PERMANENT FILE

UNITED STATES MARINE CORPS
MARINE CORPS BASE
PSC Box 20004
Camp Lejeune, North Carolina 28542-0004

IN REPLY
REFER TO:
6287
BEMD

02 AUG 2000

Mr. Bruce Reed
North Carolina Department of Environment
and Natural Resources
Division of Waste Management
UST Section
127 Cardinal Drive Extension
Wilmington, North Carolina 28405

Dear Mr. Reed:

Please be aware that Marine Corps Base, Camp Lejeune is transferring Underground Storage Tank (UST) site 45 to our Installation Restoration (IR) program. UST site 45 is located adjacent to Highway 24 aboard Marine Corps Base, Camp Lejeune , North Carolina just south of the main gate (Enclosure 1). Your office sent a Notice of Regulatory Requirements (NORR) letter (Enclosure 2) requiring that the site receive a Limited Site Assessment. This area, however, is within a previously existing Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA) site, and all subsequent assessments on the area will be completed along with the IR program site # 84.

This transfer does not include Building 45/S941-1,2, the second UST site at this same location. Currently, there is an air sparge/soil vapor extraction system in operation. Site 45/S941-1,2, while located in the same general area, will remain as an active UST site.

Should you have any questions, concerns, or require additional information, please do not hesitate to call. Point of contact is Ms. Nikki Hall, Installation Restoration Division, Environmental Management Department, at (910) 451-9610. The IR program manager is Mr. Rick Raines and can be reached at (910) 451-9461.

Sincerely,

SCOTT A. BREWER, PE
Deputy Assistant Chief of Staff
Environmental Management
By direction of
the Commanding General

Enclosures: 1) Site location map for UST site # 45.
2) Site location map # 2 for UST site # 45.
3) Copy of NORR letter.

Copy to: (with encl)
COMLANTNAVFACENGCOM (Code 18215, L. Reuther)
COMLANTNAVFACENGCOM (Code 1823, K. Stevens)
Mr. Dave Lown - NCDENR
Ms. Gena Townsend – EPA Region # 4
Mr. Rick Raines – MCB, Camp Lejeune, NC

State of North Carolina
Department of Environment and Natural Resources
Wilmington Regional Office
Division of Waste Management
UST Section

James B. Hunt, Jr., Governor
Bill Holman, Secretary

OPTIONAL FORM 99 (7-90) Let me know if you need anything else! 19 Oct 99

FAX TRANSMITTAL # of pages ▸ 1 of 13

To Lori Ruether	From Nikki Hall
Dept./Agency LANTDIV	Phone # 910.451.9610
Fax #	Fax #

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

ENVIRONMENT AND NATURAL RESOURCES

October 13, 1999

CERTIFIED MAIL Z 495 992 320
RETURN RECEIPT REQUESTED
Ms. Nikki Hall
Marine Corps Base
PSC Box 20004
Camp Lejeune, NC 28542-0004

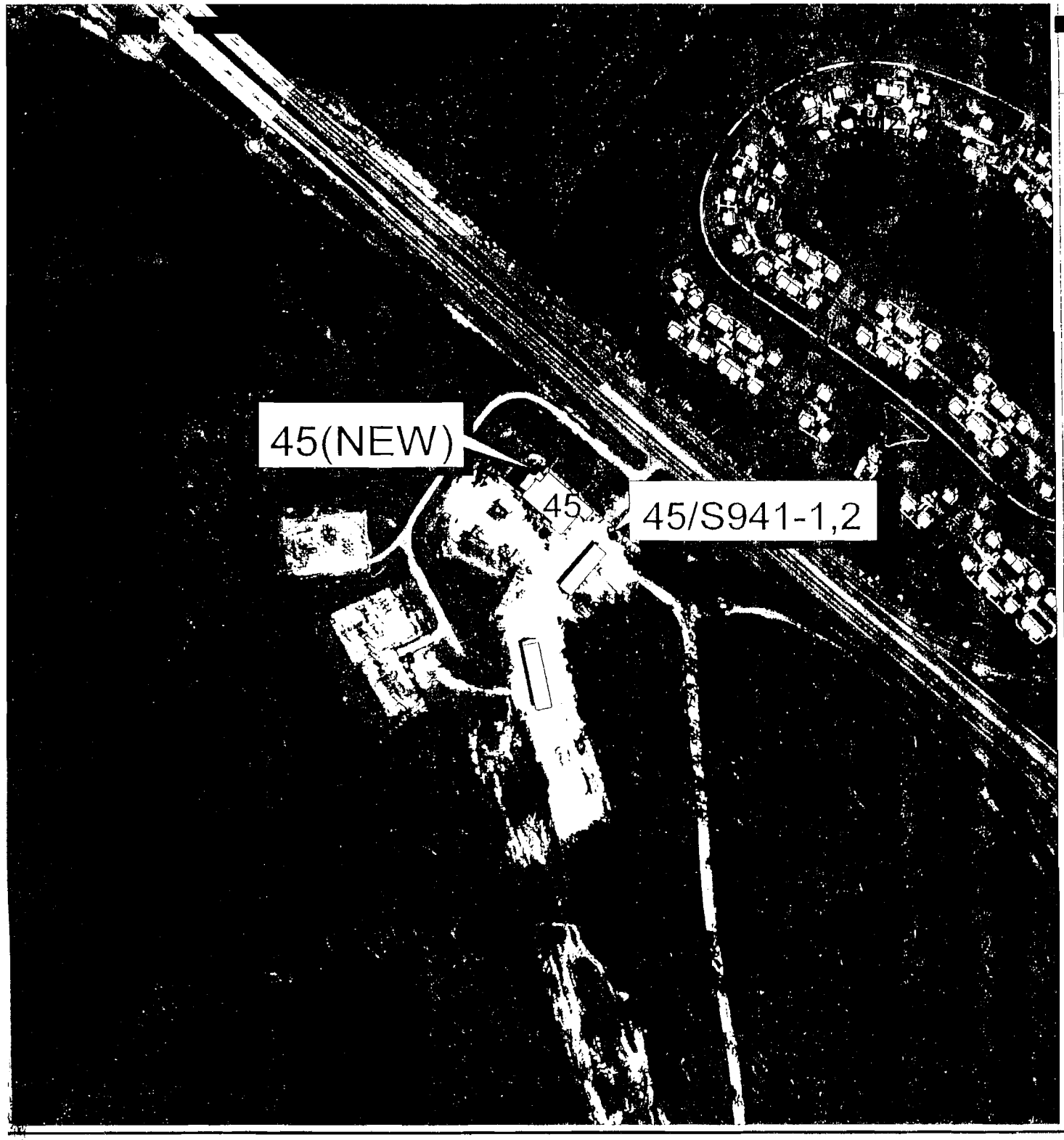
RE: Notice of Regulatory Requirements
15A NCAC 2L .0115(c)
RISK-BASED ASSESSMENT AND
CORRECTIVE ACTION FOR PETROLEUM
UNDERGROUND STORAGE TANKS
USMC-Camp Lejeune-Bldg. 45
NC Highway 24, Camp Lejeune
Onslow County, N.C.
Incident No. Pending

Dear Ms. Hall:

Information received by this office on August 2, 1999, and October 8, 1999, confirms a release or discharge from a petroleum underground storage tank (UST) system at the above referenced location. Records indicate that you are the owner and/or operator of this UST tank system. This letter is a standard notice explaining the actions you must take as a result of the release or discharge in accordance with North Carolina statutes and rules. The UST Section of the Division of Waste Management administers the state's rules for USTs and the required response for petroleum releases. Those rules are located in Title 15A, Subchapter 2L and Title 15A, Subchapter 2N of the North Carolina Administrative Code (NCAC).

As a responsible party, you are required to comply with the release response and corrective action requirements of 15A NCAC 2L .0115(c), which include the requirements established in 15A NCAC 2N. Listed is a general description of actions you must take to comply with State rules. For a detailed description of your requirements please refer to the enclosed rules and the January 1998 *Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II* ("the Guidelines"). The Guidelines are available on the Internet at http://gw.ehnr.state.nc.us or may be purchased from the UST Section for a fee of $7.00. To purchase a copy of the Guidelines, please send a check made payable to DENR to:

Enclosure (3)



Building # 45 Area

Road Edge
Road Centerline
Ir_ust shp
- ACTIVE
- CLOSED

Structure Existing

Road Edge: Created from AeroDynamics and Eagan McAllister Vector Data From 1996 Flyover of Camp Lejeune

Road Centerline: Created from AeroDynamics and Eagan McAllister 1996 flyover URS/Radian International 1998 Flyover and EMD data

Structure Existing: Created from AeroDynamics and Eagan McAllister

Prepared 1 August 2000 by:
Bob Lowder, EMD/IRD
451-9607

20 0 20 40 60 80 Meters

Map Projection: UTM (NAD83, GRS1980)

INTEGRATED GEOGRAPHIC INFORMATION REPOSITORY
Marine Corps Base, Camp Lejeune, NC

Managed by the GIS Office, Environmental Management Department

NOTE: THIS MAP IS FOR REFERENCE ONLY

The requestor must be aware of data conditions and ultimately bear responsibility for the appropriate use of the information with respect to possible errors, origin of map scale, collection methodology, currency of data, and other conditions specific to certain data

File

GW/UST-12
UNDERGROUND STORAGE TANK CLOSURE REPORT

UST No. 45

Location: Camp Lejeune, NC

The closure report should contain, at a minimum, the following information. Any other information that is pertinent to the site should be included.

I. General Information

A. Ownership of UST(s)

1. Name of UST owner:

Commanding General
Marine Corps Base, Camp Lejeune, North Carolina

2. Owner address and telephone number:

Commanding General
AC/S, Environmental Management Department
PSC 20004
MCB, Camp Lejeune, NC 28542
910-451-5837

B. Facility Information

1. Facility name:

Building 45, MCB Camp Lejeune

2. Facility ID #:

N/A

3. Facility address, telephone number, and county:

Commanding General
AC/S, Environmental Management Department
PSC 20004
MCB, Camp Lejeune, NC 28542
910-451-5837
Onslow County

C. Contacts

1. Name, address, telephone number and job title of primary contact person:

Brian Marshburn – Environmental Engineer
AC/S, EMD
PSC 20004
MCB, Camp Lejeune, NC 28542
910-451-5837

2. Name, address, and telephone number of closure contractor:

J.A. Jones Environmental Services Company
6135 Park South Drive, Suite 250
Charlotte, North Carolina 28210
704-553-3595

3. **Name, address, and telephone number of primary consultant:**
   J.A. Jones Environmental Services Company
   6135 Park South Drive, Suite 250
   Charlotte, North Carolina 28210
   704-553-3595

4. **Name, address, telephone number, and State certification number of laboratory:**
   Prism Laboratories, Inc.
   449 Springbrook Road
   Charlotte, NC 28217
   704-529-6364
   North Carolina certification #: 402

D. UST Information

Tank No.	Installation Date	Size in Gallon	Tank Dimension	Last Content
45	Est. 1980	500	5'10" x 4' (dia.)	#2 Heating Oil

E. Site Characteristics

1. **Describe any past release at this site:**
   No past releases were reported

2. **Is the facility active or inactive at this time? If the facility is inactive note the last time the USTs were in operation:**
   Inactive

3. **Describe surrounding property use (for example, residential, commercial, farming, etc.):**
   The site is on a military base. The building for which the tank supplied heating oil was formerly a maintenance facility for construction equipment. This facility was abandoned and the building is currently under demolition (see Photo 1). Approximately 250 feet east to the building is North Carolina Highway 24. Open fields or forests surround the facility on north, west and south. The area, therefore may fall into the commercial/industrial category.

4. **Describe site geology/hydrogeology:**
   The area is located in the Outer Coastal Plain of North Carolina. Regionally, the predominant soil type is sandy silt to clayey silt with unknown thickness. The depth to the underlain bedrock of Tertiary aged Belgrade Formation is unknown, but is estimated to be more than 50 feet. The average depth-to-water is estimated to be 10 feet from ground surface. The nearest surface water body is Northeast Creek, a tributary of New River, which is approximately 700 feet northwest to the site. The flow direction of groundwater in the surficial aquifer is unknown, but is assumed to flow towards the creek. All buildings and structures in this area are supplied by a public water supply system. No water wells are observed within 1,500 feet radius.

   Local geological cross-section exhibited in the excavation pit is light brown silt and golden silt, which extends from ground surface to beyond the excavation bottom.

II. Closure Procedures

A. Describe preparations for closure including the steps taken to notify authorities, permits obtained, and the steps taken to clean and purge the tanks:

A GW/UST-3 form was submitted to the Environmental Management Department of the Base on 7/12/1999. A copy of the GW/UST-3 form is included in Appendix B. Prior to removal, the tank was cut at top to create a large hole to release flammable vapor. It is reported that the

Environmental Management Department removed the content of the tank recently. When opened, the tank was empty and there was no sludge or residual remaining in it. Therefore, no additional cleaning and purging were performed.

B. Note the amount of residual material pumped from the tank(s):

No residual in the tank.

C. Describe the storage, sampling, and disposal of the residual material:

N/A

D. Excavation

1. **Describe excavation procedures noting the condition of the soils and the dimensions of the excavation in relation to the tanks, piping and/or pumps:**

   Before the UST was removed on 7/22/1999, the building demolition contractor had removed a concrete pad covering the tank and performed excavation to expose the tank (see Photo 2). No additional excavation was necessary to remove the tank out of ground. Although soil discoloration was not observed at the walls and the floor of the excavation, analytical results of a soil sample (ID# Bldg 45) collected on the excavation floor exhibited diesel range petroleum hydrocarbon contamination of 220 ppm (see Photos 9&10). As a result, over-excavation was conducted on 8/5/99 in an attempt to remove the impacted soil. The final excavation dimension measured at the top of the excavation pit was 7.5'(L) x 4.75'(W) x 5'(D). A concrete 12-inch thick pad thick was encountered at the east part of the excavation floor, at a level of 3'6'' below the tank top. The concrete pad remains underground, the location which is illustrated in the site drawing. It is assumed the backfilling of the excavation was conduct by the demolition contractor.

2. **Note the depth of tank burial(s) (from land surface to top of tank):**

   Since the demolition contractor exposed the UST, the amount of overburden is unknown.

3. **Quantity of soil removed:**

   On 8/5/99 approximately 1.5 cu-yds of soil was removed.

4. **Describe soil type(s):**

   Light brown and golden silt

5. **Type and source of backfill used:**

   It is assumed the demolition contractor backfilled the excavation, the type and source in unknown.

E. Contaminated Soil

Approximately 1.5 cubic yard impacted soil was excavated during the over-excavation. Soil above the UST (overburden) were removed by the demolition contractor prior to the UST excavation and therefore unaccounted. The soil was stockpiled on site until 09/08/1999, when being transported off-base by Pridgen Trucking, Inc. to its remedial facility in Rocky Mount, North Carolina. A copy of the impacted soil transportation manifest is included in Appendix D.

III. Site Investigation

A. Provide information on field screening and physical observations, including methods used to calibrate field screening instrument(s):

During the UST removal activities on 7/22/99, no soil discoloration and apparent petroleum odor were observed on the walls and floor of the excavation pit (Photo 6 & 7). The 500-gallon heating oil UST

was in good shape and no rust holes or oily appearances on the tank body (Photo 4 & 5). A FOXBORO TVA PID/FID was used for field screening. The soil sample (ID# Bldg 45) that was taken for lab test on that day had a FID reading of 2 ppm and a PID reading of 0.0 ppm. The instrument was calibrated per the user's menu provided by the manufacture.
During the over-excavation on 8/5/99, soil discoloration and apparent petroleum odor were not observed on the excavation floor and walls. However, strong animal-waste-like odor came from the northwest wall.

B. Describe soil sampling points and sampling procedures used:

After the UST was removed on 7/22/99, one (1) soil sample (ID# Bldg 45) was collected from the tank base floor (see Photo 7), 6 inches below the tank bottom level. During the over-excavation on 8/5/99, 5 confirmation soil samples (ID# 45-1 through 45-5) were collected at the excavation floor and walls, respectively. The location and depth of each sample are illustrated in the attached site drawing. The samples were tested for total petroleum hydrocarbon concentrations using EPA Methods 3550 and 5030.

C. Describe groundwater or surface water sampling procedures used:

Groundwater was not encountered.

D. Quality control measures:

Lab-provided containers and dedicated disposable gloves were used for sampling. After collection, the samples were stored in a cooler, chilled by ice, and sent to the laboratory through an over-night carrier.

E. Investigation results:

Field physical observation on the tank body and at the excavation pit did not suggest any leaks of the tank content to the environment.

The analytical results of the soil sample, ID # Bldg 45 that was collected at the excavation floor indicates that diesel range total petroleum hydrocarbon (TPH) concentration was 220 ppm and gasoline range TPH was below the method detection limits (BDL).

The analytical results of the 5 confirmation samples are summarized in the attached table. As shown in the table and the site drawing, sample #45-1, taken at the southeast wall, has both TPH DRO and GRO concentrations below the detection limits (BDL); sample #45-2, taken at the southwest wall, has TPH DRO of 100 ppm and TPH GRO of 3.9 ppm; sample #45-3, taken at the northeast part of the floor and beneath the concrete pad, has TPH DRO of 37 ppm and TPH GRO of BDL; sample #45-4, taken at the center floor, has TPH DRO of 110 ppm and TPH GRO of 2.5 ppm; sample #45-5, taken at the northwest wall, has TPH DRO of 13,000 ppm and TPH GRO of 5,800 ppm.

A copy of the analytical results is included in Appendix E.

IV. Conclusions and Recommendations

The lab analytical results of the soil samples collected at this location indicate soil contamination of petroleum hydrocarbons. However, there is evidence to support the conclusion that the 500-gallon heating oil UST is not the source of the contamination. It is suggested that the contamination may have come from other unidentified source(s), when the long industrial operation history of Building 45 is considered. Submission of this UST Closure Report to NCDENR is recommended.

V. Signature and Seal of Professional Engineer or Licensed Geologist

James X. Tan for J.A. Jones Environmental Services Company

North Carolina Licensed Professional Geologist No. 1408

VI. Enclosures

A. Figures

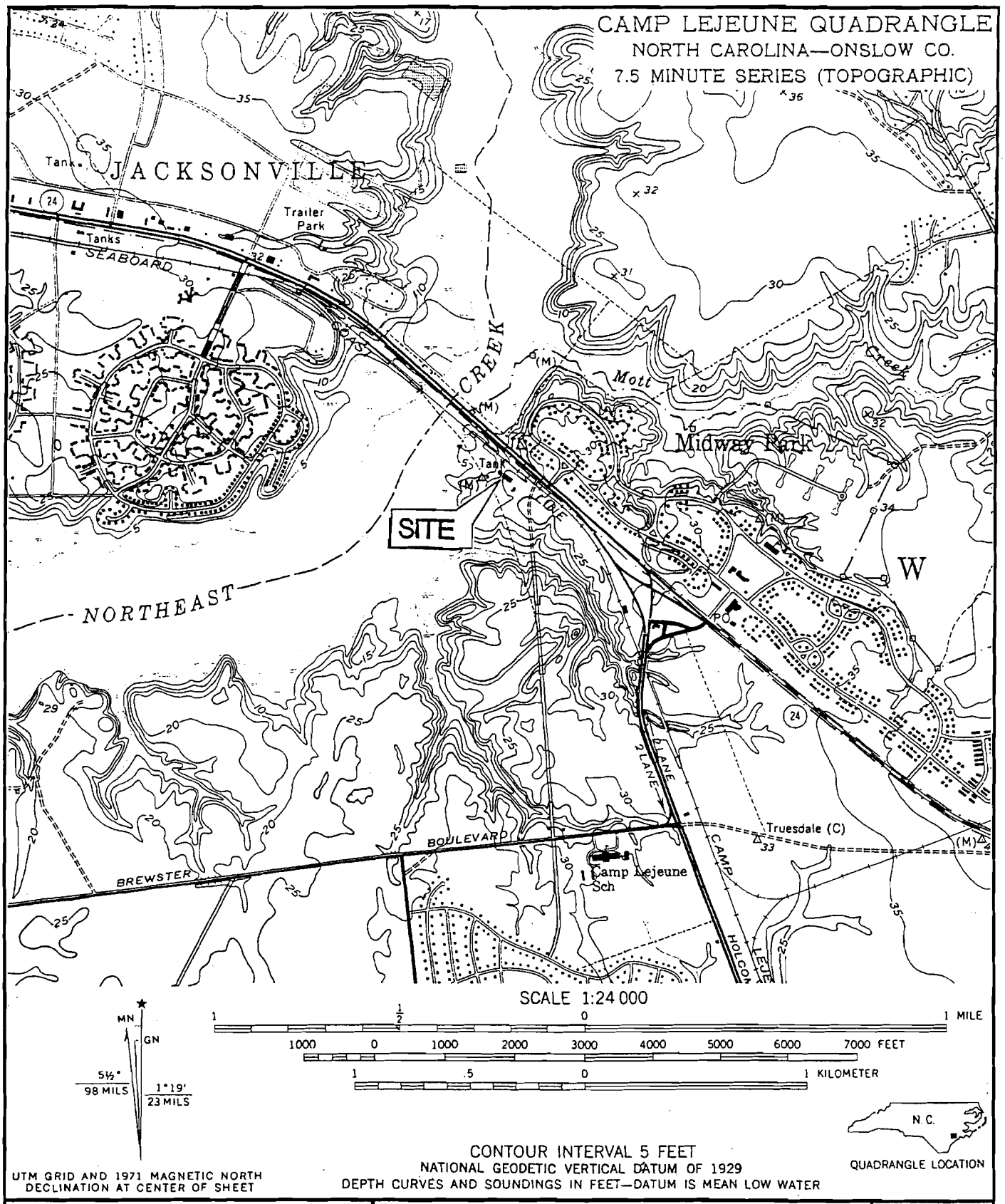
1. Site Location Map
2. Site Drawing

B. Table

Analytical Results of Soil Samples

C. Appendices

Appendix A: GW-UST-2 Form
Appendix B: Copy of GW-UST-3 Form
Appendix C: Certificate of UST Disposal
Appendix D: Contaminated Soil Transportation Manifest
Appendix E: Laboratory Analytical Reports and Complete Chain-of-Custody Records
Appendix F: Photographs of UST Removal Activities



J.A. JONES ENVIRONMENTAL SERVICES

MARINE CORPS BASE

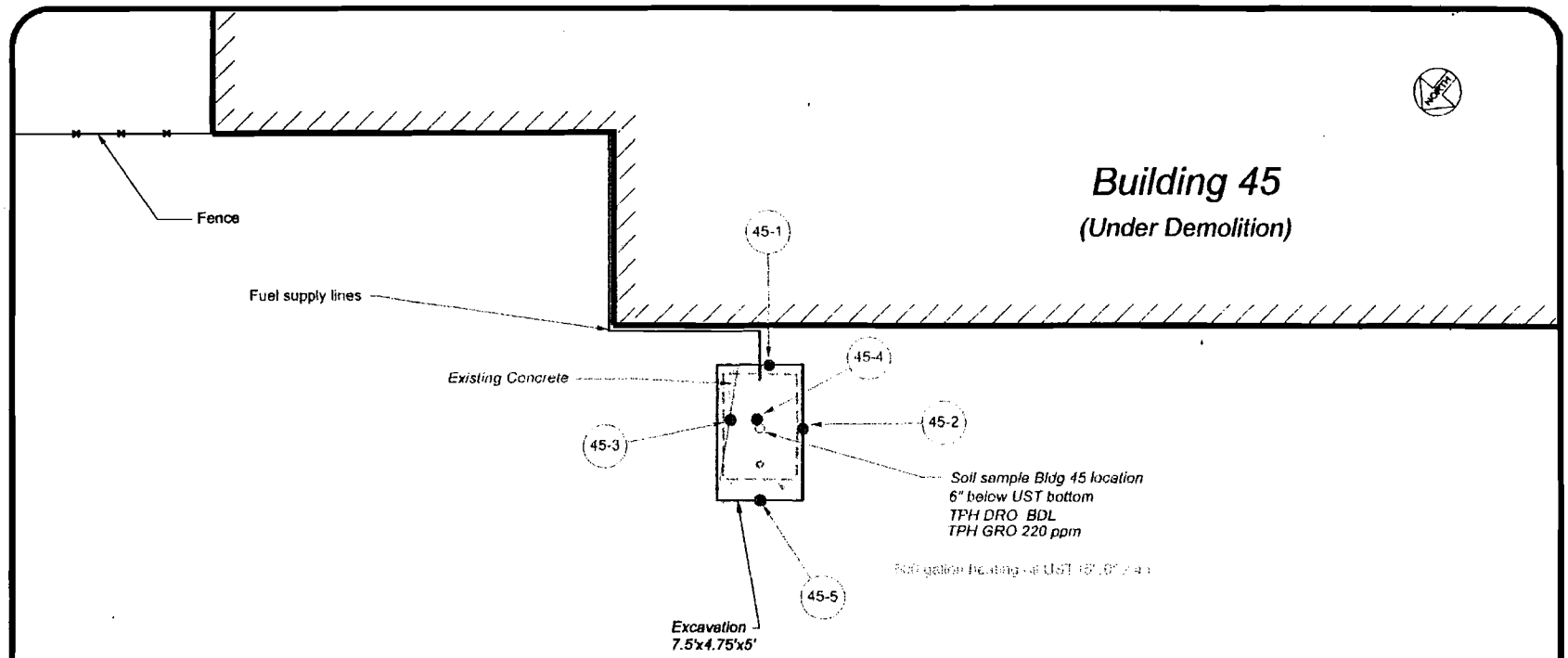
Camp Lejeune, North Carolina

Remove UST at Building 45

Contract No. N62470-93-D-3033, Delivery Order 044

Figure 1

Site Location



Groundwater monitoring wells

Note:

1. Groundwater flow direction unknown
2. Sample 45-1:
   6" below tank bottom, TPH GRO BDL, TPH DRO BDL
   Sample 45-2:
   9" below tank bottom, TPH GRO 3.9 ppm, TPH DRO 100 ppm
   Sample 45-3:
   12" below tank bottom, TPH GRO BDL, TPH DRO 37 ppm
   Sample 45-4:
   15" below tank bottom, TPH GRO 2.5 ppm, TPH DRO 110 ppm
   Sample 45-5:
   12" below tank bottom, TPH GRO 5800 ppm, TPH DRO 13000 ppm

0 5 10 feet
Graphic Scale

Date	Revision	Initials

J.A. JONES
ENVIRONMENTAL
SERVICES

CONTRACT #:	N62470-93-D-3033
PROJECT #:	DO 44
DATE:	8/12/99
DRAWN BY:	J. X. T.
SCALE:	1" = 10'

UST REMOVAL
MARINE CORPS BASE
CAMP LEJEUNE, NC

UST 45 | SITE DRAWING

TABLE

Analytical Results of Soil Samples

Sample ID	Date	Depth (ft)	FID (ppm)	PID (ppm)	TPH-DRO (ppm)	TPH-GRO (ppm)
Bldg 45	7/22/99	6" below UST	2.0	0.0	220	BDL
45-1	8/5/99	8" below UST	-	-	BDL	BDL
45-2	8/5/99	9" below UST	-	-	100	3.9
45-3	8/5/99	12" below UST	-	-	37	BDL
45-4	8/5/99	15" below UST	-	-	110	2.5
45-5	8/5/99	12" below UST	-	-	13,000	5,800

Note: Physical observations, odor and soil discoloration was the basis used to determine the limits of the overexcavation. The overexcavation activities were under the supervision of a Licensed Geologist.

APPENDIX A

GW-UST-2 Form

GW/UST-2 Site Investigation Report For Permanent Closure or Change-in-Service of U.S.T.

FOR TANKS IN **NC**

Return Completed Form To:
The appropriate DWQ Regional Office according to the county of the facility's Location. [SEE REVERSE SIDE OF OWNER'S COPY (PINK) FOR REGIONAL OFFICE ADDRESS].

State Use Only
I.D. Number _____
Date Received _____

INSTRUCTIONS

Complete and return within (30) days following completion of site investigation.

I. Ownership of Tank(s)

Owner Name: *Commanding General, MCB*
(Corporation, Individual, Public Agency, or Other Entity)
Street Address: *AC/S, EMD, MCB, PSC20004*
County: *Onslow*
City: *Camp Lejeune* State: *NC* Zip Code: *28542*
Tele. No. (Area Code): *(910) 451-5837*

II. Location of Tank(s)

Facility Name or Company: *Building 45, MCB*
Facility ID #: N/A
Street Address or State Road: *Camp Lejeune*
County: *Onslow* City: *Camp Lejeune* Zip Code: *28542*
Tele. No. (Area Code): *(910) 451-5837*

III. Contact Person

Name: *Mr. Brian Marshburn* Job Title: *Environmental Engineer* Tel. No.: *(910) 451-5837*
Closure Contractor: *J.A. Jones Environmental Serv.* Address: *6135 Park South Dr. Charlotte,NC* Tel. No.: *(704) 553-3595*
Primary Consultant: *Same* Address: *Same* Tel. No.: *Same*
Lab: *Prism Laboratories* Address: *449 Springbrook Rd. Charlotte,NC* Tel. No.: *(704) 529-6364*

IV. U.S.T. Information / V. Excavation Condition

Tank No.	Size in Gallons	Tank Dimensions	Last Contents	Water in Excavation		Free Product		Notable Odor or Visible Soil Contamination	
				Yes	No	Yes	No	Yes	No
45	*500*	*5'10" x 4'*	*#2 Heating oil*		X		X		X

VI. Additional Information Required

See reverse side of pink copy (owner's copy) for additional information required by N.C. – DWQ in the written report and sketch.

NOTE: If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G.

VII. Check List (Check the activities completed)

PERMANENT CLOSURE (For Removing or Abandoning-in-place)

- ☐ Contact local fire marshal
- ☒ Notify DWQ Regional Office before abandonment.
- ☐ Drain & Flush piping into tank.
- ☒ Remove all product and residuals from tank.
- ☐ Excavate down to tank.
- ☒ Clean and inspect tank.
- ☒ Remove drop tube, fill pipe, gauge pipe, vapor recovery tank connections, submersible pumps and other tank fixtures.
- ☐ Cap or plug all lines except the vent and fill lines.
- ☒ Purge tank of all product & flammable vapors.
- ☒ Cut one or more large holes in the tanks.
- ☒ Backfill the area.

Date Tank(s) Permanently Closed: *7/22/99*
Date of Change-in-Service: _____

ABANDONMENT IN PLACE

- ☐ Fill tank until material overflows tank opening.
- ☐ Plug or cap all openings.
- ☐ Disconnect and cap or remove vent line.
- ☐ Solid inert material used – specify: _____

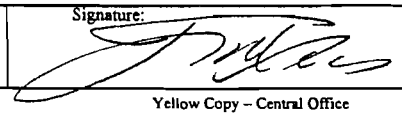
REMOVAL

- ☒ Create vent hole.
- ☒ Label tank.
- ☒ Dispose of tank in approved manner.

Final tank destination: *Jacksonville Scrap & Metals, Inc. Jacksonville, NC*

VIII. Certification (Read and Sign)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this 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.

Print name and official title of owner or owner's authorized representative		Signature:	Date Signed
James Tan	*Project Geologist*		*7/27/99*

APPENDIX B

Copy of GW-UST-3 Form

GW/UST-3 **Notice of Intent: UST Permanent Closure or Change-In-Service**

FOR TANKS IN **NC**

Return Completed Form To:
The appropriate DWQ Regional Office according to the county of the facility's Location. [SEE REVERSE SIDE OF OWNER'S COPY (PINK) FOR REGIONAL OFFICE ADDRESS].

State Use Only
I.D. Number _____
Date Received _____

INSTRUCTIONS

Complete and return at least five (5) working days prior to closure or change-in-service if a Professional Engineer (P.E.) or a Licensed Geologist (L.G.) provides supervision for closure or change-in-service site assessment activities and signs and Seals all closure reports. Otherwise, thirty (30) days notice is required.

I. OWNERSHIP OF TANK(S)

Tank Owner Name: Commanding General, MCB
(Corporation, Individual, Public Agency, or Other Entity)
Street Address: AC/S, EMD, PSC20004
County: Onslow
City: Camp Lejeune State: NC Zip Code: 28542
Tele. No. (Area Code): (910) 451-5837

II. LOCATION OF TANK(S)

Facility Name or Company: Building 45, MCB
Facility ID # (if available): N/A
Street Address or State Road: Camp Lejeune
County: Onslow City: Camp Lejeune Zip Code: 28542
Tele. No. (Area Code): (910) 451-5837

III. CONTACT PERSON

Name: Mr. Brian Marshburn Job Title: Environmental Engineer Telephone Number: (910) 451-5837

IV. TANK REMOVAL, CLOSURE IN PLACE, CHANGE IN SERVICE

1. Contact Local Fire Marshall.
2. Plan the entire closure event.
3. Conduct Site Soil Assessments.
4. If Removing Tanks or Closing in Place refer to API Publication 2015 "Cleaning Petroleum Storage Tanks" & 1604 "Removal & Disposal of Used Underground Petroleum Storage Tanks".
5. Provide a sketch locating piping, tanks and soil sampling locations.
6. Submit a closure report in the format of GW/UST-12 and include the form GW/UST-2 within 30 days following the site investigation.
7. If a release from the tank(s) has occurred, the site assessment portion of the tank Closure must be conducted under the Supervision of a P.E. or L.G., with all Closure site assessment reports bearing Signature and seal of the P.E. or L.G. If a release has not occurred, the Supervision, signature, or seal of a P.E. Or L.G. is not required.
8. Keep closure records for 3 years.

V. WORK TO BE PERFORMED BY

(Contractor) Name: J.A. Jones Environmental Services, Company
Address: 6135 Park South Drive Suite 250 Charlotte State: North Carolina Zip Code: 28210
Contact: Bryan Steiner Phone: (704) 553-3618
Primary Consultant: Jim Tan L.G. (J.A.J.E.S.) Phone: (704) 553-3379

VI. TANK(S) SCHEDULED FOR CLOSURE OR CHANGE-IN-SERVICE

TANK ID#	TANK CAPACITY	LAST CONTENTS	PROPOSED ACTIVITY: CLOSURE – Removal	CLOSURE – Abandonment In Place	CHANGE-IN-SERVICE – New Contents Stored
45	500 Gallons	Heating Oil	■	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	

VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE

Print name and official title
Bryan Steiner Project Engineer
Signature: [signature]
* Scheduled Removal Date: 7/27/99
Date Submitted: 7/12/99

* If scheduled work date changes, notify your appropriate DWQ Regional Office 48 hours prior to originally scheduled date.

GW/UST-3 (Rev. 10/96) White copy – Regional Office Yellow Copy – Central Office Pink Copy - Owner

APPENDIX C

Certificate of UST Disposal

J.A. JONES
ENVIRONMENTAL
SERVICES

6135 Park South Drive, Suite 250, Charlotte, NC 28210
(704) 553-3595 / (704) 553-3599

TANK DISPOSAL MANIFEST

1. **Tank Owner:**
Commanding General, Marine Corps Base, Camp Lejeune, North Carolina
AC/S, Environmental Management Division, MCB, Camp Lejeune, NC 28542

2. **Tank Owner / Authorized Representative:**

Contact: Mr. Gene Jones
Phone # (910)-451-3436

3. **Description of Tanks:**

Tank ID No.	Capacity	Previous Content	Comments
BLDG. 45	500 gallon	No.2 Heating Oil	

2. **Tank Owner / Authorized Representative Certification:**
The undersigned certifies that the above listed storage tank(s) have been removed from the premises of the tank owner.

Eugene H Jones — *Printed / Typed Name*
Eugene H Jones — *Signature*
7/23/99 — *Month/Day/Year*

5. **Transporter:**
The undersigned certifies that the above listed storage tank(s) have been transported off of MCB, Camp Lejeune, NC

Patrick Smith — *Printed / Typed Name*
Signature
7/23/99 — *Month/Day/Year*

6. **Disposal Certification:**
The undersigned certifies that the above named storage tank(s) have been cut into scrap pieces and accepted by the disposal facility.

Disposal Facility: Jacksonville Scrap & Metal Co. Phone 910-247-2323

Ann H. Martin — *Printed / Typed Name*
Ann H Martin — *Signature*
7/23/99 — *Month/Day/Year*

APPENCIX D

Contaminated Soil Transportation Manifest

Marine Corps Base, Camp Lejeune
Non-Hazardous Waste Shipping Document

Document #: 0844

Site: Lot 203 Holcomb, Bldg 45 MCB Camp LeJeune, North Carolina | Page 1 of 1

Generator's Name & Mailing Address: Commanding General
AC/S EMD/IRD
MCB
PSC Box 20004
Camp Lejeune, NC 28542-0004
US EPA ID Number: NC6170022580

Generator's Telephone #: (910)451-5068

Transporter's Name, Mailing Address & Telephone Number: Bridgen Trucking. 352 N. Old Carriage Dr Rocky Mount, NC 27804 (252) 347-1984
US EPA ID Number: NC Roooo85490

Destination's Name, Mailing Address & Telephone Number: Bridgen Farm INC. 9549 m.11 Branch Rocky Mount NC 27804 (252) 347-1984
US EPA ID Number: NC Roooo85490

Waste Shipping Name and Description	Containers		Total Quantity	Units
	Number	Type		
Lot 203 - PT 37 POL contaminated soil / Non-Hazardous NON RCRA	1	TD	3	Tons
Bldg 45 Pol contaminated soil / Non-Hazardous NON RCRA	1	TD	8	Tons

Container/Tag Number:

Profile #:

Lab: Prism Lab

Additional Information and Discrepancy Indication: Emergency NO. (252) 904-2319
OL# 358853 D.O. 44 Truck No. P3

GENERATOR'S STATEMENT: The materials described above on this shipping document are not subject to federal regulations for proper disposal of hazardous waste. The determination of non-hazardous waste and the information on this form are based on the analysis provided by:

Printed/Typed Name	Signature:	Date:
Eugene H Jones	Eugene H Jones	9-8-99
Transporter's Name	Signature:	Date:
Tim Mannino	Tim Mannino	9-8-99
Accepting Facility	Signature:	Date:
Bryant Pridgen	Bryant Pridgen	9/8/99

Return Original form to Generator

APPENDIX E

Laboratory Analytical Reports and Complete Chain-of-Custody Records

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

7/30/99

James Tan
J.A. Jones Management Service
6135 Park South Dr, Ste 250
Charlotte, NC 28210

Customer Project Name: **Bldg 45**
Customer Sample ID: **BLDG 45**
Prism Sample ID: **AB36677**
Login Group: 8979E1
Sample Collection Date/Time: 7/22/99 09:06
Lab Submittal Date/Time: 7/23/99 12:00

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	MDL	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
PREP. METHOD 3550	Completed			3550	7/27/99 16:30	JMK
TPH-GASOLINE RANGE / PREP. 5030	Less than	mg/kg	1.0	8015MOD/5030	7/28/99 12:31	DWL
TPH - DIESEL RANGE	220	mg/kg	100	GC-FID	7/29/99 11:03	PLE
CALCULATIONS BASED ON DRY WEI	89	% DRY	0.01	SM 2540 G	7/27/99 08:00	JDP

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE #

449 Springbrook Road ▲ Charlotte, NC 28217
P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Fax: 704/525-0409

PRESS DOWN FIRMLY - 3 COPIES

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?			
Received ON WET ICE? Temp 2°	✓		
PROPER PRESERVATIVES Indicated?			✓
Received WITHIN HOLDING TIMES?	✓		
CUSTODY SEALS INTACT?			✓
VOLATILES rec'd W/OUT HEADSPACE?			✓
PROPER CONTAINERS used?	✓		

Client J. A. Jones Environ.
Physical Address 6135 Park South Dr., Ste. 250
Charlotte, NC 28210
Phone 704-553-3595 Fax 704-553-3379
P.O.#/Billing Reference POLRAC-DO 44
Project Name BLDG. 45

REPORT TO: Name James Tan
Address Same
BILL TO: Name J. A. Jones Environ.
Address Same
Requested Due Date Standard Turnaround

(SEE REVERSE SIDE FOR RUSH TURNAROUND FEES)

State Certification Requested NC ___ SC ___ Other ___ NA ___
Water Chlorinated Yes ___ No ___ NA ___
Sample Iced Upon Collection Yes ___ No ___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSES REQUESTED 8550	5030					REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
BLDG 45	7/22/99	0906	S	G	2		None	✓	✓					Please Return the Cooler to Sender		31607

Sampler's Signature _____ Sampled By (Print Name) James Tan Affiliation _____

Relinquished By: (Signature)	Received By: (Signature)	Date	Military/Hours
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By:	Date 7-22-99	1240
Method of Shipment		Log-In Group No. 39961	

Additional Comments

NPDES NC ___ UST: NC ___ GROUNDWATER: NC ___ DRINKING WATER: NC ___ SOLID WASTE: NC ___ OTHER: NC ___
SC ___ SC ___ SC ___ SC ___ SC ___ SC ___
OTHER ___ OTHER ___ OTHER ___ OTHER ___ OTHER ___ OTHER ___

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

SEE REVERSE FOR

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

8/10/99

James Tan
J.A. Jones Management Service
6135 Park South Dr, Ste 250
Charlotte, NC 28210

Customer Project Name: **Bldg 45**
Customer Sample ID: **45-1**
Prism Sample ID: **AB38033**
Login Group: AO810E5
Sample Collection Date/Time: 8/5/99 11:17
Lab Submittal Date/Time: 8/6/99 10:30

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	MDL	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
PREP. METHOD 3550	Completed			3550	8/7/99 13:00	JDP
TPH-GASOLINE RANGE / PREP. 5030	Less than	mg/kg	1.0	8015MOD/5030	8/9/99 13:29	DWL
TPH - DIESEL RANGE	Less than	mg/kg	10	GC-FID	8/9/99 18:22	PLE
CALCULATIONS BASED ON DRY WEI	91	% DRY	0.01	SM 2540 G	8/9/99 16:25	JDP

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

8/10/99

James Tan
J.A. Jones Management Service
6135 Park South Dr, Ste 250
Charlotte, NC 28210

Customer Project Name: **Bldg 45**
Customer Sample ID: **45-2**
Prism Sample ID: **AB38034**
Login Group: AO810E5
Sample Collection Date/Time: 8/5/99 11:29
Lab Submittal Date/Time: 8/6/99 10:30

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	MDL	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
PREP. METHOD 3550	Completed			3550	8/7/99 13:00	JDP
TPH-GASOLINE RANGE / PREP. 5030	3.9	mg/kg	1.0	8015MOD/5030	8/9/99 14:16	DWL
TPH - DIESEL RANGE	100	mg/kg	50	GC-FID	8/9/99 19:05	PLE
CALCULATIONS BASED ON DRY WEI	89	% DRY	0.01	SM 2540 G	8/9/99 16:25	JDP

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

Lab Report

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

8/10/99

James Tan
J.A. Jones Management Service
6135 Park South Dr, Ste 250
Charlotte, NC 28210

Customer Project Name: **Bldg 45**
Customer Sample ID: **45-3**
Prism Sample ID: **AB38035**
Login Group: AO810E5
Sample Collection Date/Time: 8/5/99 11:33
Lab Submittal Date/Time: 8/6/99 10:30

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	MDL	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
PREP. METHOD 3550	Completed			3550	8/7/99 13:00	JDP
TPH-GASOLINE RANGE / PREP. 5030	Less than	mg/kg	1.0	8015MOD/5030	8/9/99 15:03	DWL
TPH - DIESEL RANGE	37	mg/kg	10	GC-FID	8/9/99 19:46	PLE
CALCULATIONS BASED ON DRY WEI	88	% DRY	0.01	SM 2540 G	8/9/99 16:25	JDP

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

Lab Report

PRISM LABORATORIES, INC.
Full Service Analytical & Environmental Solutions

8/10/99

James Tan
J.A. Jones Management Service
6135 Park South Dr, Ste 250
Charlotte, NC 28210

Customer Project Name: **Bldg 45**
Customer Sample ID: **45-4**
Prism Sample ID: **AB38036**
Login Group: AO810E5
Sample Collection Date/Time: 8/5/99 11:39
Lab Submittal Date/Time: 8/6/99 10:30

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	MDL	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
PREP. METHOD 3550	Completed			3550	8/7/99 13:00	JDP
TPH-GASOLINE RANGE / PREP. 5030	2.5	mg/kg	1.0	8015MOD/5030	8/9/99 19:22	DWL
TPH - DIESEL RANGE	110	mg/kg	50	GC-FID	8/9/99 20:48	PLE
CALCULATIONS BASED ON DRY WEI	84	% DRY	0.01	SM 2540 G	8/9/99 16:25	JDP

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

Lab Report

PRISM LABORATORIES, INC.
Full Service Analytical & Environmental Solutions

8/10/99

James Tan
J.A. Jones Management Service
6135 Park South Dr, Ste 250
Charlotte, NC 28210

Customer Project Name: **Bldg 45**
Customer Sample ID: **45-5**
Prism Sample ID: **AB38037**
Login Group: AO810E5
Sample Collection Date/Time: 8/5/99 11:47
Lab Submittal Date/Time: 8/6/99 10:30

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

TEST PARAMETER	TEST RESULT	UNITS	MDL	METHOD REFERENCE	DATE/TIME STARTED	ANALYST
PREP. METHOD 3550	Completed			3550	8/7/99 13:00	JDP
TPH-GASOLINE RANGE / PREP. 5030	5800	mg/kg	1000	8015MOD/5030	8/9/99 17:25	DWL
TPH - DIESEL RANGE	13000	mg/kg	1000	GC-FID	8/9/99 20:21	PLE
CALCULATIONS BASED ON DRY WEI	84	% DRY	0.01	SM 2540 G	8/9/99 16:25	JDP

Sample Comments:

Angela D. Overcash, V.P. Laboratory Services

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

449 Springbrook Road ▲ Charlotte, NC 28217
P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE ____ OF ____ QUOTE # ____

PRESS DOWN FIRMLY - 3 COPIES

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	✓		
Received ON WET ICE? Temp 4°C	✓		
PROPER PRESERVATIVES indicated?	✓		
Received WITHIN HOLDING TIMES?	✓		
CUSTODY SEALS INTACT?			✓
VOLATILES rec'd W/OUT HEADSPACE?	✓		
PROPER CONTAINERS used?	✓		

Client: J. A. Jones Environ. Services Co.
Physical Address: 8155 Pineville-Matthews Rd., Ste. 250
Charlotte, NC 28210
Phone: 704-553-3299 Fax: 704-553-3297
P.O.#/Billing Reference: 005-044-Bldg 45
Project Name: Bldg. 45

REPORT TO: Name: James Tew
Address: same
BILL TO: Name: J.A. Jones Environ.
Address: same
Requested Due Date: 24-hr. Turnaround

(SEE REVERSE SIDE FOR RUSH TURNAROUND FEES)

State Certification Requested: NC ✓ SC ____ Other ____ NA ____
Water Chlorinated: Yes ____ No ____ NA ____
Sample Iced Upon Collection: Yes ____ No ____

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSES REQUESTED	REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
45-1	5/5/99	1117	S	1G.	1	40 oz	none	✓ ✓			36403
45-2	"	1129	"	"	"	"		✓ ✓			36404
45-3	"	1133	"	"	"	"		✓ ✓			36405
45-4	"	1139	"	"	"	"		✓ ✓			36406
45-5	"	1147	"	"	"	"		✓ ✓			36407

Sampler's Signature: ____ Sampled By (Print Name): James Tew Affiliation: ____

Relinquished By: (Signature)	Received By: (Signature)	Date	Military/Hours
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By:	Date	
Method of Shipment		Log-In Group No:	

Additional Comments

NPDES NC ____ SC ____ OTHER ____ UST: NC ____ SC ____ OTHER ____ GROUNDWATER: NC ____ SC ____ OTHER ____ DRINKING WATER: NC ____ SC ____ OTHER ____ SOLID WASTE: NC ____ SC ____ OTHER ____ OTHER: NC ____ SC ____ OTHER ____

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

SEE REVERSE FOR TERMS & CONDITIONS

APPENDIX F

Photographs of Closure Activities

Photo 1 **Site Prior To UST Removal Activities**
Building 45 is under demolition. View to south.

Photo 2 **Site Prior To UST Removal Activities**
The tank has been exposed by others.

Photo 3 **UST Removal Activities**
To clean the tank and release flammable vapor, a large hole is created.

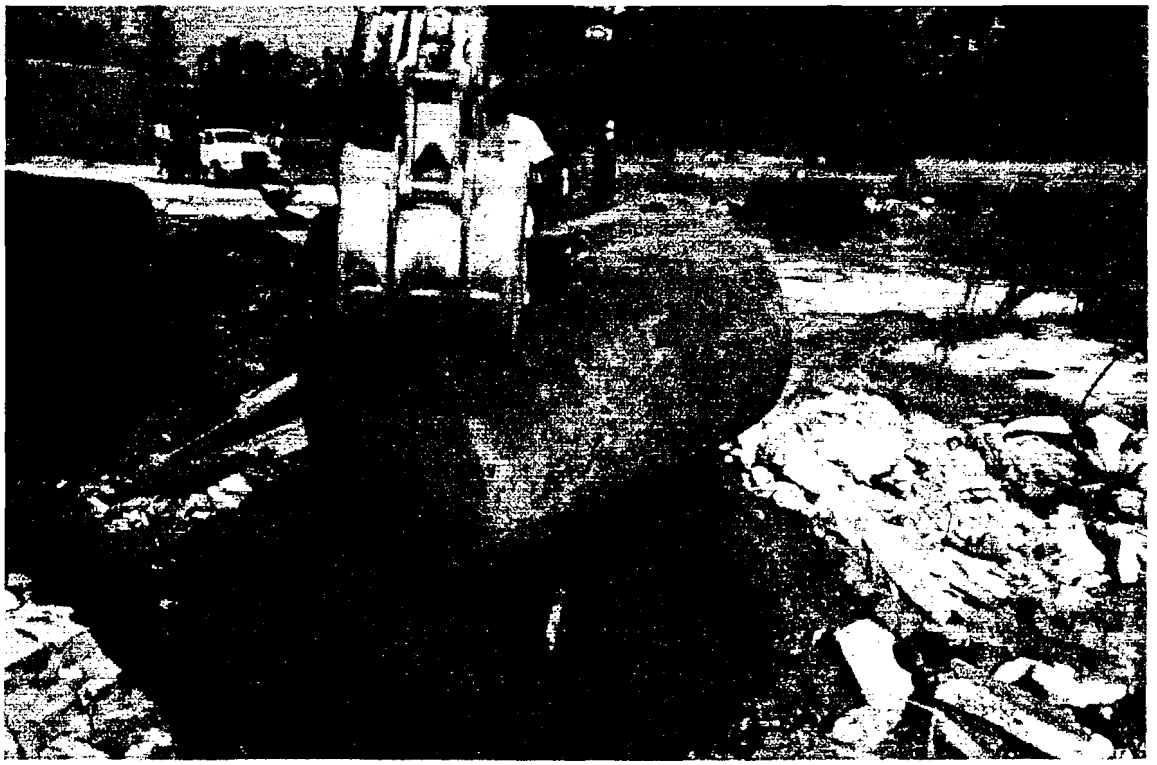


Photo 4 **UST Removal Activities**
The tank is out of ground. Note that there are no rust holes or oily appearances on the tank.

Photo 5 **UST Removal Activities**
There are not any rust holes or oily appearances on the tank.

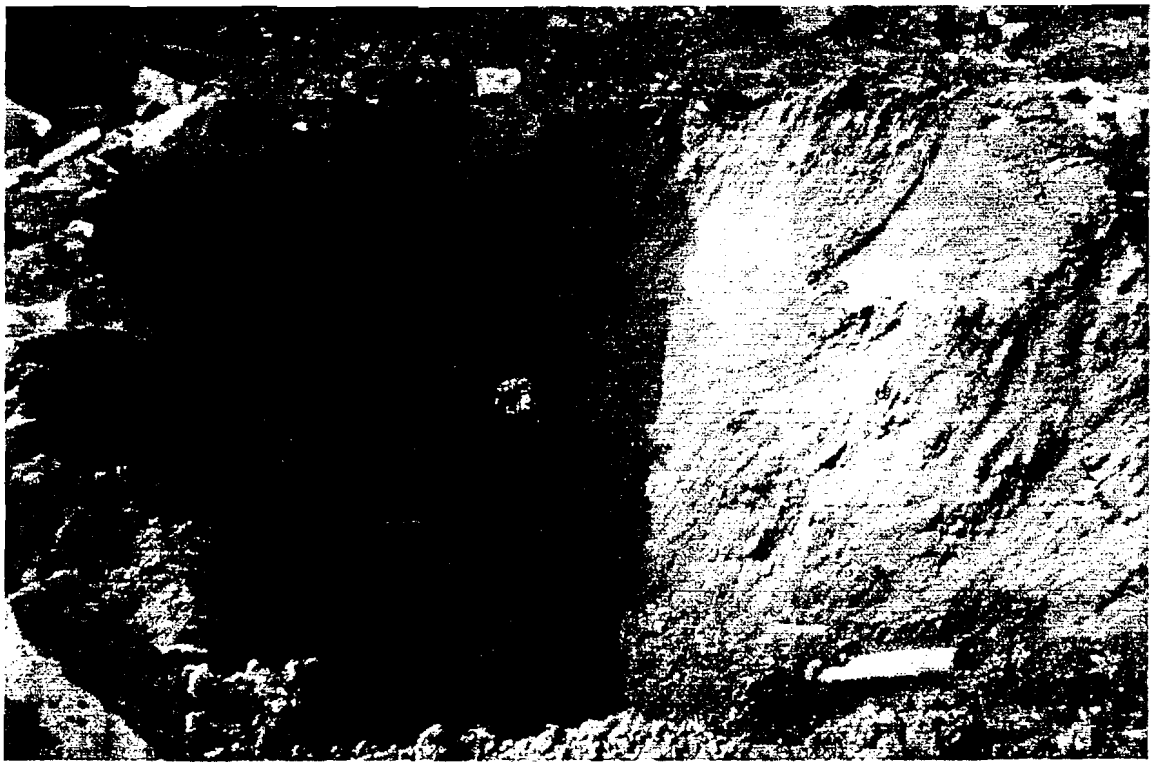


Photo 6 **UST Removal Activities**
No soil discoloration is observed on walls and floor of the excavation.

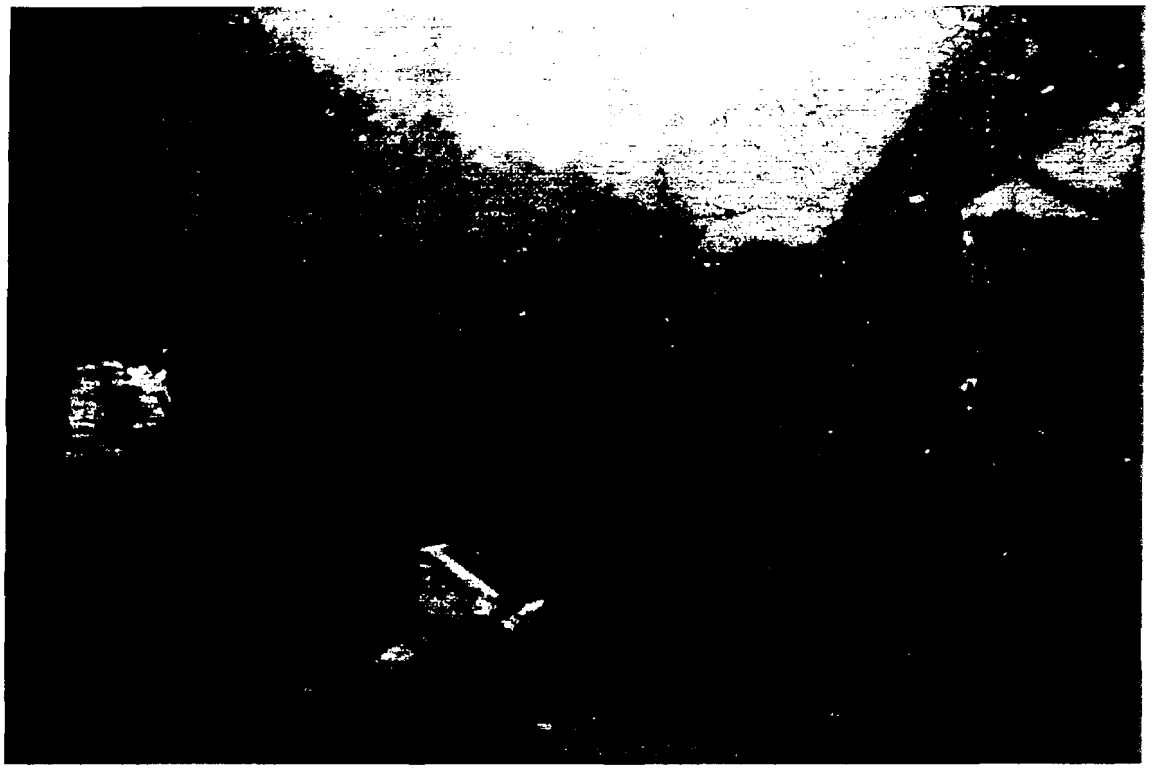


Photo 7 Soil Sample Location
A soil sample is collected beneath the tank at native soil, the color of which is unchanged.

Photo 8 Site After UST Removal
Site condition after UST removal and prior to over-excavation.

Photo 9 8/5/99 Site Undergoing Over-Excavation
Debris and rubble over excavation placed by others.

Photo 10 8/5/99 Site After Completion of Over-Excavation
5 soil samples extracted from the floor and sidewalls of the excavation.

Photo 11 Condition Of Site On 9/8/99
Site backfill completed by others.