, 56, and 53 respectively. Within each chamber, the active fuel line is isolated from the tank lines by a 10-inch valve that is chained with a lock in the closed position. In addition, a 10-inch blinding disc (frying pan) was affixed to the tank side of the line. Further isolation of the active line from the lines leading to Tanks 53 and 56 was accomplished by removing the 10-inch valve and closing both the active side and tank side of the line with 10-inch blinding discs.

The 16-inch fuel line exits the Tank Farm 5 piping network at chamber CT-53. At this point the line increases to a 24-inch-diameter direct buried line that is cathodically protected. The southern portion of the piping network at Tank Farm 5 is isolated from the active line at chamber CT-53 through a blinding disc and a chained and locked 16-inch valve in chamber CT-55 located adjacent to Tank 55.

1.6 UNDERGROUND UTILITIES

Underground utilities reportedly consist of water, electricity, and telephone service. The exact location of utility networks could not be confirmed by Base Digsafe services. Also, the existence of the telephone network shown on base planning maps could not be confirmed.

The water lines are reportedly buried 3 to 4 feet below ground surface (bgs). The telephone and electric lines are insulated for direct burial (not in conduits) and are reportedly buried 3 to 4 feet bgs (HNUS 1995a). The depth to water at Tank 56 is approximately 18 feet bgs (TRC 1992). Consequently, these utilities would be located more than 12 feet above the water table and therefore

would not act as a preferential contaminant migration pathway. It is unlikely that the water table would intersect the backfill around these utilities during high water table elevations.

1.7 GEOLOGY

The NETC site, including Tank Farm 5, is located in the southeastern portion of the 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 materials consist of unconsolidated glacial sediments ranging from gravel to silt, as well as glacial till. Soil thickness at the tank farm is highly 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 tanks because of the widespread disturbance of native soils during tank construction.

1.8 PREVIOUS INVESTIGATIONS

Previous investigations are mentioned for historical information purposes only. An Initial Assessment Study (IAS) was conducted by Envirodyne Engineers, Inc. in 1982 and 1983 (TRC 1993). Environmental Resource Associates (ERA) conducted two investigations related to Tanks 53 and 56: a 1983 investigation of the tanks' contents and a 1985 study required by RIDEM for the closure of the two tanks (TRC 1992). Loureiro Engineering Associates conducted a Confirmation Study (CS) between 1983 and 1986. A closure investigation for Tanks 53 and 56 was conducted by TRC in 1991. A Phase I Remedial Investigation (RI) was conducted by TRC as part of the Department of Defense Installation Restoration (IR) Program (TRC 1992). The RI report also presented the results of several previous environmental investigations conducted at Tank Farm 5. The RI did not detect significant contamination at Tank Farm 5. The majority of subsurface contamination was detected at Tank 53, where VOCs and BNAs were found in groundwater and where petroleum was observed in groundwater (TRC, 1992). The process piping was not specifically investigated in the RI.

The impacts of past site activities at Tank Farm 5 on soils and groundwater in the immediate vicinity of selected on-site facilities (including nine petroleum USTs) were investigated by B&R Environmental (as Halliburton NUS Corporation) in 1995 (HNUS 1995). Petroleum-impacted subsurface soils were delineated during a site investigation conducted by B&R Environmental at Tank 50 (B&R Environmental 1995). Impacted soils are located to the west and northwest of the tank. The process piping was not investigated because it was scheduled for excavation by OHM as part of the Tank Farm 5 closure activities.

2.0 CLOSURE ACTIONS

Closure actions for the process piping or loop and shunt piping and related pipe junction (CT) chambers present at Tank Farm 5 were initiated on May 24, 1995, and consisted of the following major activities:

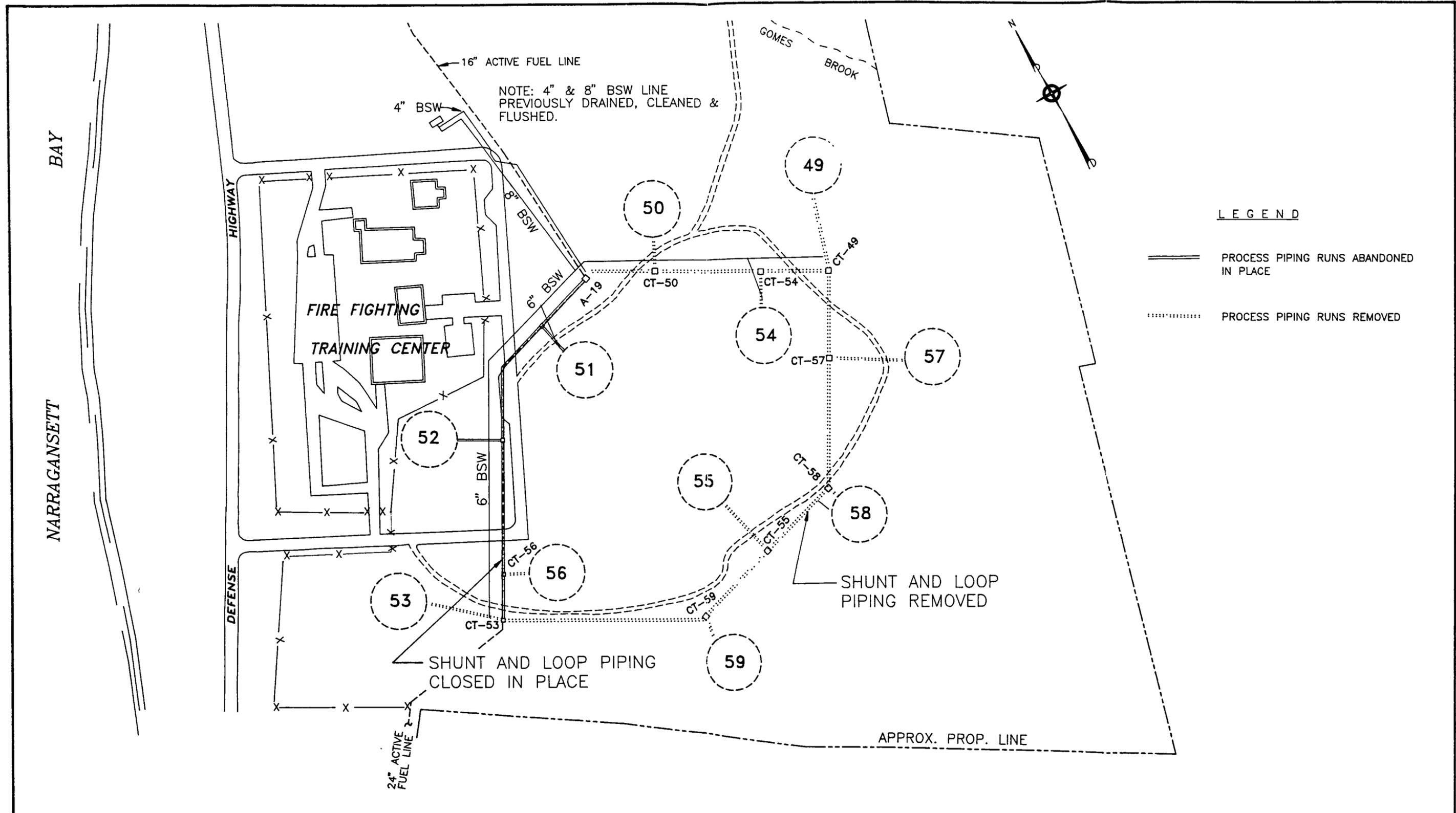
- Excavation
- Excavated soils screening and management
- Asbestos abatement
- Pipe and CT chamber cleaning
- Pipe and CT chamber demolition
- Selected piping and CT chambers in-situ closure
- Trench floor soils sampling and analysis
- Backfill

2.1 EXCAVATION AND SOILS SCREENING AND MANAGEMENT

From May 25, 1995 through August 30, 1995 pipe trench excavation was conducted to access the loop and shunt piping runs and soil cover excavation was conducted to access CT chamber ceilings. The pipe segments that were removed or closed in place are indicated in Figure 2-1. Trench excavation depths ranged from 5 to 8 feet. During excavation, all soils were visually observed and field screened using a flame ionization detector (FID). Consistent with OHM's soil management plan, all soils exhibiting FID readings of less than 10 ppm were staged adjacent to the excavation and reused as backfill for the excavation. Approximately 20 cubic yards of soils exhibited visible discoloration and/or FID readings above 10 ppm. These soils were staged in a lined containment area constructed near Tank 49, sampled, and analyzed for TPH. Sample number TF5SP1-03 yielded a TPH result of less than 16 mg/kg (see Appendix E). In accordance with OHM's Soil Management Plan (presented in Appendix A), the soil was used as backfill at the site.

2.2 ASBESTOS ABATEMENT

Asbestos abatement for the process piping runs scheduled for demolition was conducted in accordance with the Asbestos Hazard Decontamination Plan (Enviro-Safe Engineering 1995). The ACM-insulated steam supply piping was removed with insulation attached from all CT chambers (A19, CT49 through CT59) and all steam loop and shunt piping located between A19 and CT53, beginning clockwise from chamber A19. The shunt piping for Tank 51 was also abated. No ACM abatement was performed



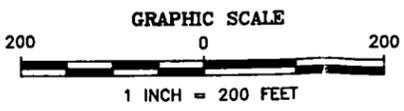
LEGEND

————— PROCESS PIPING RUNS ABANDONED IN PLACE

..... PROCESS PIPING RUNS REMOVED

NOTES:

1. PLAN LOCATIONS DEVELOPED FROM A PLAN BY TRC ENVIRONMENTAL CORPORATION, DATED: JUNE 18, 1993, ENTITLED: "PROCESS PIPING SYSTEM", DWG. NO. C-2.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
3. PLAN NOT TO BE USED FOR DESIGN.
4. SHUNT PIPING RUN CT-53 TO UST 53 WAS PREVIOUSLY REMOVED BY ORHERS.



TANK FARM 5 – PROCESS PIPING CLOSED	
PROCESS PIPING CLOSURE ASSESSMENT REPORT	
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FIGURE 2-1

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for process piping closed in place. Steam piping closed in place included all loop piping located on the northwestern perimeter parallel to the main fuel line, extending from chamber A19 to CT53. The steam piping associated with Tank 52 shunt was also closed in place. A total of 145 cubic yards of asbestos and asbestos wrapped piping was removed and disposed of off site at the Meadowfill Landfill facility, located in Bridgeport, West Virginia. Asbestos disposal documentation forms are presented in Appendix B.

2.3 PIPE AND CT CHAMBER CLEANING

As discussed in Section 1.5, with the exception of the main fuel line that remains active extending along the northwestern perimeter of the tank farm loop from CT53 to A19, all piping and CT chambers associated with the tank farm were cleaned prior to demolition or closure in place. The loop and shunt pipe runs were accessed for cleaning through each CT chamber. Piping and valve configurations contained within each chamber were dismantled and drained of free flowing liquids prior to initiating of cleaning activities. Minimal quantities of free flowing liquids were encountered during this activity and were directed to the on-site wastewater treatment system for processing.

Pipe cleaning was accomplished in-situ, using a high-pressure cold water cleaning unit outfitted with a self-propelled pipe cleaning nozzle capable of generating operating pressures up to 10,000 pounds per square inch (psi). Cleaning operations consisted of two passes through the pipe (forward and reverse) and continued until the water generated as a result of the operation showed no visible indications of petroleum contamination.

Wash water was allowed to drain from the pipe into the CT chamber and was collected and transported to the on-site wastewater treatment system using a trailer-mounted vacuum unit.

Final cleaning of the interior surfaces of each CT chamber was accomplished using a high-pressure hot water cleaning unit capable of generating an operating temperature of 240 degrees Fahrenheit and a pressure of 3,000 psi. Wash water was collected and transported to the on-site wastewater treatment system using a trailer-mounted vacuum unit.

2.4 PIPE AND CT CHAMBER DEMOLITION

Subsequent to pipe cleaning, all piping scheduled for demolition was cut into manageable lengths and placed into roll-off containers for off-site salvage. A total of 111.81 tons was transported to the Mid-City Scrap Iron and Salvage Co., Inc. facility located in Westport, Massachusetts. Weight tickets for salvageable materials are presented in Appendix C.

CT chamber ceilings and side walls were demolished to a minimum of one foot below ground surface. Holes were punched through the concrete floors at one-foot intervals using a 3-inch diameter hoe ram to ensure that the remaining structure would be free draining. The demolished concrete was reduced to rubble and used as initial backfill for the chambers. The remainder of the structure was backfilled with sand and soil cover was emplaced to obtain final grade.

2.5 IN-SITU CLOSURE

Due to the proximity of the loop piping located along the main fuel line and the integral nature of the CT chambers associated with the line, in-situ closure was chosen for selected pipe runs and associated CT chambers. With the exception of the main fuel line, all pipes and valves were dismantled and removed from the chambers, the interior of the piping was cleaned, and a welded pipe cap was installed on each pipe entrance within the CT chamber. In addition, several pipe runs, located parallel to the loop piping but not intersecting with the CT chambers, were closed in-situ. For those pipe runs, welded pipe caps were installed at the point where the piping was accessed for cleaning. The following pipe runs were selected for in-situ closure:

- All loop piping extending from CT53 to CT56
- All loop piping extending from CT56 to CT52
- All shunt piping extending from CT52 to Tank 52
- All loop piping extending from CT52 to CT51
- All loop piping extending from CT51 to chamber A19
- The 6-inch BS&W piping extending from, but not intersecting with CT53 to chamber A19.
- The 8-inch BS&W piping extending from, but not intersecting with chamber A19 to the former oil/water separator.
- The 4-inch BS&W piping extending from chamber A19 to the former oil/water separator.
- The 2-inch water supply piping located parallel to the tank farm loop piping.

2.6 BACKFILL

All excavations were backfilled using the soils excavated from the trench. In general, the soils used for backfill were in the trench at or near the area from which they were excavated. Approximately 286 cubic yards of soils were obtained from an off-site borrow source to achieve final grade.

3.0 CLOSURE CONDITIONS

3.1 SOILS SCREENING

All excavated soils were visually observed and field screened using a flame ionization detector (FID). Discolored soils were observed for the BS&W pipe trench excavation located 25 to 30 feet northwest of CT50. No other discolored soils were identified during excavation activities. Field screening logs for all excavation activities may be found in Appendix D. Soils exhibiting FID readings of greater than 10 ppm are as follows:

<u>FID Reading</u>	<u>Depth</u>	<u>Location</u>	<u>Cubic Yards Excavated</u>
18 to 20 ppm	5 to 6 feet	BS&W loop, 25 feet northwest of CT50	8
15 to 18 ppm	5 to 6 feet	BS&W loop, 30 feet northwest of CT50	4
5 to 25 ppm	6 to 8 feet	Loop excavation, 15 feet northwest of CT50	8

These soils were staged in a lined containment area constructed near Tank 49, sampled and analyzed for TPH by EPA 418.1M. The analysis yielded a TPH level of less than 16 mg/kg. In accordance with the soils management plan, these soils were used as backfill.

3.2 SOILS SAMPLING AND ANALYSIS

For each trench segment excavated, soil samples were obtained from the trench floor prior to backfilling. Samples were collected at 30-foot intervals along the trench floor and submitted for TPH analysis, Method 8015, modified. Samples were obtained from each trench segment, as presented in Table 3-1 and indicated on Figure 3-1.

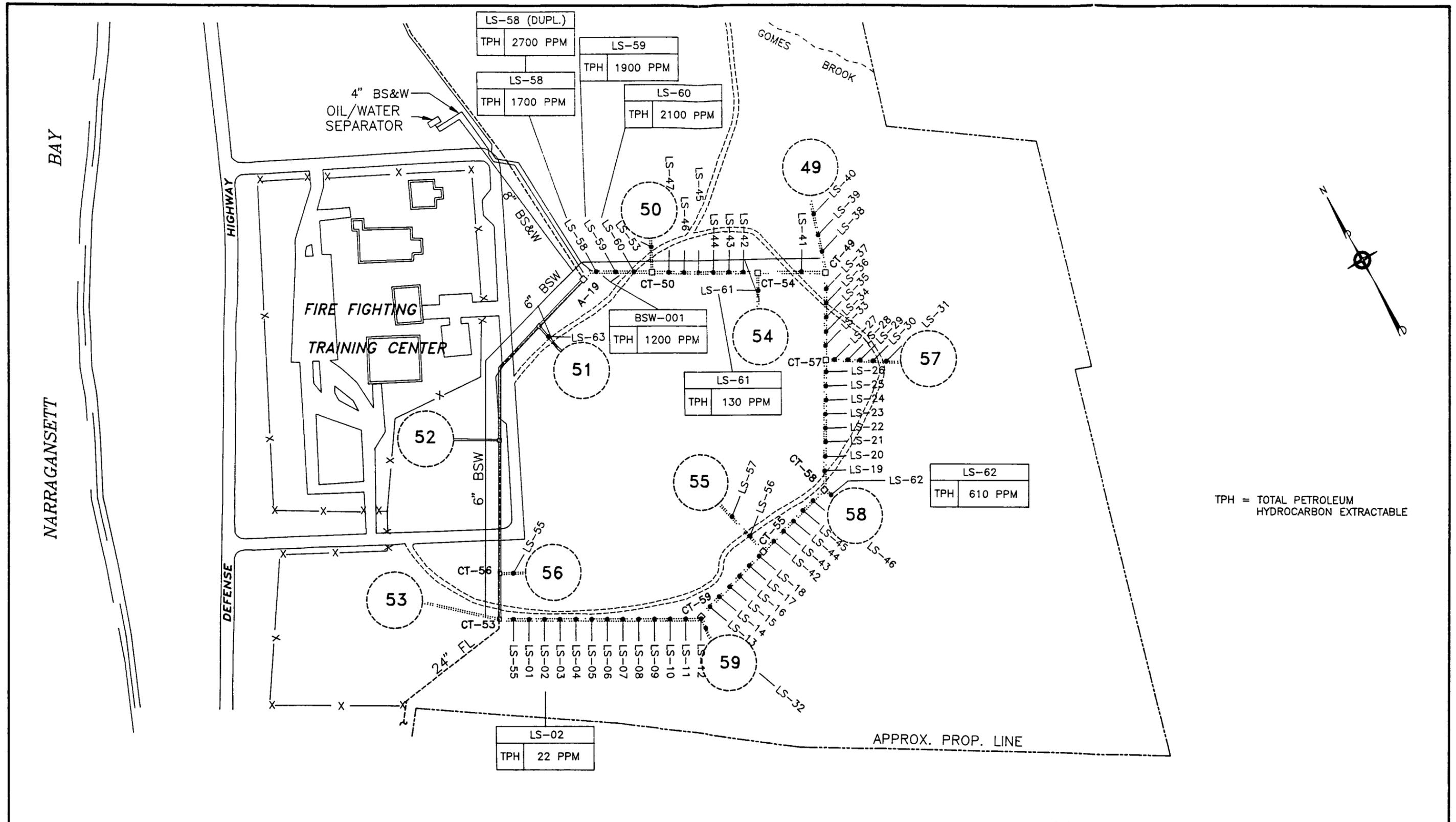
Laboratory analyses data sheets are presented in Appendix E. Samples for which TPH concentrations were positively identified and reported are presented on Table 3-2.

3.3 PIPING

All piping removed from the tank farm was visually observed for interior cleanliness prior to off-site disposal. Pipe sections that contained residual petroleum deposits were recleaned using the high-pressure hot water cleaning units. In addition, the exterior of the piping was visually observed to

**TABLE 3-1
LOOP AND SHUNT EXCAVATION SAMPLE LOCATIONS**

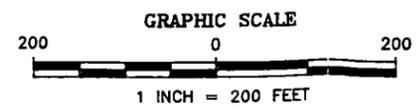
PIPE RUN	SAMPLE IDENTIFICATION	LOCATION
CT53 to CT59	LS-55, LS-01 through LS-12	30-foot increments beginning 30 feet from CT53
CT59 to CT55	LS-13 through LS-18	30-foot increments beginning 30 feet from CT59
CT55 to CT58	LS-42 through LS-46	30-foot increments beginning 30 feet from CT55
CT58 to CT57	LS-19 through LS-26	30-foot increments beginning 30 feet from CT58
CT57 to CT49	LS-33 through LS-37	30-foot increments beginning 30 feet from CT57
CT49 to CT54	LS-41	30-foot increments beginning 30 feet from CT54
CT54 to CT50	LS-47 through LS-52	30-foot increments beginning 30 feet from CT54
CT50 to A19	LS-58 through LS-60	30-foot increments beginning 30 feet from A19
CT56 to Tank 56	LS-54	Beginning 30 feet from Tank 56 pump chamber
CT59 to Tank 59	LS-32	30-foot increments beginning 30 feet from CT59
CT55 to Tank 55	LS-56, LS-57	30-foot increments beginning 30 feet from CT55
CT58 to Tank 58	LS-62	30-foot increments beginning 30 feet from CT58
CT57 to Tank 57	LS-27 through LS-31	30-foot increments beginning 30 feet from CT57
CT49 to Tank 49	LS-38 through LS-40	30-foot increments beginning 30 feet from CT49
CT54 to Tank 54	LS-61	30-foot increments beginning 30 feet from CT54
CT50 to Tank 50	LS-53	Beginning 30 feet from Tank 50 pump chamber
CT52 to Tank 52	LS-63	30-foot increments beginning 30 feet from CT51



TPH = TOTAL PETROLEUM HYDROCARBON EXTRACTABLE

NOTES:

1. PLAN LOCATIONS DEVELOPED FROM A PLAN BY TRC ENVIRONMENTAL CORPORATION, DATED JUNE 18, 1993, ENTITLED: "PROCESS PIPING SYSTEM", DWG. NO. C-2.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
3. PLAN NOT TO BE USED FOR DESIGN.



TANK FARM 5 - SOIL SAMPLING LOCATIONS & TPH DETECTIONS	
PROCESS PIPING CLOSURE ASSESSMENT REPORT	
NETC - NEWPORT, RHODE ISLAND	
DRAWN BY: R.G. DEWSNAP	REV.: 0
CHECKED BY: J. FORRELLI	DATE: 29 SEP 95
SCALE: 1" = 200'	FILE NO.: \DWG\NETC\CLOSURE\SOIL_SMP.DWG

FIGURE 3-1


Brown & Root Environmental
 A Division of Halliburton NUS Corporation
 55 Jonspin Road Wilmington, MA 01887
 (508)658-7899

**TABLE 3-2
 LOOP AND SHUNT PROCESS PIPING
 SOIL SAMPLE TPH DETECTION SUMMARY
 TPH - METHOD 8015**

SAMPLE	LOCATION	TPH (ppm)	NOTE
LS-02	Loop excavation, 90 feet east of CT53	22	Diesel range hydrocarbons
LS-58	Loop excavation, 30 feet northwest of CT50	1700	Hydrocarbons heavier than diesel
LS-58 Duplicate	Loop excavation, 30 feet northwest of CT50	2700	Hydrocarbons heavier than diesel
LS-59	Loop excavation, 60 feet northwest of CT50	1900	Hydrocarbons heavier than diesel
LS-60	Loop excavation, 90 feet northwest of CT50	2100	Hydrocarbons heavier than diesel
LS-61	Shunt excavation, 30 feet southwest of CT54	130	Hydrocarbons heavier than diesel
LS-62	Shunt excavation, 30 feet south of CT58	610	Hydrocarbons heavier than diesel
BS&W-001	Material contained inside the BS&W piping removed from the excavation located in between CT50 and A19	1200	Sampled for disposal characterization

Results are depicted on Figure 3-1.

identify obvious holes, cracking, or staining that would indicate leakage from the pipe. No signs of leakage were observed.

3.4 CT CHAMBERS

Prior to demolition or in-situ closure, all CT chambers were inspected to confirm and document interior cleaning by James White, OHM's Project QA/QC Officer. All welded caps for piping to be closed in place were also inspected by Mr. White.

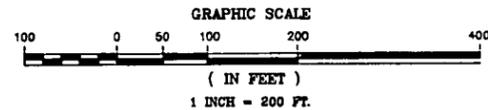
4.0 SITE GROUNDWATER DESCRIPTION

Shallow groundwater flow direction at Tank Farm 5 is generally northwest. In the southern portion of the site, where Tank 56 is located, shallow groundwater flows generally west-northwest toward Narragansett Bay (See Figure 4-1). Shallow groundwater flow in the northern portion of Tank Farm 5 is to the north, toward Gomes Brook (a gaining brook), located approximately 200 feet north of Tank 49.

No characterization data is available for groundwater likely to have been impacted by a release from the process piping.

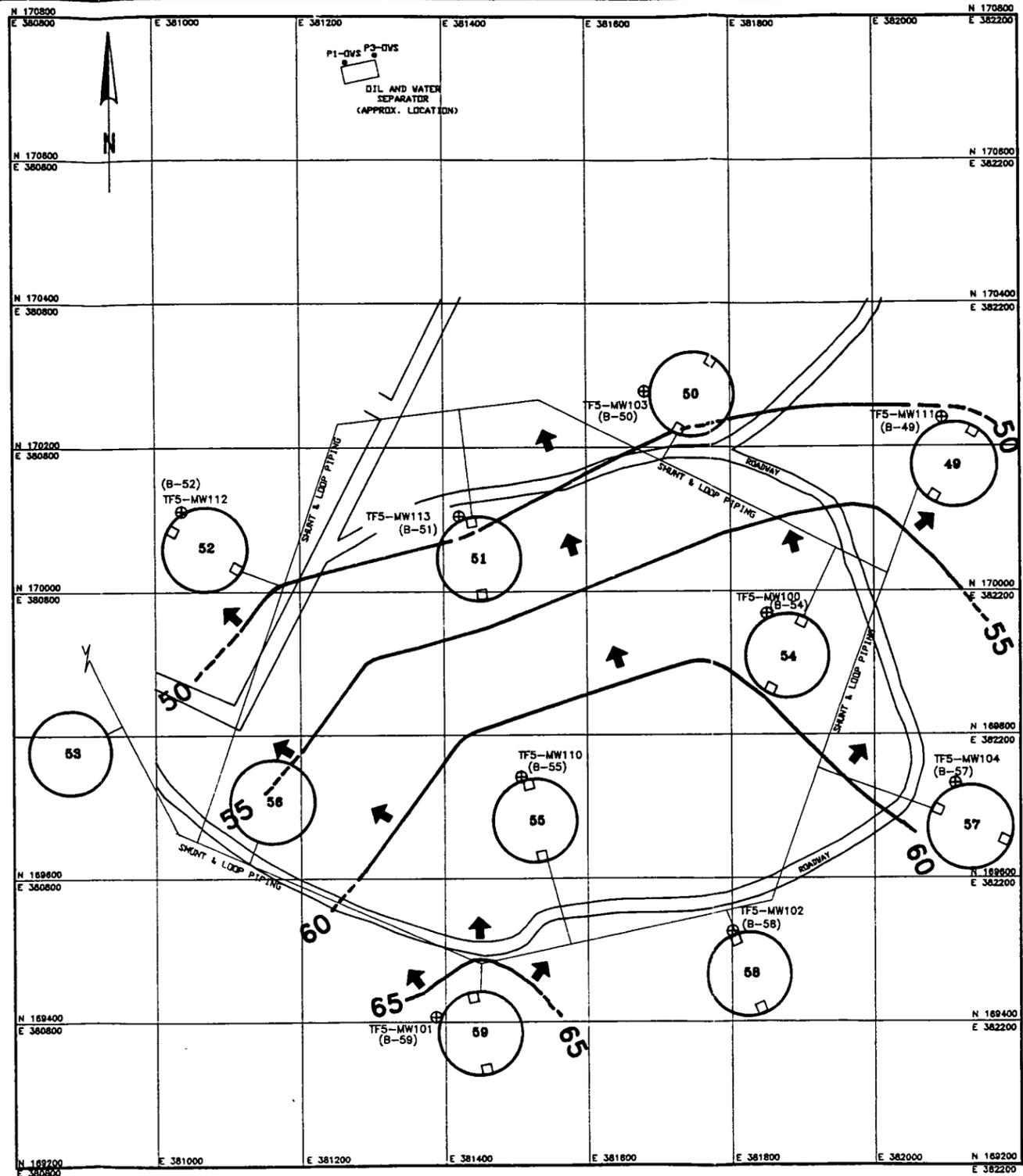
LEGEND

-  UNDERGROUND STORAGE TANK
- TF5-MW112  MONITORING WELL NUMBER AND LOCATION
- (B-51)  BORING NUMBER
- P1-OVS  SOIL PROBING POINT
-  APPROXIMATE GROUNDWATER FLOW DIRECTION
-  30 GROUNDWATER CONTOUR LINE
-  30 APPROXIMATE GROUNDWATER CONTOUR LINE



NOTES:

- 1) VERTICAL DATUM BASED ON LOCAL MEAN LOW WATER.
- 2) HORIZONTAL DATUM BASED ON STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).
- 3) BASE MAP BY LOUIS FEDERICI & ASSOCIATES, 235 PROMENADE STREET, PROVIDENCE, RI.
- 4) TANKS, ROADWAY, AND SHUNT & LOOP PIPING LOCATIONS FROM AVAILABLE PLANS AND ARE TO BE CONSIDERED APPROXIMATE.
- 5) MONITORING WELL LOCATIONS FROM ACTUAL FIELD SURVEY.
- 6) SOIL PROBING POINTS ARE TO BE CONSIDERED APPROXIMATE.



TANK FARM 5

**TANK FARM 5 - WATER TABLE MAP
PROCESS PIPING CLOSURE ASSESSMENT REPORT
NETC - NEWPORT, RHODE ISLAND**

DRAWN BY:	R.G. DEWSNAP	REV.:	0
CHECKED BY:	J. FORRELLI	DATE:	02 OCT 95
SCALE:	1" = 200'	FILE NO.:	AWG\NETC\CLOSE\GW_CO\NTR.DWG

FIGURE 4-1



Brown & Root Environmental
A Division of Halliburton NUS Corporation
55 Jonspin Road Wilmington, MA 01887
(508)658-7899

5.0 SITE GROUNDWATER CLASSIFICATION AND USE

The groundwater beneath Tank Farm 5 is classified by RIDEM as "GB". GB classified groundwater is primarily located under highly urbanized areas or in the vicinity of disposal sites for solid waste, hazardous waste, or sewage sludge. Groundwater classified as GB may not be suitable as drinking water without treatment due to known or presumed degradation.

Tank Farm 5 and all land hydraulically downgradient of the tank farm (between the tank farm and Narragansett Bay) is owned by the federal government. A review of Newport Water Department records by B&R Environmental (as Halliburton NUS Corporation) in March 1995 indicated that no private or public potable water wells are located on or in the vicinity of the site.

Tank Farm 5 is not within a designated wellhead protection area.

6.0 POTENTIAL RECEPTORS

The only significant potential receptor of a release from the Tank Farm 5 process piping is Narragansett Bay. Groundwater from the area of Tank Farm 5 generally flows west-northwest toward Narragansett Bay. Contaminants dissolved in and migrating with groundwater may discharge to this surface water. No private wells or basements that could be affected by a release from the Tank Farm 5 process piping are situated between the tank and Narragansett Bay.

7.0 FINDINGS AND CONCLUSIONS

7.1 FINDINGS

A total of 3,450 linear feet of loop and shunt process piping runs and 12 CT chambers in Tank Farm 5 have been closed. The shunt process line for Tank 53 was previously closed by others. Process piping runs, totalling approximately 2,500 linear feet and 7 CT chambers (CT-50, CT-54, CT-49, CT-57, CT-58, CT-55, and CT-59) located from A-19 clockwise to CT-53 were closed by demolition. The demolition activities consisted of draining and cleaning piping, excavating the pipe trench, removing ACM-insulated pipe, cutting and removing piping, and backfilling the trench with clean fill. During excavation, all soils were visually observed and field screened using a flame ionization detector (FID) and the trench floor was sampled for TPH analysis prior to backfilling. All material removed were disposed of or salvaged off site.

Due to the proximity of the loop piping located along the active main fuel line and the integral nature of the CT chambers associated with the line, in-situ closure was chosen for selected pipe runs and associated CT chambers. Process piping runs, totalling approximately 950 feet and 5 CT chambers (A-19, CT-51, CT-52, CT-56 and CT-53) located from A-19 counter clockwise to CT-53 were closed in place. With the exception of the main fuel line, all pipes and valves were dismantled and removed from the chambers, the interior of the piping was cleaned, and a welded pipe cap was installed on each pipe entrance within the CT chamber. No soil sampling was conducted in conjunction with the closure in-place operation.

Impacts to soils in the area of the demolished process piping were evaluated by sampling soils from the excavated trench floor for total petroleum hydrocarbon (TPH) extractables analysis. Samples were collected approximately every 30 feet with a total of 63 samples collected. No sampling was performed for process piping runs closed in place.

The sampling and analysis yielded positive TPH detections exceeding 300 ppm for two piping runs. A single detection at 610 ppm was located on the UST 58 shunt process pipe run excavation. For the loop process pipe run and BS&W piping excavations between A-19 and CT-50, four detections ranging from 1900 ppm to 2200 ppm were found.

RIDEM recommends an action level of 300 milligrams per kilogram (mg/kg) in soil for non-sensitive environments. The Tank Farm 5 property may not represent a sensitive environment because no wetlands are identified on the property; no water supply wells are located downgradient of the farm;

and marine areas are located more than 500 feet from the site, beyond the areas likely to be impacted by a release.

7.2 CONCLUSIONS

Based on the results of TPH analysis of soil samples collected from excavations for the piping runs, petroleum-impacted soils in the piping excavation west of Tank 50 may be the result of a release from the loop process piping between A-19 and CT-50 or as a result of a release from Tank 50. Also, a release from the UST shunt piping may have occurred.

REFERENCES

REFERENCES

- Dragun, J. 1988. The Soil Chemistry of Hazardous Materials. Maryland: Hazardous Materials Control Research Institute, pp. 398-411.
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- Rhode Island Department of Health. 1992. "Rules and Regulations for Lead Poisoning Prevention, [R 23-24.6-PB]." February.
- TRC Environmental Corporation. 1992. Remedial Investigation Technical Report, NETC-Newport, Rhode Island.
- TRC Environmental Corporation. 1993. Remedial Design Work Plan, Groundwater Treatment, Tanks 53 and 56 at Tank Farm 5, NETC-Newport, Rhode Island.
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- USGS. 1975. Prudence Island Quadrangle, Rhode Island. U.S. Geological Survey, 7.5' Series (Topographic). 1955, photorevised in 1970 and 1975.

APPENDIX A
OHM's SOIL MANAGEMENT PLAN

Final

**SOIL MANAGEMENT PLAN FOR
REMEDIAL ACTION AT TANK FARM #5
NETC
NEWPORT, RHODE ISLAND**

Prepared for:

**DEPARTMENT OF THE NAVY
Contract No. N64270-93-D-3032
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Mail Stop #82
Lester Pennsylvania 19113**

Prepared by:

**OHM Remediation Services Corporation
Massachusetts Division
88C Elm Street
Hopkington, Massachusetts 01748**



**Ron Anderson, P.E.
Project Manager**

May 23, 1995
OHM Proj ct 16231

BACKGROUND

This project involves the removal of tank contents from nine large 60,000 barr l underground storage tanks located in Tank Farm 5 and the excavation of th loop and shunt piping.

WORK OBJECTIVE

The objective of this plan is to address the management of all soils excavated as a result of the Tank Farm 5 project activities. The following sections of this plan describes the activities intended to meet these obj ctives.

To accomplish these objectives, OHM has divided the project into 3 tasks. Th se 3 tasks incorporate all of the requirements of the specifications and were established to divide the project into logical construction activities for planning, performance, and control. The four tasks are:

TASK 1 - EXCAVATION

TASK 2 - SAMPLING AND ANALYSIS

TASK 3 - REUSE / DISPOSAL

TASK 1- EXCAVATION

Excavation and soil handling will be conducted in a manner which minimizes mixing f soils with different levels and types of contamination. Soils will b initially segregated and stockpiled into the following three stockpiles:

Stockpile One - Indicates visible petroleum contamination, petroleum dors r sustained non-methane FID reading above 10 units.

Stockpile Two - Indicates visible petroleum contamination, petroleum odors r sustained non-methane FID readings above 100 units.

Stockpile Three - Indicates visible petroleum contamination, petrol um odors or sustained non-methane FID readings above 1,000 units.

Soils that have a FID reading of less than 10 units will be staged next to the open excavation.

On-site field screening for total petroleum hydrocarbons (TPH) and total VOCs will be performed to conduct the initial segregation. A flame ionization detector (FID) will be used to detect total VOCs. Soils with a FID reading of 10 units or greater will be considered impacted and will be segregated from the soils which do not exhibit these qualities. Visual observation of excavated soils will also assist in the evaluation of the soils. Soils which have evidence of petroleum discoloration or petroleum odors to detect TPH will be considered impacted and stockpiled accordingly.

OHM will maintain an excavation report that will track the excavated soils removed, from their time and origin of generation, to their ultimate disposal off-site or reuse on-site. The excavation report will be maintained in a single bind r notebook and contain the following collection of data:

- 1) Description of work, including date of excavation, cubic yards of excavated soil, location of soils, field screening results, and stockpile locations
- 2) Laboratory testing reports with copies of analytical results.
- 3) Copies of soil disposal paper work such as manifests, bill of lading, land ban forms, and required permits.
- 4) Cumulative quantities each type of soil removed.
- 5) Quantities and location of all soils reused on site.

An Excavator will be used to remove soils for direct loading into dump trucks. These trucks will transfer the field screened soils to their designated staging areas. A three cell soil staging area will be constructed. The staging area will be dedicated to tank farm 5 soils. The staging areas will consist of a bermed 30 mil HDPE lined area. A ramp access will be constructed to allow access for the transfer trucks to enter for dumping purposes. The staging areas will be numbered to insure that the soils are not mixed.

Stockpile soil will be covered with plastic sheeting at the end of each work day and during heavy precipitation events. Water on the liner will be collected and pumped to the water treatment plant for treatment prior to discharge to the POTW. OHM will perform the maintenance on the liner, berm, water removal, and plastic sheeting cover for the duration of the project.

TASK 2 - SAMPLING & ANALYSIS

Field screening of the soils will be accomplished by visual examination and a calibrated flame ionization detector (FID). All soils will be screened as they are excavated to identify their stockpile location in the staging area. Stockpiled soils will be sampled for characterization as presented in Table One for the tank farm 5 closure project. A stainless-steel hand auger which will be pushed into the stockpile 2 feet to collect a grab sample. Five grab samples will be collected around the circumference of the stockpile and completely mixed into a single composite sample for analysis. Upon reaching the final excavation limits a final verification sampling event will be conducted, as follows:

TANK FARM 5 LOOP AND SHUNT PIPING POST EXCAVATION SAMPLING

Post excavation samples will be collected from the trench excavations resulting from pipe removal. Sample locations will be identified by the Navy contracts on-site representative. Analysis will occur for TPH using EPA Method 8015 modified as above. Ninety-five samples are anticipated based on 2870 linear feet of piping removed. OHM's waste transportation and disposal manager may require additional analytical to determine the most cost-effective and feasible method of disposal for each waste stream.

REUSE / DISPOSAL OF SOILS:

Soils excavated from the tank farm 5 closure project activities which have a FID reading of less than 10 PPM will be used as backfill. Upon completion of soil sampling analysis as previously identified in Table One, soils which have a TPH of greater than 300 PPM will also be transported and disposed of in accordance with all Federal, State, and Local Regulations.

FID < 10 PPM = BACKFILL	
FID > 10 PPM	
PERFORM TPH ANALYSIS EVERY 400 CUBIC YARDS IF, TPH < 300 PPM = BACKFILL	
FID > 300 PPM	
FULL WASTE CHARACTERIZATION WILL BE PERFORMED. DISPOSAL AND HANDLING WILL BE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.	

TABLE ONE



OHM Corporation

21 September 1995

Officer in Charge of Construction Contracts
Northern Division, NAVFACENGCOM
ATTN: Mr. David Dorocz
NETC, Building 1
One Simonpietri Drive
Newport, RI 02841

RE: Responses to RIDEM Comments, Tank Content Removal, Tank Farm 5, Delivery Order
0031, Contract N62470-93-D-3032, NETC, Newport, RI. OHM Project 16231

Dear Mr. Dorocz:

OHM respectfully submits for the official record the responses to the RIDEM comments on the soil management plan for tanks 53, 56 and the soil management plan for tank farm 5 for the referenced project. OHM has recently submitted the final work plan revision. The soil management plans have been incorporated into the work plan. OHM will perform the remaining work activities associated with Tank Farm 5 in accordance with the soil management plans and the enclosed responses.

Sincerely,

Ron Anderson
Project Manager

Mr. Ron Anderson, OHM
OHM Project 16231

COMMENTS SPECIFIC FOR TANK 53 AND 56 SOIL MANAGEMENT PLAN

1) **Tank 56 Shunt Piping Excavation:**
Page 2, Paragraph 5.

The plan should include a contingency that if heavy oils are encountered the TPH analysis will be conducted using TPH Test Method 418.1.

Response

OHM has analyzed soils excavated and post-excavated samples for TPH using EPA Method 8015 as identified by the Contract Specifications. During excavations no heavy oils were encountered. OHM will analyze remaining samples for TPH using Test Method 418.1 as requested by RIDEM.

2) **Reuse Disposal Options:**
Page 3.

The Division recommends that one discrete jar headspace analysis per one thousand cubic yards or a minimum of five jar headspace analysis per pile be taken from Stock Pile #4. The samples will be collected from three feet below the surface of the pile. The results from these tests will be used to determine whether the sampling criteria for Stock Piles #1, 2, and 3 are applicable. Jar headspace readings below 10 ppm will warrant one composite confirmatory analysis for VOCs.

Response

OHM will perform one discrete jar headspace analysis per one thousand cubic yards or a minimum of five jar headspace analysis per pile will be taken from Stockpile #4. The samples will be collected from three feet below the surface of the pile. Upon completion of the stockpile characterization utilizing jar headspace analysis, one composite sample will be taken of the entire pile and analyzed for VOCs. If jar headspace readings are above 10 ppm analysis for TPH by Method 418.1 will be performed. Soils with TPH results of less than 100 ppm will be used as backfill. Soils with a TPH result greater than 100 ppm will be transported and disposed in accordance with all Federal, States and Local guidelines.

3) **Reuse Disposal Options:**
Page 3.

This section of the plan has the same sampling frequency for Stock Pile #1 and #2. The Division recommends increasing the sampling frequency for Stock Pile #2 to 1/400 cy.

Response

OHM will increase the sampling frequency for Stock Pile #2 to 1/400cy as requested by RIDEM.

COMMENTS SPECIFIC FOR TANK FARM 5 SOIL MANAGEMENT PLAN

1) **TPH Analysis**
Page 2.

EPA Method 418.1 should be used instead of Method 8015 modified to analyze soil samples total petroleum hydrocarbons (TPH) content. This includes soil excavated from the tank areas as well as the loop & shunt piping excavations.

Response

OHM has analyzed soils for TPH using EPA Method 8015 as identified by the contract specifications. OHM will analyze remaining samples for TPH using Test Method 418.1 as requested by RIDEM.

2) **Reuse Disposal Options**
Page 3.

The following plan should be employed for the reuse/disposal of soils excavated from both the tank area and loop & shunt piping:

Using a flame ionization detector (FID), screen soils at a regular frequency during excavation. Separate soils into three stockpiles based on FID readings in accordance with stockpile definitions on page one of the soil management plan. Once stockpiling is completed, using standard headspace analysis, filed screen stockpile no. 1 prior to using as backfill to verify a TVOC concentration of less than 10 ppm. A minimum of one head space analysis is to be performed per 1000 cy and no less than five (5) analyses total. Each soil sample must be extracted from at least two feet into stockpile. Any soil exhibiting greater than 10 ppm TVOC on the FID must be restockpiled into stockpile no. 2 or stockpile no.3, depending on concentrations.

Laboratory analysis using EPA Method 418.1 for TPH is to be performed on one soil sample for every 400 cy of contaminated soil from stockpile no 2

Laboratory analysis using EPA Method 418.1 for TPH is to be performed on one soil sample for every 40 cy of contaminated soil from stockpile no 3

Any soil which exhibits greater than 100 ppm of TPH using the laboratory analysis may not be used as backfill and must be properly stored for offsite disposal.

Response

OHM performed field screening using a flame ionization detector (FID) during excavation activities. Excavation and backfill activities associated with Tank Farm 5 excluding tanks 53 and 56 were completed by the time of RIDEM responses to the soil management plan. Therefore, OHM did not further screen the less than 10 ppm TVOC soils pile (stockpile no.1) during backfill operations.

As previously identified in comment number one, OHM will use EPA Method 418.1 to analyze TPH for future sampling. This will include soils associated with stockpiles no. 1 and 2.

OHM will not use soils with a TPH value of greater than 100 ppm as backfill. Soils greater than 100 ppm will be properly stored for offsite disposal.

3) Post Excavation Sampling for Loop & Shunt Lines

Page 2.

It is recommended that the loop & shunt piping post excavation soil sampling be performed as follows:

Analyze one soil sample for every five hundred (500) linear feet of piping. This soil sample is to be a composite consisting of a grab sample for every one hundred (100) linear feet of trench. Additional soil excavation may be required in trench areas where analytical results indicate a residual TPH contaminant concentration greater than 100 ppm.

Response

OHM has performed post excavation sampling every 30 linear feet for the loop and shunt activities. A grab sample was taken and analyzed for TPH Method 8015 This surpasses the frequency of sampling requested by RIDEM.

4) **Schedule for Offsite Disposal**

A proposed schedule with specific dates for completion of the offsite disposal of contaminated soil must be submitted if greater than thirty days is needed.

Response

OHM is currently waiting for analytical results for the stockpile of material greater than 10 ppm TVOC. OHM is anticipating being able to reuse/dispose of this material within thirty days.

5) **Liners for Stockpiles**
Page 2.

During the time which the contaminated soil is stockpiled on site, the 30 mil HDPE sheeting must fully underlie and overlay the stockpiles. This cover must be maintained for the full duration of storage.

Response

OHM has underlined the contaminated stockpiles with 30 mil HDPE liner. The stockpiles are covered with 6 mil poly as called for by the contract specifications. The liners fully underlie and overlay the contaminated stockpiles. The 6 mil liner is continuously inspected to verify it's integrity.

APPENDIX B

ASBESTOS DISPOSAL DOCUMENTATION FORMS

09/13/95

ASBESTOS DEBRIS TRACKING DATABASE

CTO 196 - TANK FARM 5 RA

HALLIBURTON NUS CORP.

<u>DATE</u>	<u>LOAD</u>	<u>TYPE</u>	<u>QUANTITY</u>	<u>TRANSPORTER</u>	<u>TSD FACILITY</u>
06/28/95	27582	ASBESTOS, NA2212	30 YDS	LOGANO TRUCKING	MEADOWFILL LF, BRIDGEPORT, WV
07/24/95	27583	ASBESTOS, NA2212	30 YDS	LOGANO TRUCKING	MEADOWFILL LF, BRIDGEPORT, WV
07/24/95	27584	ASBESTOS, NA2212	30 YDS	LOGANO TRUCKING	MEADOWFILL LF, BRIDGEPORT, WV
08/02/95	29101	ASBESTOS, NA2212	30 YDS	LOGANO TRUCKING	MEADOWFILL LF, BRIDGEPORT, WV
08/09/95	28815	ASBESTOS, NA2212	25 YDS	LOGANO TRUCKING	MEADOWFILL LF, BRIDGEPORT, WV
		TOTAL	145 YDS		



LOGANO TRUCKING CO., INC.
 PORTLAND, CT 06480
 342-0667 • 342-4866
 Out of State 1-800-272-3867

27582

IZING IN ASBESTOS & WASTE TRANSPORTATION

NS-0676

ASBESTOS DISPOSAL & DOCUMENTATION FORM

Job Number 04019 P.O. # _____
 Contractor N.S.C.
 Address 260 ELLINGTON RD
 City SOUTH WINDSOR
 State CT Zip 06074
 Telephone Number (203) 289-4229
 Date Container Delivered _____
 Date of Pickup 6-28-95
 Type of Container ROLL OFF
 Bag Drum Wrapped Other
 Approximate Volume of Asbestos Removed
30 CY

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Authorized Signature [Signature]

GENERATOR/BUILDING OWNER Code 40E
NAVY SUB BASE TANK FARM
 Address 98 DEWEESE HIGHWAY
 City NEWPORT State RI Zip 02841
 Phone Number [Signature]

GENERATING LOCATION
 Address 98 DEWEESE HIGHWAY
 City NEWPORT State RI Zip _____
 Phone Number _____

E.P.A. AGENCY
 U.S. EPA - Region 1
 Air Management - JFK Building
 Boston, MA 02203
 Phone Number (617) 565-3265

RQ, ASBESTOS, 9, NA2212, PG III

Transporter 1: Logano Trucking Co.

I hereby certify that the above named material was picked up at the generator site listed above, and, if applicable delivered to the temporary storage/transfer location.

Driver: [Signature] Registration #: 18551A/CT Date: 6/28/95
 Signature State / #

TEMPORARY STORAGE / TRANSFER FACILITY: LOGANO TRUCKING CO., INC. • 203 PICKERING STREET • PORTLAND, CT 06480
 PHONE: (203) 342-0667 PERMIT # SW 1130223

Received By: [Signature] Date: 6/28/95

I hereby certify that the above named material has been accepted at the above named facility.

Transporter 2: LOGANO TRUCKING CO., INC.

I hereby certify that the above named material was delivered without incident to the destination listed below

Driver: [Signature] Registration #: 19549A/CT Date: 7-10-95
 Signature State / #

Landfill Name: Meadow Hill Landfill Phone No. 304 842 2784
 Address: Bridgeport, CT Permit #: SWF 103247

Approximate Volume of Asbestos Received: 30 CY
 Discrepancy If Any: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the information provided is true and accurate.

Received by: [Signature] Date: 7-10-95



Portland, CT 06480
342-0667 • 342-4866
Out of State 1-800-272-3867

27583

104

REGULATING IN ASBESTOS & WASTE TRANSPORTATION

NS-0678

ASBESTOS DISPOSAL & DOCUMENTATION FORM

Job Number 04019 P.O. # _____
 Contractor NATIONAL SERVICE CLEAN
 Address 260 BILKINGTON ROAD
 City SOUTH WINDSOR
 State CT Zip 06074
 Telephone Number (203) 289-4229
 Date Container Delivered 06/28/95
 Date of Pickup 7-24-95
 Type of Container OPN TOP
 Bag Drum Wrapped Other
 Approximate Volume of Asbestos Removed
30 LBS

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Authorized Signature [Signature]

Transporter 1: LOGANO TRUCKING

I hereby certify that the above named material was picked up at the generator site listed above, and, if applicable delivered to the temporary storage/transfer location

Driver: [Signature] Registration #: 16610-A/CT Date: 7-24/95
 Signature State / #

TEMPORARY STORAGE/TRANSFER FACILITY: LOGANO TRUCKING CO., INC. • 203 PICKERING STREET • PORTLAND, CT 06480
PHONE: (203) 342-0667 PERMIT # SW 1130223

Received By: [Signature] Date: 7/25/95
 I hereby certify that the above named material has been accepted at the above named facility

Transporter 2: LOGANO TRUCKING CO., INC.

I hereby certify that the above named material was delivered without incident to the destination listed below

Driver: [Signature] Registration #: 10410 A CT Date: 7-29-95
 Signature State / #

Landfill Name: MEADOWFIELD LANDFILL Phone No: 1-800-547-5303
XX

Location: 703 XXX Permit #: XXXXXXXXXXXX
XX BRIDGEPORT, WV 26330 SWF-1032-92

Approximate Volume of Asbestos Received: _____
 Discrepancy If Any: 30 CY

I hereby certify that the above named material has been accepted and to the best of my knowledge the information provided is true and accurate.

Received by: [Signature] Date: 7-29-95

GENERATOR/BUILDING OWNER
DEPT. OF NAVY NETC Code 40E
 Address 10 INDUSTRIAL WAY One S. Newport Str.
 City PHILADELPHIA State PA Zip 19113
 Phone Number Newport RE 02871

GENERATING LOCATION
TANK FARM #5
 Address NEWPORT NAVY BASE
 City NEWPORT State RI Zip _____
 Phone Number _____

E.P.A. AGENCY
 U.S. EPA - Region 1
 Air Management - JFK Building
 Boston, MA 02203
 Phone Number (617) 565-3265

RQ, ASBESTOS, 9, NA2212, PG III



Portland, CT 06480
342-0667 • 342-4866
Out of State 1-800-272-3867

27584

105

SPECIALIZING IN ASBESTOS & WASTE TRANSPORTATION

NS-0679

ASBESTOS DISPOSAL & DOCUMENTATION FORM

Job Number 04019 P.O. # _____
Contractor NATIONAL SERVICE CLEAN
Address 260 ELLINGTON ROAD
City SOUTH WINDSOR
State CT Zip 06074
Telephone Number (203) 289-4229
Date Container Delivered 06/28/95
Date of Pickup 7-24-95
Type of Container OPEN TOP
Bag Drum Wrapped Other
Approximate Volume of Asbestos Removed
30 LBS

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Authorized Signature [Signature]

GENERATOR/BUILDING OWNER
DEPT OF NAVY NITC Calcutt
Address 10 INDUSTRIAL WAY One S. Newport Rd.
City PHILADELPHIA PA State PA Zip 19143
Phone Number Newport RI 02871

GENERATING LOCATION Stn 1
TANK FARM # 5
Address NEWPORT, RI
City NEWPORT NAVY BASE State _____ Zip _____
Phone Number _____

E.P.A. AGENCY
U.S. EPA - Region 1
Air Management - JFK Building
Boston, MA 02203
Phone Number (617) 565-3265

RQ, ASBESTOS, 9, NA2212, PG III

Transporter 1: LOGANO TRUCKING

I hereby certify that the above named material was picked up at the generator site listed above and if applicable delivered to the temporary storage/transfer location.

Driver: R. Z-t Signature Registration #: 16610-A/CT State / # Date 7-24/95

TEMPORARY STORAGE / TRANSFER FACILITY: LOGANO TRUCKING CO., INC. • 203 PICKERING STREET • PORTLAND, CT 06480
PHONE: (203) 342-0667 PERMIT # SW 1130223

Received By: Tamara Plouffe Date: 7/25/95
I hereby certify that the above named material has been accepted at the above named facility.

Transporter 2: LOGANO TRUCKING CO., INC.

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver: [Signature] Signature Registration #: _____ State / # Date: 7-01

Landfill Name: MEADOWFILL LANDFILL Phone No: XXXXXXXXXXXXXXX
BRIDGEPORT, WV 26330

Location: XXXXXXXXXXXXXXXXXXXX Permit #: XXXXXXXXXXXXXXX

Approximate Volume of Asbestos Received: XXXXXXXXXXXX SWF-1032-92 30 CY

Discrepancy If Any: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the information provided is true and accurate.

Received by: Katie French Date: 7-27-95



Portland, CT 06480
342-0667 • 342-4866
Out of State 1-800-272-3867

29101

REGULATING IN ASBESTOS & WASTE TRANSPORTATION

NS-0690

ASBESTOS DISPOSAL & DOCUMENTATION FORM

Job Number 04019 P.O. # _____
 Contractor NISC
 Address 260 ELLINGTON ROAD
 City SOUTH WINDSOR
 State CT Zip 06074
 Telephone Number 203-289-4229
 Date Container Delivered 07/24/95
 Date of Pickup 8-2-95
 Type of Container OPEN TOP
 Bag Drum Wrapped Other

Approximate Volume of Asbestos Removed
30 YARDS

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Authorized Signature Edward Keenan

GENERATOR/BUILDING OWNER
 Address NOTICE CODE 408
1 SIMONDI DR.
 City NEWPORT State RI Zip 02841
 Phone Number 1-800-272-3867

GENERATING LOCATION
 Address TANK FARM #5
 City NEWPORT State RI Zip 02841
 Phone Number 1-800-272-3867

E.P.A. AGENCY
 U.S. EPA - Region 1
 Air Management - JFK Building
 Boston, MA 02203
 Phone Number (617) 565-3265

RQ, ASBESTOS, 9, NA2212, PG III

Transporter 1: LOGANO TRUCKING

I hereby certify that the above named material was picked up at the generator site listed above, and, if applicable delivered to the temporary storage/transfer location

Driver: [Signature] Registration #: 18551A/ CT Date: 8-2-95
 Signature State / #

TEMPORARY STORAGE / TRANSFER FACILITY: LOGANO TRUCKING CO., INC. • 203 PICKERING STREET • PORTLAND, CT 06480
PHONE: (203) 342-0567 PERMIT # SW 1130223

Received By: Tamara French Date: 8/2/95

I hereby certify that the above named material has been accepted at the above named facility

Transporter 2: LOGANO TRUCKING CO., INC.

I hereby certify that the above named material was delivered without incident to the destination listed below

Driver: V.L. Stone Registration #: 77C Date: 8-8-95
 Signature State / #

Landfill Name: MEADOWELL LANDFILL Phone No: 800-847-5303
 Location: BRIDGEPORT, WV 26330 Permit #: SW 1130223
 Approximate Volume of Asbestos Received: 30 CY SWF-1032-92

Discrepancy If Any: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the information provided is true and accurate
 Received by: Katie French Date: 8-8-95



Portland, CT 06480
 342-0667 • 342-4866
 Out of State 1-800-272-3867

28815

ALZING IN ASBESTOS & WASTE TRANSPORTATION

ASBESTOS DISPOSAL & DOCUMENTATION FORM

108

Job Number NS-0692 P.O. # _____
 Contractor N.S.C. CORP. (CT)
 Address 260 ELLINGTON RD.
 City SOUTH WINDSOR
 State CT Zip 06074
 Telephone Number 203-289-4229
 Date Container Delivered 08/03/95
 Date of Pickup 8/9/95
 Type of Container OPEN TOP
 Bag Drum Wrapped Other
 Approximate Volume of Asbestos Removed
25 CU. YDS

GENERATOR/BUILDING OWNER
 NETA Code 40E
 Address Simonpietri Dr.
 City Newport State RI Zip 02841
 Phone Number _____

GENERATING LOCATION
 Address 98 DEFENSE HWY / BURMA
 City MIDDLETOWN State RI Zip 02842
 City 401-846-4077
 Phone Number _____

E.P.A. AGENCY
 U.S. EPA - Region 1
 Air Management - JFK Building
 Boston, MA 02203
 Phone Number (617) 565-3265

R.I. ASEESTOS. 9, NA2212, PG III

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Authorized Signature [Signature]

Transporter 1: LOGANO TRUCKING

I hereby certify that the above named material was picked up at the generator site listed above, and, if applicable delivered to the temporary storage/transfer location

Driver: [Signature] Registration #: 17919-A CT Date: 8/9/95
 Signature State / #

TEMPORARY STORAGE / TRANSFER FACILITY: LOGANO TRUCKING CO., INC. • 203 PICKERING STREET • PORTLAND, CT 06480
PHONE: (203) 342-0667 PERMIT # SW 1130223

Received By: [Signature] Date: 8/9/95
 I hereby certify that the above named material has been accepted at the above named facility

Transporter 2: LOGANO TRUCKING CO., INC.

I hereby certify that the above named material was delivered without incident to the destination listed below

Driver: [Signature] Registration #: _____ Date: 8-21-95
 Signature State / #

Landfill Name: MEDOWFIELD LANDFILL Phone No: 304-842-2784
 Location: RT.2 BOX 68 BRIDGEPORT W. VA. Permit #: SWF-1032-92

Approximate Volume of Asbestos Received: 25 CY
 Discrepancy If Any: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the information provided is true and accurate.

Received by: [Signature] Date: 8-21-95

APPENDIX C

WEIGHT TICKETS FOR SALVAGEABLE MATERIALS

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

Driver M

8274 No. 77108 D

Westport, Mass. 02790

Weighed For: A.H. Mr. Jones Corp

Purchased From: O.H.M. memo # 14045

SI No: 98 Debris

City: Middleboro, Mass 01942

	WGT.	TYPE	AMT.
TYPE		BRASS	
GROSS	6440	COPPER	
TARE	38700	LEAD	
NET	25700	RADIATOR	
		BATTERIES	
Certified Weigher	Total Amt. Paid	ALUMINUM	
	\$574.11	STAINLESS	

55572

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

Driver M

8274 No. 77108 D

Westport, Mass. 02790

7-19-95

Weighed For:

Purchased From: O.H.M.

SI No: memo # 14097

City:

	WGT.	TYPE	AMT.
TYPE		BRASS	
GROSS	64740	COPPER	
TARE	38600	LEAD	
NET	26140	RADIATOR	
		BATTERIES	
Certified Weigher	Total Amt. Paid	ALUMINUM	
	\$583.48	STAINLESS	

55573

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

No. 77114 D

7-25-1995

Westport Mass 02890

Weighed For _____
 Purchased From O. H. M.
 St. No. _____
 City _____

		WG#	TYPE	AMT
TYPE	<u>Shearing</u>		BRASS	
GROSS	<u>57040</u>		COPPER	
TARE	<u>36880</u>		LEAD	
NET	<u>20160</u>		RADIATORS	
	<u>at \$50⁰⁰ Per G. I.</u>		BATTERIES	
Certified Weigher	Total Amt Paid		ALUMINUM	
	<u>\$ 450⁰⁰</u>		STAINLESS	

AB.
 -450.
 3301091
 7/25

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

Driver On Off

No. 77118 B

8-1 '95

Westport Mass 02790

Weighed For _____

Purchased From O.H.M.

St. No _____

City _____

		WGT	TYPE	AMT
TYPE	Shearing		BRASS	
GROSS	58940		COPPER	
TARE	37800		LEAD	
NET	21140		RADIATORS	
	<i>a \$50⁰⁰ per G.T.</i>		BATTERIES	
Certified Weigher	Total Amt. Paid		ALUMINUM	
	\$471.88		STAINLESS	

AB,
471.88
3301091
elli

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

Driver Off

No. 77124 D

8-2-95

Westport Mass 02790

Weighted for _____
 Purchased From C.H.M.
 SI No _____
 City _____

	WGT	TYPE	AMI
TYPE		BRASS	
GROSS		COPPER	
TARE		LEAD	
NET		BATTERIES	
		ALUMINUM	
		STAINLESS	

Certified Weigher

Total Amt Paid

\$ 407.14

AB.
8/2
3301291
-407.14

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

Driver On Off

No. 77125 C

Westport Mass. 02790

8-4 1995

Weighed For _____

Purchased From O. H. W.

St. No _____

City _____

	WGT	TYPE	AMT
TYPE		Y BRASS	
GROSS		L COPPER	
TARE		LEAD	
NET		RADIATORS	
		BATTERIES	
		ALUMINUM	
		STAINLESS	
Certified Weigher	Total Amt Paid		
	\$ 400 ⁰⁰		

AB.
- 400.
330/091
8/4

at \$50⁰⁰ per 6 T.

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

Driver On Off

No. 77125 A

Westport Mass 02790

8-3 1965

Weighed For _____

Purchased From

O. H. W.

St No _____

City _____

		WGT	TYPE	AMT
TYPE	Sherrington		Y BRASS	AB. 8/3 3301091 - 619.19
GROSS	66240		L COPPER	
TARE	38500		LEAD	
NET	27740		RADIATORS	
	in 50" m.g.i.		BATTERIES	
			ALUMINUM	
Certified Weigher	Total Amt Paid		STAINLESS	
	\$ 619.19			

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

Driver On Off

No. 77129 B

8-9-95

Westport, Mass 02790

Weighed For _____

Purchased From O. H. M.

St. No _____

City _____

			WGT	TYPE	AMT
TYPE	Sherry	Sherry		BRASS	
GROSS	62360	47000		COPPER	
TARE	37800	37500		LEAD	
NET	24560	9500		RADIATORS	
	548.21	212.05		BATTERIES	
Certified Weigher	Total Amt. Paid			ALUMINUM	
	\$ 460.26			STAINLESS	

AB.
- 760.26
3301091
8/9

**MID-CITY SCRAP IRON
and SALVAGE CO., INC.**

548 State Rd. - Route 6
TELEPHONE (508)-675-7831

One or

No. 77142 C

Westport Mass 02791

8-30-95

Weighed For

Purchased From

O. H. M.

SI No

JOB 16231

City

	WGT	TYPE	AMT
TYPE		Y BRASS	
GROSS		L COPPER	
TARE		LEAD	
NET		PAC & DPE	
		BATTERIES	
		ALUMINUM	
		STAINLESS	

Handwritten entries in table:
 TYPE: Shear
 GROSS: 54980
 TARE: 38100
 NET: 16880
 Total Amt Paid: \$376.78
 Note: @ .50 = Profit.

AB.
 3301091
 - 376.78
 8/30

MID-CITY SCRAP IRON and SALVAGE CO., INC.

Driver On Off

648 State Rd. - Route 6
TELEPHONE (508)-675-7831

No. 78251 B
8-31-95

Westport, Mass., 02790

Weighed For

Purchased From

H. M.

St No.

City

	WGT.	TYPE	AMT.
TYPE		BRASS	
GROSS	65000	COPPER	
TARE	36900	LEAD	
NET	28120	RADIATORS	
	-36900	BATTERIES	
	55120	ALUMINUM	
		STAINLESS	

Shear w/ Tin Fence
A.50 - G.T.

Certified Weigher Total Amt. Paid
\$560.71

APPENDIX D
FIELD SCREENING LOGS

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 7/6/75

TEMP 65.85

WEATHER Clear

LOCATION: Loop E Street EQUIP #: A22138

TECHNITION B. Boynton 6297

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0 - 0	8ft, 112ft from Pump house T-57
2	8	Clean	0 - 0	8ft, 118ft from Pump house T-57
3	8	Clean	0 - 0	8ft, 114ft from Pump house T-57
4	8	Clean	0 - 0	8ft, 120ft from Pump house T-57
5	8	Clean	0 - 0	8ft, 126ft from Pump house T-57
6	8	Clean	0 - 0	8ft, 132ft from Pump house T-57
7	8	Clean	0 - 0	8ft, 138ft from Pump house T-57
8	8	Clean	0 - 0	8ft, 144ft from Pump house T-57
9	8	Clean	0 - 0	8ft, 150ft from Pump house T-57
10	8	Clean	0 - 0	8ft, 156ft from Pump house T-57
11	8	Clean	0 - 0	8ft, 158ft from Pump house T-57
12	8	Clean	0 - 0	8ft, 11ft from CT Chamber 57
13	8	Clean	0 - 0	8ft, 10ft from CT Chamber 57
14	8	Clean	0 - 0	8ft, 4ft from CT Chamber 57
15	8	Clean	0 - 0	Edge of CT 57, 8ft (North)
16	8	Clean	0 - 0	Edge of CT 57, 8ft (Southwest)
17	8	Clean	0 - 0	Edge of CT 57, 8ft (Southwest)
18	8	Clean	0 - 0	Edge of CT 57, 8ft (West)
19	8	Clean	0 - 0.5	Edge of CT 57, 8ft (West)
20	8	Clean	0 - 0	Edge of CT 57, 8ft (North)
21	8	Clean	0 - 0	6ft from CT 57, 8ft (North)
22	8	Clean	0 - 0	12ft from CT 57, 8ft (North)
23	8	Clean	0 - 0	12ft from CT 57, 8ft (North)
24	8	Clean	0 - 0	10ft from CT 57, 8ft (North)
25	8	Clean	0 - 0	18ft from CT 57, 8ft (North)

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: B. Boynton

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 7/12/95

TEMP 50/71

WEATHER: Cloudy, mild

LOCATION: Loop & Summit EQUIP #: A22135

TECHNICIAN: B. Pappas

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
26	8	Clean	0-0	57ft from CT 47 8ft (North)
27	8	Clean	0-0	80ft from CT 49 8ft (North)
28	8	Clean	0-0	80ft from CT 49 8ft (North)
29	8	Clean	0-0	80ft from CT 49 8ft (North)
30	3	Clean	0	80ft from CT 49 8ft (North)
31	8	Clean	0-0	Edge of CT 49 8ft (North)
32	8	Clean	0-0	Edge of CT 49 8ft (North)
33	8	Clean	0-0	6ft from CT 49 8ft (North)
34	8	Clean	0-0	12ft from CT 49 8ft (North)
35	8	Clean	0-0	16ft from CT 49 8ft (North)
36	8	Clean	0-0	19ft from CT 49 8ft (North)
37	8	Clean	0-0	22ft from CT 49 8ft (North)
38	8	Clean	0-0	25ft from CT 49 8ft (North)
39	8	Clean	0-0	28ft from CT 49 8ft (North)
40	8	Clean	0-0	31ft from CT 49 8ft (North)
41	4	Clean	0-0	34ft from CT 49 8ft (North)
42	8	Clean	0-0	Edge of CT 54 8ft (Southwest)
43	8	Clean	0-0	Edge of CT 54 8ft (Southwest)
44	8	Clean	0-0	6ft from CT 54 8ft (West)
45	8	Clean	0-0	6ft from CT 54 8ft (West)
46	3	Clean	0	0ft from CT 54 8ft (West)
47	8	Clean	7-0	37ft from CT 49 8ft (East)
48	8	Clean	0-6	42ft from CT 49 8ft (East)
49	8	Clean	0-0	47ft from CT 49 8ft (East)
50	8	Clean	3-0	52ft from CT 49 8ft (East)

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCK PILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: B. Pappas

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 7/8/95

TEMP: 61, 70

WEATHER: Cloudy

LOCATION: Loop & Shunt EQUIP #: A221 8

TECHNITION: D. Williams

LOAD NUMBER	TOTAL CORE YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0 - 0	18 ft from CT 49 8ft (North)
2	8	Clean	0 - 0	12 ft from CT 49 8ft (North)
3	8	Clean	0 - 0	6 ft from CT 49 8ft (North)
4	8	Clean	0 - 0	3 ft from CT 49 8ft (North)
5	8	Clean	0 - 0	Edge of CT 49 8ft (North)
6	8	Clean	0 - 0	Edge of CT 49 8ft (North)
7	8	Clean	0 - 0	Edge of CT 49 8ft (North)
8	5	Clean	0 - 0	Edge of CT 49 8ft (North)
9	8	Clean	0 - 0	Edge of CT 49 8ft (North)
10	8	Clean	0 - 0	Edge of CT 49 8ft (North)
11	8	Clean	0 - 0	1 ft from CT 49 8ft (North)
12	8	Clean	0 - 0	16 ft from CT 49 8ft (North)
13	8	Clean	0 - 0	22 ft from CT 49 8ft (North)
14	8	Clean	0 - 0	28 ft from CT 49 8ft (North)
15	8	Clean	0 - 0	34 ft from CT 49 8ft (North)
16	8	Clean	0 - 0	40 ft from CT 49 8ft (North)
17	8	Clean	0 - 0	46 ft from CT 49 8ft (North)
18	8	Clean	0 - 0	52 ft from CT 49 8ft (North)
19	8	Clean	8 - 6	58 ft from CT 49 8ft (North)
20	8	Clean	0 - 3	64 ft from CT 49 8ft (North)
21	8	Clean	0 - 4	70 ft from CT 49 8ft (North)
22	8	Clean	3 - 9	76 ft from CT 49 8ft (North)
23	8	Clean	0 - 2	82 ft from CT 49 8ft (North)
24	8	Clean	0 - 0	88 ft from CT 49 8ft (North)
25	8	Clean	0 - 2	78 ft from CT 49 8ft (North)

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: [Signature]

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 7/15/95 TEMP. 65 WEATHER Clear

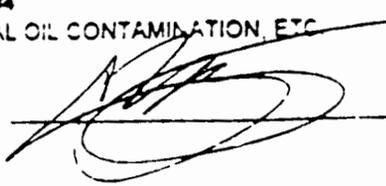
LOCATION Loop E Shunt EQUIP # A22071 TECHNICIAN C. K. Lee 7648

Depth 1 Locat. 07

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF BJL RELATING TO TANK
1	8		< 1 ppm	0-4' 0-6' from PH 54
2	8		< 1 ppm	2-6' 0-10'
3	8		< 1 ppm	2-6' 0-10'
4	8		< 1 ppm	0-6' 0-8' from CT50-CT55
5	8		< 1 ppm	3-6' 0-10'
6	8		< 1 ppm	0-6' 0-12'
7	8		< 1 ppm	0-6' 0-12'
8	8		< 1 ppm	0-6' 10-20'
9	8		< 1 ppm	0-4' 15-25'
10	8		< 1 ppm	0-4' 17-32'
11	8	-	< 1 ppm	0-4' 20-30'
12	8		< 1 ppm	0-4' 27-35'
13	8		< 1 ppm	0-4' 35-40'
14	8		< 1 ppm	0-4' 39-45'
15	8		< 1 ppm	0-4' 47-57'
16	8		< 1 ppm	0-4' 55-60'
17	8		< 1 ppm	0-4' 60-72'
18	8		< 1 ppm	0-4' 70-80'
19	8		< 1 ppm	0-4' 75-82'
20	8		< 1 ppm	0-4' 85-97'
21	8		< 1 ppm	0-4' 93-103'
22	8		< 1 ppm	0-4' 100-110'
23	8		< 1 ppm	0-4' 105-115'
24	8		< 1 ppm	0-4' 110-120'
25	8		< 1 ppm	0-4' 115-125'

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL COOR. VISUAL OIL CONTAMINATION, ETC

SIGNATURE _____



FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 7-25-95 TEMP 90

WEATHER HOT - Sunny

LOCATION: CT-58-CT EQUIP #: 62231

TECHNITION L. Pille

CT Pump House

6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0-0	5' - CT-58
2	8	Clean	0-0	5' - CT-58
3	8	Clean	0-0	5' - CT-58
4	8	Clean	0-0	5' - CT-58

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCK PILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE:

Chris Pille
6222

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 7-26-95

TEMP 80, 90

WEATHER Hot-Humid-Sunny

LOCATION CT-58

EQUIP # A22071

TECHNITION Chris Riley
6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
26	8	Clean	0	3' depth 65' away CT-Beach
27	8	Clean	0	8' depth 70' away CT-58
28	8	Clean	0	5' depth 70' away CT-Beach
29	8	Clean	0	3' depth 70' away CT-Beach
30	8	Clean	0	8' depth 75' away CT-58
31	8	Clean	0	8' depth 80' away CT-58
32	8	Clean	0	5' depth 80' away CT-Beach
33	8	Clean	0	8' depth 80' away CT-58
34	8	Clean	0	8' depth 80' away CT-58
35	8	Clean	0	8' depth 80' away CT-58
36	8	Clean	0	8' depth 85' away CT-58
37	8	Clean	0	5' depth 85' away CT-Beach
38	8	Clean	0	5' depth 85' away CT-Beach
39	8	Clean	0	5' depth 90' away CT-58
40	8	Clean	0	8' depth 90' away CT-58
41	8	Clean	0	5' depth 90' away CT-Beach
42	8	Clean	0	5' depth 90' away CT-58
43	8	Clean	0	8' depth 95' away CT-58
44	8	Clean	0	8' depth 95' away CT-58
45	8	Clean	0	5' depth 95' away CT-Beach

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE

Chris Riley
6222

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 7-26-95

TEMP 80

WEATHER Heavy Humid Wet

LOCATION: CT-58

EQUIP # A22071

TECHNITION Chris Riley

H6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0	5' depth - 10' away CT-58
2	8	Clean	0	5' depth - 15' away CT-58
3	8	Clean	0	5' depth - 20' away CT-58
4	8	Clean	0	5' depth - 20' away CT-58
5	8	Clean	0	3' depth - 25' away CT-58 - Bench
6	8	Clean	0	3' depth - 15' away CT-58 - Bench
7	8	Clean	0	5' depth - 20' away CT-58
8	8	Clean	0	5' depth - 20' away CT-58
9	8	Clean	0	5' depth - 25' away CT-58
10	8	Clean	0	5' depth - 25' away CT-58
11	8	Clean	0	3' depth - 30' away CT-58 - Bench
12	8	Clean	0	8' depth - 30' away CT-58
13	8	Clean	0	5' depth - 35' away CT-58 - Bench
14	8	Clean	0	5' depth - 40' away CT-58 - Bench
15	8	Clean	0	8' depth - 40' away CT-58
16	8	Clean	0	8' depth - 45' away CT-58
17	8	Clean	0	5' depth - 45' away CT-58 - Bench
18	8	Clean	0	8' depth - 50' away CT-58
19	8	Clean	0	8' depth - 50' away CT-58
20	8	Clean	0	8' depth - 55' away CT-58
21	8	Clean	0	5' depth - 55' away CT-58 - Bench
22	8	Clean	0	3' depth - 55' away CT-58 - Bench
23	8	Clean	0	8' depth - 60' away CT-58
24	8	Clean	0	5' depth - 60' away CT-58 - Bench
25	8	Clean	0	8' depth - 60' away CT-58

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: Chris Riley

H6222

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 7-27-95 TEMP 80

WEATHER Humid - Heavy - Hot

LOCATION: CT-59 - CT-55 EQUIP # A22071

TECHNICIAN Chris Ditley

6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0	8' depth - 150' Away CT-55
2	8	Clean	0	8' depth - 155' Away CT-55
3	8	Clean	0	8' depth - 160' Away CT-55
4	8	Clean	0	8' depth - 165' Away CT-55
5	8	Clean	0	8' depth - next to CT-55
6	8	Clean	0	8' depth - next to CT-55
7	8	Clean	0	8' depth - next to CT-55
8	8	Clean	0	8' depth - 5' Away CT-55
9	8	Clean	0	8' depth - 5' Away CT-55
10	8	Clean	0	8' depth - 10' Away CT-55
11	8	Clean	0	8' depth - 10' Away CT-55
12	8	Clean	0	8' depth - 15' Away CT-55
13	8	Clean	0	8' depth - 15' Away CT-55
14	8	Clean	0	8' depth - 30' Away CT-55
15	8	Clean	0	8' depth 20' Away CT-55
16	8	Clean	0	8' depth 25' Away CT-55
17	8	Clean	0	8' depth 25' Away CT-55
18	8	Clean	0	8' depth 30' Away CT-55
19	8	Clean	0	8' depth 35' Away CT-55
20	8	Clean	0	8' depth 35' Away CT-55
21	8	Clean	0	8' depth 35' Away CT-55
22	8	Clean	0	8' depth 40' Away CT-55

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCK PILE #4
 FIELD CHARACTERIZATION = OIL ODOR VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Chris Ditley

6222

FID FIELD SCREENING FOR TANK 52 AND 56 SITE EXCAVATIONS

DATE 7-27-75

TEMP 90

WEATHER 1st round sun

LOCATION CT-54

EQUIP # A22071

TECHNITION Chris Willey

6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0	40' Away CT-54 - 8' depth
2	8	Clean	0	40' Away CT-54 - 8' depth
3	8	Clean	0	35' Away CT-54 - 8' depth
4	8	Clean	0	35' Away CT-54 - 8' depth
5	8	Clean	0	35' Away CT-54 - 8' depth
6	8	Clean	0	30' Away CT-54 - 8' depth
7	8	Clean	0	25' Away CT-54 - 8' depth
8	8	Clean	0	20' Away CT-54 - 8' depth
9	8	Clean	0	15' Away CT-54 - 8' depth
10	8	Clean	0	10' Away CT-54 - 8' depth
11	8	Clean	0	20' Away CT-54 - 8' depth
12	8	Clean	0	15' Away CT-54 - 8' depth
13	8	Clean	0	20' Away CT-54 - 8' depth
14	8	Clean	0	15' Away CT-54 - 8' depth
15	8	Clean	0	10' Away CT-54 - 8' depth
16	8	Clean	0	15' Away CT-54 - 8' depth
17	8	Clean	0	5' Away CT-54 - 8' depth
18	8	Clean	0	Next to CT-54 - 8' depth
19	8	Clean	0	Next to CT-54 - 8' depth
20	8	Clean	0	Next to CT-54 - 8' depth
21	8	Clean	0	Next to CT-54 - 8' depth
22	8	Clean	0	Next to CT-54 - 8' depth
23	8	Clean	0	Next to CT-54 - 8' depth
24	8	Clean	0	Next to CT-54 - 8' depth

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE

Chris Willey

6222

FID FIELD SCREENING FOR LOOP/SHUNT SITE EXCAVATION

DATE: 7/31/95
~~8/1/95~~

TEMP: 90°

WEATHER: Hot Clear

LOCATION: CTSO A 14 EQUIP #: A22138

TECHNICIAN: C. Kucely 7677

WELL NUMBER	TOTAL DEPTH (FEET)	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATIVE TO BING LINE	Depth
1	8	Clean	< 1 ppm	0-8' From A-17-CTSO	
2	8	Clean	< 1 ppm	2-8'	0-7'
3	8	Clean	< 1 ppm	4-11'	0-7'
4	8	Clean	< 1 ppm	6-14'	0-7'
5	8	Clean	< 1 ppm	8-16'	0-7'
6	8	Clean	< 1 ppm	10-18'	0-6'
7	8	Clean	< 1 ppm	14-20'	0-6'
8	8	Clean	< 1 ppm	16-22'	0-6'
9	8	Clean	< 1 ppm	18-24'	0-6'
10	8	Clean	< 1 ppm	20-27'	0-6'
11	8	Clean	< 1 ppm	22-30'	0-6'
12	8	Clean	< 1 ppm	25-32'	0-5'
13	8	Clean	< 1 ppm	27-34'	0-5'
14	8	Clean	< 1 ppm	30-39'	0-5'
15	8	Clean	< 1 ppm	33-42'	0-5'
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FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
 FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: 

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 8-1-95

TEMP 80, 90

WEATHER Hot Sunny

LOCATION A-19 ~~to 19~~ EQUIP # A22071

TECHNITION Chris Dille

6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0	8' depth - 60' away A-19
2	8	Clean	0	8' depth - 60' away A-19
3	8	Clean	0	8' depth - 60' away A-19
4	8	Clean	0	8' depth 65' away A-19
5	8	Clean	0	8' depth 70' away A-19
6	8	Clean	0	8' depth 75' away A-19
7	8	Clean	0	8' depth 80' away A-19
8	8	Clean	0	8' depth 80' away A-19
9	8	Clean	0	8' depth 80' away A-19
10	8	Clean	0	8' depth 85' away A-19
11	8	Clean	0	8' depth 85' away A-19
12	8	Clean	0	8' depth 90' away A-19
13	8	Clean	0	8' depth 90' away A-19
14	8	Clean	0	8' depth 95' away A-19
15	8	Clean	0	8' depth 90' away A-19
16	8	Clean	0	8' depth 90' away A-19
17	8	Clean	0	8' depth 90' away A-19
18	8	Clean	0	8' depth 95' away A-19
19	8	Clean	0	8' depth 100' away A-19
20	8	Clean	0	8' depth 100' away A-19
21	8	Clean	0	8' depth 100' away A-19
22	8	Clean	0	8' depth 105' away A-19
23	8	Clean	0	8' depth 110' away A-19
24	8	Clean	0	8' depth 115' away A-19
25	8	Clean	0	8' depth 110' away A-19

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = Oil, Odor, Visual Oil Contamination, ETC

SIGNATURE: Chris Dille

6222

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 8-1-95

TEMP 80

WEATHER Hot - Sunny - Slight Wind

LOCATION CT-50 EQUIP # A22071

TECHNITION Chris Dilley

- Pump House 50

6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0	3' depth - next to CT-50
2	8	Clean	5	5' depth - next to CT-50
3	8	Clean	0	6' depth - next to CT-50
4	8	Clean	0	6' depth - next to CT-50
5	8	Clean	0	3' depth - next to CT-50 - Bench
6	8	Clean	0	3' depth - next to CT-50 Bench
7	8	Clean	0	6' depth - 10' Away CT-50
8	8	Clean	0	6' depth - 10' Away CT-50
9	8	Clean	0	3' depth - 10' Away CT-50 Bench
10	8	Clean	0	6' depth - 15' Away CT-50
11	8	Clean	0	3' depth - 20' Away CT-50
12	8	Clean	0	6' depth - 25' Away CT-50
13	8	Clean	0	6' depth - 20' Away CT-50
14	8	Clean	0	6' depth - 25' Away CT-50
15	8	Clean	0	6' depth - 30' Away CT-50
16	8	Clean	0	6' depth - 20' Away CT-50
17	8	Clean	0	6' depth - 35' Away CT-50
18	8	Clean	0	6' depth - 40' Away CT-50
19	8	Clean	0	6' depth - 35' Away CT-50
20	8	Clean	0	6' depth - 30' 45' Away - Next to A-HS
21	8	Clean	0	3' depth - 40' Away - CT-50
22	8	Clean	0	8' depth - 40' Away CT-50 - next to PH-5
23	8	Clean	0	10' depth - 45' Away CT-50 Next to PH-5
24	8	Clean	0	10' depth - 45' Away CT-50 Next to PH-5
25	8	Clean	0	8' depth - 45' Away CT-50 - Next to PH-5

PH = Pump House

- FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
- FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
- FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
- FID RANGE LESS THAN 10 PPM = STOCK PILE #4
- FIELD CHARACTERIZATION = OIL ODOR VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: Chris Dilley

6222

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 8-2-95

TEMP 70 1 90

WEATHER Hot Sunny

LOCATION: CT-54(LBSW) EQUIP # A22071

TECHNICIAN: Chris Pitley

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF BOIL RELATING TO TANK
1	8	Clean	0	CT-54 5' away - 10' to ^{side} 6' deep
2	8	Clean	0	CT-54-5' away - 15' to side 6' deep
3	8	Clean	5	CT-54-5' away - 20' to side 5' deep
4	8	Clean	3	CT-54-5' away - 20' to side - 5' deep
5	8	Clean	0	CT-54-5' away - 20' to side - 5' deep
6	8	Clean	0	CT-54-5' away - 25' to side - 5' deep
7	8	Clean	0	CT-54-5' away - 25' to side - 5' deep
8	8	Clean	0	CT-54-5' away - 30' to side - 5' deep
9	8	Clean	0	CT-54-5' away 35' to side - 5' deep
10	8	Clean	0	CT-54-5' away 40' to side - 5' deep
11	8	Clean	0	CT-54-5' away 45' to side 5' deep
12	8	Clean	0	CT-54-5' away 50' to side 5' deep
13	8	Clean	0	CT-54-5' away 55' to side 5' deep
14	8	Clean	0	CT-54-5' away 60' to side 6' deep
15	8	Clean	0	CT-54-5' away 65' to side 6' deep
16	8	Clean	0	CT-54-5' away 70' to side 6' deep
17	8	Clean	0	CT-54-5' away 75' to side 6' deep
18	8	Clean	0	CT-54-5' away 80' to side 6' deep

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Chris Pitley

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 8-2-95

TEMP 70, 90

WEATHER Hot - Sunny

LOCATION: CT-50

EQUIP #: A22071

TECHNITION Chris Dilley

Area House 50 (PH-50)

6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0	10' depth - 20' away PH-50
2	8	Clean	0	10' depth - 10' away PH-50
3	8	Clean	0	10' depth - Next to PH-50

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Chris Dilley

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 8-2-95

TEMP 70 190

WEATHER 1st Sunny

LOCATION A-19 to

EQUIP # A22071

TECHNITION Chris Dille

CT-50

6222

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0	115' Away 8' in depth - A-19
2	8	Clean	0	115' Away A-19 - 8' depth
3	8	Clean	0	120' Away A-19 - 8' depth
4	8	Clean	0	170' Away A-19 - 8' depth
5	8	Clean	0	120' Away A-19 - 8' depth
6	8	Clean	0	110' Away A-19 - 8' depth
7	8	Clean	0	115' Away A-19 - 8' depth
8	8	Clean	0	120' Away A-19 - 8' depth
9	8	Clean	0	120' Away A-19 - 8' depth
10	8	Clean	0	125' Away A-19 - 8' depth
11	8	Clean	0	125' Away A-19 - 8' depth
12	8	Clean	0	120' Away A-19 - 8' depth
13	8	Clean	0	120' Away A-19 8' depth
14	8	Clean	0	115' Away A-19 - 3' depth - Beach
15	8	Clean	0	120' Away A-19 - 8' depth
16	8	Clean	0	125' Away A-19 - 8' depth
17	8	Clean	0	125' Away A-19 8' depth

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE Chris Dille

6222

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE 8-2-76

TEMP 7-135

WEATHER Partly Cloudy / Sunny

LOCATION CT 55 Street

EQUIP # A22071

TECHNITION Damon Beamin

LOAD NUMBER	TOTAL CUBE YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATIVE TO TANK
1	8	Clean	0-1	3 Ft down across CT55 20 FT
1	8	Clean	0-1	3 Ft down across CT55 15 FT
1	8	Clean	0-2	3 Ft down across CT55 10 FT
1	8	Clean	1-0	6 Ft down across CT55 20 FT
1	8	Clean	0-0	6 Ft down across CT55
1	8	Clean	0-1	6 Ft down across CT55
1	8	Clean	0-1	6 Ft down across CT55

TANK CT 53

Backhaul 1.6

1	8	Clean	1-1	3 Ft down across CT 53 6 FT
1	8	Clean	1-1	3 Ft down across CT53 6 FT
1	8	Clean	1-1	3 Ft down across CT53 6 FT
1	8	Clean	1-2	3 Ft down across CT53 8 FT
1	8	CLEAN	2-2	3 Ft down across CT53 8 FT
1	8	CLEAN	0-1	6 Ft down across CT53 15 FT
1	8	Clean	2-2	6 Ft down across CT53 20 FT
1	8	Clean	2-2	6 Ft down across CT53 25 FT
1	8	Clean	0-1	6 Ft down across CT 53 25 FT

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Damon Beamin

FID FIELD SCREENING FOR LOOP/SHUNT SITE EXCAVATION

DATE: 12-19-05

TEMP: 80, 95

WEATHER: Bunny - Humid

LOCATION: CT59 to pump check # A21540
CT59 to CT 55

TECHNITION: Kimberly Martin #229

1	8	topsoil - rock	0-1	8' Depth 38' from CT59
2	8	topsoil, rock	0-1	8' Depth 40' from CT59
3	8	topsoil, rock	0-1	8' Depth 4' length
4	8	topsoil, rock	0-1	8' Depth 8' length
5	8	topsoil, rock	0-1	8' Depth 12' length
6	8	topsoil, rock	0-1	8' Depth 15' length
7	8	topsoil, rock	0-1	8' Depth 18' length
8	8	topsoil, rock	0-1	8' Depth 21' length
9	8	topsoil, rock	0-1	8' Depth 24' length
10	8	topsoil, rock	0-1	8' Depth 27' length
11	8	topsoil, rock	0-1	8' Depth 30' length
12	8	topsoil, rock	0-1	8' Depth 32' length
13	8	topsoil, rock	0-1	8' Depth 35' length
14	8	topsoil, rock	0-1.5	8' Depth 39' length
15	8	topsoil, rock	0-1	8' Depth 42' length
16	8	topsoil, rock	0-1	8' Depth 45' length
17	8	topsoil, rock	0-1	8' Depth 50' length
18	8	topsoil, rock	0-1	8' Depth 55' length
19	8	topsoil, rock	0-1	8' Depth 60' length
20	8	topsoil, rock	0-1	8' Depth 64' length
21	8	topsoil, rock	0-1	8' Depth 68' length
22	8	topsoil, rock	0-1	8' Depth 72' length
23	8	topsoil, rock	0-1	8' Depth 76' length
24	8	topsoil, rock	0-1	8' Depth 80' length
25	8	topsoil, rock	0-1	8' Depth 85' length

FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: Kimberly J Martin

FID FIELD SCREENING FOR LOOP/SHUNT SITE EXCAVATION

DATE: 6-20-95

TEMP: 80, 95

WEATHER: Humid, Sunny

LOCATION: CT59-55

EQUIP #: A21540

TECHNITION: Kimberly Moore 6225

CT58-57

1	8	topsoil, Rock	0-1	8' Depth 127' length
2	8	topsoil, Rock	0-1	8' Depth 130' length
3	8	topsoil, Rock	0-1	8' Depth 135' length
4	8	topsoil, Rock	0-1	8' Depth 138' length
5	8	topsoil, Rock	0-1	8' Depth 140' length
6	8	topsoil, Rock	0-1	8' Depth 145' length
7	8	topsoil, Rock	0-1	8' Depth 147' length
8	8	topsoil, Rock	0-1	8' Depth 150' length
9	8	topsoil, Rock	0-1	8' Depth 153' length
10	8	topsoil, rock	0-1	8' Depth 158' length
11	8	topsoil, rock	0-1	8' Depth 162' length
12	8	topsoil, rock	0-1	8' Depth 166' length
13	8	topsoil, rock	0-1	8' Depth 170' length
14	8	topsoil, Rock	0-1	8' Depth 175' length
15	8	topsoil, Rock	0-1	8' Depth 180' length
16	8	topsoil, rock	0-1	8' Depth 185' length
17	8	topsoil, rock	0-1	8' Depth 190' length
18	8	topsoil, rock	0-1	8' Depth 195' length
19	8	topsoil, Rock	0-1	8' Depth 200' length
20	8	topsoil, Rock	0-1	8' Depth 205' length
21	8	topsoil, Rock	0-1	8' Depth 5' length from CT58
22	8	topsoil, Rock	0-1	8' Depth 7' length

FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
 FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION ETC.

SIGNATURE: 

FID FIELD SCREENING FOR LOOP/HUNT SITE EXCAVATION

DATE: 6-26-95

TEMP: 65.1

WEATHER: Cloudy

LOCATION: CT58 - CT57

EQUIP #: A21540

TECHNICIAN: Kimberly M. [unclear]

1	8	Topsoil Rock	0-1	8' Depth 35' length
2	8	Topsoil Rock	0-1	8' Depth 35' length
3	8	Topsoil Rock	0-1	8' Depth 35' length
4	8	Topsoil Rock	0-1	8' Depth 35' length
5	8	Topsoil Rock	0-1	8' Depth 35' length
6	8	Topsoil Rock	0-1	8' Depth 35' length
7	8	Topsoil Rock	0-1	8' Depth 35' length
8	8	Topsoil Rock	0-1	8' Depth 35' length
9	8	Topsoil Rock	0-1	8' Depth 35' length
10	8	Topsoil Rock	0-1	8' Depth 35' length
11	8	Topsoil Rock	0-1	8' Depth 35' length
12	8	Topsoil Rock	0-1	8' Depth 35' length
13	8	Topsoil Rock	0-1	8' Depth 35' length
14	8	Topsoil Rock	0-1	8' Depth 35' length
15	8	Topsoil Rock	0-1	8' Depth 35' length
16	8	Topsoil Rock	0-1	8' Depth 35' length
17	8	Topsoil Rock	0-1	8' Depth 35' length
18	8	Topsoil Rock	0-1	8' Depth 35' length
19	8	Topsoil Rock	0-1	8' Depth 35' length
20	8	Topsoil Rock	0-1	8' Depth 35' length

FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
 FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: Kimberly M. [unclear]

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 6/28/95

TEMP: 60, 70

WEATHER: Clear

LOCATION: Loop & Shunt EQUIP #: A22138

TECHNICIAN: B. Boynton 6097

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0-0	CT58, 8ft (60 ft from CT58)
2	8	Clean	0-0	CT58, 8ft (63 ft from CT58)
3	8	Clean	0-0	CT58, 8ft (66 ft from CT58)
4	8	Clean	0-0	CT58, 8ft (69 ft from CT58)
5	8	Clean	0-0	CT58, 8ft (72 ft from CT58)
6	8	Clean	0-0	CT58, 8ft (75 ft from CT58)
7	8	Clean	0-0	CT58, 8ft (78 ft from CT58)
8	8	Clean	0-0	CT58, 8ft (81 ft from CT58)
9	8	Clean	0-0	CT58, 8ft (84 ft from CT58)
10	8	Clean	0-0	CT58, 8ft (87 ft from CT58)
11	8	Clean	0-0	CT58, 8ft (90 ft from CT58)
12	8	Clean	0-0	CT58, 8ft (93 ft from CT58)
13	8	Clean	0-0	CT58, 8ft (96 ft from CT58)
14	8	Clean	0-0	CT58, 8ft (99 ft from CT58)
15	8	Clean	0-0	CT58, 8ft (102 ft from CT58)
16	8	Clean	0-0	CT58, 8ft (105 ft from CT58)
17	8	Clean	0-0	CT58, 8ft (108 ft from CT58)
18	8	Clean	0-0	CT58, 8ft (111 ft from CT58)
19	8	Clean	0-0	CT58, 8ft (114 ft from CT58)
20	8	Clean	0-0	CT58, 8ft (117 ft from CT58)
21	8	Clean	0-0	CT58, 8ft (120 ft from CT58)
22	8	Clean	0-0	CT58, 8ft (123 ft from CT58)
23	8	Clean	0-0	CT58, 8ft (126 ft from CT58)
24	8	Clean	0-0	CT58, 8ft (129 ft from CT58)
25	8	Clean	0-0	CT58, 8ft (132 ft from CT58)

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Bethany J. Simpson

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 6/29/95

TEMP 60, 75

WEATHER Clear

LOCATION: Loop & Shunt

EQUIP #: A22138

TECHNICIAN: B. Roynton 6007

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO TANK
1	8	Clean	0 - 0	CT58, 8ft (147 ft from CT58)
2	8	Clean	0 - 0	CT58, 8ft (15.3 ft from CT58)
3	8	Clean	0 - 0	CT58, 8ft (15.9 ft from CT58)
4	8	Clean	0 - 0	CT58, 8ft (16.4 ft from CT58)
5	8	Clean	0 - 0	CT58, 8ft (17.0 ft from CT58)
6	8	Clean	0 - 0	CT58, 8ft (17.6 ft from CT58)
7	8	Clean	0 - 0	CT58, 8ft (18.2 ft from CT58)
8	8	Clean	0 - 0	CT58, 8ft (18.8 ft from CT58)
9	8	Clean	0 - 0	CT58, 8ft (19.4 ft from CT58)
10	8	Clean	0 - 0	CT58, 8ft (20.0 ft from CT58)
11	8	Clean	0 - 0	CT58, 8ft (20.6 ft from CT58)
12	8	Clean	0 - 0	CT58, 8ft (21.2 ft from CT58)
13	8	Clean	0 - 0	CT58, 8ft (21.8 ft from CT58)
14	8	Clean	0 - 0	CT58, 8ft (22.4 ft from CT58)
15	8	Clean	0 - 0	CT58, 8ft (23.0 ft from CT58)
16	8	Clean	0 - 0	CT58, 8ft (23.6 ft from CT58)
17	8	Clean	0 - 0	CT58, 8ft (24.2 ft from CT58)
18	8	Clean	0 - 0	CT58, 8ft (24.8 ft from CT58)
19	8	Clean	0 - 0	CT57, 8ft (East side of CT57)
20	8	Clean	0 - 0	CT57, 8ft (East side of CT57)
21	8	Clean	0 - 0	CT57, 8ft (East side of CT57)
22	8	Clean	0 - 0	CT57, 8ft (East side of CT57)
23	8	Clean	0 - 0	CT57, 8ft (East side of CT57)

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCK PILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Bethany J. Roynton

FID FIELD SCREENING FOR LOOP/SHUNT SITE EXCAVATION

DATE: 8/17/95

TEMP: 86°

WEATHER: clear sunny

LOCATION: A19-50
B5W line

EQUIP #: _____

TECHNICIAN: D. Matheson

LOAD NUMBER	TOTAL CUBIC YARDS	FIELD CHARACTERIZATION	FID RANGE IN PPM	DEPTH OF EXCAVATION AND LOCATION OF SOIL RELATING TO PIPING LINE
	8 yds	clean	3-8 ppm	5-6 ft 20' off 50' shunt
2	8 yds	decontaminated	18-20 ppm	5-6 ft 25' off 50' shunt
3	8 yds	decontaminated	15-18 ppm	5-6 ft " 3' off
4	8 yds	clean	2-5 ppm	
5	8 yds	clean	2-5 ppm	
6	8 yds	clean	3-6 ppm	
7	8 yds	clean	2-5 ppm	
8	8 yds	clean	4-6 ppm	
9	8 yds	clean	3-6 ppm	
10	8 yds	clean	3-5 ppm	
11	8 yds	clean	4-6 ppm	
12	8 yds	clean	2-4 ppm	
13	8 yds	clean	3-5 ppm	
14	8 yds	clean	3-5 ppm	

FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
 FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: 

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 6-5-95

TEMP: 80 1:40 pm

WEATHER: Warm Sunny

LOCATION: CT-50

EQUIP #: A22138

TECHNITION: Chris Dilley

LOAD #	TOTAL	FIELD CHARACTERIZATION	FID RANGE	DEPTH OF EXCAVATION AND LOCATION
1	8	top soil	0	0'-2' depth
2	8	top soil	0	0'-2' depth

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: Chris Dilley

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 1/15

TEMP: 90°

WEATHER: SUNNY

LOCATION: Leptishant Ex

EQUIP #: A22071

TECHNITION: M. Jambinski #7070

1	8 yds	Normal	0-1	Running at low Rd level GTS
2	8 yds	Normal	0-1	4.5 ft
3	8 yds	Abnormal	0-1	6.0 ft
4	8 yds	Normal	0-1	6.5 ft
5	8 yds	Normal	0-1	6.0 ft
6	8 yds	Normal	0-1	6.0 ft
7	8 yds	Normal	0-1	6.0 ft
8	8 yds	normal	0-1	6 ft
9	8 yds	normal	0-1	6 ft
10	8 yds	normal	0-1	6 ft
11	8 yds	normal	0-1	6 ft

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCKPILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: M. Jambinski #7070

FID FIELD SCREENING FOR LOOP/SHUNT SITE EXCAVATION

DATE: 6-12-95 TEMP: 65, 70
 LOCATION: CT-53-59 EQUIP #: A22138

WEATHER: Muggy - Overcast
 TECHNICIAN: Chris Dille 6222
Kim Martin 6229

1	8	topsoil - rocks	0-1	0'-8' depth - 30' from CT-53
2	9	topsoil - rocks	0-1	beginning of excavation
3	8	topsoil - rocks	0-1	0'-8' depth - 35' feet in length
4	8	topsoil - rocks	0-1	0'-8' depth - 40' feet in length
5	8	topsoil - rocks	0-1	0'-8' depth - 45' feet in length
6	8	topsoil - rocks	0-1	0'-8' depth - 50' feet in length
7	8	topsoil - rocks	0-1	0'-8' depth - 55' feet in length
8	8	topsoil - rocks	0-1	0'-8' depth - 60' feet in length
9	8	topsoil - rocks	0-1	0'-8' depth - 65' feet in length
10	8	topsoil - rocks	0-1	0'-8' depth - 67' feet in length
11	8	topsoil - rocks	0-1	0'-8' depth - 70' feet in length
12	9	topsoil - rock	0-1	0'-8' depth - 75' feet in length
13	8	topsoil - rock	0-1	0'-8' depth - 80' feet in length
14	8	topsoil - rock	0-1	0'-8' depth - 85' feet in length
15	8	topsoil - rock	0-1	0'-8' depth - 90' feet in length
16	8	topsoil - rock	0-1	0'-8' depth - 95' feet in length
17	8	topsoil - rock	0-1	0'-8' depth - 100' feet in length
18	8	topsoil - rock	0-1	0'-8' depth - 105' feet in length
19	8	topsoil - rock	0-1	0'-8' depth - 110' feet in length
20	8	topsoil - rock	0-1	0'-8' depth - 115' feet in length
21	8	topsoil - rock	0-1	0'-8' depth - 118' feet in length
22	8	topsoil - rock	0-1	0'-8' depth - 120' feet in length
23	8	topsoil - rock	0-1	0'-8' depth - 122' feet in length
24	8	topsoil - rock	0-1	0'-8' depth - 123' feet in length
25	8	topsoil - rock	0-1	0'-8' depth - 125' feet in length

FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
 FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

X On Load number 5, the FID was replaced with a PID.

PID # 301246

SIGNATURE: Chris Dille 6222

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 10-12-95 TEMP: 105.1

WEATHER: Rainy/overcast

LOCATION: Loop 28 Street EQUIP #: 301246

TECHNICIAN: Kim Martin
6339

26	8	topsoil-rock	0-1	8' Depth - 210' length
27	8	topsoil-rock	0-1	8' Depth - 213' length
28	8	topsoil-rock	0-1	8' Depth - 216' length
29	8	topsoil-rock	0-1	8' Depth - 220' length
30	8	topsoil-rock	0-1	8' Depth - 224' length
31	8	topsoil-rock	0-1	8' Depth - 228' length
32	8	topsoil-rock	0-1	8' Depth - 232' length
33	8	topsoil-rock	0-1	8' Depth - 236' length
34	8	topsoil-rock	0-1	8' Depth - 240' length
35	8	topsoil-rock	0-1	8' Depth - 243' length
36	8	topsoil-rock	0-1	8' Depth - 245' length
37	8	topsoil-rock	0-1	8' Depth - 247' length
38	8	topsoil-rock	0-1	8' Depth - 250' length
39	8	topsoil-rock	0-1	8' Depth - 254' length
40	8	topsoil-rock	0-1	8' Depth - 258' length
41	8	topsoil-rock	0-1	8' Depth - 262' length
42	8	topsoil-rock	0-1	8' Depth - 265' length
43	8	topsoil-rock	0-1	8' Depth - 268' length

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCK PILE #4
 FIELD CHARACTERIZATION = OIL ODOR VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Kimberly S. Martin

FID FIELD SCREENING FOR TANK 53 AND 56 SITE EXCAVATIONS

DATE: 10-13-95

TEMP: 65.1

WEATHER: Overcast - Rain

LOCATION: Lopp + Shunt EQUIP #: 301246

TECHNITION: Kim Martin 6229

1	8	top soil + rocks	0-1	Depth 8' - 135' length
2	8	top soil + rocks	0-1	Depth 8' - 137' length
3	8	top soil + rocks	0-1	Depth 8' - 140' length
4	8	top soil + rocks	0-1	8' Depth - 143' length
5	8	top soil - rocks	0-1	8' Depth - 146' length
6	8	top soil - rocks	0-1	8' Depth - 149' length
7	8	top soil - rock	0-1	8' Depth - 152' length
8	8	top soil - rock	0-1	8' Depth - 155' length
9	8	top soil - rock	0-1	8' Depth - 159' length
10	8	top soil - rock	0-1	8' Depth - 163' length
11	8	top soil - rock	0-1	8' Depth - 166' length
12	8	top soil - rock	0-1	8' Depth - 168' length
13	8	top soil rock	0-1	8' Depth - 172' length
14	8	top soil + rock	0-1	8' Depth - 175' length
15	8	top soil - rock	0-1	8' Depth - 178' length
16	8	top soil - rock	0-1	8' Depth - 180' length
17	8	top soil + rock	0-1	8' Depth - 182' length
18	8	top soil + rock	0-1	8' Depth - 185' length
19	8	top soil + rock	0-1	8' Depth - 188' length
20	8	top soil + rock	0-1	8' Depth - 192' length
21	8	top soil + rock	0-1	8' Depth - 195' length
22	8	top soil + rock	0-1	8' Depth - 198' length
23	8	top soil - rock	0-1	8' Depth - 202' length
24	8	top soil - rock	0-1	8' Depth - 205' length
25	8	top soil - rock	0-1	8' Depth - 208' length

FID RANGE GREATER THAN 10 PPM BUT LESS THAN 100 PPM = STOCK PILE #1
 FID RANGE GREATER THAN 100 PPM BUT LESS THAN 1000 PPM = STOCK PILE #2
 FID RANGE GREATER THAN 1000 PPM = STOCK PILE #3
 FID RANGE LESS THAN 10 PPM = STOCK PILE #4
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: Kim Martin

FID FIELD SCREENING FOR LOOP/SHUNT SITE EXCAVATION

DATE: 10-14-95

TEMP: 65.1

WEATHER: Overcast

LOCATION: Loop/Shunt
CT53-59

EQUIP #: OVA 21540

TECHNITION: Kimberly Martin
6229

1	8	topsoil - rock	0-1	8' Depth 270' length
2	8	topsoil - rock	0-1	8' Depth 273' length
3	8	topsoil - rock	0-1	8' Depth 276' length
4	8	topsoil - rock	0-1	8' Depth 279' length
5	8	topsoil - rock	0-1	8' Depth 285' length
6	8	topsoil - rock	0-1	8' Depth 286' length
7	8	topsoil - rock	0-1	8' Depth 290' length
8	8	topsoil - rock	0-1	8' Depth 293' length
9	8	topsoil - rock	0-1	8' Depth 295' length
10	8	topsoil - rock	0-1	8' Depth 299' length
11	8	topsoil - rock	0-1	8' Depth 299 RD 303' length
12	8	topsoil - rock	0-1	8' Depth 307' length
13	8	topsoil - rock	0-1	8' Depth 311' length
14	8	topsoil - rock	0-1	8' Depth 315' length
15	8	topsoil - rock	0-1	8' Depth 319' length
16	8	topsoil - rock	0-1	8' Depth 324' length
17	8	topsoil - rock	0-1	8' Depth 329' length
18	8	topsoil - rock	0-1	8' Depth 334' length
19	8	topsoil - rock	0-1	8' Depth 339' length
20	8	topsoil - rock	0-1	8' Depth 5' from CT59 length
21	8	topsoil - rock	0-1	8' Depth 10' from CT59 length
22	8	topsoil - rock	0-1	8' Depth 15' from CT59 length
23	8	topsoil - rock	0-1	8' Depth 20' from CT59 length

FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
 FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC.

SIGNATURE: _____

Kimberly Martin 6229

FID FIELD SCREENING FOR LOOP/SHUNT SITE EXCAVATION

DATE: 10-15-95

TEMP: 70.1

WEATHER: Sunny

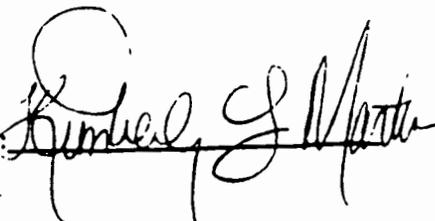
LOCATION: CT53 CT59
Rump Chamber

EQUIP #: 21540

TECHNITION: Kim Martin #10289

1	8	topsoil, rocks	0-1	8' Depth 340' length
2	8	topsoil, rocks	0-1	8' Depth 343' length
3	8	topsoil, rocks	0-1	8' Depth 345' length
4	8	topsoil, rocks	0-1	8' Depth 347' length
5	8	topsoil, rocks	0-1	8' Depth 350' length
6	8	topsoil, rocks	0-1	8' Depth 353' length
7	8	topsoil, rocks	0-1	8' Depth 356' length
8	8	topsoil, rocks	0-1	8' Depth 359' length
9	8	topsoil, rocks	0-1	8' Depth 363' length
10	8	topsoil, rocks	0-1	8' Depth 365' length
11	8	topsoil, rocks	0-1	8' Depth 5' length from CT59
12	8	topsoil, rocks	0-1	8' Depth 8' length from CT59
13	8	topsoil, rock	0-1	8' Depth 11' length from CT59
14	8	topsoil, rock	0-1	8' Depth 13' length from CT59
15	8	topsoil, rock	0-1	8' Depth 18' length
16	8	topsoil, rock	0-1	8' Depth 21' length
17	8	topsoil, rock	0-1	8' Depth 24' length
18	8	topsoil, rock	0-1	8' Depth 26' length
19	8	topsoil, rock	0-1	8' Depth 30' length
20	8	topsoil, rock	0-1	8' Depth 33' length
21	8	topsoil, rock	0-1	8' Depth 37' length

FID RANGE LESS THAN 10 PPM = UNIMPACTED SOIL STAGED NEXT TO EXCAVATION
 FID RANGE GREATER THAN 10 PPM = STAGE IN DEDICATED TANK FARM 5 STOCKPILE
 FIELD CHARACTERIZATION = OIL ODOR, VISUAL OIL CONTAMINATION, ETC

SIGNATURE: 

APPENDIX E
LABORATORY ANALYSES DATA SHEETS

AMERICAN ENVIRONMENTAL NETWORK, INC
ORGANIC ANALYSIS DATA SHEET
FORM I

Client OHM CORPORATION
Project TANK FARM #5 PROJECT #16231
Contract # 9507159
Date 07/24/95
Matrix SOIL
Units mg/Kg

Analysis TPH by GC
Method 8015 M
ND = not detected at given detection limit
D - Diesel range hydrocarbons
L - Hydrocarbons lighter than diesel
H - Hydrocarbons heavier than diesel

Sample ID	AENI ID	Date Analyzed	(%) Solid	Qualifier	Concentration	Detection Limit
BLANK	BLK 0720LA	7/23/95	100	U	ND	17
LS-01	L9507159-001	7/23/95	83.6	U	ND	19
LS-02	L9507159-002	7/23/95	91.4	D	22	18
LS-03	L9507159-003	7/24/95	87.6	U	ND	19
LS-04	L9507159-004	7/24/95	90.2	U	ND	18
LS-05	L9507159-005	7/24/95	90.6	U	ND	18
LS-06	L9507159-006	7/24/95	87.5	U	ND	19
LS-07	L9507159-007	7/24/95	88.5	U	ND	19
LS-08	L9507159-008	7/24/95	88.8	U	ND	18
LS-09	L9507159-009	7/24/95	85	U	ND	19
LS-10	L9507159-010	7/24/95	86.8	U	ND	19
LS-11	L9507159-011	7/24/95	91.5	U	ND	18
LS-12	L9507159-012	7/24/95	90.2	U	ND	18
LS-12 DUP	L9507159-013	7/24/95	89.3	U	ND	18

AMERICAN ENVIRONMENTAL NETWORK, INC.

AMERICAN ENVIRONMENTAL NETWORK INC
9151 Rumsey Road, Columbia, MD 21045
(410) 730 8525

9507159

CHAIN OF CUSTODY RECORD

CT		ANALYSIS REQUIRED		CONTAINERS NO.	TPH	REMARKS OR SAMPLE LOCATION	PRESERVATION	
K FARM #5 Project #16231 LEPS (Signature) <i>James L. Royon</i>		/ /					I	C
SAMPLE NUMBER	DATE	TIME	MATRIX					
-01	7/1/95		Soil	1	X	-001		60' FROM CT 53
-02	7/1/95		Soil	1	X	002		30' FROM LS-01
-03	7/1/95		Soil	1	X	003		30' FROM LS-02
-04	7/1/95		Soil	1	X	004		30' FROM LS-03
-05	7/1/95		Soil	1	X	005		30' FROM LS-04
-06	7/1/95		Soil	1	X	006		30' FROM LS-05
-07	7/1/95		Soil	1	X	007		30' FROM LS-06
-08	7/1/95		Soil	1	X	008		30' FROM LS-07
-09	7/1/95		Soil	1	X	009		30' FROM LS-08
S-10	7/1/95		Soil	1	X	010		30' FROM LS-09
S-11	7/1/95		Soil	1	X	011		30' FROM LS-10
S-12	7/1/95		Soil	1	X	012		30' FROM LS-11
S-12 Dup	7/1/95		Soil	1	X	013		30' FROM LS-12

Requested by (Signature) ①	Date / Time	Received by (Signature)	Relinquished by (Signature) ④	Date / Time	Shipped via: Fed Ex
Requested by (Signature) ②	Date / Time	Received by (Signature)	Received for Laboratory by (Signature) <i>[Signature]</i>	Date / Time 7/19/95 1300	Shipping Ticket No
Requested by (Signature) ③	Date / Time	Received by (Signature)	Remarks: Per OTHM with check 15 8015-020 -444 -1/4/95		

07/24/1995 16:36

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PAGE 13

**AMERICAN ENVIRONMENTAL NETWORK, INC
ORGANIC ANALYSIS DATA SHEET
FORM I**

Client OHM CORPORATION
 Project OHM REMEDIATION - TANK FARMS
 Contract # 9507169
 Date 07/26/95
 Matrix SOIL
 Units mg/Kg

Analysis TPH by GC
 Method 8015 M
 ND = not detected at given detection limit
 D - Diesel range hydrocarbons
 L - Hydrocarbons lighter than diesel
 H - Hydrocarbons heavier than diesel

Sample ID	AENI ID	Date Analyzed	(%) Solid	Qualifier	Concentration	Detection Limit
BLANK	BLK 0721RB	7/24/95	100	U	ND	17
BLANK	BLK 0724LA	7/25/95	100	U	ND	17
LS 13	L9507169-001	7/25/95	88.3	U	ND	18
LS 14	L9507169-002	7/25/95	89.9	U	ND	18
LS 15	L9507169-003	7/25/95	89.5	U	ND	18
LS 16	L9507169-004	7/25/95	87.9	U	ND	19
LS 16DUP	L9507169-005	7/26/95	89	U	ND	19
LS 17	L9507169-006	7/26/95	87	U	ND	19
LS 18	L9507169-007	7/26/95	89.2	U	ND	19
LS 19	L9507169-008	7/26/95	86.6	U	ND	19
LS 20	L9507169-009	7/26/95	85.8	U	ND	19
LS 21	L9507169-010	7/26/95	85.3	U	ND	20
LS 22	L9507169-011	7/26/95	83.4	U	ND	20
LS 23	L9507169-012	7/26/95	83.4	U	ND	19
LS 24	L9507169-013	7/26/95	84.6	U	ND	20
LS 25	L9507169-014	7/26/95	82.4	U	ND	200
LS 26	L9507169-015	7/26/95	78.6	U	ND	210

**AMERICAN ENVIRONMENTAL NETWORK, INC
ORGANIC ANALYSIS DATA SHEET
FORM I**

Client: OHM CORPORATION
Project: OHM NEWPORT, RI TANK FARM 5
Contract #: 9507231
Date: 08/04/95
Matrx: SOIL
Units: mg/Kg

Analysis: TPH by GC
Method: 8015 M
ND = not detected at given detection limit
D - Diesel range hydrocarbons
L - Hydrocarbons lighter than diesel
H - Hydrocarbons heavier than diesel

Sample ID	AENI ID	Date Analyzed	(%) Solid	Qualifier	Concentration	Detection Limit
BLANK	BLK 0731VA	8/3/95	100	U	ND	17
LS 27	L9507231-001	8/3/95	90.8	U	ND	18
LS 28	L9507231-002	8/3/95	91.4	U	ND	18
LS 29	L9507231-003	8/3/95	91.3	U	ND	18
LS 30	L9507231-004	8/3/95	91.9	U	ND	18
LS 31	L9507231-005	8/3/95	86.7	U	ND	19
LS 31DUP	L9507231-006	8/3/95	87.8	U	ND	19
LS 32	L9507231-007	8/4/95	90.4	U	ND	180
LS 33	L9507231-008	8/4/95	84.3	U	ND	19
LS 34	L9507231-009	8/4/95	89.3	U	ND	19
LS 35	L9507231-010	8/4/95	89.6	U	ND	18
LS 36	L9507231-011	8/4/95	88.9	U	ND	18
LS 36DUP	L9507231-012	8/4/95	86.3	U	ND	19
LS 37	L9507231-013	8/4/95	86.2	U	ND	19
LS 38	L9507231-014	8/4/95	93.3	U	ND	18
LS 39	L9507231-015	8/4/95	86.6	U	ND	190
LS 40	L9507231-016	8/4/95	87.4	U	ND	19
LS 41	L9507231-017	8/4/95	90	U	ND	18

AMERICAN ENVIRONMENTAL NETWORK, INC.

9151 Rumsey Road, Columbia, MD 21045 Phone (410) 730-8525 Fax (410) 997-2586

CHAIN OF CUSTODY RECORD

GREY SHADED AREAS FOR AEN LAB USE

AEN # <u>9507231</u>	Quote # _____	Scope Q/M _____	# of Container <u>1</u>	
Client Name: <u>OHM</u>			Container Type <u>4oz glass</u>	
Project Name: <u>TANK FARM 5</u>			Preservative Used <u>N/A</u>	
Site Location: City, State <u>NEWPORT, RI</u>			Type of Analysis <u>TPH MERC BOB DIBEL</u>	

LAB #	SAMPLE - ID	DATE	TIME	MATRIX								REMARKS	
01	LS 32	7/27/95	0756	SOIL	X							-007	30' FROM CT49 TO Pumphouse
02	LS 33	7/27/95	0800	SOIL	X							-008	30' FROM CT57 TO CT49
03	LS 34	7/27/95	0804	SOIL	X							-009	60' FROM CT57 TO CT49
04	LS 35	7/27/95	0809	SOIL	X							-010	90' FROM CT57 TO CT49
05	LS 36	7/27/95	0814	SOIL	X							-011	120' FROM CT57 TO CT49
06	LS 36 DUP	7/27/95	0818	SOIL	X							-012	120' FROM CT57 TO CT49
07	LS 37	7/27/95	0821	SOIL	X							-013	150' FROM CT57 TO CT49
08	LS 38	7/27/95	0825	SOIL	X							-014	30' FROM CT49 TO Pumphouse
09	LS 39	7/27/95	0832	SOIL	X							-015	60' FROM CT49 TO Pumphouse
10	LS 40	7/27/95	0837	SOIL	X							-016	90' FROM CT49 TO Pumphouse
11	LS 41	7/27/95	0842	SOIL	X							-017	30' FROM CT54 TO Pumphouse

Relinquished by: (Signature) ① 	Date / Time <u>7/27/1600</u>	Received by: (Signature)	Received by Laboratory: (Signature) 	Date / Time <u>7/28/95 1000</u>	Shipped via: <u>FedEx</u> Shipping Ticket No. <u>5738132400</u>
Relinquished by: (Signature) ②	Date / Time	Received by: (Signature)	Remarks: <u>Any LAPSE IN TIME due TO FEDEX</u>		
Relinquished by: (Signature) ③	Date / Time	Received by: (Signature)	Sampling By: <u>MARK GOUVEIA</u>	Sampler's Signature 	

**AMERICAN ENVIRONMENTAL NETWORK, INC
ORGANIC ANALYSIS DATA SHEET
FORM I**

Client: OHM CORPORATION
Project: TANK FARM 5
Contract # 9508143
Date: 08/18/95
Matrix: SOIL
Units: mg/Kg

Analysis: TPH by GC
Method: 8015 M
ND = not detected at given detection limit
D - Diesel range hydrocarbons
L - Hydrocarbons lighter than diesel
H - Hydrocarbons heavier than diesel

Sample ID	AENI ID	Date Analyzed	(%) Solid	Qualifier	Concentration	Detection Limit
BLANK	BLK 0814JC	8/16/95	100	U	ND	17
LS-42	L9508143-001	8/16/95	83.3	U	ND	20
LS-43	L9508143-002	8/16/95	83.8	U	ND	20
LS-44	L9508143-003	8/16/95	85.7	U	ND	19
LS-44-DUP	L9508143-004	8/16/95	83.6	U	ND	20
LS-45	L9508143-005	8/16/95	88.7	U	ND	19
LS-46	L9508143-006	8/16/95	89	U	ND	19
LS-47	L9508143-007	8/16/95	86.3	U	ND	19
LS-48	L9508143-008	8/16/95	87.7	U	ND	19
LS-49	L9508143-009	8/16/95	85	U	ND	20
LS-50	L9508143-010	8/17/95	83.8	U	ND	20
LS-51	L9508143-011	8/17/95	89.7	U	ND	18
LS-52	L9508143-012	8/17/95	78.7	U	ND	21
LS-53	L9508143-013	8/18/95	84.6	U	ND	20
LS-54	L9508143-014	8/17/95	85.8	U	ND	19
LS-55	L9508143-015	8/18/95	88.5	U	ND	19
LS-55-DUP	L9508143-016	8/18/95	88.2	U	ND	19
LS-56	L9508143-017	8/18/95	88.8	U	ND	19
LS-57	L9508143-018	8/17/95	89.3	U	ND	19
LS-58	L9508143-019	8/18/95	89.5	H	1,700	180
LS-58-DUP	L9508143-020	8/17/95	89.9	H	2,700	180
LS-59	L9508143-021	8/17/95	91.7	H	1,900	180
LS-60	L9508143-022	8/17/95	88.9	H	2,100	190
LS-61	L9508143-023	8/17/95	87.8	H	130	19
LS-62	L9508143-024	8/17/95	87.5	H	610	19
LS-63	L9508143-025	8/17/95	90.7	U	ND	18
LS-63-DUP	L9508143-026	8/17/95	82.3	U	ND	20



R.I. Analytical

Specialists in Environmental Services

Post-it Fax Note	071	Date	8/24/95	Unit	L
To	Jim Begley	From	R.I. Analytical		
C. Dept	O.H.M.				
Phone #		Phone #	237-8500		
Fax #	401-846-4447	Fax #	238-1970		

CERTIFICATE OF ANALYSIS

OHM Remediation Services Corp.
Attn: Mr. Jim Begley
P.O. Box 7338
Groton, CT 06340

DATE RECEIVED: 08/23/95
DATE REPORTED: 08/24/95
P.O. NUMBER:
INVOICE NUMBER: H5698

DESCRIPTION: One (1) solid sample labeled BSW 001

Subject sample has been analyzed by our laboratory with the following results:

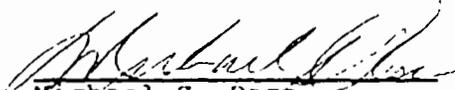
PARAMETER	RESULTS
Total Petroleum Hydrocarbons	1,200 mg/kg *

*Calculated on dry weight basis

Reference: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, U.S. EPA, SW-846, November 1986, 3rd edition, Update IIB, January 1995.

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

Approved by:


Michael S. Rose
Laboratory Manager


Laurel Stoddard
Quality Control Coordinator

ohm:sjs

AMERICAN ENVIRONMENTAL NETWORK, INC.

9151 Rumsey Road Suite 150, Columbia, MD 21045-1992
(410) 730-8525 Fax (410) 997-2586

Report Number: 9509019
Report To: OHM Corporation
Project: Tank Farm #5
Date: September 19, 1995
Analysis: Total Petroleum Hydrocarbons, (EPA 418.1M)

<u>Client ID</u>	<u>AENI ID</u>	<u>%Solids</u>	<u>Result, mg/Kg</u>
TF5SP1-01	9509019-010	86.8	270
TF5SP1-02	9509019-011	85.1	180
TF5SP1-03	9509019-012	89.8	<16
	Method Blank	100	<15

(1) Results reported on a dry weight basis.