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NWS EARLE
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SITE INVESTIGATION REPORT SUMMARY OF FINDINGS FOR UNDERGROUND STORAGE
TANK C-53 NWS EARLE NJ
8/11/1995
ENVIRO-TECH, INC.

Item # (14)

Box 1

Closure Report for:
UST C-53

00000382

**SITE INVESTIGATION REPORT
SUMMARY OF FINDINGS FOR UST C-53**

**UNITED STATES NAVAL WEAPONS STATION - EARLE
Colts Neck, Monmouth County, New Jersey**

August 11, 1995

Prepared for:

**Tom Dunn
ROICC
NWS Earle
Colts Neck, New Jersey**

Prepared by:

**Enviro-Tech, Inc.
364 Broad Street
Keyport, New Jersey**

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UST # _____
Date Rec'd _____
TMS # _____
Staff _____

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0028
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner -
Commissioner

Karl J. Delane
Director

**UNDERGROUND STORAGE TANK
SITE ASSESSMENT SUMMARY**

*Under the provisions of the Underground Storage
of Hazardous Substances Act
in accordance with N.J.A.C. 7:14B*

This Summary form shall be used by all owners and operators of Underground Storage Tank Systems (USTS) who have either reported a release and are subject to the site assessment requirements of N.J.A.C. 7:14B-8.2 or who have closed USTS pursuant to N.J.A.C. 7:14B-9.1 et seq. and are subject to the site assessment requirements of N.J.A.C. 7:14B-9.2 and 9.3.

INSTRUCTIONS:

- Please print legibly or type.
- Fill in all applicable blanks. This form will require various attachments in order to complete the Summary. The technical guidance document, Interim Closure Requirements for UST's, explains the regulatory (and technical) requirements for closure and the Scope of Work, Investigation and Corrective Action Requirements for Discharges from Underground Storage Tanks and Piping Systems explains the regulatory (and technical) requirements for corrective action.
- Return one original of the form and all required attachments to the above address.
- Attach a scaled site diagram of the subject facility which shows the information specified in Item IV B of this form.
- Explain any "No" or "N/A" response on a separate sheet.

Date of Submission AUGUST 11, 1995

0151003
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

UNITED STATES NAVAL WEAPONS STATION - EARLE
COLTS NECK
County MORRIS
Telephone No. 908-866-2048

OWNER'S NAME AND ADDRESS, if different from above

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

- A. Was contamination found? ___ Yes No If Yes, Case No. _____
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)
- B. The substance(s) discharged was(were) N/A
- C. Have any vapor hazards been mitigated? ___ Yes ___ No N/A

III. DECOMMISSIONING OF TANK SYSTEMS

Closure Approval No. NONE ASSIGNED

The site assessment requirements associated with tank decommissioning are explained in the Technical Guidance Document, Interim Closure Requirements for UST's, Section V. A-D. Attach complete documentation of the methods used and the results obtained for each of the steps of tank decommissioning used. Please include a site map which shows the locations of all samples and borings, the location of all tanks and piping runs at the facility at the beginning of the tank closure operation and annotated to differentiate the status of all tanks and piping (e.g., removed, abandoned, temporarily closed, etc.). The same site map can be used to document other parts of the site assessment requirements, if it is properly and legibly annotated.

IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

Any evidence of contamination in excavated soil will require that the soil be classified as either Hazardous Waste or Non-Hazardous Waste. Please include all required documentation of compliance with the requirements for handling contaminated excavated soil (if any was present) as explained in the technical guidance documents for closure and corrective action. Describe amount of soil removed, its classification, and disposal location.

B. Scaled Site Diagrams

1. Scaled site diagrams must be attached which include the following information:

- a. North arrow and scale
- b. The locations of the ground water monitoring wells
- c. Location and depth of each soil sample and boring
- d. All major surface and sub-surface structures and utilities
- e. Approximate property boundaries
- f. All existing or closed underground storage tank systems, including appurtenant piping
- g. A cross-sectional view indicating depth of tank, stratigraphy and location of water table
- h. Locations of surface water bodies

C. Soil samples and borings (check appropriate answer)

1. Were soil samples taken from the excavation as prescribed? Yes ___ No ___ N/A
2. Were soil borings taken at the tank system closure site as prescribed? ___ Yes ___ No N/A
3. Attach the analytical results in tabular form and include the following information about each sample:
 - a. Customer sample number (keyed to the site map)
 - b. The depth of the soil sample
 - c. Soil boring logs
 - d. Method detection limit of the method used
 - e. QA/QC information as required

D. Ground Water Monitoring

1. Number of ground water monitoring wells installed NONE
2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each well:
 - a. Site diagram number for each well installed
 - b. Depth of ground water surface
 - c. Depth of screened interval
 - d. Method detection limit of the method used
 - e. Well logs
 - f. Well permit numbers
 - g. QA/QC Information as required

V. SOIL CONTAMINATION

- A. Was soil contamination found? Yes No
If "Yes", please answer Question B-E
If "No", please answer Question B
- B. The highest soil contamination still remaining in the ground has been determined to be:
1. N/A ppb total BTEX, N/A ppb total non-targeted VOC
 2. N/A ppb total B/N, N/A ppb total non-targeted B/N
 3. 34 ppm TPHC
 4. N/A ppb N/A (for non-petroleum substance)
- C. Remediation of free product contaminated soils
1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface Yes No
 2. Free product contaminated soils are suspected to exist below the water table Yes No
 3. Free product contaminated soils are suspected to exist off the property boundaries. Yes No
- D. Was the vertical and horizontal extent of contamination determined? Yes No N/A
- E. Does soil contamination intersect ground water? Yes No N/A

VI. GROUND WATER CONTAMINATION N/A

- A. Was ground water contamination found? Yes No
If "Yes", please answer Questions B-G.
If "No", please answer only Question B.
- B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be:
1. _____ ppb total BTEX, _____ ppb total non-targeted VOC
 2. _____ ppb total B/N, _____ ppb total non-targeted B/N
 3. _____ ppb total MTBE, _____ ppb total TBA
 4. _____ ppb _____ (for non-petroleum substance)
 5. greatest thickness of separate phase product found _____
 6. separate phase product has been delineated Yes No N/A
- C. Result(s) of well search
1. A well search (including a review of manual well records) indicates that private, municipal or commercial wells do exist within the distances specified in the Scope of Work. Yes No N/A
 2. The number of these wells identified is _____.

D. Proximity of wells and contaminant plume

1. The shallowest depth of any well noted in the well search which may be in the horizontal or vertical potential path(s) of the contaminant plume(s) is _____ feet below grade (consideration has been given for the effects of pumping, subsurface structures, etc. on the direction(s) of contaminant migration). This well is _____ feet from the source and its screening begins at a depth of _____ feet.
2. The shallowest depth to the top of the well screen for any well in the potential path of the plume(s) (as described in D1 above) is _____ feet below grade. This well is located _____ feet from the source.
3. The closest horizontal distance of a private, commercial or municipal well in the potential path of the plume (as determined in D1) is _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____ feet.

E. A plan for separate phase product recovery has been included. Yes No N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well.
 Yes No N/A

G. Delineation of contamination

1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. Yes No
2. The plume is suspected to continue off the property at concentrations greater than MCLs.
 Yes No
3. Off property access (circle one): is being sought has been approved has been denied

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:14B-8.3(b) & 9.5(a)3]

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C.7:14B-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:14B-8.3(a) & 9.2(b)2, must supply the name of the certifying organization and certification number.

"I certify under penalty of law that the information provided in this document is true, accurate, and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-8 and 9. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) A. LEE FANKHAUSER SIGNATURE 

COMPANY NAME ENVIRO-TECH, INC. DATE 8/11/95
(Preparer of Site Assessment Plan)

CERTIFYING ORGANIZATION STATE OF NEW JERSEY CERTIFICATION NUMBER 0010953

VIII. TANK DECOMMISSIONING CERTIFICATION [person performing tank decommissioning portion of closure plan - N.J.A.C. 7:14B-9.5(a)4]

"I certify under penalty of law that tank decommissioning activities were performed in compliance with N.J.A.C. 7:14B-9.2(b)3. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) STEVEN PINISYI SIGNATURE [Signature]
COMPANY NAME CENTRAL Pump & Tank DATE 9/28/95
(Performer of Tank Decommissioning)

IX. CERTIFICATIONS BY THE RESPONSIBLE PARTY(IES) OF THE FACILITY

A. The following certification shall be signed by the highest ranking individual with overall responsibility for that facility [N.J.A.C. 7:14B-2.3(c)1].

"I certify under penalty of law that the information provided in this document is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____
COMPANY NAME _____ DATE _____

B. The following certification shall be signed as follows [according to the requirements of N.J.A.C. 7:14B-2.3(C)2]:

1. For a corporation, by a principal executive officer of at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency by either the principal executive officer or ranking elected official.
4. In cases where the highest ranking corporate partnership, governmental officer or official at the facility as required in A above is the same person as the official required to certify in B, only the certification in A need to be made. In all other cases, the certifications of A and B shall be made.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____
COMPANY NAME _____ DATE _____

TABLE OF CONTENTS

	<u>Page:</u>
1.0 INTRODUCTION	1
2.0 SITE INVESTIGATIONS	1
2.1 UST Decommissioning Activities	1
2.2 Soil Investigation	2
3.0 RESULTS	3
3.1 Chemical Analysis of Soil	3
4.0 CONCLUSIONS	4
5.0 RECOMMENDATIONS	4

LIST OF FIGURES:

1. SITE LOCATION PLAN
2. SITE PLAN
3. POST-EXCAVATION SOIL SAMPLE LOCATION PLOT

LIST OF TABLES:

1. SUMMARY OF FID MEASUREMENTS WITHIN UST EXCAVATION
2. SUMMARY OF TPH ANALYTICAL DATA FOR #2 HEATING OIL UST POST-EXCAVATION SOIL SAMPLES

APPENDICES:

- I. UST CLOSURE APPROVAL FOR C-53
- II. RESIDUAL PRODUCT AND BOTTOM SLUDGE DISPOSAL MANIFESTS
- III. UST DISPOSAL MANIFEST
- IV. CLEAN FILL CERTIFICATION
- V. LABORATORY ANALYTICAL PACKAGE

ATTACHMENT:

UNDERGROUND STORAGE TANK SITE ASSESSMENT SUMMARY

1.0 INTRODUCTION

United States Naval Weapons Station Earle (Earle) is a United States Navy ammunition depot located in Monmouth County, New Jersey. Figure 1 is an annotated United States Geological Survey 7.5 minute series (Marlboro and Long Branch Quadrangles) map showing site location, local topography, drainage, and other features. Figure 2 is a site plan showing site layout, building location, underground storage tank (UST) location, UST designation and other site features.

In light of the New Jersey Department of Environmental Protection's (NJDEP's) deadlines regarding UST upgrades, Earle decided to close a single 3,000 gallon #2 heating oil UST (designated C-53) at their facility (UST Registration #0151003).

In April, 1995, Enviro-Tech, Inc. (ETI) of Keyport, New Jersey (NJDEP Closure/Subsurface Evaluation Certification #1300239) was retained by Central Pump & Tank (CP&T) of Freehold, New Jersey (a subcontractor of Tri-State Construction, Inc. of Fort Washington, Pennsylvania), the UST removal contractors retained by Earle, to complete the NJDEP's site investigation requirements for the closure of UST C-53. ETI's activities at Earle included the preparation and submission of the UST Closure Plan Approval Application to the NJDEP, the completion of a Site Investigation in accordance with N.J.A.C. 7:26E-3.0, and the preparation and submission of a Site Investigation Report (SIR) to the NJDEP which would satisfy the requirements of the NJDEP's *Technical Requirements for Site Remediation*.

On April 7, 1995, ETI submitted the UST Closure Approval Application to Earle for their review and submission to the NJDEP. Subsequent to Earle's submission of the application to the NJDEP, the facility was issued a UST Closure Approval for the closure of UST C-53. A copy of the UST Closure Approval is included in Appendix I.

2.0. SITE INVESTIGATIONS

2.1 UST Decommissioning Activities

UST decommissioning and removal activities were conducted on June 28, 1995 by CP&T. UST decommissioning activities included pumping the UST free of residual product, excavating overlying soils to expose the top of the UST, cutting off the top of the UST to allow access to the tank's interior, and cleaning the interior of the UST with a biodegradable degreaser. A total of approximately 100 gallons of residual product and bottom sludge was removed from the single 3,000 gallon UST present at the facility by L&L Oil Company of Old Bridge, New Jersey as New Jersey hazardous waste X722 "Waste oil and bottom sludge generated from tank cleanouts from residential/ commercial fuel oil tanks". The manifest for the residual product and bottom sludge disposal is included in Appendix II.

During inspection of the UST, no corrosion holes or pitting were observed within the UST by ETI and CP&T personnel. Following removal, the UST was trucked from the facility to Neptune Iron & Metal Recycling Co., Inc. in Neptune, New Jersey for disposal. A copy of the manifest received by CP&T for the disposal of the single steel UST is included in Appendix III.

2.2 Soil Investigation

On June 28, 1995, ETI personnel (A. Lee Fankhauser-NJDEP License No.0010953) was on-site to locate and collect post-excavation soil samples from below the UST in accordance with current NJDEP requirements.

During the removal/closure of the UST at the Earle facility, soils removed from above and from the sides of the UST were scanned for "free product contamination" in the field using a Heath Consultants, Inc. *Detecto-Pack III* flame ionization detector (FID) and/or one or more of the following methods:

Method 1 - Soil/Water Agitation

A clear jar was partially filled with the soil/fill sample. Sufficient water was added to saturate the soil and bring the water level to about 1 cm above the soil surface. The jar was sealed, and the sample was agitated by shaking. The jar was then opened to check for the presence of a sheen on the water surface. If a sheen was present, the soils were contaminated by free product. If no sheen was present, the soils were either contaminated with dissolved product or were free of contamination. The presence of a sheen was checked under various lighting conditions and backgrounds since these factors affect the visibility of the sheen.

Method 2 - Field Sorption Method

This method was used to sorb free product from contaminated soils. A sample of the soil/fill was pressed against a brown paper bag for about 10 seconds. Soils contaminated by free product resulted in a "greasy" staining of the bag. The stain is more pronounced with fuel oils than for gasoline.

The FID was calibrated prior to use with 100 parts per million (ppm) methane gas.

During the removal of soil from the excavation created for the removal of UST C-53, no potentially contaminated soils were identified by ETI personnel. Soil removed from the UST excavation was used as backfill following the completion of site investigation activities. Soils underlying the surface in the vicinity of UST C-53 consisted of the following:

- 0.0' - 0.5' Brown sandy LOAM;
- 0.5' - 5.0' Tan-brown sandy, gravelly CLAY;
- 5.0' - 6.0' Orange-tan CLAY (tight).

Following the removal of UST C-53, a total of five (5) post-excavation soil samples (PE-1 through PE-5) were collected from the base of the excavation, from a depth of approximately six (6) feet below grade.

Post-excavation soil samples collected from UST C-53's excavation were submitted to Veritech Environmental and Analytical Services (Veritech), NJDEP Certification #14622, for analysis of total petroleum hydrocarbons (TPH), volatile organic compounds plus ten (10) unknown peaks (VO+10) and total xylene. The TPH analyses were to be completed by the laboratory first. If the TPH results indicated a TPH concentration greater than 1,000 ppm in any of the post-excavation soil samples collected from the single UST excavation, 25% of those samples would be analyzed for the additional parameters VO+10 and total xylene. If the results showed no TPH concentration greater than 1,000 ppm, no additional analyses were to be required.

Quality assurance/quality control (QA/QC) samples for this sampling event included a field blank sample. The field blank was prepared in the field, on the day of the post-excavation soil sampling event, by pouring laboratory de-ionized water over pre-cleaned soil sampling tools and into laboratory supplied sample collection bottles. The field blank sample then accompanied the post-excavation soil samples to the laboratory for analysis.

A chain of custody accompanied post-excavation soil samples from the time of collection to the time they were received by the appointed lab for analyses.

The locations and designations of post-excavation soil samples collected from the excavation created for the removal of UST C-53 are included in Figure 3. FID measurements collected prior to the collection of post-excavation soil samples are included in Table 1.

Following the collection of post-excavation soil samples from the base of UST C-53's excavation, the excavation was backfilled to grade using certified clean fill material. A letter certifying the clean fill is included in Appendix IV.

3.0 RESULTS

3.1 Chemical Analysis of Soil

A total of five (5) post-excavation soil samples were collected from the base of the UST excavation (post-excavation soil sample locations PE-1 through PE-5) from a depth of approximately six (6) feet below grade. The analytical results of the post-excavation soil samples

collected from these sample locations indicated that post-excavation soil sample PE-1 contained a non-detectable (ND) TPH concentration, post-excavation soil sample PE-2 contained a ND TPH concentration, post-excavation soil sample PE-3 contained a ND TPH concentration, post-excavation soil sample PE-4 contained a TPH concentration of 34 ppm, and post-excavation soil sample PE-5 contained a TPH concentration of 25 ppm.

As no post-excavation soil sample resulted in a TPH concentration greater than 1,000 ppm, no additional sample parameters for the soil samples were required. The field blank sample was also not required.

Results of the post-excavation soil sampling program for UST C-53 are included in Table 2. The laboratory analytical package for UST C-53's Site Investigation is included in Appendix V.

4.0 CONCLUSIONS

After reviewing the data collected during Earle's Site Investigation, the following conclusions may be made:

- A single formerly existing 3,000 gallon #2 heating oil UST at the Earle facility was removed on June 28, 1995;
- Upon inspection, the UST was found to be in good condition with no apparent corrosion holes or pitting;
- No indications of a discharge were observed in the soils underlying the UST;
- As the soil removed from the excavation resulted in no FID readings greater than 5 ppm, the excavated soil was used as backfill within the excavation;
- No ground water was observed within the UST excavation during soil removal and post-excavation soil sample collection;
- None of the five (5) post-excavation soil samples collected from the base of the UST excavation resulted in a TPH concentration of greater than 34 ppm;
- As no post-excavation soil sample resulted in a TPH concentration greater than 1,000 ppm, no additional analyses were required.

5.0 RECOMMENDATIONS

Following a review of the analytical data collected during ETI's Site Investigation at UST C-53, it is ETI's opinion that no further action should be required of Earle for the removal/closure of this UST.

The Underground Storage Tank Site Assessment Summary is attached with this report.

FIGURES

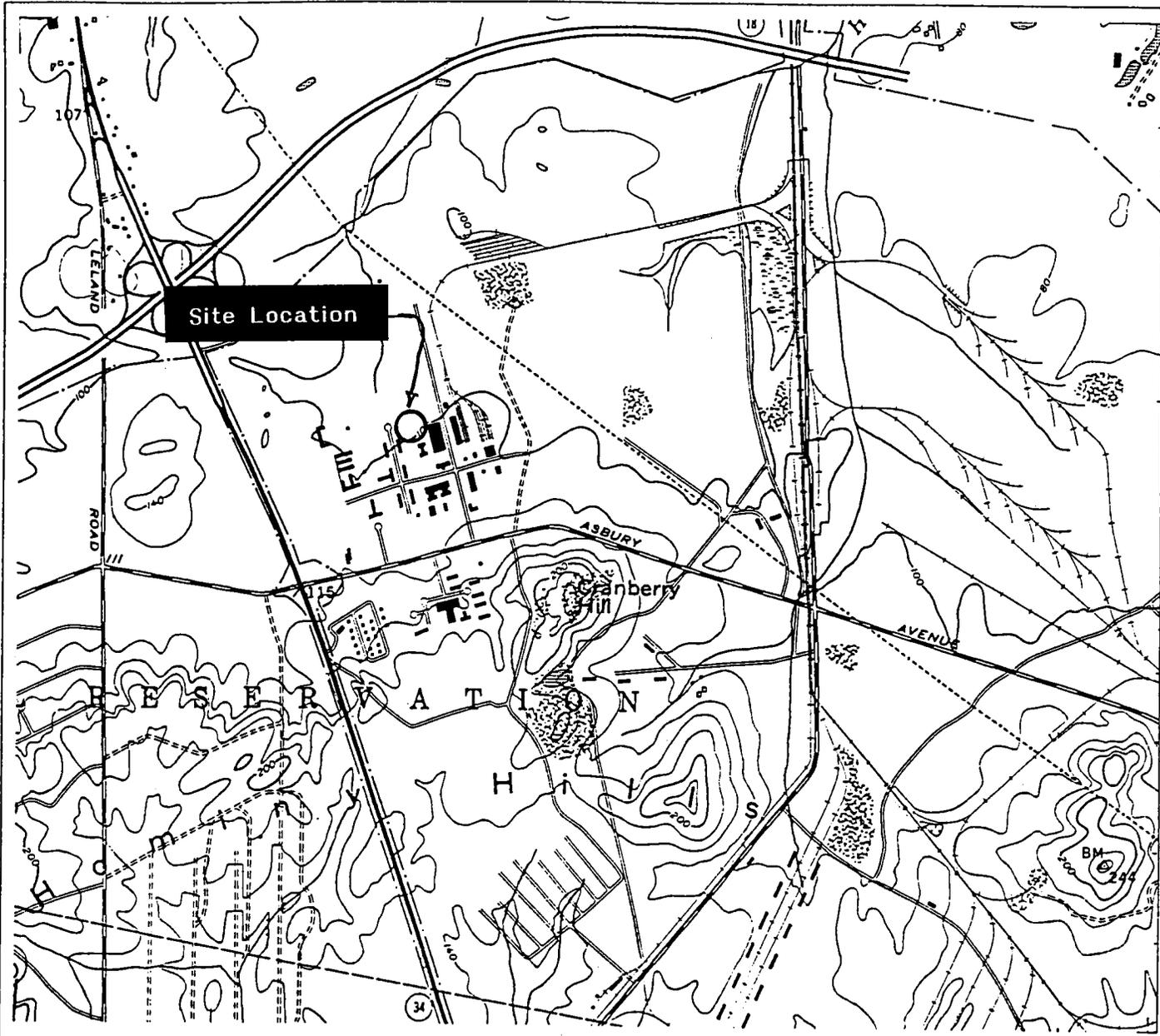
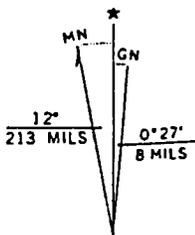
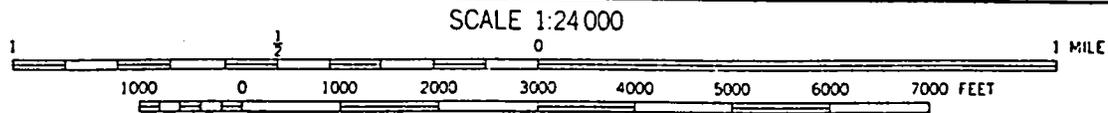


Figure 1
 SITE LOCATION PLOT
 United States Naval Weapons Station - Earle
 Colts Neck, New Jersey



Enviro-Tech Inc.

364 Broad Street
 Keyport, NJ 07735-1619

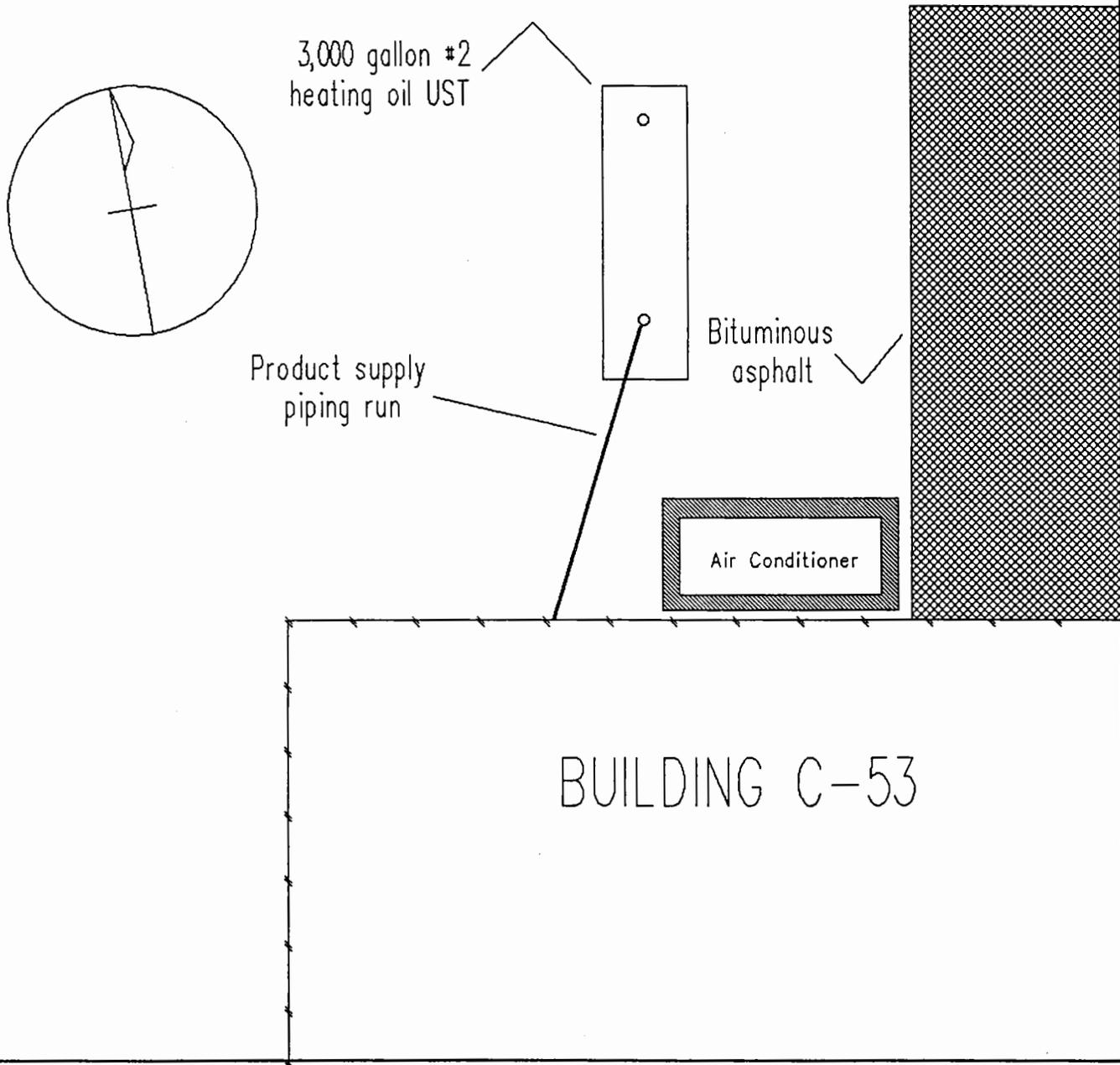


Figure 2

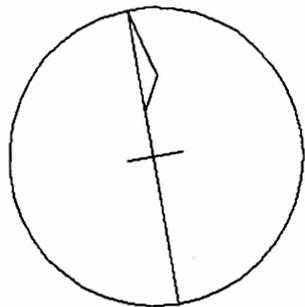
SITE PLAN

United States Naval Weapons Station - Earle

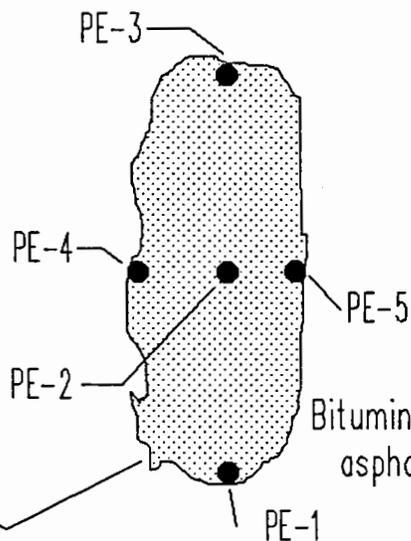
UST C-53

Colts Neck, Monmouth County, New Jersey

Scale: 1" = 10'



Approximate limit
of UST excavation.



Bituminous
asphalt

Air Conditioner

BUILDING C-53

Figure 3
Post-excavation Soil Sample Location Plot
United States Naval Weapons Station - Earle
UST C-53
Colts Neck, Monmouth County, New Jersey
Scale: 1" = 10'

TABLES

Table 1

SUMMARY OF FID MEASUREMENTS
United States Naval Weapons Station - Earle
Colts Neck, Monmouth County, New Jersey

Soil/Vapor Sample location		Sample Depth (ft)		FID Units (ppm)
PE-1	-	6	-	0.0
PE-2	-	6	-	0.0
PE-3	-	6	-	0.0
PE-4	-	6	-	0.0
PE-5	-	6	-	0.0

TABLE 2

SUMMARY OF TPH ANALYTICAL RESULTS FOR #2 HEATING OIL
UST POST-EXCAVATION SOIL SAMPLES

United States Naval Weapons Station Earle
Monmouth County, New Jersey

Underground Storage Tank C-53

(June 28, 1995)

<u>SAMPLE #</u>	<u>TPH RESULT (ppm)</u>
PE-1	ND
PE-2	ND
PE-3	ND
PE-4	34
PE-5	25

Notes: ND = Compound was not detected.

APPENDIX I

UST CLOSURE APPROVAL FOR C-53

UNDERGROUND STORAGE TANK SYSTEM CLOSURE APPROVAL

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF ** CASE MANAGEMENT
CN-028, TRENTON, NJ 08625-0028

UST # 0151003

Naval Weapons Station Earle
Monmouth County
New Jersey

THE ABOVE LISTED FACILITY IS HEREBY GRANTED APPROVAL TO PERFORM THE FOLLOWING ACTIVITY IN ACCORDANCE WITH N.J.A.C.7:14R-1 ET SEQ.:

REMOVAL OF: One (1) 5,000 gallon, #2 heating oil Underground Storage Tank (UST), designated C-38. One (1) 1,500 gallon #2 heating oil UST, designated R-1. One (1) 2,000 gallon, #2 heating oil UST, designated R-12 and one (1) 3,000 gallon #2 heating oil UST, designated C-53. Removal shall include all associated piping and appurtenances.

SITE ASSESSMENT: Samples shall be collected every five (5) feet along the centerline of each tank and one (1) every 15 feet along the appurtenant piping. Two (2) additional samples shall be taken per tank and shall be biased to the areas of highest field screened readings. Samples will be analyzed for TPHC. Analyze 25% of the samples over 1,000 ppm TPHC for VO+10. Analysis shall be biased towards the samples with the highest THFC concentrations.

ON-SITE MANAGER:
A. Lee Fankhauser

TELEPHONE:
(908)-566-2277

EFFECTIVE DATE: 5/27/95

THIS FORM MUST BE DISPLAYED AT THE SITE DURING THE APPROVED ACTIVITY AND MUST BE MADE AVAILABLE FOR INSPECTIONS AT ALL TIMES.

ROMAN S. LUZECKI, SECTION CHIEF,
BUREAU OF FEDERAL CASE MANAGEMENT

OPTIONAL FORM 09 (7-90)		# of pages ▶ 1	
FAX TRANSMITTAL			
To	LEE. F.	From	T.E. DUNN
Dept./Agency	ENVIRO-TERA	Phone #	866 2048
Fax #	566-2505	Fax #	
NSN 7540-01-817-7368		5008-101 GENERAL SERVICES ADMINISTRATION	
888 9293			

APPENDIX II

RESIDUAL PRODUCT AND BOTTOM SLUDGE DISPOSAL MANIFEST



RD1 Box 5A
Old Bridge, N.J. 08857
(808) 721-0900
Fax: (908) 721-0231

STANDARD
COLLECTION
ORDER FORM

102860

GENERATOR/LOCATION		OFFICE USE ONLY		BILL TO (IF DIFFERENT FROM LOCATION)	
NAME		NAME		NAME	
ADDRESS		ADDRESS		ADDRESS	
CITY		CITY		CITY	
STATE		STATE		STATE	
ZIP		ZIP		ZIP	
PHONE NUMBER		PHONE NUMBER		PHONE NUMBER	
PURCHASE ORDER NUMBER		PURCHASE ORDER NUMBER		PURCHASE ORDER NUMBER	
STATE ID NO.		STATE ID NO.		STATE ID NO.	
USA EPA ID NO. (IF APPLICABLE)		USA EPA ID NO. (IF APPLICABLE)		USA EPA ID NO. (IF APPLICABLE)	
MANIFEST NUMBER		MANIFEST NUMBER		MANIFEST NUMBER	

SHIPPING INFORMATION

This is to certify that the below described materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

QTY	TYPE	UNIT	US DOT Description (including Proper Shipping Name, Hazard Class and ID Number)	SALES REPRESENTATIVE

SERVICE SECTION

SALES CODE	DESCRIPTION	WASTE CODE	QUANTITY	UNIT OF MEASURE	PRICE	TAX	LINE TOTAL
40500	USED OIL REMOVAL		2140	GALS			
40501	OIL WATER DISPOSAL						
40502	SLUDGE DISPOSAL	222	100	GALS			
41000	NON HAZARDOUS DISPOSAL		653	GALS			
41001	RCRA WASTE DISPOSAL						
41500	VAC TRUCK & OPERATOR	800-1200					
41501	DRUM DISPOSAL						
41502	SEPARATOR CLEANING						
41503	QA/QC ANALYTICAL TESTING						
41504	TANK CLEANING						
41605	CONFINED SPACE ENTRY						
42000	MANIFEST PROCESSING FEE						
42001	DEXSIL TEST KIT						
TOTAL							

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION.

INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 2% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION INCLUDING REASONABLE ATTORNEY'S FEES.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261. GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is in accordance with the N.J.A.C. 7:26.12.1 et seq. LORCO has the required permits to accept the above described waste.

Doris J. Swartzwell EP3
Print Name Title

Doris Swartzwell 6-27-95
Signature Date

GENERATOR/CUSTOMER

SMALL QUANTITY GENERATOR CERTIFICATION

I certify that this generator generates less than 100 kilograms (approximately 220 pounds) or 30 gallons of hazardous waste per month, as defined in 40 C.F.R. 261 and does not accumulate more than 1,000 kilograms of such waste during the month.

GENERATOR SIGNATURE

LARGE QUANTITY GENERATOR CERTIFICATION

DEXSIL CDT TEST RESULTS

< 1006 PPM

PAYMENT RECEIVED SECTION

CASH TOTAL RECEIVED

CHECK NUMBER

PAYMENT MADE SECTION

PAYMENT METHOD PAYMENT AMOUNT

CASH CHECK

RECEIVED BY

CUSTOMER'S SIGNATURE

In accordance with 40 CFR 266 § 43(b) LORCO has notified the US EPA of its location and used oil management activities.

Gary L. Bell
Print Name

Gary L. Bell 6-27-95
Signature Date

LORCO REPRESENTATIVE

APPENDIX III
UST DISPOSAL MANIFEST

Neptune Iron & Metal Recycling Co., Inc.

Ferrous & Non-Ferrous Metals - Container Service

401 MEMORIAL DRIVE at 11th Avenue

NEPTUNE, N.J. 07763

(908) 774-4100

C-53

DATE

8/10/95

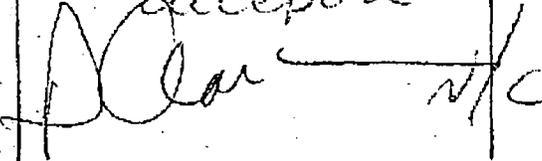
SOLD TO

Central Pump & Tank

ADDRESS

C-53 - 401

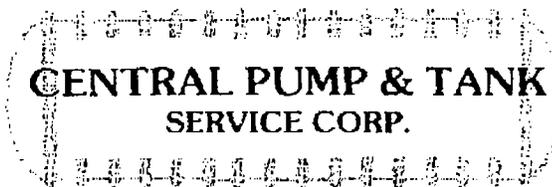
PHONE

QUANTITY	DESCRIPTION	PRICE
①	4000 Gallon metal tank	
cleared & accepted		
		

REFUND POLICY: Refunds will only be given if we cannot replace wrong or defective part.
Deposits not refundable. Electrical items not returnable.

01744

APPENDIX IV
CLEAN FILL CERTIFICATION



August 8, 1995

Clean Fill Certification
For: Earle Naval Weapons Station
Highway 34
Colts Neck, NJ
Building C-53

To Whom It May Concern,

In regards to the fill material that was used at the above referenced location the fill was purchased from Millington Quarry and to the best of our knowledge is clean material.

Sincerely,



Central Pump & Tank

APPENDIX V
LABORATORY ANALYTICAL REPORT



veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

**ENVIRO-TECH, INC.
NJDEP REDUCED PKG**

PROJECT: EARLE AMMUNITION

LAB # AA31522-AA31527

**NJDEP Cert. #14622, CT Cert. # PH0671
PADER Cert. #68-463, MA Cert. #NJ386
NYDOH Cert. # 11408**

TABLE OF CONTENTS

<u>VERITECH LABORATORY RESULTS</u>	<u>PAGE NOS.</u>
Sample Key	1
Chains Of Custody	2
Condition Upon Receipt Forms	3
Internal Chain Of Custody Records	4
Laboratory Chronicles	5-10
Nonconformance Summaries	11
Method References	12-14
Sample Results & Sample Data Package	15-20
Inorganic Method Blank Summary	21
Inorganic Spike Sample Recovery Data	22-23
Inorganic Duplicate Sample Data	24
Inorganic LOTUS Spreadsheets	25-27
TPH IR Spectra	28-38

SAMPLE KEY

Enviro-Tech No.

VERITECH No.

PE-1

AA31522

PE-2

AA31523

PE-3

AA31524

PE-4

AA31525

PE-5

AA31526

FIELD BLANK

AA31527

CHAIN-OF-CUSTODY RECORD

SAMPLER: (Signature) Date Shipped _____ Carrier _____
Phone 908-888-1300 Airbill No. _____ Cooler No. _____

SHIP TO:

VERITECH

SEND RESULTS TO:

Client Name _____
Company ENVIRO-TECH, INC.
Address 364 BROAD ST.
KEYPORT, NJ
Phone 908-888-1300

ATTENTION: _____

PROJECT NAME EARLE NAVAL WEAPONS PROJECT NO. _____ P.O. NO. _____

Relinquished by: (Signature) Received by: (Signature) Date 6/28/95 Military Time 0905

Relinquished by: (Signature) Received by: (Signature) Date 6/28/95 Military Time 1020

Relinquished by: (Signature) Received at lab by: (Signature) Date _____ Military Time _____

Relinquished from lab by: (Signature) Received by: (Signature) Date _____ Military Time _____

ANALYSIS REQUEST

Sample ID Number	Sample Description	Date/Time Sampled	Analysis Requested	Sample Condition Upon Receipt
2 PE-1	Soil	6/28/95 11:35	TPH*, VOTIO, TOTAL XYLENE	Cond AA3152
2 PE-2	↓	11:40	↓	3152
2 PE-3	↓	11:45	↓	3152
2 PE-4	↓	11:50	↓	3152
2 PE-5	↓	11:55	↓	3152
2 FIELD BLANK	AQUEOUS	11:35	VOTIO, TOTAL XYLENE**	↓ 3152
— 24 Hour Turnaround on TPH please —				

Special Instructions/Comments:

* Please analyze soil samples for TPH first. If results show a concentration > 1,000 ppm, please contact E&I office for authorization of additional parameters.

** PLEASE ANALYZE FIELD BLANK ONLY IF SOIL SAMPLES REQUIRE VOTIO ANALYSIS.

NOTE: UNUSED PORTIONS OF NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Expected

Analytical

Immediate

T.A.T.'s:

_____ Attention (200% surcharge)

_____ RUSH (50-100% surcharge)

_____ Standard



veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

CONDITION UPON RECEIPT FORM

Date Received 6/29/95 Filed By A-S
 Client ENVIRO Lab Sample No(s) _____

CONDITION (Check Applicable Items)

- _____ (1) Not enough sample sent for analysis
- _____ (2) Sample(s) received broken (Specify) _____
 Sample(s) received leaking (Specify) _____
- _____ (3) Illegible sample number(s) or label(s) missing from bottle(s)
 (Specify) _____
- _____ (4) Numbers on sample(s) do not correspond to information on the
 chain of custody record
- _____ (5) No chain of custody record submitted with the samples
- _____ (6) Samples received without a cooler
- _____ (7) Custody seals missing or broken (circle one)
- _____ (8) Holding time(s) exceeded upon receipt
 (List parameters _____)
- _____ (9) Samples received without proper refrigeration when deemed
 necessary
- _____ (10) Samples received without proper preservation (see Preservation
 Form for actual pH readings)
- (11) Cooler Temperature Upon Receipt (Specify) 30°
- _____ (12) Other (Specify) _____

47 Corey Avenue • Butler, NJ 07405

Phone: (201) 492-8744

Fax: (201) 492-1815

INTERNAL CHAIN OF CUSTODY RECORD

PARAMETER	SAMPLE No.	REMOVED FROM:				RETURNED TO:			
		COLDBOX No.	DATE	TIME (A/P)	SIGNATURE	COLDBOX No.	DATE	TIME (A/P)	SIGNATURE
TECP	CSW 2, 3, 4 CSW 2, 3, 4	sample Frig	6/27	16:00	J. Fajin	sample Frig	6/27	16:10	J. Fajin
CL-	31296	3	6/27	16:05	J. Fajin	3	6/27	18:15	J. Fajin
YASAKH	51438, 39	3	6/27	16:15	J. Fajin	3	6/27	18:35	J. Fajin
% Solids	30869, 31442, 31443 31444, 31445, 31446 31447, 31448, 31449 31450	sample Frig	6/27	08:15	J. Fajin	sample Frig	6/28	09:15	J. Fajin
BNA	31466	3	6/28/95	10:01	J. Fajin	DEPLETED	6/28/95	10:03	J. Fajin
% Solids	31401	3	6/28/95	11:10	J. Fajin	3	6/28/95	11:15	J. Fajin
TD-WJ	31337-354	3	6-28-95	11:35	G. Scott	3	6-28-95	11:55	G. Scott
GC/MS	31411 ~ 31426	3	6/28/95	11:43	J. Fajin	3	6/28/95	14:33	J. Fajin
TPH-GC	31503, 504, 505	3	6/28/95	14:24	J. Fajin	3	6/28/95	14:33	J. Fajin
Tor Sulf	31300	3	6/28/95	15:40	J. Fajin	3	6-29-95	08:27	G. Scott
TD-WJ	31337-354	3	6-29-95	07:58	G. Scott	3	6-29-95	08:27	G. Scott
BN	31397-399, 31400-401	3	6-29-95	8:45	J. Fajin	3	6-29-95	8:59	J. Fajin
BN	31408, 31447-43	3	6-29-95	8:45	J. Fajin	3	6-29-95	8:59	J. Fajin
TEN	31467	3	6-29-95	10:40	J. Fajin	3	6-29-95	15:30	J. Fajin
% Solids	31456-57, 31506-07	1				1			
TD-Soil	31405	met. Table	6-29-95	10:40	G. Scott	met. Table	6-29-95	10:55	G. Scott
% Solid	31503 - 05	3	6/29/95	10:40	J. Fajin	3	6-29-95	18:40	J. Fajin
TPH	31506, 31507	3	6/29/95	12:25	J. Fajin	3			
% Solid	31517	1				1			
CI-	31296	3	6/29	12:40	J. Fajin	DEPLETED			
TPH % Solid	JK 31522 FE 2 FE 3 FE 4 6/28 Entire Bch	3	6/29	12:50	J. Fajin	3			
oxidizer	31356	3	6/29	15:20	J. Fajin	3			
GC/MS	31427 ~ 31433, 31444 31436 ~ 31439	3	6/29	16:11	J. Fajin	3			

* 000004

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 07-15-1995 Time: 05:22:17

Sample I.D. AA31522
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/28/95
Date submitted: 06/29/95
Due date: 07/12/95
Specification checking: off
Descript: PE-1 SOIL
COL.DATE: 6/28/95

Analysis	Result	Unit	Finished	Anl
-----	-----	-----	-----	-----
%SOLIDS	70	PERCENT	06/29/95	JK
TPH-SOIL	Not detected	mg/kg dry wt	06/29/95	JK
TPH EXTRACTION	Completed		06/29/95	JK

End of progress report on sample: AA31522

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 07-15-1995 Time: 05:22:18

Sample I.D. AA31523
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/28/95
Date submitted: 06/29/95
Due date: 07/12/95
Specification checking: off
Descript: PE-2 SOIL
COL.DATE: 6/28/95

Analysis	Result	Unit	Finished	Anl
-----	-----	-----	-----	---
%SOLIDS	97	PERCENT	06/29/95	JK
TPH-SOIL	Not detected	mg/kg dry wt	06/29/95	JK
TPH EXTRACTION	Completed		06/29/95	JK

End of progress report on sample: AA31523

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 07-15-1995 Time: 05:22:18

Sample I.D. AA31524
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/28/95
Date submitted: 06/29/95
Due date: 07/12/95
Specification checking: off
Descript: PE-3 SOIL

COL.DATE: 6/28/95

Analysis	Result	Unit	Finished An:
-----	-----	-----	-----
%SOLIDS	85	PERCENT	06/29/95 JK
TPH-SOIL	Not detected	mg/kg dry wt	06/29/95 JK
TPH EXTRACTION	Completed		06/29/95 JK

End of progress report on sample: AA31524

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 07-15-1995 Time: 05:22:19

Sample I.D. AA31525
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/28/95
Date submitted: 06/29/95
Due date: 07/12/95
Specification checking: off
Descript: PE-4 SOIL
COL.DATE: 6/28/95

Analysis	Result	Unit	Finished	Anl
-----	-----	-----	-----	-----
%SOLIDS	74	PERCENT	06/29/95	JK
TPH-SOIL	34	mg/kg dry wt	06/29/95	JK
TPH EXTRACTION	Completed		06/29/95	JK

End of progress report on sample: AA31525

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 07-15-1995 Time: 05:22:19

Sample I.D. AA31526
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/28/95
Date submitted: 06/29/95
Due date: 07/12/95
Specification checking: off
Descript: PE-5 SOIL
COL.DATE: 6/28/95

Analysis	Result	Unit	Finished	Anl
-----	-----	-----	-----	---
%SOLIDS	94	PERCENT	06/29/95	JK
TPH-SOIL	25	mg/kg dry wt	06/29/95	JK
TPH EXTRACTION	Completed		06/29/95	JK

End of progress report on sample: AA31526

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 07-15-1995 Time: 05:22:20

Sample I.D. AA31527
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/28/95
Date submitted: 06/29/95
Due date: 07/12/95
Specification checking: off
Descript: FIELD BLANK
COL.DATE: 6/28/95

Analysis	Result	Unit	Finished Anl
pH (VOA VIALS)	<2	UNITS	07/06/95 AS

End of progress report on sample: AA31527

METHOD REFERENCES

Volatile Organics (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 8240.

Volatile Organics (Waters): *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 624.

TCLP Volatile Organics: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311 and 8240.

Volatile Organics (Drinking Waters): *Methods for the Determination of Organic Compounds in Drinking Water*, EPA/600/4-88/039, Revision 3, 1989, Method 524.2.

Semivolatile Organics (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8270.

Semivolatile Organics (Waters): *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 625.

TCLP Semivolatile Organics: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311, 3510 and 8270.

Pesticides (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8080.

Pesticides (Waters): *Federal Register*, 40 CFR Part 136, October 26, 1984, Method 608.

TCLP Pesticides: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311, 3510 and 8080.

TCLP Herbicides (Waters): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 1311 and 8150.

PCB's (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3550 and 8080.

PCB's (Waters): *Federal Register*, 40 CFR, Part 136, October 26, 1984, Method 608.

PCB's (Oils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Methods 3580 and 8080.

Total Metals (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition. Methods 3020 or 3050 are used for digestion. All ICP metals are analyzed using Method 6010. Antimony, arsenic, cadmium, molybdenum, selenium and thallium are analyzed by Methods 7041, 7060, 7131, 7481, 7740 and 7841 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

TCLP Metals: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 1311 followed by Method 3020 for digestion, Methods 6010 and 7470 for analysis.

ICP Metals (Waters): *Methods for the Determination of Metals in Environmental Samples*, EPA/600/4-91/010, June 1991, Revision 3.3, Method 200.7.

GFAA Metals & Mercury (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983. Antimony, arsenic, cadmium, lead, molybdenum, selenium, thallium and tin are

analyzed using Methods 204.2, 206.2, 213.2, 239.2, 246.2, 270.2, 279.2 and 282.2 respectively. Mercury is analyzed using Method 245.1.

Cyanide (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9010.

Cyanide (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 335.2.

Cyanide (Free): *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 4500-CN-I.

Phenols (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9065.

Phenols (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 420.1.

TPH (Soils & Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 418.1 for waters and modified 418.1 for soils using a soxhlet extraction with freon prior to analysis.

TPH Extractables: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 3510 or 3550 and Modified Method 8015.

Hexavalent Chromium (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Second and Third Editions, Methods 3060 and 7196A.

Hexavalent Chromium (Waters): *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 3500-Cr D.

pH (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9040.

pH (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 150.1.

Reactive Cyanide: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Reactive Sulfide: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Ignitability: *Test Methods for Evaluating Solid Waste*, SW-848, Third Edition, Chapter Seven, Section 7.1, Ignitability.

Flashpoint: *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 1010.

Conductance (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 120.1.

Residue, Filterable (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.1.

Residue, Non-Filterable (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.2.

Residue, Total (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 160.3.

Chloride (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 325.3.

Chloride (Soils): *Test Methods for Evaluating Solid Waste*, SW-846, Third Edition, Method 9252.

Sulfide (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 376.1.

Chemical Oxygen Demand (Waters): *Hach Chemical Company*, Method 8000.

Oil & Grease (Waters): *Methods for the Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983, Method 413.1.

TOX (Waters & Soils): *American Society for Testing & Materials (ASTM)*, D2361-91, June 1991.

2,3,7,8 - TCDD/TCDF: *Modified Contract Laboratory Program Statement of Work*, November 1992.

VERITECH
 47 CAREY AVE., BUTLER, NJ 07405
REPORT OF ANALYSIS

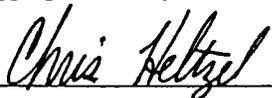
CT. NO: PH-0671
 MADEP NO: NJ386
 PADER NO: 68-463
 NJDEPE NO: 14622
 NYDOH NO: 11408

TO: ENVIRO-TECH, INC.
 364 BROAD STREET
 KEYPORT, N.J. 07735
 (908) 888-1300

Date Collected: 06/28/95
 Date Submitted: 06/29/95
 Date Reported: 07/15/95
 Project: EARLE

Sample I.D.	AA31522				AA31523	
Sample Description	PE-1 SOIL				PE-2 SOIL	
Analyte	Units	MDL	Result	MDL	Result	
%SOLIDS	PERCENT	1.0	70	1.0	97	
TPH-SOIL	mg/kg dry wt	29	Not detected	21	Not detected	
Sample I.D.	AA31524				AA31525	
Sample Description	PE-3 SOIL				PE-4 SOIL	
Analyte	Units	MDL	Result	MDL	Result	
%SOLIDS	PERCENT	1.0	85	1.0	74	
TPH-SOIL	mg/kg dry wt	24	Not detected	27	34	
Sample I.D.	AA31526					
Sample Description	PE-5 SOIL					
Analyte	Units	MDL	Result	MDL	Result	
%SOLIDS	PERCENT	1.0	94			
TPH-SOIL	mg/kg dry wt	21	25			

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.


 Chris Heltzel - Laboratory Manager

Or

Stanley Gilewicz - Laboratory Director

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31522
Sample Matrix: SOIL
% Solids: 70

Date Received: 6/29/95
Date Extracted: 6/29/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	PE-1 soil	ND	1	29	6/29/95

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31523
Sample Matrix: SOIL
% Solids: ~~92~~ 47 SA. 7/4/95

Date Received: 6/29/95
Date Extracted: 6/29/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	PE-2 soil	ND	1	21	6/29/95

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31524
Sample Matrix: SOIL
% Solids: 85

Date Received: 6/29/95
Date Extracted: 6/29/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	PE-3 soil	ND	1	24	6/29/95

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31525
Sample Matrix: SOIL
% Solids: 74

Date Received: 6/29/95
Date Extracted: 6/29/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	PE-4 soil	34	1	27	6/29/95

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA31526
Sample Matrix: SOIL
% Solids: 94

Date Received: 6/29/95
Date Extracted: 6/29/95

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	PE-5 soil	25	1	21	6/29/95

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech
Lab Codex: 14622

Blank Matrix: Soil
Units: mg/kg

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	20	386s	ND

analysis TPH SOILS
 BATCH 386
 DATE: 11-Jul-95
 ANALYST: JK

Q.C. DATA

THEORETICAL

	VALUE	RESULT	% REC.
	PPM	PPM	
CK STD	10	10.66	107%
MBS	666.7	716.61	107%
MS #1	823.05	731.53	84%
MS #2	823.05	743.79	86%
SAMPLE		38.20	RPD
SAMPLE DUP		39.63	3.67%

SAMPLE #	SOLIDS FACTOR	SAMPLE MG WEIGHT	CALC. FROM CURVE	DILUT. FACTOR	TPH (PPM)	MDL DRY WT.
10mg 6-28	1.00	1000.0	10.6623	1.0	10.66	20.00
MBS	1.00	15.0	10.7491	1.0	716.61	20.00
DUP 31453	0.81	15.0	0.4815	1.0	39.63	24.69
MS 31453	0.81	15.0	8.8881	1.0	731.53	24.69
MSD 31453	0.81	15.0	9.0370	1.0	743.79	24.69
MB 6-27	1.00	15.0	0.1937	1.0	12.91	20.00
31453	0.81	15.0	0.4641	1.0	38.20	24.69
31454	0.79	15.0	0.3872	1.0	32.68	25.32
MB 6-28	1.00	15.0	0.0373	1.0	2.49	20.00
30869	1.00	15.0	10.8558	1.0	723.72	20.00
MB 6-29	1.00	15.0	0.2458	1.0	16.38	20.00
10mg 6-29	1.00	1000.0	9.8261	1.0	9.83	20.00
20mg 6-29	1.00	1000.0	20.0391	1.0	20.04	20.00
31506	0.88	15.0	9.8409	1.0	745.53	22.73
31507	0.85	15.0	1.0869	1.0	85.25	23.53
31519	0.59	15.0	0.1192	1.0	13.47	33.90
31522	0.70	15.0	0.1738	1.0	16.55	28.57
31523	0.97	15.0	0.1366	1.0	9.39	20.62
31524	0.85	15.0	0.2458	1.0	19.28	23.53
31525	0.74	15.0	0.3798	1.0	34.21	27.03
31526	0.94	15.0	0.3500	1.0	24.82	21.28
MB 6-30	1.00	15.0	0.0000	1.0	0.00	20.00
10mg 6-30	1.00	1000.0	10.5729	1.0	10.57	20.00
31528	0.92	15.0	0.1391	1.0	10.08	21.74
31529	0.94	15.0	0.3525	1.0	25.00	21.28
31530	0.86	15.0	1.0447	1.0	80.99	23.26
31531	0.91	15.0	0.0845	1.0	6.19	21.98
31532	0.91	15.0	0.4418	1.0	32.37	21.98
31533	0.86	15.0	1.5956	1.0	123.69	23.26
31534	0.81	15.0	0.4889	1.0	40.24	24.69
31535	0.83	15.0	0.7569	1.0	60.80	24.10
31536	0.83	15.0	0.4542	1.0	36.48	24.10

V DATA W/MT
 7/11/95 JS

JK 7/11/95

TPH LINEAR REGRESSION
TPH_1S

DATE 5-11-95
ANALYST JS

STDS (MG)	ABS.	Regression Output:	
0	0.0000	Constant	0.003495
2.5	0.1122	Std Err of Y Est	0.008116
5	0.2058	R Squared	0.999453
10	0.4037	No. of Observations	6
15	0.5974	Degrees of Freedom	4
20	0.8177		
		X Coefficient(s)	0.040301
		Std Err of Coef.	0.000471

Lot # W-95-TPH-1522

STDS (MG)	ABS.	PPM	DIFF
0	0.0000	-0.0867	0.0867
2.5	0.1122	2.6973	-0.1973
5	0.2058	5.0198	-0.0198
10	0.4037	9.9303	0.0697
15	0.5974	14.7365	0.2635
20	0.8177	20.2028	-0.2028

BATCH	386	ABS.	MG
SAMPLE			
10mg 6-28		0.4332	10.6623
MBS		0.4367	10.7491
DUP 31453		0.0229	0.4815
MS 31453		0.3617	8.8881
MSD 31453		0.3677	9.0370
MB 6-27		0.0113	0.1937
31453		0.0222	0.4641
31454		0.0191	0.3872
MB 6-28		0.0050	0.0373
30869		0.4410	10.8558
MB 6-29		0.0134	0.2458
10mg 6-29		0.3995	9.8261
20mg 6-29		0.8111	20.0391
31506		0.4001	9.8409
31507		0.0473	1.0869
31519		0.0083	0.1192
31522		0.0105	0.1738
31523		0.0090	0.1366
31524		0.0134	0.2458
31525		0.0188	0.3798
31526		0.0176	0.3500
MB 6-30		0.0026	0.0000
10mg 6-30		0.4296	10.5729
31528		0.0091	0.1391
31529		0.0177	0.3525
31530		0.0456	1.0447
31531		0.0069	0.0845
31532		0.0213	0.4418

JK
7/8/95

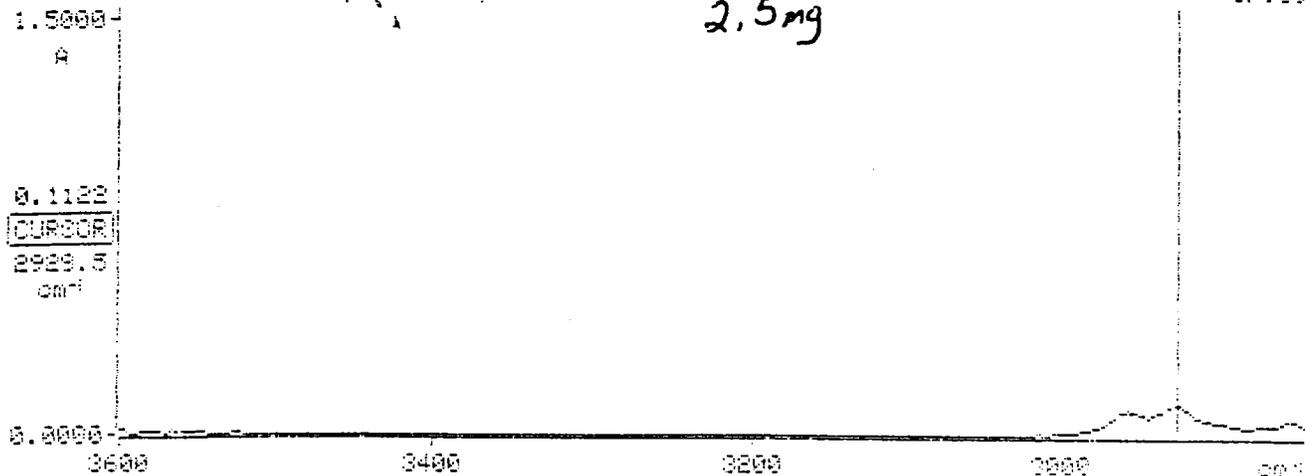
✓ DATA INPUT
7/8/95 JS

31533	0.0678	1.5956
31534	0.0232	0.4889
31535	0.0340	0.7569
31536	0.0218	0.4542

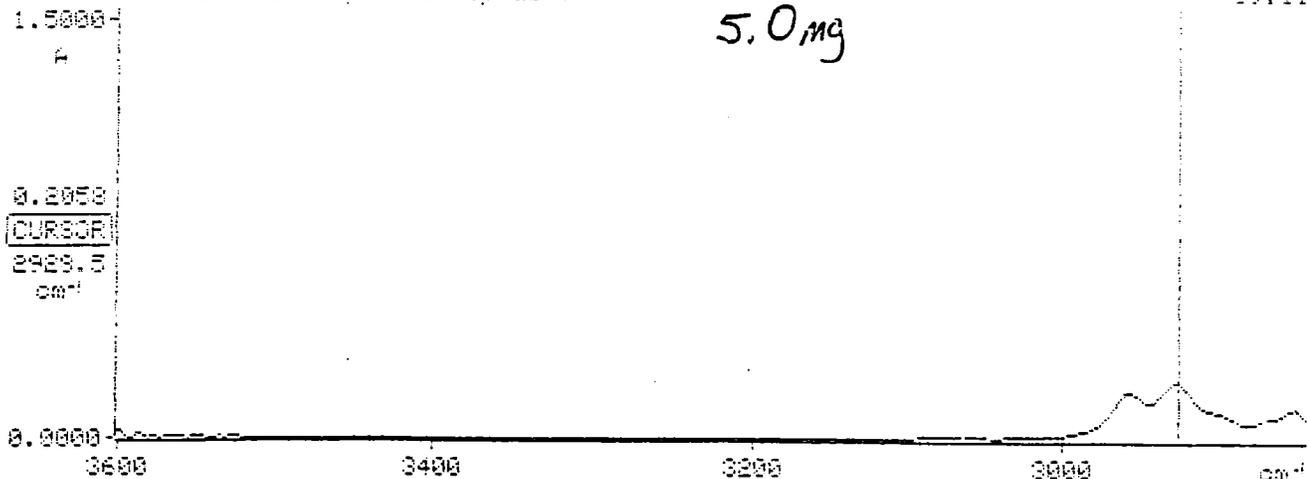
✓ DATA IN WPT
7/8/95 (2)

TPH CUNE
5/11/95 JS

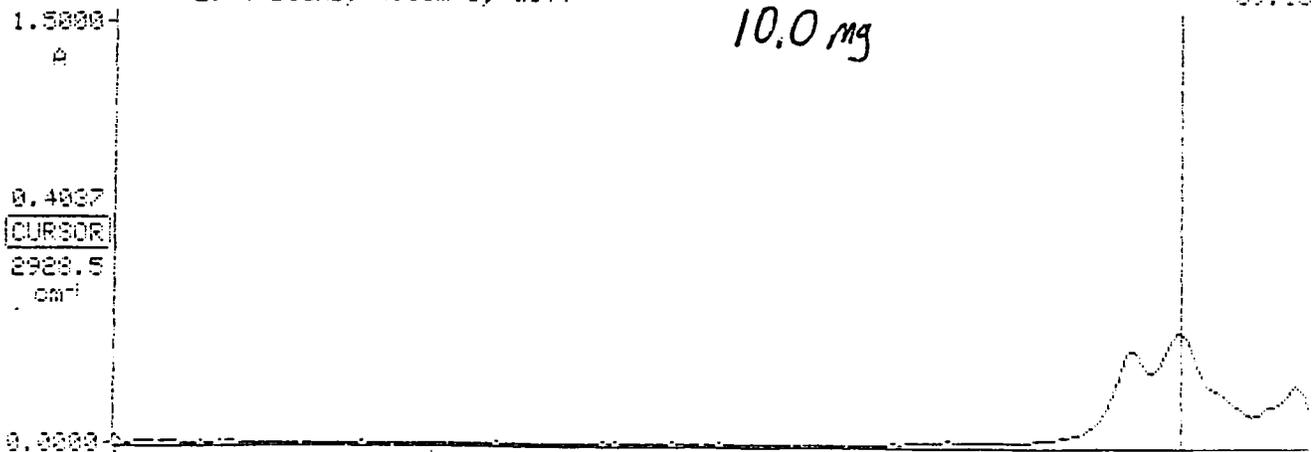
DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff



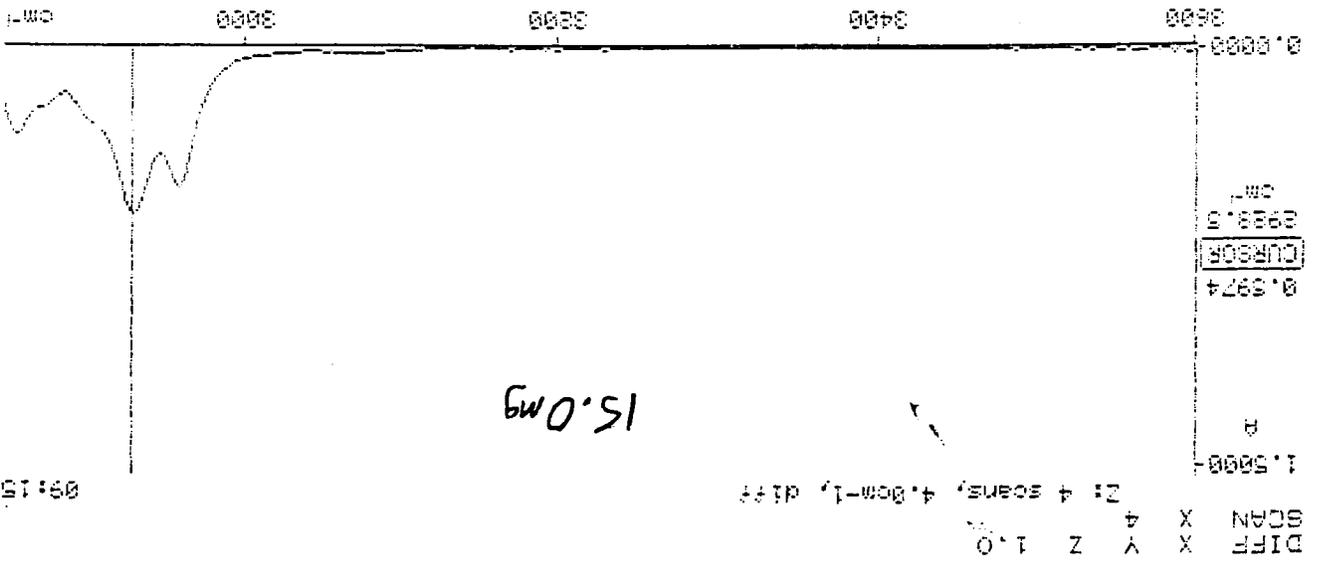
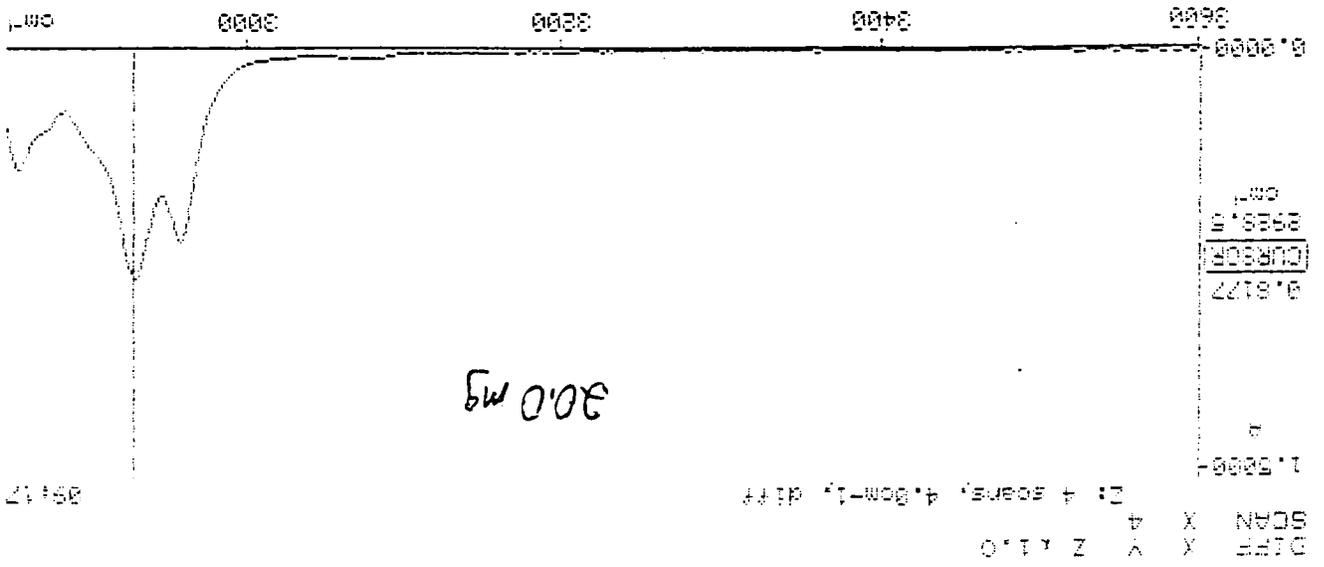
DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff



DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff



028



TPH CURDC
S11195 IS

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

#306
10mg

10:51

1.5000
A

0.4322
CURSOR
2929.5
cm⁻¹

Ex / Run
JK
6/28/95

0.0000 3500 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

#386

07:44

1.5000
A

MB

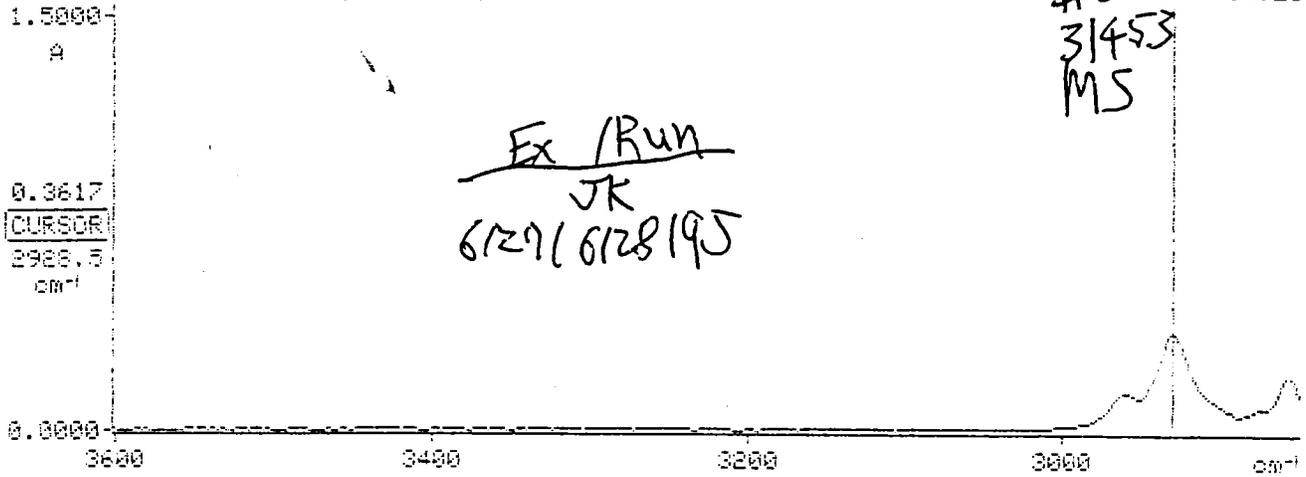
3.9113
CURSOR
2928.5
cm⁻¹

EX 447
JK
6/27/6/28/95

3.8000 3600 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

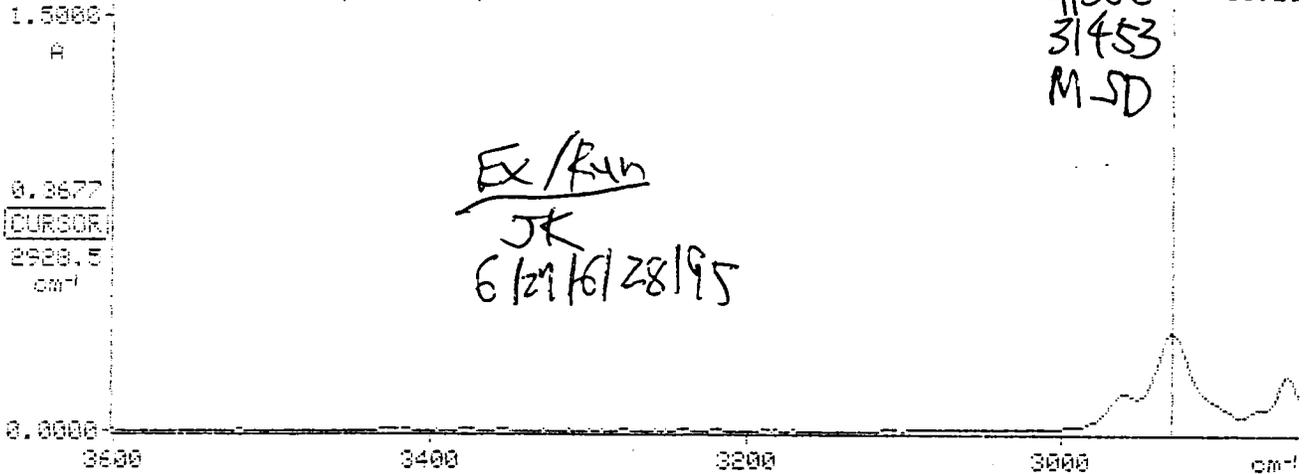
#386 08:20
31453
MS



Ex / Run
JK
6/29/6/28/95

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

#386 08:21
31453
MS



Ex / Run
JK
6/29/6/28/95

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

1.5000
A

0.0229
CURSOR
2928.5
cm⁻¹

Ex / Run
JK
6/27 / 6/28/95

#386
31453
SD

98:16

0.0000 3600 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

1.5000
A

0.0222
CURSOR
2928.5
cm⁻¹

Ex / Run
JK
6/27 / 6/28/95

#386
31453

98:17

0.0000 3600 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.8cm-1, diff

15:20

1.5000
A

0.3995
CURSOR
2928.5
cm⁻¹

Ex/Run
JK
6/29/95

#386
10mg

0.0000 3600 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4

Z: 4 scans, 4.0cm-1, diff

#386
MB

15:16

1.5000
A

0.0134
CURSOR
2929.5
cm⁻¹

Ex/Run
JK
6/29/95

0.0000 3600 3400 3200 3000 cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

15:01

1.5000

A

#386
31522

0.0105

CURSOR

2928.5
cm⁻¹

Ex / Run
JK
6/29/95

0.0000

3600

3400

3200

3000

cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

15:02

1.5000

A

#386
31523

0.0090

CURSOR

2928.5
cm⁻¹

Ex / Run
JK
6/29/95

0.0000

3600

3400

3200

3000

cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

15:03

1.5000

A

#386
31524

0.0134

CURSOR

2928.5
cm⁻¹

Ex / Run
JK
6/29/95

0.0000

3600

3400

3200

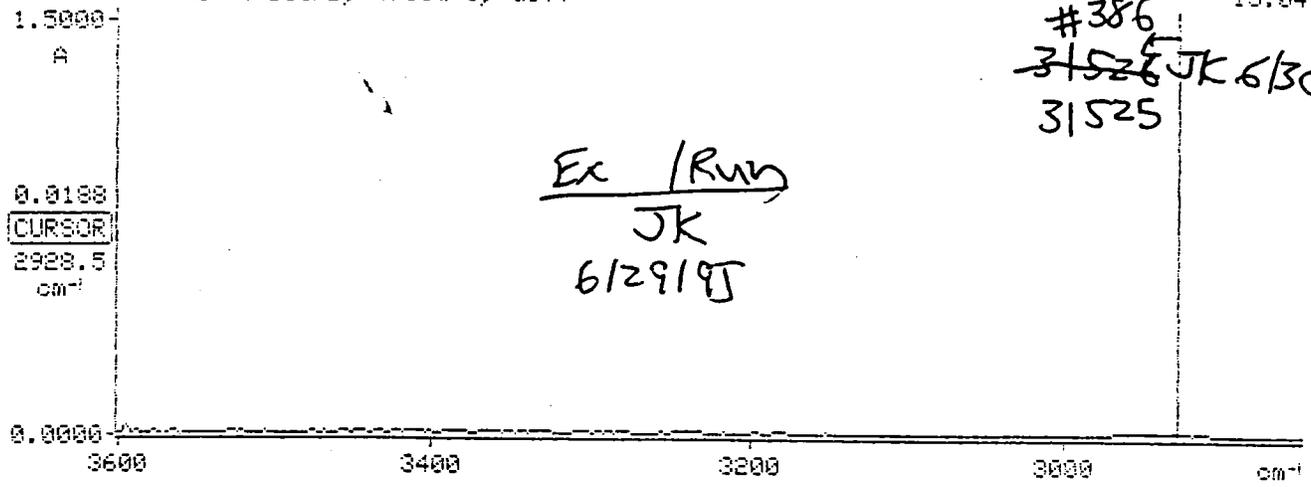
3000

cm⁻¹

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

15:04

#386
~~31526~~ JK 6/30
31525



DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

15:05

#386
31526

