POST REMOVAL REPORT
REMOVE THREE 50,000 GALLON USTs
CALVERTON, NEW YORK

Contract No. N62472-94-D-0398
Delivery Order #33
Subcontract No. 1284-33-3246

ENVIRO/CONSULTANTS GROUP, LTD.
Environmental Managers & Consultants

431

0708.0010001

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October 3, 1997

PREPARED FOR:

Prime Contractor:
Foster Wheeler Environmental Corp.
2300 Lincoln Highway East
One Oxford Valley, Suite 200
Langhorne, PA 19047-1829

Client:
U.S. Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Mail Stop #82
Lester, PA 19113-2090

PREPARED BY SUBCONTRACTOR:

ENVIRO/CONSULTANTS GROUP, LTD.
262 Chapman Road, Suite 103-A
Newark, Delaware 19702
(302) 292-8995

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ATTACHMENTS

1.0 INTRODUCTION

Enviro/Consultants Group, Ltd. (ECGL) was subcontracted by Foster Wheeler Environmental Corporation (FWENC) to remove three (3) 50,000-gallon underground storage tanks (USTs) at the former Naval Weapons Industrial Plant, Calverton, Long Island, New York. This Post Removal Report describes the field activities in connection with the tank removals performed during the period of August 11, 1997 through August 21, 1997 and the contaminated soil removal performed on September 7, 1997. The Post Removal Report has been prepared to satisfy requirements of the Remedial Action Contract Number N62472-94-D-0398, Delivery Order #0033, Subcontract Number 1284-33-3246, UST Removals at Calverton, NY.

2.0 SITE DESCRIPTION

2.1 Project Location and Description

The former Naval Weapons Industrial Plant is located in Calverton, New York on Long Island approximately 70 miles of New York City near the intersection of I-495 and State Route 25. The USTs were located at the fuel depot which is located midway between the main gate and the north gate. Site Plan is Figure 1 and the Vicinity plan is Figure 2.

The three (3) 50,000 gallon USTs were cleaned and certified gas free in 1992. The tanks were single walled steel tanks that were used to store aviation fuel. The tanks were 12 feet in diameter by 60 feet long. The tops of the tanks were approximately 3 feet below grade. The tanks were located in an area covered with crushed stone and each tank location was bordered by concrete curbing (see Figure 2). Groundwater was not encountered during the tank excavation.

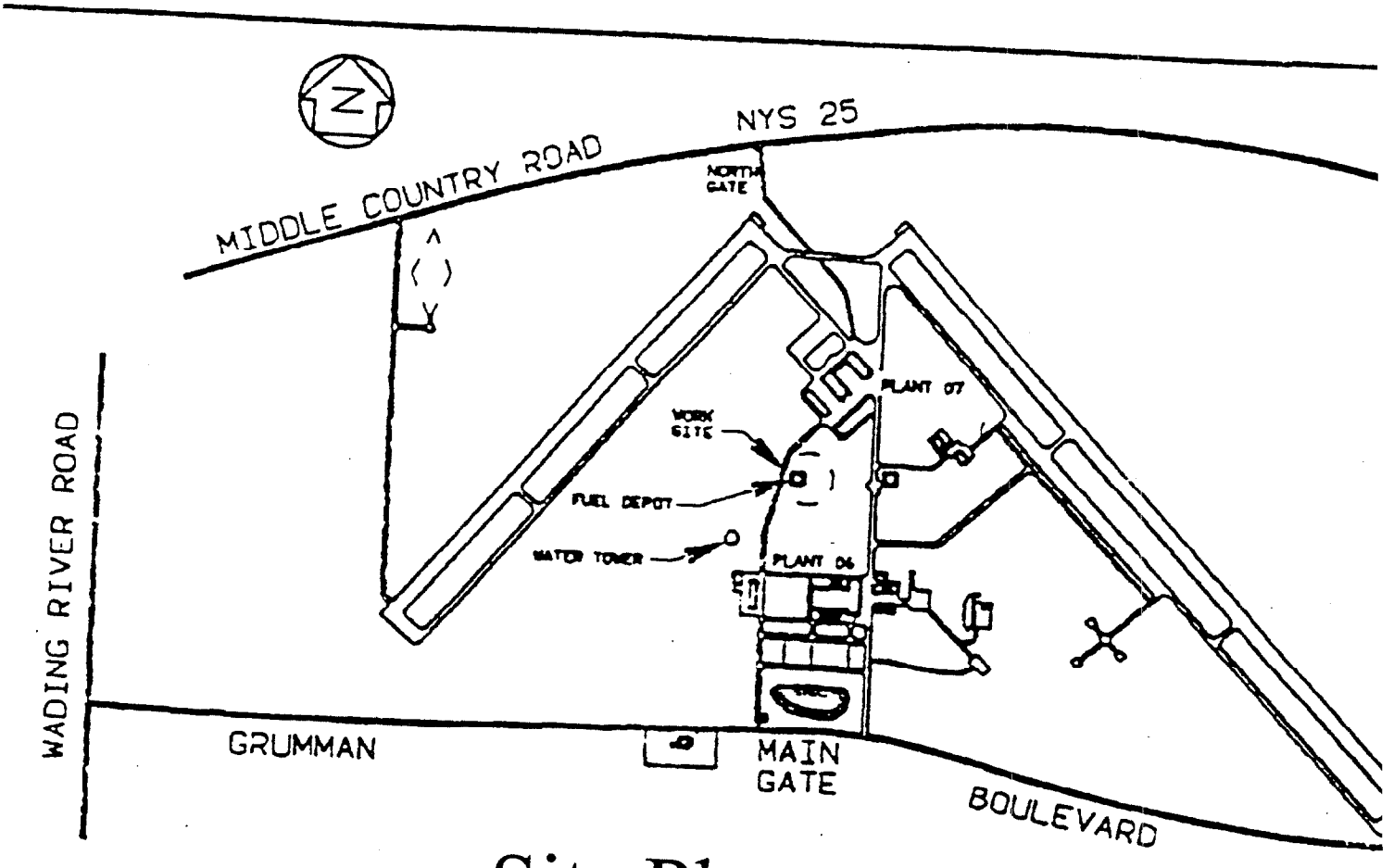
2.2 Objectives/Project Summary

The objective of the project was the excavation, removal and disposal of the three (3) 50,000-gallon underground storage tanks. Contaminated soil encountered during the tank excavation was stockpiled on-site and subsequently removed for off-site disposal. Soil sampling and analysis within the tank excavation area were performed by Brown and Root Environmental.

Tank removal activities are summarized as follows:

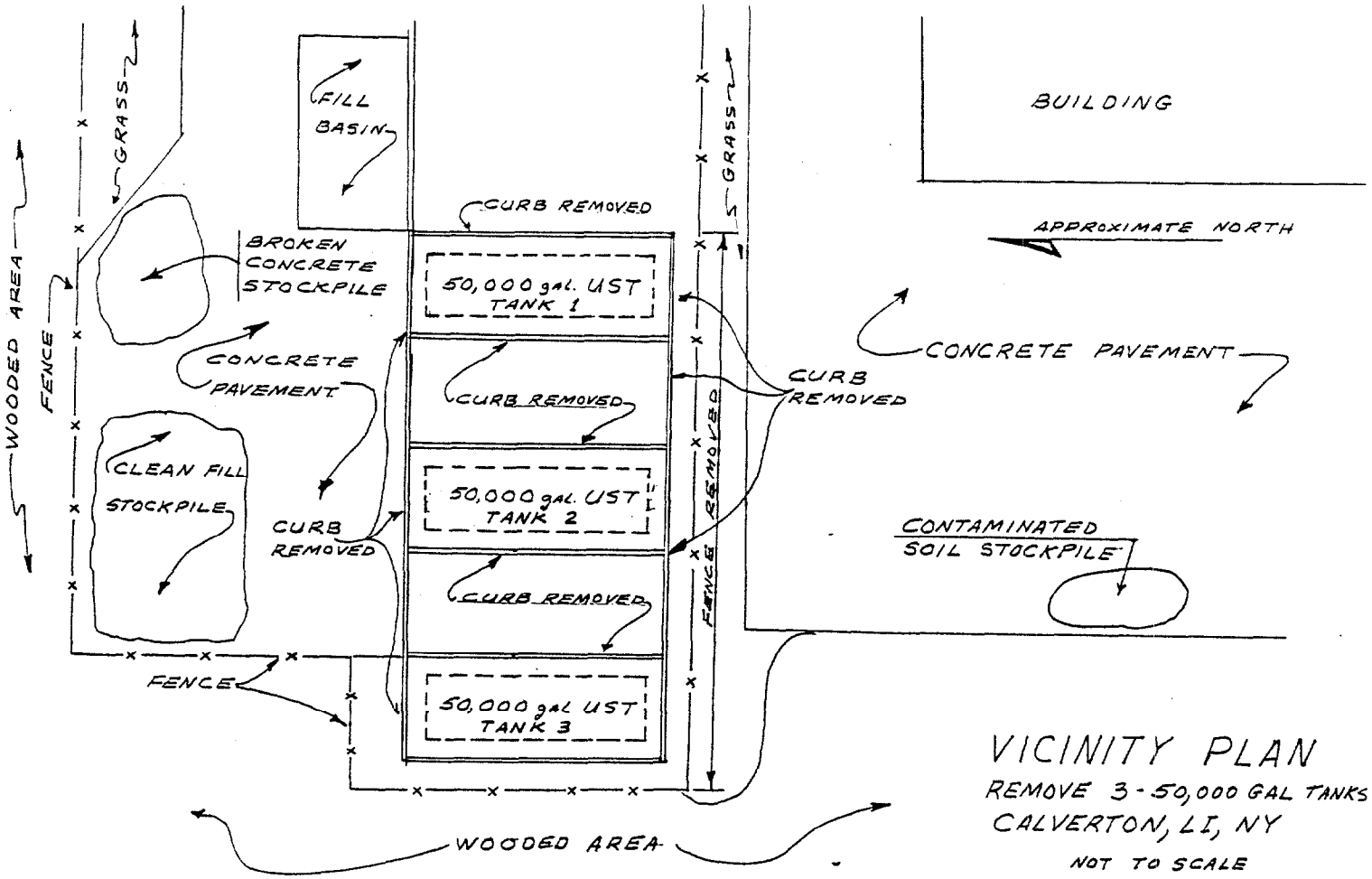
August 11 - Mobilized at the site. Removed crushed stone from tank area. Removed pump and valve from top of Tank 1.

August 12 - Performed excavation for Tank 1. Stockpiled 542 tons of certified clean backfill from East Coast Mining Corp., East Quogue, NY. Excavated and stockpiled soil from tank excavation. Removed and stockpiled concrete curb.



Site Plan

Figure 1



VICINITY PLAN
REMOVE 3 - 50,000 GAL TANKS
CALVERTON, LI, NY
NOT TO SCALE

FIGURE 2

August 13 - Stockpiled 392 tons of clean backfill. Started cutting top quadrant of Tank 1. Because of high LEL readings, air compressor used to purge Tank 1. Resumed cutting of Tank 1. Removed and stockpiled concrete curb. A portion of the excavated soil exhibited a petroleum odor and was segregated and stockpiled separately as contaminated soil. Covered Tank 1 and contaminated soil with plastic sheeting.

August 14 - Stockpiled 1,000 tons of clean backfill. Completed cutting top quadrant of Tank 1. Removed top quadrant of Tank 1 from excavation. Continued to excavate around Tank 1. Excavated ramp at end of excavation to allow Tank 1 to be dragged from excavation. Removed fence and concrete curb to allow removal of tanks from excavation. Remainder of Tank 1 removed from excavation. Tank excavation inspected by Michael Seaman, Suffolk County and Tony Leung, NYSDEC and received clearance to backfill. Three (3) soil samples taken by Teresa Sawyer, Brown and Root Environmental. Backfilled Tank 1 excavation.

August 15 - Segregated contaminated soil as directed by Michael Seaman, Suffolk County. Stockpiled and covered contaminated soil with plastic sheeting. Cut Tank 1 to allow loading on truck for transport to scrap yard, P.K. Metals, Coram, NY. Excavated Tanks 2 and 3. Stockpiled excavated soil. Removed remaining concrete curb around excavation area.

August 18 - Completed excavation around Tanks 2 and 3. Cut and remove top quadrant of Tank 2. Remove remainder of Tank 2 from excavation. Tank excavation inspected by Michael Seaman, Suffolk County and Tony Leung, NYSDEC and received clearance to backfill. Five (5) soil samples taken by Teresa Sawyer, Brown and Root Environmental. Backfilled Tank 1 excavation. Started cutting top quadrant of Tank 3.

August 19 - Completed cutting top quadrant of Tank 3. Removed top quadrant of Tank 3 from excavation. Completed excavation of Tank 3 and removed Tank 3 from excavation. Tank excavation inspected by Michael Seaman, Suffolk County and Tony Leung, NYSDEC and received clearance to backfill. Soil samples taken by Teresa Sawyer, Brown and Root Environmental. Loaded Tank 1 scrap for transport to scrap yard, P.K. Metals, Coram, NY. Began cutting Tanks 2 and 3 to allow loading on trucks. Started backfilling tank excavation.

August 20 - Completed cutting Tanks 2 and 3 for disposal. Loaded Tanks 2 and scrap onto trucks. Completed backfilling of excavation. Loaded out one truck load of broken concrete curb. Started sweeping of concrete pavement

August 21 - Cleaned project site of trash and other debris. Complete finish grading of excavated area. Wash concrete pavement to remove black tar stains from tank coating. Complete loading out of broken concrete curb.

Sept. 17 - Loaded out (one truck load, 29.15 tons) contaminated soil pile for off-site disposal.

3.0 WASTE DISPOSAL

3.1 Tank Scrap

65.7 tons of tank scrap metal were transported to P.K. Metals, 3542 Route 112, Coram, Long Island, New York 11727. See Tab 1 for truck weigh tickets.

3.2 Broken Concrete Curbing

Approximately 50 tons (two truck loads) of broken concrete curbing was transported for disposal to East Coast Mines & Materials Corporation, Route 2, Lewis Road, East Quogue, Long Island, New York 11942. See Tab 1 for concrete debris load tickets.

3.3 Chain Link Fencing

Fence fabric and posts were removed but remain on site.

3.4 Contaminated Soil

Contaminated soil from the tank excavation (29.15 tons) was transported by Horwith Trucks, Inc., Route 329, Northampton, Pennsylvania 18067 to R3 Technologies, Inc., 7 Steel Road East, Morrisville, Pennsylvania 19067-0847 for disposal. See Tab 3 for waste profile, weigh ticket, non-hazardous waste manifest and laboratory analytical data for the contaminated soil.

4.0 SAMPLING OF TANK EXCAVATION

Sampling of the tank excavation was not a requirement of Enviro/Consultants Group, Ltd. subcontract with Foster Wheeler Environmental Corporation. Soil sampling and analysis were the responsibility of Brown and Root Environmental and sample locations and analysis results are not presented in the Post Removal Report.

5.0 PHOTOGRAPHIC LOG

A photographic log recording the progress of the tank removals is provided in Tab 2.

TAB 1
TRANSPORTATION MANIFESTS

ALUMINUM
COPPER

PK METALS

BRASS
LEAD

3542 Route 112, Coram, New York 11727
2 MI. NORTH L.I.E. EXIT 64
Call (516) 732-6403

№ 199005

DATE 8/19 1997

NAME ENVIRO[redacted]/CONSULTANTS

ADDRESS CALVERTON

THE SCRAP METAL DESCRIBED BELOW IS MINE TO SELL.	PRICE	AMOUNT
GROSS [illegible] lb TANK		
TARE [illegible] lb ST-L		
NET 33460		
G		
T		
N		
MAN ON ☐ MAN OFF ☐		

ALUMINUM
COPPER

PK METALS

BRASS
LEAD

3542 Route 112, Corem, New York 11727
(2 MI. NORTH L.I.E. EXIT 64)
Call (516) 732-6403

№ 195525

DATE 8/20 1997

NAME ENVIRO[redacted] CONSULTANTS

ADDRESS CALVERTON

THE SCRAP METAL DESCRIBED BELOW IS MINE TO SELL.	PRICE	AMOUNT
GROSS		
TARE [illegible] lb		
NET 32680		

TANKS
SCL

G
T
N

MAN ON ☐ MAN OFF ☐

ALUMINUM
COPPER

PK METALS

BRASS
LEAD

3542 Route 112, Coram, New York 11727
(2 MI. NORTH L.I.E. EXIT 64)
Call (516) 732-6403

№ 195232

DATE 8/20 19 97

NAME ENVIRO [redacted] / CONSULTANTS

ADDRESS CALVERTON

THE SCRAP METAL DESCRIBED BELOW IS MINE TO SELL.	PRICE	AMOUNT
GROSS		
TARE — TANKS		
NET 22340 ST-L		

→ G
→ T
→ N

MAN ON ☐ MAN OFF ☐

ALUMINUM
COPPER

PK METALS

BRASS
LEAD

3542 Route 112, Coram, New York 11727
(2 MI. NORTH L.I.E. EXIT 64)
Call (516) 732-6403

№ 107883

DATE 8/20 19 97

NAME ENVIRO [redacted] / CONSULTANTS

ADDRESS CALVERTON

THE SCRAP METAL DESCRIBED BELOW IS MINE TO SELL.	PRICE	AMOUNT	
GROSS			
TARE 49150 lb TANK			
NET 42980			
G			
T			
N			
MAN ON ☐ MAN OFF ☐			

EAST COAST MINES & MATERIALS CORPORATION

ROUTE 2, LEWIS ROAD
EAST QUOGUE, N.Y. 11942
(516) 653-5445

	FINE SAND
	CONCRETE SAND
	GRIT
	GRAVEL
	BANK RUN
	FILL
	STONE BLEND
	SCREENINGS
	BLUE STONE
✓	Concrete

CUSTOMER COPY

CUSTOMER Enviro
P/U at Grumman, Calverton

☑ Picked Up

☐ Delivered

#21 8/20/97
1 load removed.

GROSS
TARE
NET

SIGNATURE [signature]

CUSTOMER COPY

EAST COAST MINES & MATERIALS CORPORATION

ROUTE 2, LEWIS ROAD
EAST QUOGUE, N.Y. 11942
(516) 653-5445

Pete

Ticket No
000186323

Date :08/21/97

Customer :ECGL
ENVIRO/CONSULTANTS GROUP, LTD
262 CHAPMAN ROAD
SUITE 103A
NEWARK DE 19702

Order No :1
NAVEL WEAPON INDUSTRIAL PLANT
Load No : 36
Total Tn : 1009.99
Miles :

EAST COAST MINES #7

BROKEN CON/ASPH REM.

Gross	20.64 tn	Keyed	01 Outbound 16:02
Tare	20.64 tn	Stored	
Net	0.00 tn		

Price/LD 1.00/LD

WEIGH MASTER (CAT)

DRIVER

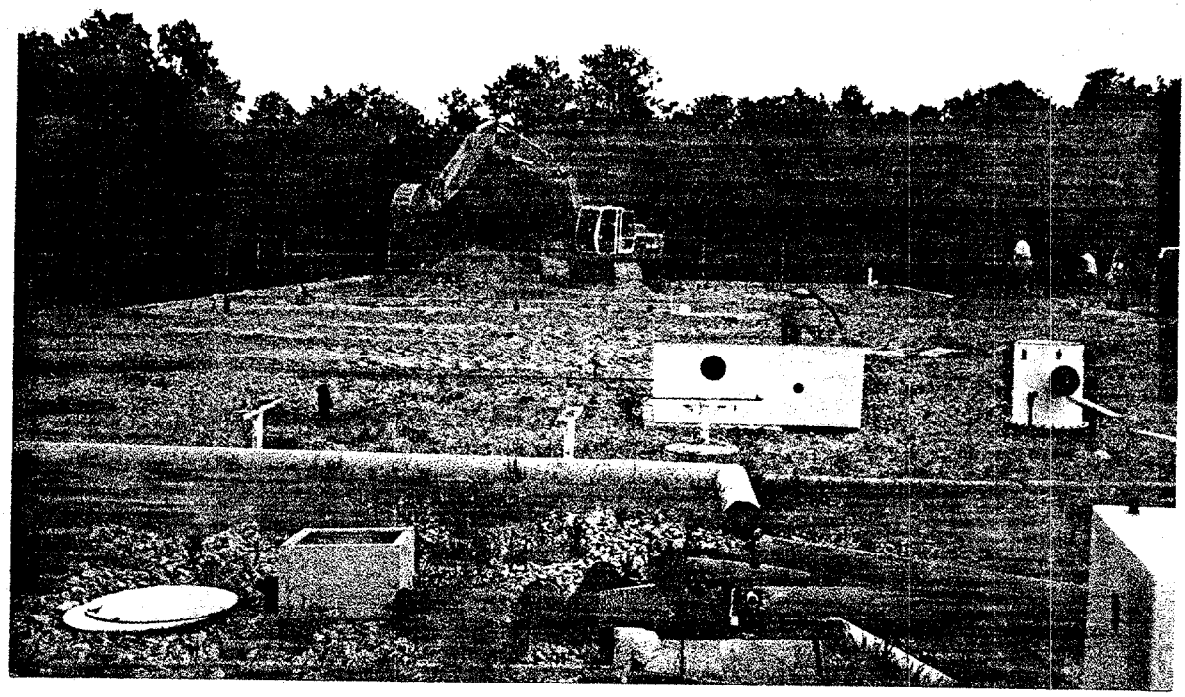
Material $	
Delivery $	
Misc $	
Tax $	
Total DUE $	

REMARKS CTR#N62472-94-D-0398

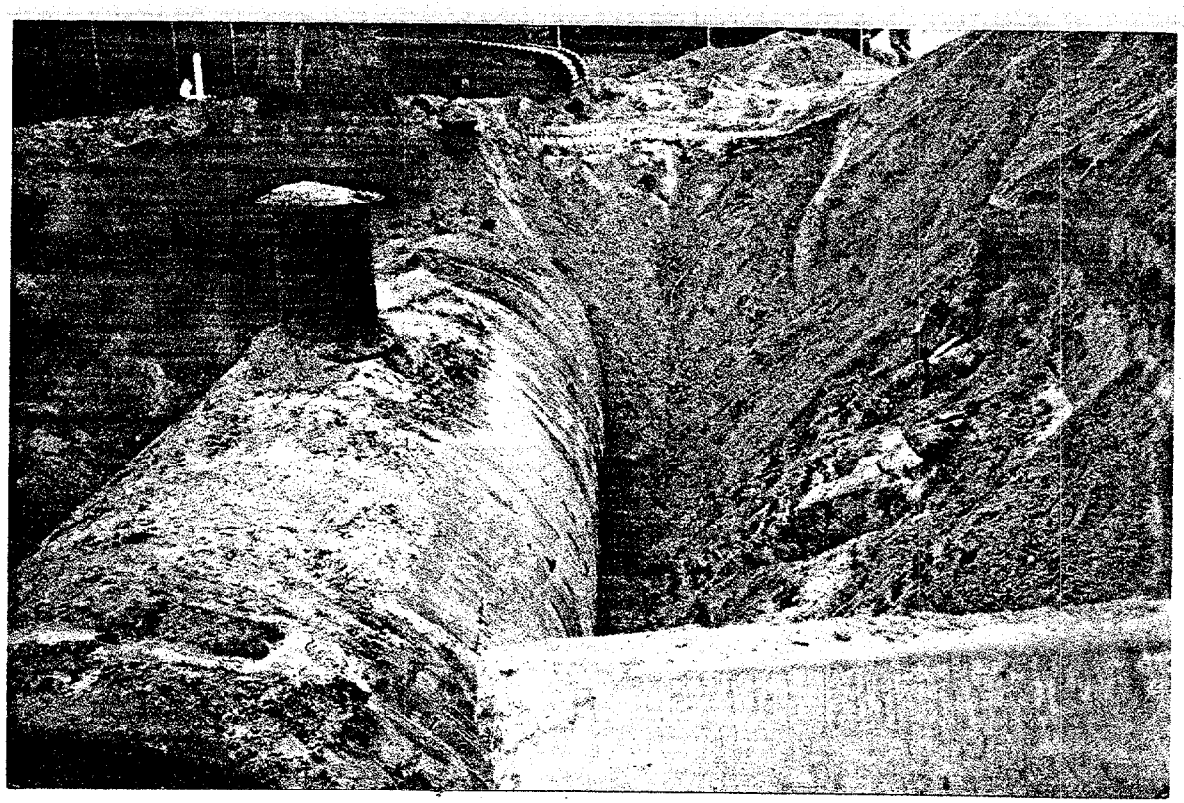
*All payments for all deliveries must be paid net 30 days. All cost associated with collection of monies will be added to the outstanding balance after 30 days. All outstanding balances after 30 days will incur a 1.5% interest charge per month.

*FULL REMITTANCE FOR TONNAGE OR YARDAGE SIGNED.
*TRUCK DELIVERY BEYOND CURB AT CUSTOMER'S RISK.

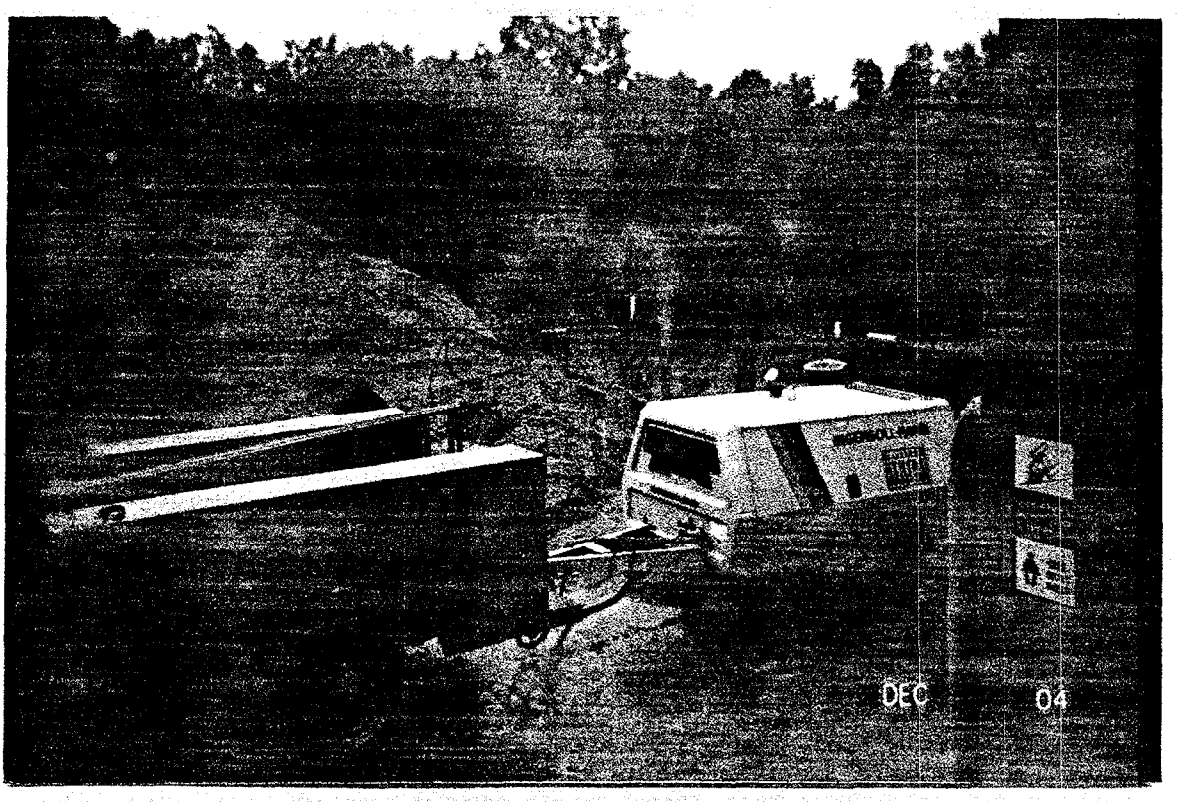
TAB 2
PHOTOGRAPHIC LOG



Start of Excavation for Tank Removal

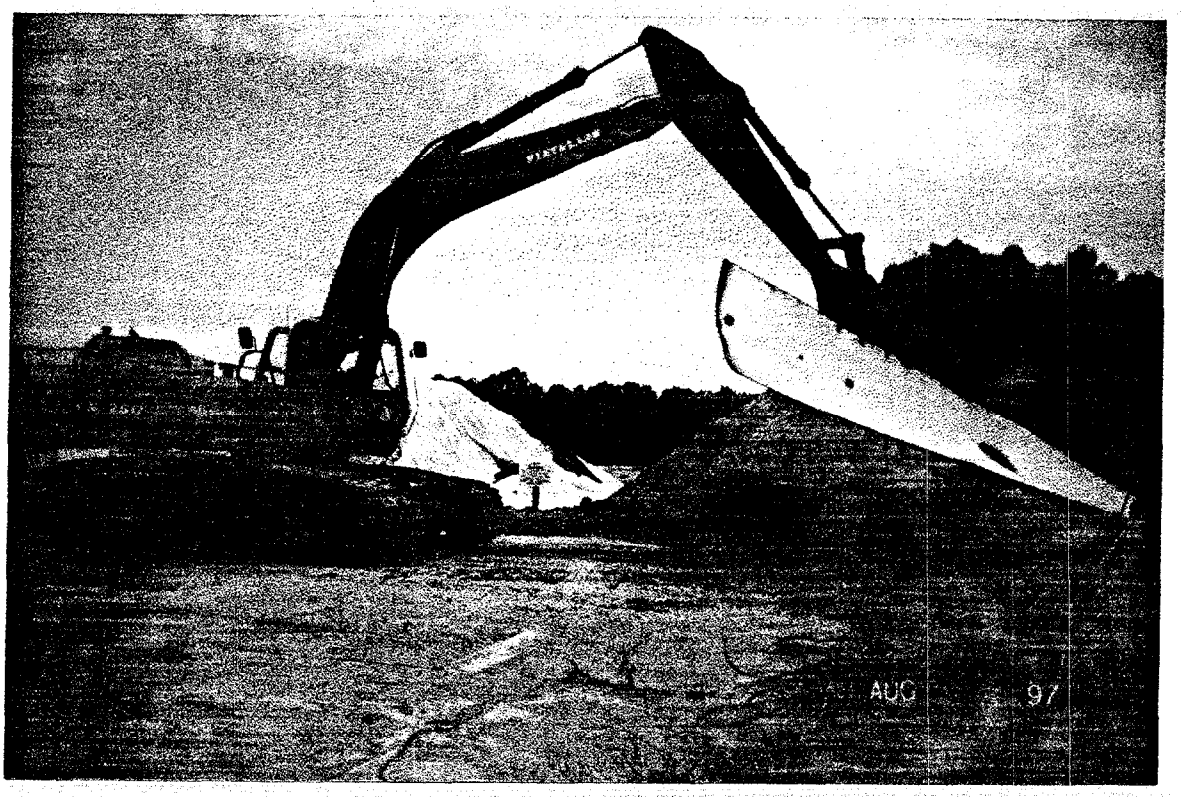


Tank Excavation

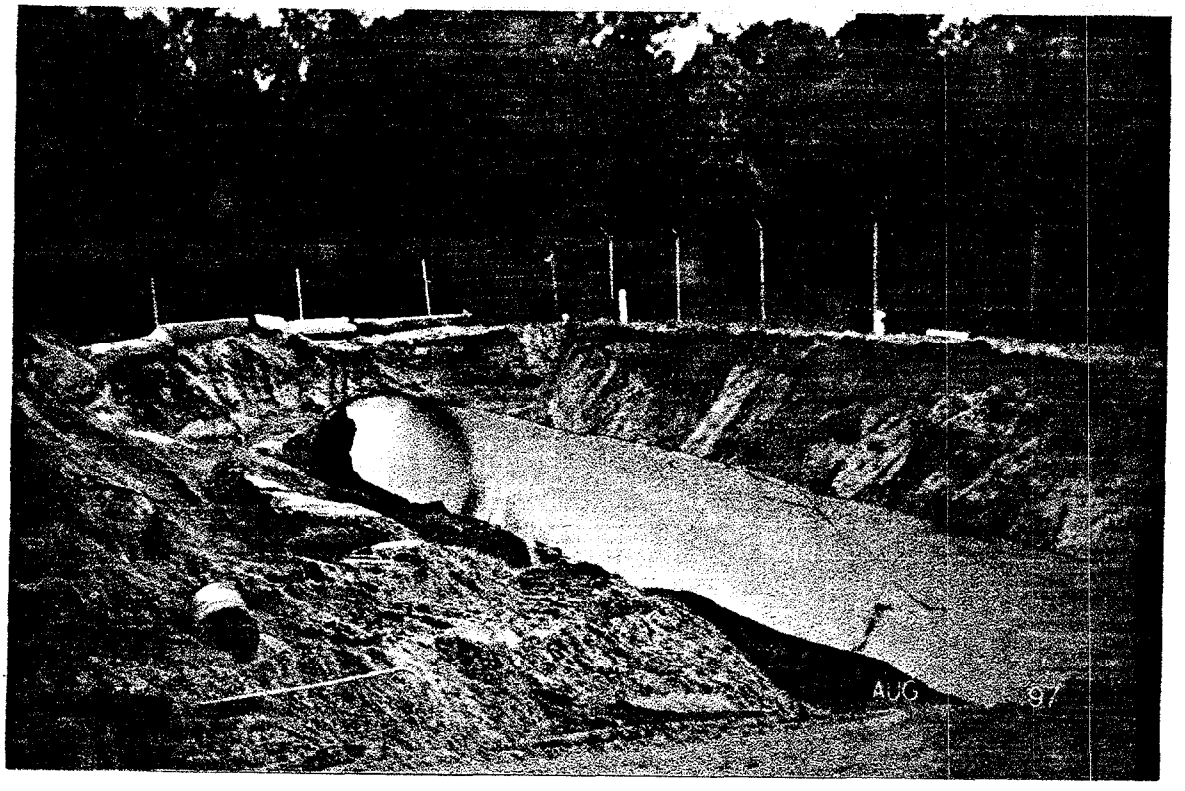


Purging Tank of Flammable Vapors

Remove Curb & Fence To Allow Tank Removal From Excavation

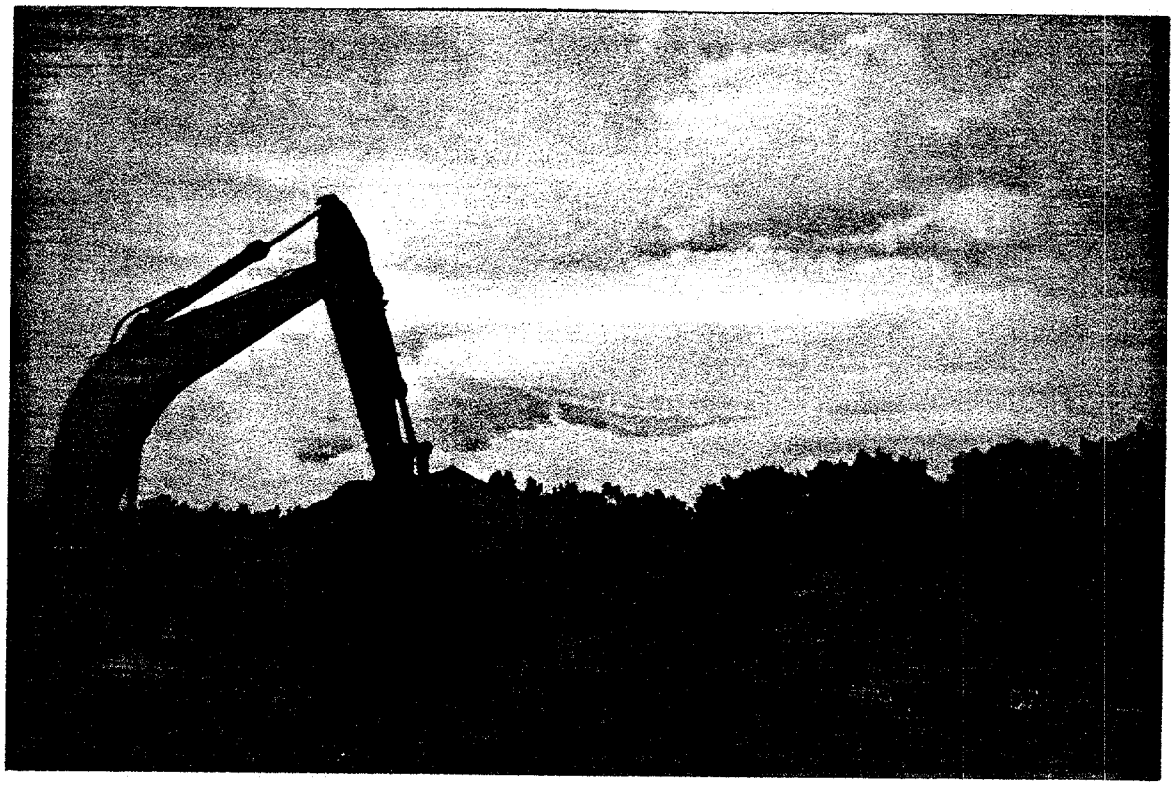


Remove Top Quadrant of Tank

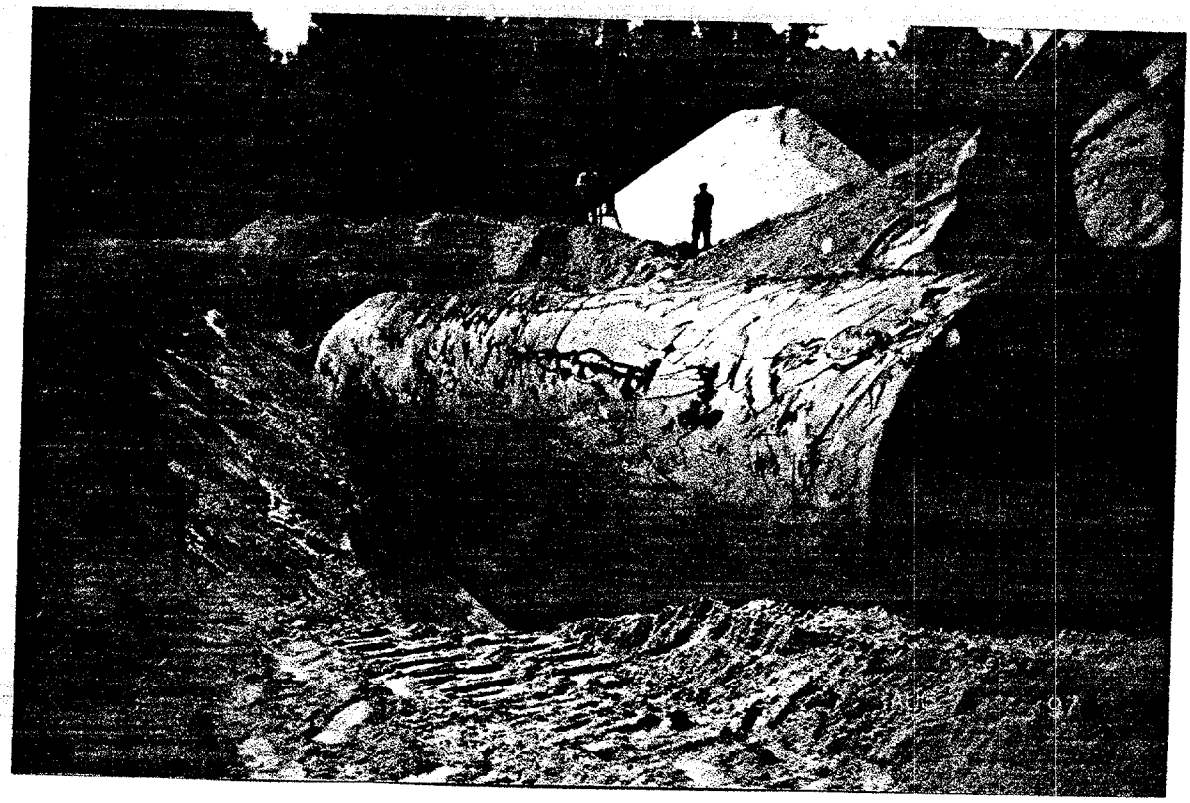


Tank in Excavation with Top Quadrant Removed

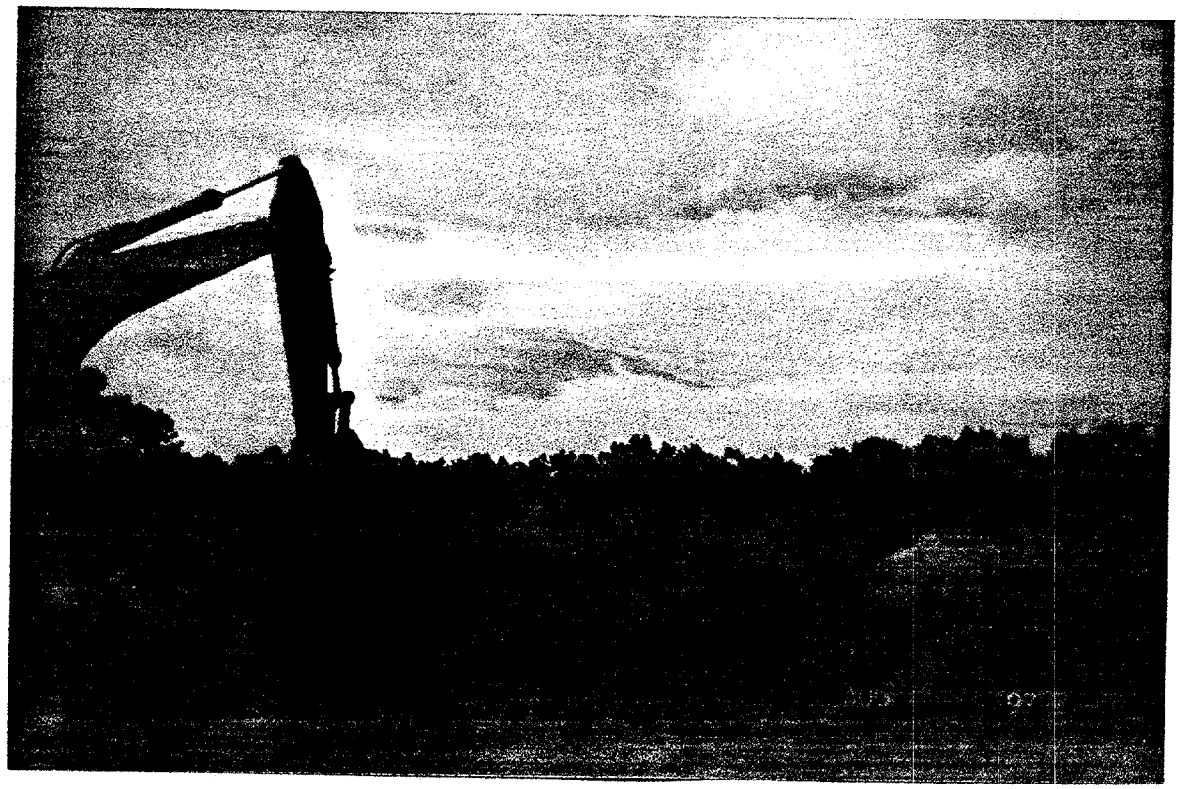
Prepare to Remove tank from Excavation



Remove Tank from Excavation



Prepare to Remove Tank from Excavation



Tank Removed from Excavation

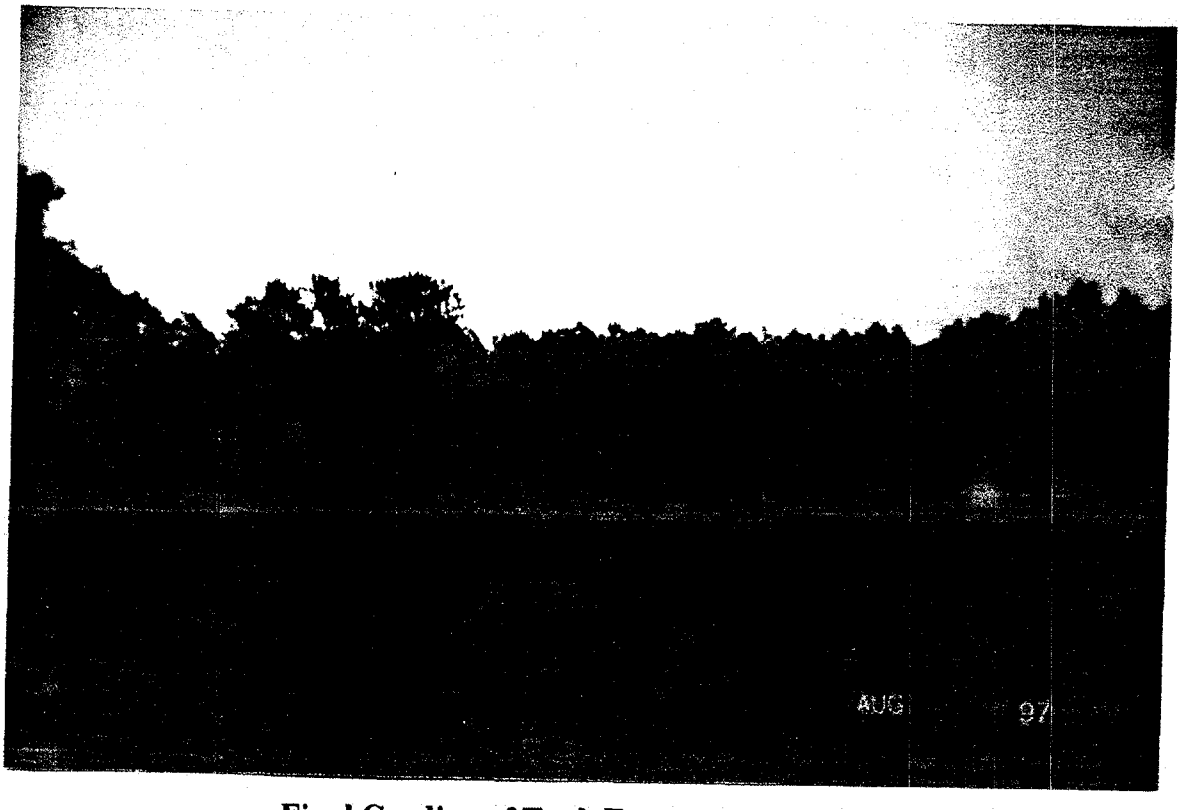
Bottom of Excavation after Tank Removal

Preparing to Backfill Tank Excavation

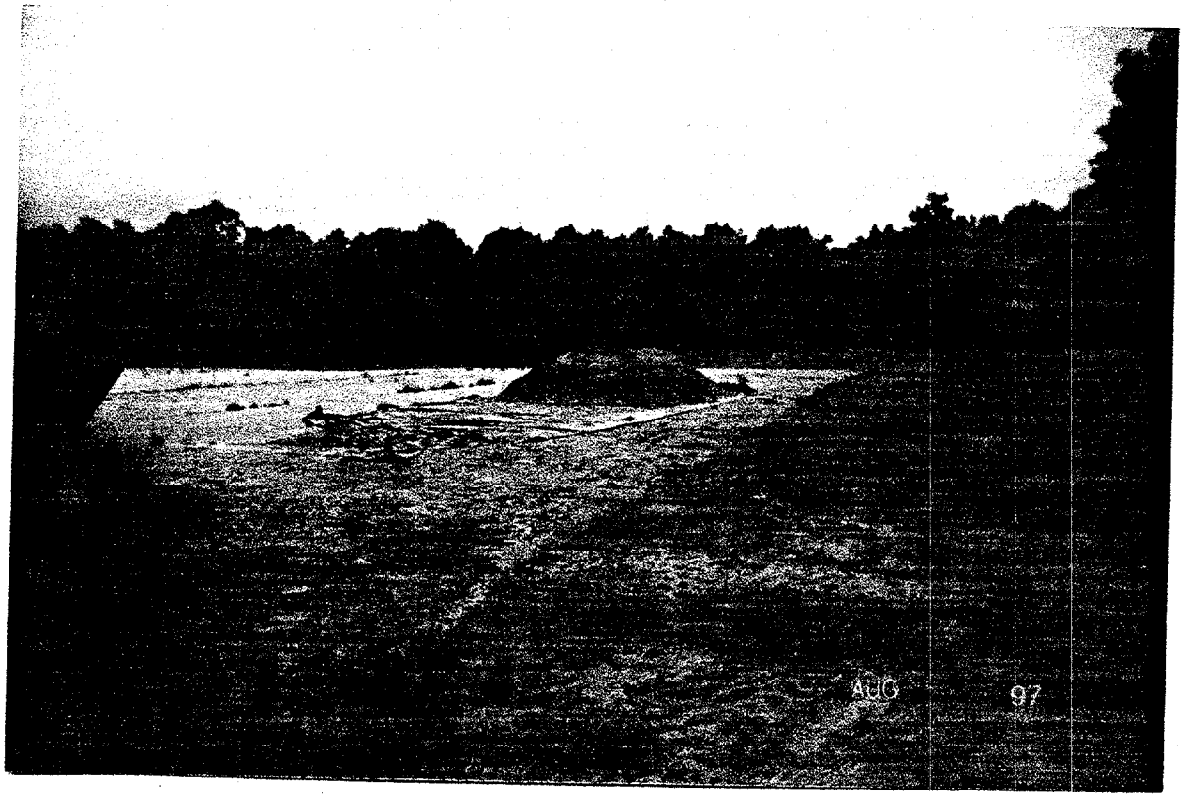
Placing Clean Backfill in Tank Excavation

Grading of Clean Backfill in Tank Excavation

Final Grading of Tank Excavation

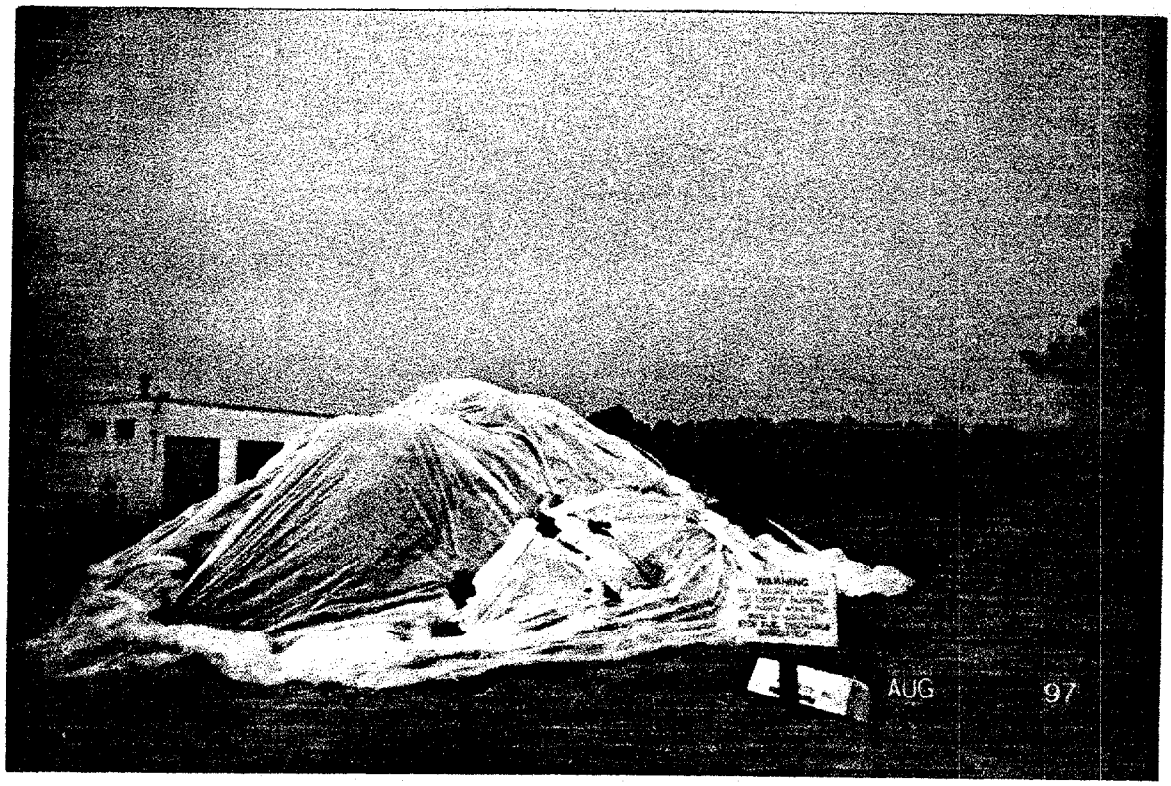


Final Grading of Tank Excavation



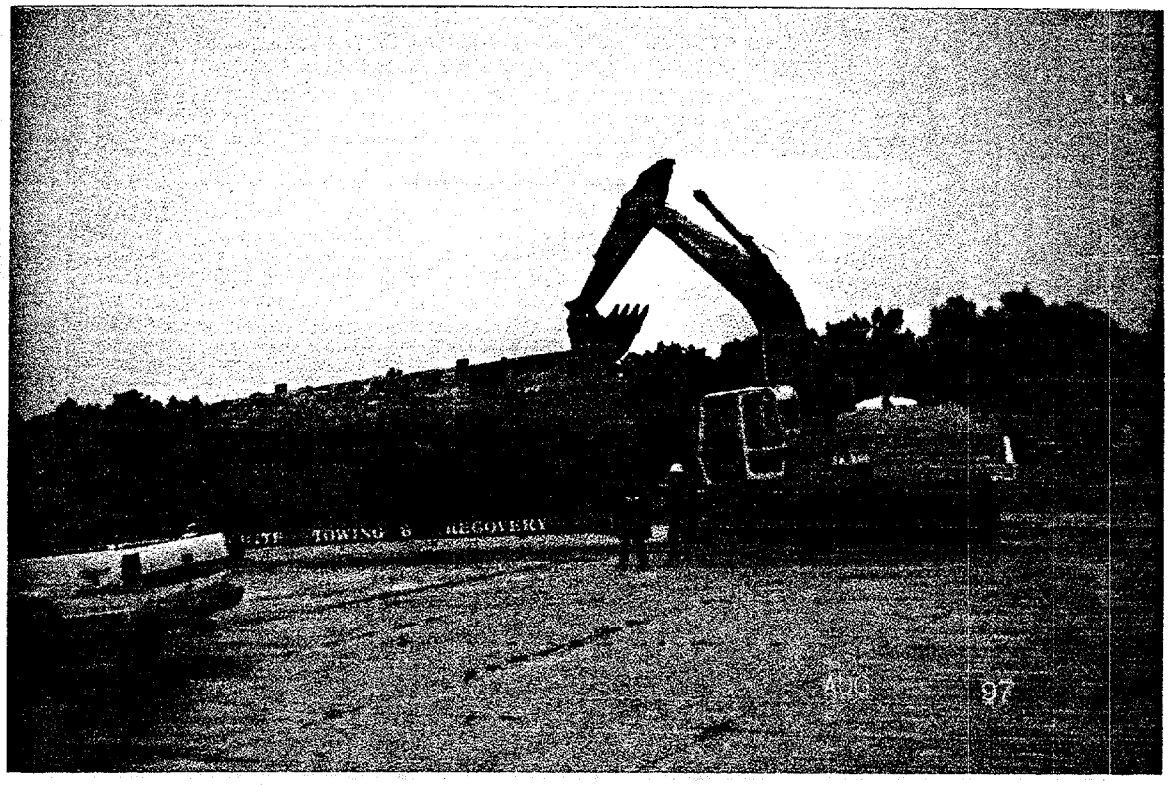
Contaminated Soil Stockpile

Contaminated Soil Stockpile

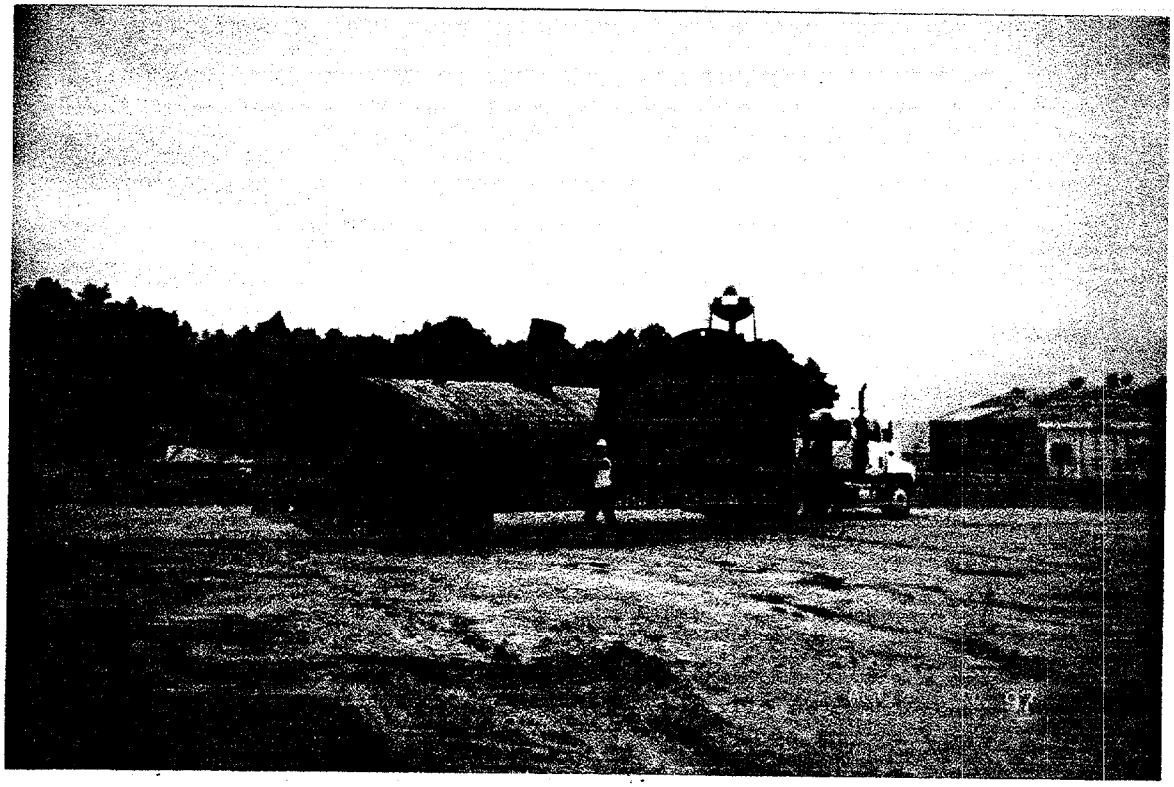


Contaminated Soil Stockpile

Tank Scrap



Loading Tank Scrap



Loading Tank Scrap

TAB 3
CONTAMINATED SOIL INFORMATION

702-[illegible]
-404.

R3 technologies

R3 Technologies Inc.
7 Steel Road East
P.O. Box 847
Morrisville, PA 19067-0847
Phone: 215.428.1700
Fax: 215.428.1704

CONTAMINATED SOIL OR AGGREGATES CERTIFICATION FORM - TABLE 1A

Date: 9-11-97 R3 Tech. Project No.: F0S9709010

A. GENERAL INFORMATION

Generator/Client Name: Naval Weapons Industrial Reserve Plant
Address: Commercial Blvd
Calverton NY
Contact: Al Tarantino
Telephone: 516-346-0344

Consultant Name: Foster Wheeler Envir. Corp
Address: 2300 Lincoln Hwy East, Oxford Valley
Langhorne Pa. 19047
Contact: Joseph Evanhoe
Telephone: 215-702-4000

Soil Location/Address/County: CALVERTON NY

Estimated Quantity: 25 Tons ___ Cubic Yards ✓ Drums ___
Sample Available: ___ Yes X No

Contamination Source (Check all that apply):

✓ Underground Tank	___ Aboveground Tank	___ Pipeline	___ Surface Spill
✓ Virgin Source	___ Non-Virgin Source	___ Unknown Source	___ Other ___

Contaminant (Check all that apply):

___ Gasoline	___ Diesel Fuel	✓ Aviation Fuel	___ No. ___ Oil
___ Motor Oil	___ Bunker Oil	___ Crude Oil	___ Greases
___ Asphalts	___ Oxygenated Organics (type): ___		
___ Tars - Coal, Natural, or Asphalt (circle one)			

B. SOIL CHARACTERISTICS (please estimate if actual is unknown)

___ % moisture
___ % clay
___ % debris

C. ANALYTICAL REQUIREMENTS

Provide all test results as specified on the Contaminated Soil Evaluation Form Table #1B, page 2. The results must be in accordance with the maximum contaminant limitations shown in Table #2A, page 3.

D. CERTIFICATION

I hereby certify that this information is a complete and accurate representation of the subject soil and all known or suspected hazards have been disclosed. I further certify that the subject soil is not hazardous by federal or Pennsylvania regulations. I understand that only non-hazardous soil will be accepted at R3 Technologies, Inc. facilities and no soil will be accepted without a properly executed agreement.

[signature] WALKER — Authorized Signature

FAC MGR. — Title

9/16/97 — Date

Page 1 must be completed and returned to R3 Technologies with the analytical test results for acceptance approval.

R3 TECHNOLOGIES, INC.
7 STEEL ROAD EAST P.O. BOX 847
MORRISVILLE, PA 19067-0847
(215) 428-1700

17916

DATE: 09/17/97
TIME IN: 13:32
TIME OUT: 13:42
SCALE: 1

CARRIER: HOR HORWITH TRUCKING, INC.

CUSTOMER: FOS FOSTER WHEELER

TRUCK: 277 TRAILER:

PRODUCT: PH PETROLEUM HYDROCARBN JOB: FOS9709010PH

WGT IN GROSS: 92180 LBS

TARE: 33880 LBS PB

NET: 58300 LBS = 29.15 TONS @ PER TON

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

AMOUNT: $

LIC: 21281

...to certify that the above named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to applicable state and federal law. The wastes were consigned to the transporter named. I certify that the foregoing is true and correct to the best of my knowledge.

Date: 9/17/97 Signature: Joseph Kuhlow Asst Sale Manager
(Name and Title)

2. Hauler of Waste (must be filled in by hauler) EPA I.D. No.: PAD 146 714 878
(if applicable)

X COMPANY NAME: Horwith Trucks Inc

ADDRESS: Rt 329 Northampton Pa 18067

Pick-up Date: 9/17/97 Truck No.: 277 Vehicle Lic. No.: AB5919Y - Pa

The above described waste was picked up and hauled by me to the disposal facility named below and was accepted. I certify under penalty of perjury that the foregoing is true and correct.

(Signature of authorized agent and title)

3. Processing Facility: **R3 Technologies, Inc.**
7 Steel Road East
Morrisville, PA 19067-0847
Permit #301254

Waste subject to this manifest was delivered by the above hauler to this disposal facility and accepted on this date: 9/17/97

(Signature of authorized agent and title)

PROCESSING FACILITY

Manifest No.: 1

R3 technologies

R3 Technologies, Inc. • 7 Steel Road East • P.O. Box 847 • Morrisville, PA 19067-0847 • Phone: (215) 428-1700

NON-HAZARDOUS WASTE MANIFEST

1. EPA I.D. No., Generator of Waste: _____

Company Name: (Print or Type) U.S. Navy (UST) Removal Site

Pick-up Address: Various Removals Colverton NY
(No.) (Street) (City) (State)

Telephone Number: _____ Fax Number: _____

Waste Stream Identification: This manifest represents a non-hazardous waste as per EPA and PA D.E.P. regulations.

Tons: _____ Cubic Yards: 20 Other: (Specify) _____

Waste Type: Petroleum Contaminated Soil

Special Handling Instructions, if any: none

PROFILE / WASTE STREAM I.D. NUMBER: FOS 970910PH

This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to applicable state and federal law. The wastes were consigned to the transporter named. I certify that the foregoing is true and correct to the best of my knowledge.

Date: 9/17/97 Signature: Joseph Kubler Asst Site Manager
(Name and Title)

2. Hauler of Waste (must be filled in by hauler) EPA I.D. No.: PAD 146 714 878
(if applicable)

X COMPANY NAME: Horwith Trucks Inc

ADDRESS: Rt 329 Northampton PA 18067

Pick-up Date: 9/17/97 Truck No.: 277 Vehicle Lic. No.: AB5914Y-Pa

The above described waste was picked up and hauled by me to the disposal facility named below and was accepted. I certify under penalty of perjury that the foregoing is true and correct.

Jason T. Kay
(Signature of authorized agent and title)

3. Processing Facility: **R3 Technologies, Inc.**
7 Steel Road East
Morrisville, PA 19067-0847
Permit #301254

Waste subject to this manifest was delivered by the above hauler to this disposal facility and accepted on this date: 9/17/97

Mahesh Amin
(Signature of authorized agent and title)

PROCESSING FACILITY

Received: 09/05/97 09/15/97 09:37:51

REPORT TO: FOSTER & WHEELER
1 OXFORD VALLEY, SUITE 200
LANGHORNE, PA. 19047
215-702-4007 FAX: 4047
ATTEN J. GORGOL

PREPARED BY: TOXIKON CORPORATION
15 WIGGINS AVE
BEDFORD, MA 01730
ATTEN PAUL LEZBERG
PHONE (617)275-3330

CERTIFIED BY

CONTACT CHUCKC

CLIENT FOSTER SAMPLES 1
COMPANY FOSTER & WHEELER
FACILITY 1 OXFORD VALLEY, SUITE 200
LANGHORNE, PA. 19047

MA CERT # M-MA064: TRACE METALS, SULFATE,CYANIDE,RES. FREE CHLORINE, Ca, TOTAL ALK., TDS, pH, THMs, VOC, PEST.,NUTRIENTS. DEMAND. O&G, PHENOLICS, PCBs . CT DHS #PH-0563, NY #10778 FL HRS E87143, NJ DEP 59538, NC DNR286, SC 88002, NH 204091-C.

WORK ID D.O.# 0033, GALVERTON, NY
TAKEN 9/4/97
TRANS
TYPE SOIL
P.O. #
INVOICE under separate cover

VERIFIED BY:

SAMPLE IDENTIFICATION

01 CAL-33WC-01

TEST CODES and NAMES used on this workorder

CORO S	CORROSIVITY-SOIL
F PT	FLASH POINT
MEX HG	METALS, EXT. FOR MERCURY
MEX TS	METALS, TOTAL EXT., SOIL
PCB S	PCB - SW846-8080
RCRA	RCRA METALS (8)
RE CN	REACTIVE CYANIDE
RE S	REACTIVE SULFIDE
TOX	TOTAL HALOGEN
TPH IR	TPH BY IR

SAMPLE ID CAL-33WC-01 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 09/04/97 11:41:00 Category SOIL

CORO_S	F_PT	RE_CN	RE_S	TOX	TPH_IR
NON	>220	ND	ND	221	148
pH=8.1	F	mg/Kg DL=100	mg/Kg DL=100	mg/Kg DL=5.0	mg/Kg DL=40

SAMPLE ID CAL-33WC-01 FRACTION 01A TEST CODE PCB_S NAME PCB - SW846-8080
Date & Time Collected 09/04/97 11:41:00 Category SOIL

PCB in SOIL

CAS NUM.	RESULT	LIMIT	UNITS	ANALYTE
12674-11-2	ND	0.50	mg/Kg	Aroclor 1016
11104-28-2	ND	0.50	mg/Kg	Aroclor 1221
11141-16-5	ND	0.50	mg/Kg	Aroclor 1232
53469-21-9	ND	0.50	mg/Kg	Aroclor 1242
12672-29-6	ND	0.50	mg/Kg	Aroclor 1248
11097-69-1	ND	0.50	mg/Kg	Aroclor 1254
11096-82-5	ND	0.50	mg/Kg	Aroclor 1260

Notes and Definitions for this Report:

EXTRACTED: 09/08/97
DATE RUN: 09/09/97
ANALYST: HP3
INSTRUMENT: HP3
DIL. FACTOR: 1

ND = Not detected at detection limit

SAMPLE ID CAL-33WC-01 FRACTION 01A TEST CODE RCRA NAME RCRA METALS (8)
Date & Time Collected 09/04/97 11:41:00 Category SOIL

RCRA (8) METALS

	RESULT	DETECTION LIMIT
Silver	ND	0.36
Barium	ND	5.2
Cadmium	ND	0.26
Chromium	1.77	0.52
Lead	2.71	2.6
Arsenic	ND	5.2
Selenium	ND	13
Mercury	ND	0.086

Notes and Definitions for this Report:

EXTRACTED	09/10/97
DATE RUN	09/11/97
ANALYST	VR
INSTRUMENT	ICP
DIL. FACTOR	1
UNITS	mg/Kg
EXTR_METHOD	TOTAL

ND = not detected at detection limit

TEST CODE CORO_S NAME CORROSIVITY-SOIL

EPA METHOD: 9045 Corrosivity

Reference: Methods for Evaluating Solid Waste: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

TEST CODE F_PT NAME FLASH POINT

EPA Method: 1010

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical
Methods. EPA SW-846 (Third Edition) 1986.
Office of Solid Waste, USEPA.

TEST CODE MEX_HG NAME METALS, EXT. FOR MERCURY

REFERENCE:
EPA METHOD 245.1 Mercury. Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020.

EPA METHOD 7470.Mercury in Liquid Waste.
or
EPA METHOD 7471.Mercury in Solid or Semisolid Waste.
Test Methods for Evaluating Solid Waste:Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA>

TEST CODE MEX_TS NAME METALS, TOTAL EXT., SOIL

REFERENCE:
EPA METHOD 3050: Acid Digestion of Sediments, Sludges and Soils. Test Methods for Evaluating Solid Waste Physical/Chemical Methods. SW 846, 3rd Edition.

Analytical Method for ICP:6010A

TEST CODE PCB_S NAME PCB - SW846-8080

EPA Method: 8080

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical
Methods. EPA SW-846 (Third Edition) 1986.
Office of Solid Waste, USEPA.

TEST CODE RE_CN NAME REACTIVE CYANIDE

EPA METHOD 7.3.3.2

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

Note: Result of NR is Not Reactive.

TEST CODE RE_S NAME REACTIVE SULFIDE

EPA METHOD 7.3.4.1

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

Note: Sample Result of NR is Not Reactive.

TEST CODE TOX NAME TOTAL HALOGEN

EPA Method: 9020 Total Organic Halides (TOX)

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical
Methods. EPA SW-846 (Third Edition) 1986.

Soil samples are prepared using EPA-600/4-84-008.January 1984.

TEST CODE TPH IR NAME TPH BY IR

EPA METHOD: 418.1 for water sample.

Reference: Methods for Chemical Analysis of Water and Wastes.
EPA 600/4-79-020 (Revised, March 1983). EPA/EMSL, Cincinnati, OH.

EPA METHOD: 9071/9073

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

TOXIKON
15 Wiggins Ave., Bedford, MA 01730
Telephone: (617) 275-3330
Fax: (617) 275-7478

CHAIN OF CUSTODY RECORD

WORK ORDER #: 97-09-075
DUE DATE: 9-12-97

COMPANY: Foster Wheeler Environmental
ADDRESS: 2300 Lincoln Hwy East
One Oxford Valley Langhorne, PA
PHONE #: (215) 702-4000 FAX #: (215) 702-4045
P.O. #:
PROJECT MANAGER: J. Gorgol
PROJECT ID/LOCATION: D.O.# 0023 Calverton, NY

SAMPLE TYPE: 1. WASTEWATER 2. SOIL 3. SLUDGE 4. OIL 5. DRINKING WATER 6. WATER (GW/MW/SW) 7. OTHER (SPECIFY)

CONTAINER TYPE: P - PLASTIC G - GLASS V - VOA

ANALYSES

TOXIKON #	SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER SIZE	CONTAINER TYPE	CONTAINER #	SAMPLING DATE	SAMPLING TIME	PRESERVATIVE	TPH, EPA 418.1	TOX, SW846 3540A	PCB	IGNITABILITY, CORROSIVITY	REACTIVITY	TOTAL METALS	(8) RCRA	[illegible]	[illegible]				SPECIAL INSTRUCTIONS/ COMMENTS
1	CAL-33WC-01	2	[illegible]	G	8	9/4/97	11:41	—	X	X	X	X	X	X	X	X	X				

SAMPLED BY: [signature] DATE: 09-04-97 TIME: 11-41-AM

QUOTATION #:

RELINQUISHED BY: [signature] DATE: - - TIME: - -

RECEIVED BY: [signature] DATE: 9-5-97 TIME: 09-00

RELINQUISHED BY: DATE: - - TIME: - -

RECEIVED FOR LAB BY: DATE: - - TIME: - -

METHOD OF SHIPMENT

COOLER TEMPERATURE 5°

☐ RUSH 5 BUSINESS DAY TURN AROUND
☒ ROUTINE

Sample disposal information
Are there any other known or suspected contaminants in these samples other than those listed above?
Yes ____ No ____ If Yes, 1st Known

CASE NARRATIVE

Work Order: 9709075

All samples were analyzed within the method holding times.

No target compounds were detected in the method blanks.

RCRA METALS (8) ANALYSIS

The % RPD for Ag could not be calculated due to inconsistencies present in the sample chosen as the matrix spike. The matrix spike is not from this project and the sample results are not affected.

TOXIKON

GC PESTICIDES/PCB ANALYSIS SURROGATE RECOVERIES (METHOD 608/8080)

PROJECT # : 9709075
MATRIX : SOIL

SAMPLE ID	2,4,5,6-Tetrachloro-M-Xylene	Decachlorobiphenyl
METHOD BLANK	55	75
LCS9709017	60	78
MS9709103.49	42	84
MSD9709103.49	38	80
9709075.1	41	69

D - Indicates Diluted Out
INT - Indicates Interference

TOXIKON

GC PESTICIDIES/PCB ANALYSIS MS/MSD RECOVERIES
(METHOD 608/8080)

PROJECT : 9709075
MATRIX : SOIL

LABORATORY CONTROL SPIKE

COMPOUND	SPIKE ADDED (mg/L)	CONTROL SPIKE (mg/L)	CONTROL % RECOVERY	QC LIMITS
AROCHLOR 1260	5.0	4.12	82.4	46 - 124

MATRIX SPIKE SAMPLE : MS9709103.49
DILUTION : 1X

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONC. (mg/L)	MS CONC. (mg/L)	MS % RECOVERY
AROCHLOR 1260	5.0	ND	4.60	92

MATRIX SPIKE DUPLICATE : MSD9709103.49
DILUTION : 1X

					QC LIMITS	
COMPOUND	SPIKE ADDED (mg/L)	MSD CONC. (mg/L)	MSD % RECOVERY	% RPD	%RPD	RECOVERY
AROCHLOR 1260	5.0	5.00	100	8.3	< 15	46 - 124

D - Indicates Diluted Out
INT - Indicates Interference

TOXIKON

QC SUMMARY - METALS

PROJECT : 9709075
MATRIX : SOIL

SPIKE SAMPLE: 9708559.1
HG SPIKE SAMPLE: 9708559.1

ANALYTE	METHOD BLANK	MS (% REC)	LCS (% REC)	DUPLICATE (% RPD)
Ag	ND	78	92	* N/C
As	ND	89	99	0
Ba	ND	107	97	0
Cd	ND	86	102	0
Cr	ND	87	102	20
Pb	ND	81	102	23
Se	ND	87	99	0
Hg	ND	81	83	0

* = Not Calculable.

ACCEPTANCE CRITERIA

ANALYTE	METHOD BLANK	MS (% REC)	LCS (% REC)	DUPLICATE (% RPD)
Ag	BDL	65 - 125	80 - 120	<25
Hg	BDL	75 - 125	80 - 120	<25
All Others	BDL	80 - 120	80 - 120	<25

TOXIKON

QA/QC REPORT

WORK ORDER: 9709075
MATRIX: SOIL

PARAMETER	DUPLICATE PERCENT RPD	CONTROL LIMITS	CONTROL SPIKE PERCENT RECOVERY	MATRIX SPIKE PERCENT RECOVERY	CONTROL LIMITS
Corrosivity	0	< 25	NA	NA	80 - 120
Flashpoint	0	< 25	NA	NA	80 - 120
TPH_IR	20	< 25	97	NA	80 - 120
Reactive CN	NA	< 25	NA	NA	80 - 120
Reactive S	NA	< 25	NA	NA	80 - 120
TOX	NA	< 25	84	74	80 - 120