APPENDIX A

ADEM UST CLOSURE REPORTS FOR FTMC

ATTACHMENT 1

BUILDING 215 (BRAUN)

January 26, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 215, Calhoun County, Fort McClellan, Alabama.

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8713.

Sincerely,

David Doble
Environmental Geologist

for Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises
f:*wpfiles\cmkx\93-0180\0180.r09

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A. Background

The Underground Storage Tank (UST) at BLDG 215 is located west of building 215 and south of and adjacent to building 205. Because the UST was located adjacent to the wall footings of building 205, in-place abandonment was chosen as the closure option. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 2000 gallons and was used to store used oil.

B. Piping Abandonment

Used oil was emptied into a drain pan in building 215 and to the UST through underground PVC piping. Approximately 45 feet of product piping connected the UST to building 215. The piping run was located beneath a parking lot between the UST and the building. The product piping crossed beneath two former railroad spur lines and over a 4-inch water main. The tracks crossed approximately 30 feet of the pipe run. The piping was flushed, sealed at both ends and abandoned in place.

Railroad ties and gravel base prohibited sampling beneath the tracks. Therefore, no pipe trench samples were collected.

C. In-Place UST Abandonment

Prior to abandoning the UST, approximately 1500 gallons of waste oil was removed from the tank. After the product was removed, the tank was continually purged with fresh air and cleaned. The UST was constructed of single wall steel and no holes were observed from the interior. The UST appeared to be in fair condition. The tank was filled with concrete slurry on May 13, 1994. The excavation limits are illustrated in Figure 2, Appendix C.

D. Soil Disposal

Approximately 5 yards of soil were removed from the UST basin during excavation of the UST. Contaminated soils were transported to the base landfill for thinspreading.

E. Sludge Disposal

No sludge was encountered during removal, however approximately 60 gallons of used oil were drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

F. Soil Sampling and Laboratory Results

F.1. Soil Sampling Procedures

Three power auger borings (labeled 215-E, 215-S, and 215-W) were performed on each accessible side of the UST using a truck-mounted core and auger drill. Borings were extended to a depth near the assumed base of the UST. Additionally, one boring was continued to 13.5 feet below land surface to determine if groundwater was present within 5 feet of the assumed bottom of the UST. All down-hole equipment was steam cleaned prior to use, and clean augers were used for each borehole.

Power auger borings were advanced 2.5 foot intervals below land surface then removed by dead lifting. Split spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140 pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2 1/2-foot vertical intervals to the termination depth of the borings.

F.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

F.3. Soil Boring Observations.

The soils encountered in the soil borings completed near the UST basin consisted of 7 to 8 feet of lean clay with sand over weathered shale and shale bedrock. Groundwater was encountered at a depth of approximately 12.5 feet. Complete soil boring logs are attached in Appendix E.

F.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

F.5. Chemical Soil Sampling

Soil samples were collected for chemical analysis from the depth of 10 feet below land surface in each of the three soil borings. In addition, soil samples were collected from soil borings 215-S and 215-W at a depth of 7.5 feet where organic vapors were detected emanating from the soil samples. The soil samples collected from the soil borings were analyzed for the presence of total petroleum hydrocarbons (THC) and total lead. A soil sample was also collected from the soil removed from the top of the UST. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

F.6. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation, pipe trench and the soil stockpile are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix E.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical(ft)	Sample ID No.
215-E	10	20	10	94-0431-16
215-S	3,700	12	7.5	94-0431-17
215-S	25	20	10	94-0431-18
215-W	2500	11	7.5	94-0431-39
215-W	5	18	10	94-0431-40
Stockpile	6000	6	NA	94-0431-10

NA=Not applicable

G. Groundwater Sampling and Analyses

G.1. Monitoring Well Installation

Four monitoring wells were installed near the UST to collect groundwater samples for analyses in accordance with ADEM rules and contract specifications. Each monitoring well was constructed of 4-inch diameter, flush-threaded PVC riser pipe and a 10-foot long, 4-inch diameter, 0.010-inch PVC screen. Silica sand was placed around the screen as a filter pack, and a bentonite seal was installed. Wells were finished using protective at-grade well vaults placed over the riser pipe, around which a concrete pad was constructed. Appendix F includes complete Well Construction Diagrams.

G.2. Monitoring Well Development Procedures

The monitoring wells were developed by removing groundwater from the well using a precleaned 4-foot PVC bailer. Groundwater was purged from each well until relatively clear, sediment-free water was produced, the well was bailed dry, or 10 well volumes were removed.

G.3. Groundwater Sampling Procedures

To sample the groundwater from monitoring wells, each well was purged using a precleaned Teflon® bailer until the water in the well exhibited consistent pH, temperature, and specific conductance readings. The criteria for consistency were ± 0.01 unit (pH), ± 0.5° celsius (temperature) and ± 5 percent for specific conductance. Samples were collected using a Teflon® bailer and placed in clean, glass, screw-top VOA vials having Teflon®-lined caps. The sample vials were labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

G.4. Groundwater Measurements

Four monitoring wells were installed at the site. Depth to groundwater was measured at each of the four monitoring wells present on site. Groundwater elevation data collected on October 11, 1994 indicate that groundwater movement is toward the west. Table 3 summarizes the groundwater elevation data collected at the site.

Table 3
Groundwater Measurements

Location	Top of riser	Water level
MW-1	99.77	94.11
MW-2	99.45	93.35
MW-3	99.22	91.81
MW-4	99.20	91.00

G.5. Groundwater Chemical Analysis

All analyses were performed using EPA or other recognized standard procedures. Data were reviewed prior to release and all quality control guidelines were met. Specific information on standard operating procedures is available upon request.

G.6. Groundwater Analytical Chemistry Results

One round of groundwater sampling was performed on October 14, 1994, on monitoring wells MW-1, MW-2, MW-3 and MW-4. Sample parameters for the sampling were volatile organic compounds (VOCs), total lead, and polynuclear aromatic hydrocarbons (PAHs). Laboratory reports and Chain-of-Custody forms are included in Appendix G.

No VOCs, PAHs or lead concentrations were detected at or above the analytical method detection limits in monitoring wells MW-1, MW-2, MW-3 or MW-4 during the sampling event with the exception of; fluorene detected in MW-2 at a concentration of 0.25 micrograms per liter (μg/l); fluorene detected in MW-3 at a concentration of 0.25 μg/l and; benzo(k)flouranthene detected at a concentration of 0.02 μg/l and fluorene detected at a concentration of 0.20 μg/l detected in MW-4. No total lead concentrations were detected at or above the laboratory method detection limit in water samples collected from MW-2, MW-3, and MW-4. A total lead concentration of 3 μg/l was detected in the water sample collected from MW-1, upgradient of the UST.

H. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum contaminated soils were encountered in soil borings completed near the UST basin. The vertical and horizontal extent of the petroleum contaminated soils was not determined during this assessment. Water was encountered in soil boring 215-S near the tank basin within 5 feet of the assumed tank bottom. The analyses of the soil samples collected from the soil borings show a TPH concentrations ranging from 5 ppm to 3,700 ppm and total lead concentrations ranging from 11 ppm to 20 ppm.

Groundwater samples were collected from four monitoring wells installed near the UST basin. Laboratory analyses of the groundwater samples collected from the monitoring wells detected no VOCs or PAHs in concentrations at or above analytical method detection limits with the exception of fluorene and benzo(k)flouranthene. The fluorene and benzo(k)flouranthene were detected in downgradient monitoring wells.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015-015840

Date of this Report: January 26, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 215
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/ (205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1 CIP

Number of tanks remaining at site: 1
Closure Date: 5-13-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	64" X 12'				
Tank Capacity	2000				
Tank Age	UN				
Date Tank Last Used	5-13-94				
Substance Stored	Used Oil				
Type of Product Piping (pressurized/suction)	Gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
   YES __NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
   YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____ NO _____
   If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
   If yes
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
   If yes, please indicate which tank(s) by the Identification Number _____.
   Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
   _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
_____
_____
_____

i. Was the excavation backfilled? YES _____ NO ____
If yes, provide the date. _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO ___X_____ If no, provide the depth from the ground surface to the groundwater table. 5 to 8 ft.
1. Boring or Monitor Well 4 monitoring wells on site
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO ____X____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO X
If yes:
1. How was free product handled? _____
_____
_____
2. What was the measured thickness of free product? _____
_____
_____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Lean clay with sand, brown, moist 7 to 8 feet; weathered shale bedrock 1 to 2 feet; shale bedrock. Boring logs attached.
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). Concrete slurry
_____

h. Provide the date the tank(s) were filled. May 13, 1994

i. Were the bore holes properly sealed with bentonite/soil?
Yes X No _____ If yes, provide date: 4-26-94

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES _____ NO ___

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____)

f. Was there water in the piping trench? YES _____ NO _____
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES ___ NO _____
If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO _____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date Piping trench was excavated further for installation of replacement UST.
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Was the piping capped? YES X NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES X NO ___ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES NA NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES NA NO _____
If yes;
1. Now was free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction West; based on groundwater elevations in the monitoring wells.

b. Was a monitoring well used? YES X NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 5 cubic yards.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
Soil was transported to base landfill for thinspreading

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.

c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: 1-27-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: _____ for Earl Windahl Date: 1-27-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: _____

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 1800
Location: Fort McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/ (205) 848-3539

Name of Consultant who performed calculations: David Doble, Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

Sample 1	6000	ppm	x	5	cyds	x	.002	=	60	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 0		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions
								TOTAL POTENTIAL EMISSIONS	60	lbs VOC emissions

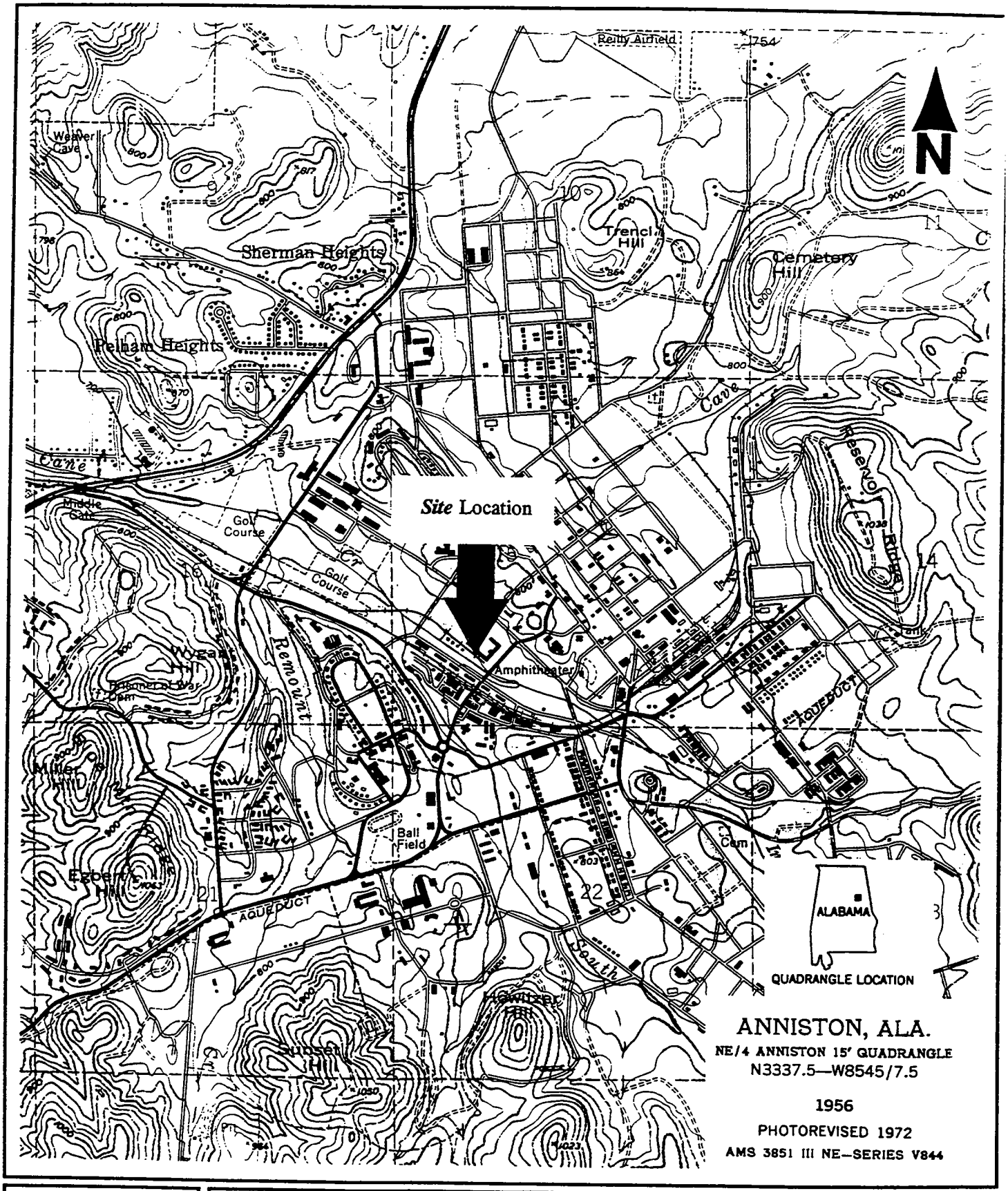
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

f:\wpfiles\cmxx\forms\ADEMUST

Appendix B

Site Location



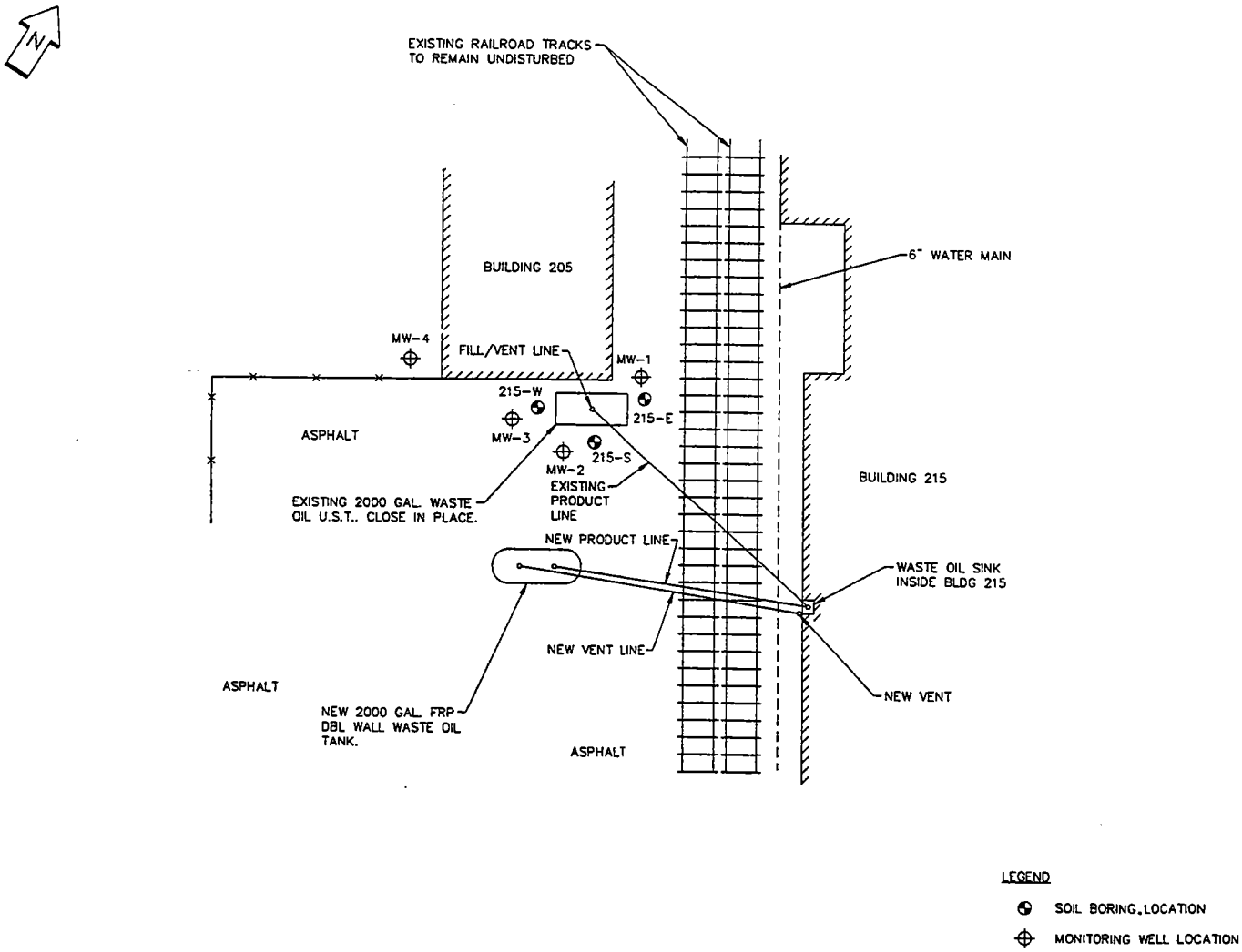
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 215
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations


N
EXISTING RAILROAD TRACKS TO REMAIN UNDISTURBED
BUILDING 205
6" WATER MAIN
MW-4
FILL/VENT LINE
MW-1
215-W
215-E
ASPHALT
MW-3
215-S
MW-2
BUILDING 215
EXISTING 2000 GAL. WASTE OIL U.S.T.. CLOSE IN PLACE.
EXISTING PRODUCT LINE
NEW PRODUCT LINE
WASTE OIL SINK INSIDE BLDG 215
NEW VENT LINE
ASPHALT
NEW VENT
NEW 2000 GAL. FRP DBL WALL WASTE OIL TANK.
ASPHALT
LEGEND
SOIL BORING LOCATION
MONITORING WELL LOCATION

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8332
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Date [redacted]

(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: [illegible]
Manifest Document No.: 19001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: [illegible] SOMERVILLE ROAD ANNISTON, AL 36205
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: [illegible]
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Fisher Industrial Service, Inc.
402 Webster Chapel Rd.
Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. [illegible] FIS Profile #: [illegible]	40	[illegible]	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above:

15. Special Handling Instructions and Additional Information — 24 Hr. Emergency Response Name/Number:
Work Order #: [illegible] Purchase Order #: [illegible]

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: NOLAN L. JAYE, JR. — Signature: [signature] — Month / Day / Year

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: JOHN W. OLIVER — Signature: John W. Oliver — Month: 06 Day: 06 Year: 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Month: 06 Day: 06 Year: 94

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: ~~NOLAN L. JAYE, JR.~~ NRJ — Signature: [signature] NRJ — Month / Day / Year

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

Appendix E

Organic Vapor Field Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 215W *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5		0	0	
7.5		30.1	30.0	
10		0	2.8	

Organic Vapor Field Data Sheet

Boring Identification: 215E *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5		0	0	
7.5		0	3.5	
10		0	6.7	

Organic Vapor Field Data Sheet

Boring Identification: 215S *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5		50	48	
7.5		140	82	
10		30	2.8	

Appendix F

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 215-E LOCATION: See attached sketch. DATE: 4/26/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.9	0.0					
98.9	1.0		3" Bituminous over Aggregate base			Asssumed elevation of 100.0 feet established on the floor slab of bldg. 205.
		CL	LEAN CLAY with SAND, brown, moist, rather soft to stiff. (Residual Clay)	4		
				10		
91.9	8.0			13		
			SHALE, grey. (Weathered Bedrock)			
89.9	10.0			56		
			END OF BORING Auger refusal at 10 feet. Water not observed to 10 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 215-S LOCATION: See attached sketch. DATE: 4/26/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.6	0.0					
98.6	1.0		3" Bituminous over Aggregate base			
		CL	LEAN CLAY with SAND, brown, moist, rather soft. (Residual Clay)	4		
95.6	4.0					
		CL	LEAN CLAY with SAND, grey, moist, rather stiff. (Residual Clay)	11		
92.6	7.0					
			SHALE, grey. (Weathered Bedrock)	20		
				30		
				50+		
86.1	13.5					
			END OF BORING Water down 12.5 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST

Ft. McClellan

Ft. McClellan,

BORING: 215-W

LOCATION:
See attached sketch.

DATE: 4/26/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.4	0.0		Aggregate base			
98.4	1.0	CL	AND, brown, moist, rather Residual Clay)	9		
				24		
				20		
91.9	7.5		thered Bedrock)	99		
88.9	10.5		10 feet immediately after			
			l with cuttings.			

Appendix G

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 27, 1994
Revised January 20, 1995

Project CMKX-93-0180D
Report 08-94-0497R

Mr. Marty Pelkey
J & ND Enterprises
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on one (1) soil sample received on May 20, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref.: *94-0497*-10 BLDG. 215 Spoil Pile

Analysis performed on May 25, and 26, 1994.

Methods: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
10	6000.	6.
Spike Recovery, %	103.74	104.00
Relative Percent Difference on Duplicate, %	0.28	1.04

Sincerely,

Jason Dahl
Lead Chemist

Thomas Hallquist
Supervisor, Chemistry

jd/th:ljc

k:\system\800\misc\J&Nent07.18R

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-0497

Page 1 of 1

Site Identification

Ft. McClellan
Anniston Alabama

Project #:

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ○ No ○ NA ○

Project Manager: Dave Dill

Sampled by: D. Dill

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
10	BLDG 215 spoil pile	5-13		a				1								TPH Lead

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
D. Dill	5-13-94						

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN℠
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on five (5) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0431-16	BLDG. 215	East	
94-0431-17	BLDG. 215	South	7.5 feet
94-0431-18	BLDG. 215	South	10.0 feet
94-0431-39	BLDG. 215	West	7.5 feet
94-0431-40	BLDG. 215	West	10.0 feet

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
16	10	20
17	3700	12
18	25	20
Spike Recovery, %	85.07	96.78
Relative Percent Difference on Duplicate, %	1.63	1.80

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
39	2500	11
40	5	18
Spike Recovery, %	97.97	101.19
Relative Percent Difference on Duplicate, % ..	0.39	1.17

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\j&ndcn07.20

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST
5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Client Name: BRAUN INTERTEC
Client Contact: DAVE DOBLE
Ref(s):
Site Location:
P.O. #
Log In No. 94-~~[illegible]~~ 0431 Project No. CMKX-93-0180D

Chain of Custody Record

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:
Requested Due Date:
LEGAL CASE ☐ Yes ☒ No
RUSH ☐ Yes ☒ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	LEAD (Pb)										REMARKS	Refrigerated	Preserved
11	4/26	10:25	BLDG 1697 WEST	X												X	X												
12	4/26	11:25	BLDG 338 SOUTH	X												X	X												
13	4/26	12:15	BLDG 503 SOUTH	X												X	X												
14	4/26	1:35	BLDG 503 EAST	X												X	X												
15	4/26	2:08	BLDG 503 WEST	X												X	X												
16	4/26	2:42	BLDG 215 EAST	X												X	X												
17	4/26	2:55	BLDG 215 SOUTH	X												X	X												
18	4/26	3:05	BLDG 215 SOUTH	X												X	X										7.5 feet		
19	4/28	8:00	BLDG 238 SPOIL PILE	X												X	X										10.0 feet CRACKED		
20	4/28	8:00	BLDG 338 PIPE TRENCH (A)	X												X	X												

Relinquished by:
Received by: Jason All
Date/Time: 3MAY94 2:00
Relinquished by:
Received by:
Date/Time:
Relinquished by:
Received by:
Date/Time:
Relinquished by:
Received by:
Date/Time:

White – Client Yellow – Company files Pink – Department files

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: Braun InterTec
Client Contact: Dave Doble
Ref(s):

P.O. #
Log In No. 94. 0431 Project No. CMKX-93-0180D

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:

LEGAL CASE ☐ Yes ☐ No
Requested Due Date: RUSH ☐ Yes ☐ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	LEAD (Pb)									REMARKS	Refrigerated	Preserved
21	4/27	1:40	BLDG 1800 NORTH (A)	X												X	X											
22			" " SOUTH (A)	X												X	X									cracked		
23			" " EAST (A)	X												X	X											
24			" " WEST (A)	X												X	X											
25			BOTTOM (A)	X												X	X											
26			NORTH (B)	X																						HOLD		
27			SOUTH (B)	X																						HOLD		
28			EAST (B)	X																						HOLD		
29			WEST (B)	X																						HOLD		
30			BOTTOM (B)	X																						HOLD		

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
U.P.S.	5.3.94 / 11:15		
Received by: Dawie Hayek		Received by:	
Relinquished by: Dawie Hayek	5.3.94 / 1:00	Relinquished by:	
Received by: Thomas Halbquist		Received by:	

White – Client Yellow – Company files Pink – Department files

BRAUN INTERTEC NORTHWEST

BRAUN INTERTEC
5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: BRAUN INTERTEC
Client Contact: DAVE DOBLE
Ref(s):
Site Location:
P.O. #
Log In No. 94-0431 Project No. CMKX-93-0180D

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:
LEGAL CASE ☐ Yes ☒ No
Requested Due Date: RUSH ☐ Yes ☒ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	LEAD (Pb)	REMARKS	Refrigerated	Preserved
31	4/27	2:20	BLDG 1800 PIPE TRENCH (A)	X												X	X			
32	4/27	225	BLDG 1800 PIPE TRENCH (B)	X												X	X	HOLD CRACKED		
33	4/27	4:30	BLDG 238 NORTH (A)	X												X	X			
34	4/27		BLDG 238 EAST (A)	X												X	X			
35	4/27		BLDG 238 SOUTH (A)	X												X	X			
36	4/27		BLDG 238 WEST (A)	X												X	X			
37	4/27		BLDG 238 BOTTOM (A)	X												X	X	CRACKED		
38	4/27		BLDG 238 WEST (B)	X												X	X	HOLD		
39	4/26	3:50	BLDG 215 WEST	X												X	X	7.5 feet		
40	4/26	3:55	BLDG ~~215~~ 215 WEST	X												X	X	10.0 feet		

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by: Susan Odell	3 MAY 94 2:00pm	Received by:	
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by:		Received by:	

White – Client Yellow – Company files Pink – Department files

Appendix H

Well Construction Diagrams

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 215

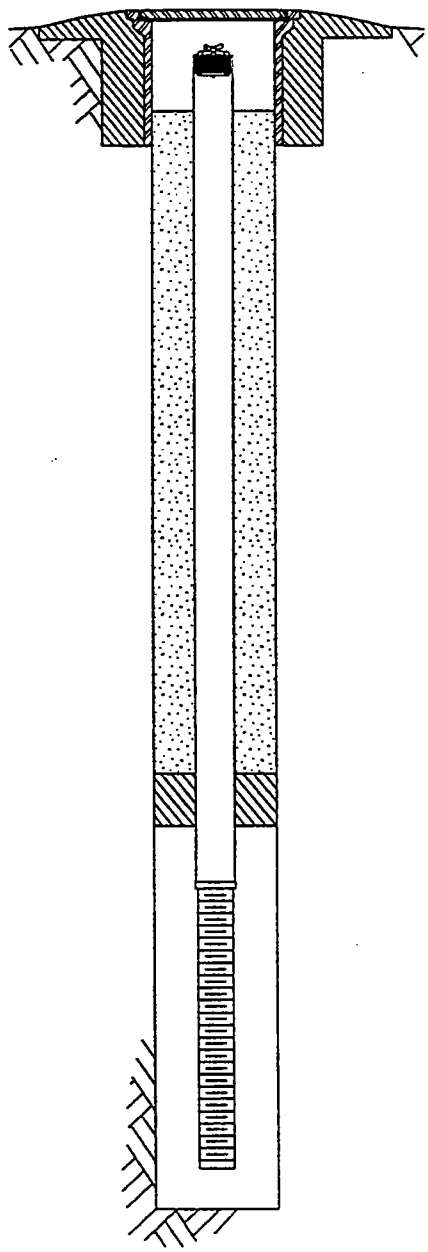
Well Number MW-4 Well Location See attached Date of Installation 5-18-94

B.M. Location and Elevation (± 0.01') Floor slab Building 205, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 99.5

Top of riser pipe elevation (±0.01'w/o cap) 99.20



Depth to top of seal 1.5

Depth to bottom of seal 3.5

Depth to top of screen 6.5

Depth to bottom of screen 16.5

Depth to bottom of boring 16.5

Method of Advance:

HSA _____ I.D. _____

Casing _____ I.D. _____

Tricone _____ O.D. _____

Power Auger X O.D. 10-inches

Protective Vault:

Manufacturer _____

Model # _____

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.5

Riser Pipe:

Type PVC

Diameter 4"

Total Length 6.5

Sections used 1

Couplings 0

Caps Yes X No _____

Seal Material Bentonite

Amount of material used (lb) _____

Filter Material Silica Sand

Amount of material used (lb) _____

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Remarks: _____

Completed by: DJD

BRAUN INTERTEC

wpfiles\cmkx\93-0180\0180.F00

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 215

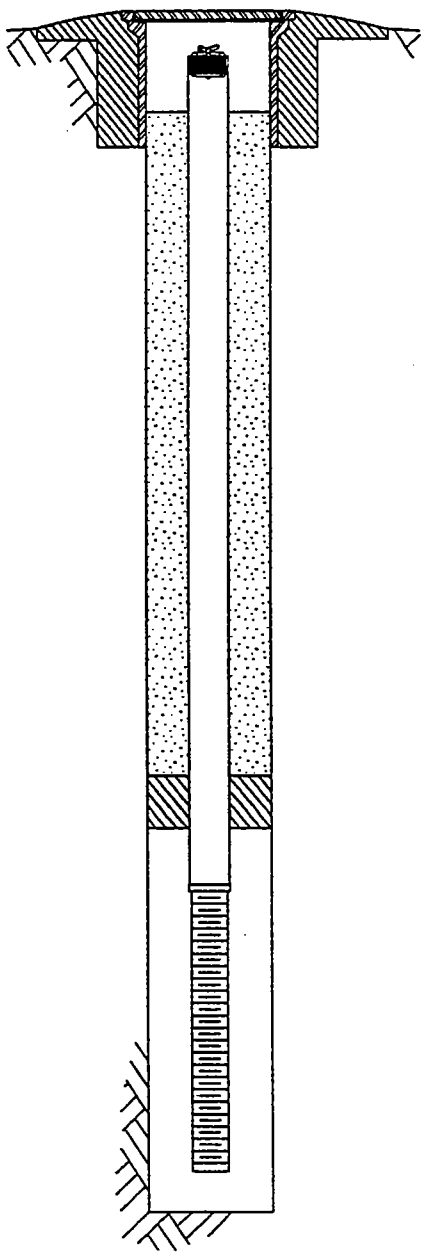
Well Number MW-3 Well Location See attached Date of Installation 5-18-94

B.M. Location and Elevation (± 0.01') Floor slab Building 215, assumed 100.00

Geologist _____

Ground surface elevation (±0.1') 99.5

Top of riser pipe elevation (±0.01'w/o cap) 99.22



Protective Vault:

Manufacturer _____
Model # _____
Diameter 6"
Hex wrench access Yes
Watertight Seal Yes

Neat Cement Grout Above Seal: 3.0

Riser Pipe:

Type PVC
Diameter 4"
Total Length 7
Sections used 1
Couplings 0
Caps Yes X No _____

Depth to top of seal 3.0

Depth to bottom of seal 5.0

Depth to top of screen 7.0

Seal Material Bentonite
Amount of material used (lb) _____

Filter Material Silica Sand
Amount of material used (lb) _____

Screen:

Type PVC
Slot Size .010
Length 10'
Diameter 4"
Plug/Point Plug

Depth to bottom of screen 17'

Depth to bottom of boring 17'

Method of Advance:

HSA _____ I.D. _____
Casing _____ I.D. _____
Tricone _____ O.D. _____
Power Auger X O.D. 10-inches

Remarks: _____

Completed by: DJD

BRAUN INTERTEC

\wpfiles\cmkx\93-0180\0180.F00

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 215

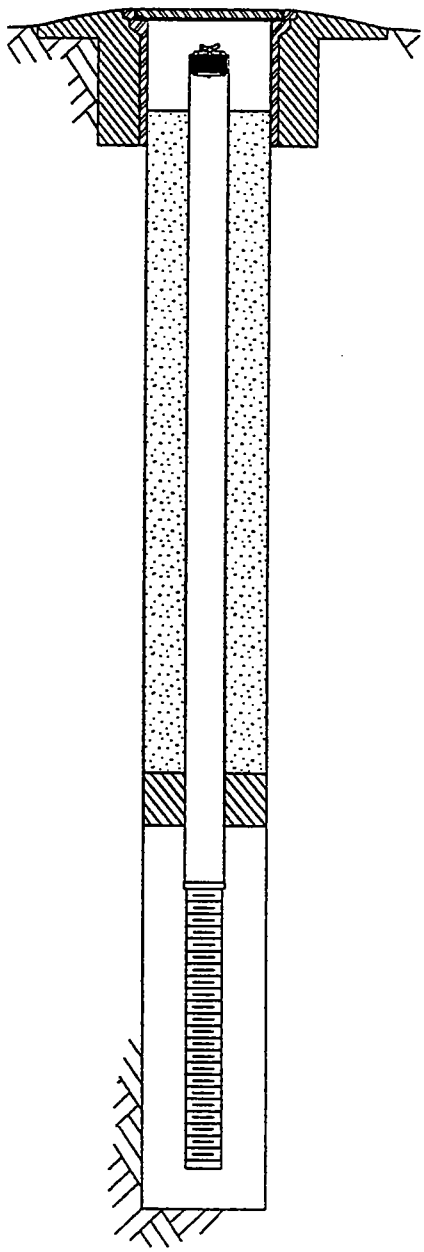
Well Number MW-2 Well Location See attached Date of Installation 5-18-94

B.M. Location and Elevation (± 0.01') Floor slab Building 215, assumed 100.00

Geologist _____

Ground surface elevation (±0.1') 99.6

Top of riser pipe elevation (±0.01'w/o cap) 99.45



Protective Vault:

Manufacturer _____
Model # _____
Diameter 6"
Hex wrench access Yes
Watertight Seal Yes

Neat Cement Grout Above Seal: 3.0

Riser Pipe:

Type PVC
Diameter 4"
Total Length 7'
Sections used 1
Couplings 0
Caps Yes X No _____

Seal Material Bentonite
Amount of material used (lb) _____

Filter Material Silica Sand
Amount of material used (lb) _____

Screen:

Type PVC
Slot Size .010
Length 10'
Diameter 4"
Plug/Point Plug

Depth to top of seal 3.0

Depth to bottom of seal 5.0

Depth to top of screen 7.0

Depth to bottom of screen 17'

Depth to bottom of boring 17'

Method of Advance:

HSA _____ I.D. _____
Casing _____ I.D. _____
Tricone _____ O.D. _____
Power Auger X O.D. 10-inches

Remarks: _____

Completed by: DJD

BRAUN™ INTERTEC

f:\wpfiles\cmkx\93-0180\0180.F00

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 215

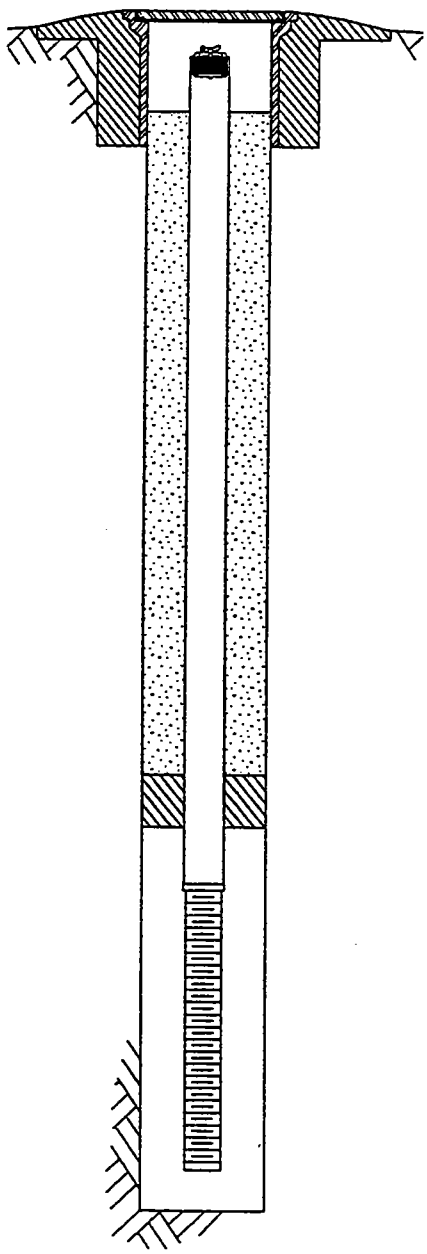
Well Number MW-1 Well Location See attached Date of Installation 5-18-94

B.M. Location and Elevation (± 0.01') Floor slab Building 215, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 99.9

Top of riser pipe elevation (±0.01'w/o cap) 99.77



Depth to top of seal 2.0

Depth to bottom of seal 4.0

Depth to top of screen 7.0

Depth to bottom of screen 17'

Depth to bottom of boring 17'

Method of Advance:

HSA _____ I.D. _____

Casing _____ I.D. _____

Tricone _____ O.D. _____

Power Auger X O.D. 10-inches

Protective Vault:

Manufacturer _____

Model # _____

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 2.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 7

Sections used 2

Couplings 1

Caps Yes X No _____

Seal Material Bentonite

Amount of material used (lb) _____

Filter Material Silica Sand

Amount of material used (lb) _____

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Remarks: _____

Completed by: DJD

BRAUN™ INTERTEC

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ATTACHMENT 2

BUILDING 234/238 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 26, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 234/238, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above-referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8713.

Sincerely,

David Doble
Environmental Geologist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J&D Enterprises

*f:\wpfiles\cmkx\93-0180\0180.R10

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D. Hazardous Waste Manifest and Certificate of Disposal
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A. Background

The Underground Storage Tank (UST) at Building 234/238 is located west of Building 234. The Alabama Department of Environmental Management (ADEM) Closure Report form is included in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 2,000 gallons and was used to store waste oil.

B. Piping Removal

Waste oil was emptied into a drain sink inside of the building and to the UST through underground PVC piping. The pipe trench was excavated on April 21, 1994. Approximately 35 feet of pipe was removed from the site. The existing pipe trench and surrounding area was excavated to approximately 14 feet below grade for the installation of the replacement UST. The soils underlying the product pipe were excavated by the contractor prior to the environmental geologist arriving on-site. Therefore, no pipe trench samples were collected.

C. UST Excavation

Prior to removal of the UST, approximately 400 gallons of used oil were removed from the tank. After the product was removed, the tank was continually purged with fresh air and cleaned. Soils around the tank were excavated and screened with the PID until the tank sides and ends were exposed and could be removed. The tank was steel, no holes were observed, and it appeared to be in fair condition. The tank was removed on April 27, 1994. The excavation limits are illustrated in Figure 2, Appendix C.

The soils of the tank basin consisted of silty clay to approximately 8 feet overlying shale bedrock. The base of the tank rested approximately 9 feet below land surface. Water was encountered in the bottom 3 inches of the excavation on the surface of the bedrock.

After removal of the tank, the excavation measured approximately 20 feet long by 14 feet wide by 10 feet deep. All of the soils removed from the excavation were removed to a stockpile area south of the excavation. The excavation was backfilled with pea gravel on April 27, 1994.

D. Soil Observations

Soil samples retrieved from the side walls and base of the UST excavation were examined visually by an environmental geologist for staining and other apparent signs of contamination.

The soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling. The PID was used to test fresh surfaces of soil collected from the sidewalls of the excavation and to perform headspace analyses.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. PID headspace analysis results of the final excavation limits are listed in Table 1.

Table 1
PID Headspace Readings

Location	Headspace reading (ppm)
North wall	3.0
South wall	2.4
East wall	3.6
West wall	2.5
Base	0.4

E. Soil Disposal

Approximately 5 yards of soil were removed from the UST basin during excavation of the UST. Contaminated soils were transported to the base landfill for thin-spreading.

F. UST Disposal

After the UST was properly cleaned by J & D Enterprises, it was transported off-site for disposal by Shorty's Scrap Metal, according to the contract requirements.

F. Sludge Disposal

No sludge was encountered during removal, however approximately 60 gallons of used oil were drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

G. Soil Sampling and Laboratory Results

G.1. Soil Sample Collection

Soil samples were collected according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix B. One sample was collected from each sidewall and the base of UST excavation labeled "A." An additional sample labeled "B" was collected from the sampling point on the west sidewall 2 feet further into the native soil. The "B" sample was preserved until analysis of the "A" sample were completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples was to be analyzed. An additional sample was collected from the stockpile for analysis. After the west "B" sample was collected, the basin sidewalls collapsed. The site safety officer indicated that no further entry into the basin was allowed. In addition, the east "B" sample location was within backfill of the newly installed replacement UST basin. Therefore, no "B" samples were collected from the north, east and south sidewalls.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

G.2. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation and the soil stockpile are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix E.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
North Sidewall "A"	25	3.4	6	94-0431-33
South Sidewall "A"	10	4.2	6	94-0431-35
East Sidewall "A"	65	5.0	6	94-0431-34
West Sidewall "A"	<5	5.9	6	94-0431-36
West Sidewall "B"	NL	NL	6	94-0431-38
Base "A"	15	3.1	9	94-0431-37
Stockpile	110	13	NA	94-0431-19

NL= No laboratory analyses conducted on "B" sample.
NA=Not applicable

H. Groundwater Sampling and Analyses

H.1. Monitoring Well Installation

Four monitoring wells were installed near the UST to collect groundwater samples for analyses in accordance with ADEM rules and contract specifications. Each monitoring well was constructed of 4-inch diameter, flush-threaded PVC riser pipe and a 10-foot long, 4-inch diameter, 0.010-inch

PVC screen. Silica sand was placed around the screen as a filter pack, and a bentonite seal was installed. Wells were finished using protective at-grade well vaults placed over the riser pipe, around which a concrete pad was constructed.

H.2. Monitoring Well Development Procedures

The monitoring wells were developed by removing groundwater from the well using a precleaned 4-foot PVC bailer. Groundwater was purged from each well until relatively clear, sediment-free water was produced, the well was bailed dry, or 10 well volumes were removed.

H.3. Groundwater Sampling Procedures

To sample the groundwater from monitoring wells, each well was purged using a precleaned Teflon® bailer until the water in the well exhibited consistent pH, temperature, and specific conductance readings. The criteria for consistency were ± 0.01 unit (pH), ± 0.5° celsius (temperature) and ± 5 percent for specific conductance. Samples were collected using a Teflon® bailer and placed in clean, glass, screw-top VOA vials having Teflon®-lined caps. The sample vials were labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

H.4. Groundwater Measurements

Four monitoring wells were installed at the site. Appendix F includes Well Construction Diagrams.

Depth to groundwater was measured at each of the four monitoring wells present on-site. Groundwater elevation data collected on October 13, 1994 indicate that groundwater movement is toward the northwest. Table 3 summarizes the groundwater elevation data collected at the site.

Table 3
Groundwater Measurements

Location	Top of riser	Water level
MW-1	99.40	89.66
MW-2	96.23	89.34
MW-3	95.73	89.19
MW-4	95.11	88.51

H.5. Groundwater Chemical Analysis

All analyses were performed using EPA or other recognized standard procedures. Data were reviewed prior to release and all quality control guidelines were met. Specific information on standard operating procedures is available upon request.

H.6. Groundwater Analytical Chemistry Results

One round of groundwater sampling was performed on October 13, 1994, on monitoring wells MW-1, MW-2, MW-3 and MW-4. Sample parameters for the sampling were volatile organic compounds (VOCs), total lead, and polynuclear aromatic hydrocarbons (PAHs). Laboratory reports and chain of custody forms are included in Appendix C. Water sampling data sheets are included in Appendix C.

No VOCs, PAHs or lead concentrations were detected at or above the analytical method detection limits in monitoring wells MW-1, MW-2, MW-3 or MW-4 during the sampling event with the exception of fluorene at a concentration of 0.47 micrograms per liter (μg/l) detected in MW-3 and acenaphthalene (4.2 μg/l), flourene (10 μg/l), and naphthalene (1.6 μg/l) detected in MW-4.

I. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum-contaminated soils were encountered in the tank basin. The vertical and horizontal extent of the petroleum contaminated soils was not determined during the limited amount of excavation to remove the tank. Water was encountered in the tank basin during the excavation process. The analyses of the soil samples collected from the sidewalls and the base of the excavation show a TPH concentrations ranging from <5 ppm to 65 ppm and total lead concentrations ranging from 3.1 ppm to 5.9 ppm. Soil from beneath the pipe trench was excavated approximately 14 feet below land surface for installation of the replacement UST.

Groundwater samples were collected from four monitoring wells installed near the UST basin. Laboratory analyses of the groundwater samples collected from the monitoring wells detected no VOCs, PAHs or lead concentrations at or above analytical method detection limits with the exception of fluorene, acenaphthalene and naphthalene. The fluorene, acenaphthalene and naphthalene were detected in downgradient monitoring wells.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015-015840

Date of this Report: January 26, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 1800
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 1
Closure Date: 4-27-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	64" X 12'				
Tank Capacity	2000				
Tank Age	UN				
Date Tank Last Used	4-21-94				
Substance Stored	Used Oil				
Type of Product Piping (pressurized/suction)	Gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
   YES _NO _X____ If not, provide the depth from the ground surface to the groundwater table. _approx. 9 feet___ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _4 monitoring wells installed near the UST basin_____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
   YES _____X___ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe mild to strong, waste OIL_____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
   (other _____)

e. Was there water in the excavation? YES _X approximately 3 inches_____ NO _____
   If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _Left in place_____

f. Was there free product in the excavation? YES _____ NO ___X____
   If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

g. Were visible holes noted in the tank(s)? YES _____ NO ___X_____
   If yes, please indicate which tank(s) by the Identification Number _____.
   Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
   _____
   _____
   _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
0-8 feet silty clay,brown, moist; shale bedrock

i. Was the excavation backfilled? YES X NO _
If yes, provide the date. 4-27-94

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____
_____
_____
2. What was the measured thickness of free product? _____
_____
_____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). _____
_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES __X_____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES _____X_____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well _4 monitoring wells installed at the site_____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO __X_____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____
_____)

f. Was there water in the piping trench? YES _____ NO ___X_____
1. One-time discharge to sanitary sewer with local approval _____
_____
2. Hauled to facility capable of treating constituents of petroleum products in water
_____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES ___ NO X_____
If yes,
1. How was the free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Were visible holes noted in the piping? YES _____ NO __X_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____
_____
_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
Silty clay, brown, moist.

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date Piping trench was excavated further for installation of replacement UST.
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____
If yes; 1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction. Northwest; based on groundwater elevations in the monitoring wells.

b. Was a monitoring well used? YES X NO _____
   If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed _5_ cubic yards.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on-site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum-Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
Soil was transported to base landfill for thin-spreading

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES __X__ NO _____ If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank. __0__ gallons.

c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: D. Doble Date: 1-27-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: for Earl Windahl Date: 1-27-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____
Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: _____

Incident No. (If applicable)
UST ___ - _____ - _____

Facility County: Calhoun

Facility Name: Building 234/238

Location: Fort McClellan

Address: Fort McClellan, AL 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3535

Name of Consultant who performed calculations: David Doble, Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

Sample 1	110	ppm	x	5	cyds	x	.002	=	1.1	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 0		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions
							TOTAL POTENTIAL EMISSIONS		1.1	lbs VOC emissions

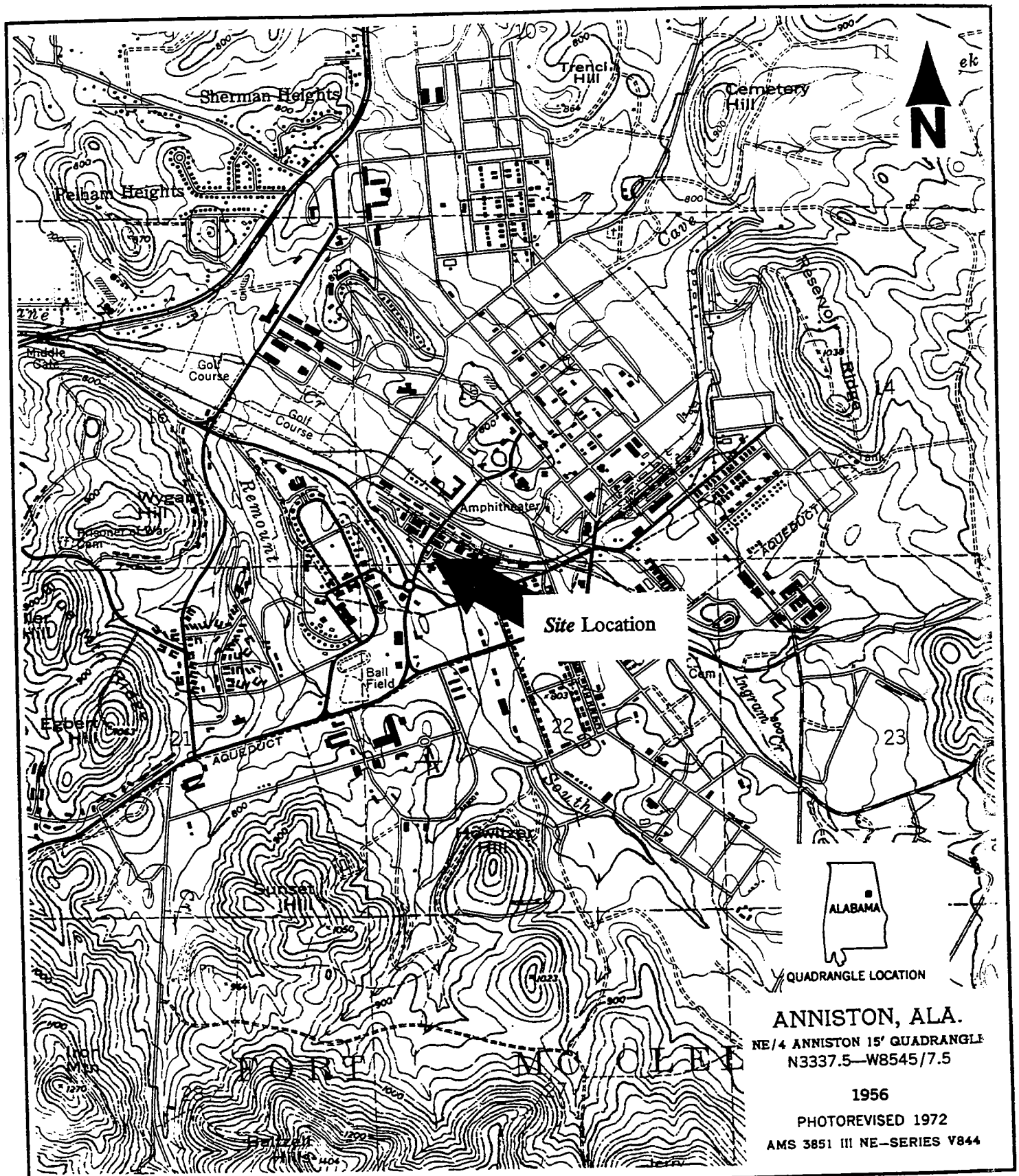
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

*f:\wpfiles\cmkx\93-0180\0180.R10

Appendix B

Site Location



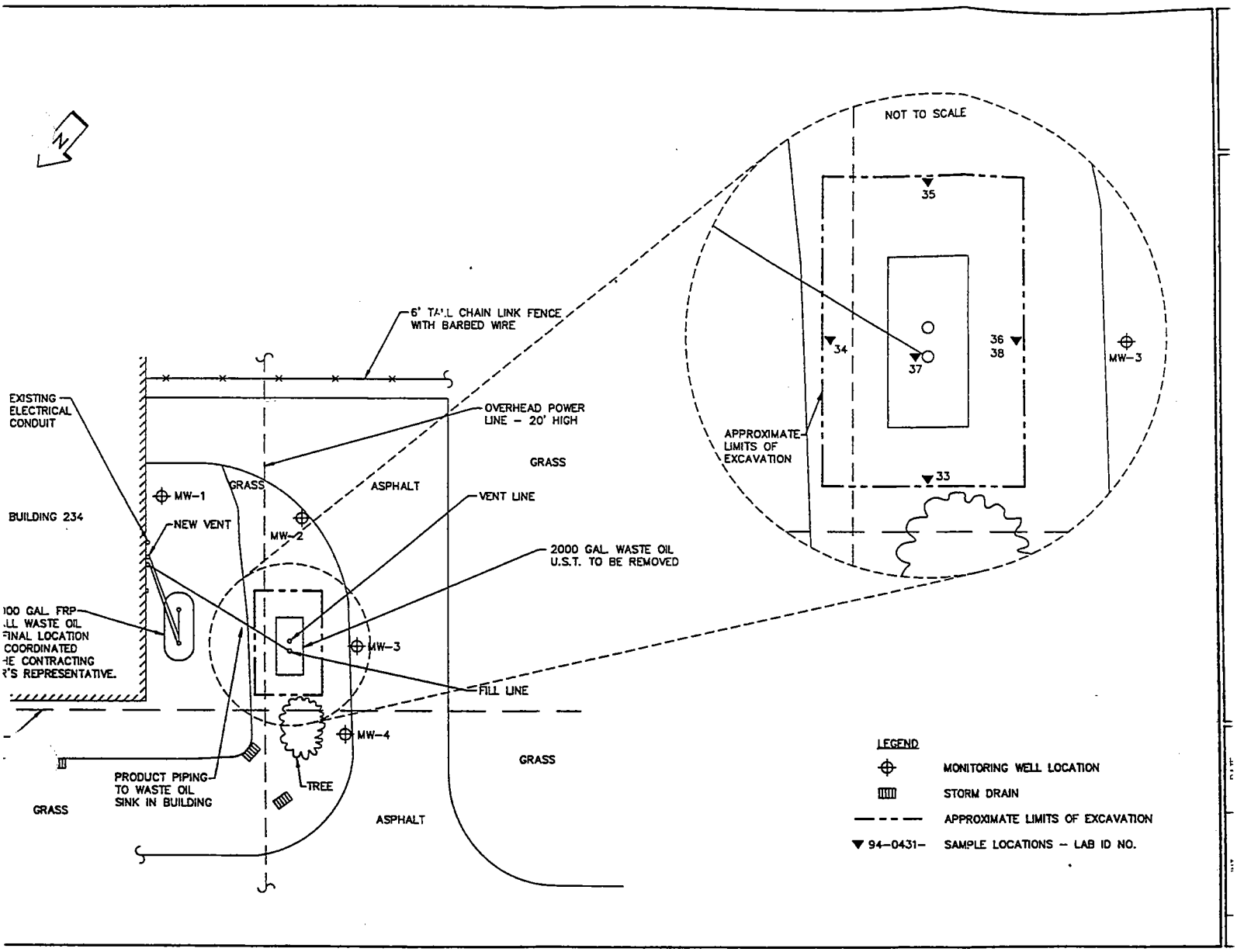
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 234/238
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	OF
APP'D BY:		
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations


N
6' TALL CHAIN LINK FENCE WITH BARBED WIRE
EXISTING ELECTRICAL CONDUIT
OVERHEAD POWER LINE - 20' HIGH
GRASS
ASPHALT
VENT LINE
MW-1
BUILDING 234
NEW VENT
MW-2
2000 GAL. WASTE OIL U.S.T. TO BE REMOVED
100 GAL. FRP ALL WASTE OIL FINAL LOCATION COORDINATED THE CONTRACTING R'S REPRESENTATIVE.
MW-3
FILL LINE
MW-4
PRODUCT PIPING TO WASTE OIL SINK IN BUILDING
TREE
GRASS
ASPHALT
NOT TO SCALE
35
34
37
36
38
33
MW-3
APPROXIMATE LIMITS OF EXCAVATION
LEGEND
MONITORING WELL LOCATION
STORM DRAIN
APPROXIMATE LIMITS OF EXCAVATION
94-0431- SAMPLE LOCATIONS - LAB ID NO.

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id.: ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Date [redacted]

Appendix E

Laboratory Results

BRAUN INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on seven (7) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0431-19	BLDG. 238	Spoil Pile
94-0431-33	BLDG. 238	North "A"
94-0431-34	BLDG. 238	East "A"
94-0431-35	BLDG. 238	South "A"
94-0431-36	BLDG. 238	West "A"
94-0431-37	BLDG. 238	Bottom "A"
94-0431-38	BLDG. 238	West "B"

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
19	110	13
Spike Recovery, %	85.07	96.78
Relative Percent Difference on Duplicate, % . .	1.63	1.80

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
33	25	3.4
34	65	5.0
35	10	4.2
36	< 5	5.9
37	15	3.1
38	*	*
Spike Recovery, %	97.97	101.19
Relative Percent Difference on Duplicate, %	0.39	1.17

* = Not tested

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-0431

Page _____ of _____

Site Identification

Fort McClellan
Anniston Al

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) _____

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: D. Dth

Sampled by: D. Dth

Comments:

Project #: CMKX-93-0180

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
-33	Bldg 238 North A	4-27		a												THC lead
-34	East A															
-35	South A															
-36	West A															
-37	Bottom A															
-38	West B															

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-0431

Page _____ of _____

Site Identification

Fort McClellan
Anniston, Al

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) _____

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: D. Dill

Sampled by: D. Dill

Comments:

Project #: CMKX-93-0180

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
-19	Bldg 238 spoil pile	4-27		a												THC 1 cont

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
D. Dill	8-2-94						

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
6875 Washington Avenue South
P.O. Box 39108
Minneapolis, Minnesota 55439-0108
612-941-5600 Fax: 942-4844

Engineers and Scientists Serving the Built and Natural Environments®

November 18, 1994

Project CMKX-93-0180
Report 94-3503 (Revised)

Mr. David Doble
Braun Intertec Corporation

Re: Fort McClellan

Amiston, AL

Braun Intertec Corporation received your analytical request on October 17, 1994. Analytical results are summarized on the following laboratory report.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed. No anomalies were encountered in the analysis of these samples.

We appreciate the opportunity to meet your analytical needs. If you have any questions or need additional information, please call Thomas Wagner at 612-942-4932.

Sincerely,

Thomas P. Wagner
Project Manager

Dirk W. Hoogenboom
Quality Assurance Coordinator

Attachments
Chain of Custody
Laboratory Results

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-01	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-01	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-01	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-02	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-02	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-02	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

lient Sample ID/Description: Bldg 238 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-03	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-03	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	0.47	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-03	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-04	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-04	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	4.2	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-04	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 238 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	1.6	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-3503

Page 1 of 3

Site Identification: Fort McClellan, ~~Bldg~~ Anniston, Alabama

Project #: CMKX-93-0180

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager:

Sampled by:

Comments: P. 2 and 3 of C of C filled out in lab. Rec'd on ice! 6° and 9°.

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
94-3503-01	Bldg 238 MW-1	12:50	10:30		4		1	2								VOC, lead & PAH-610
02	MW-2	1:05			4		1	2								
03	MW-3	1:20			4		1	2								
04	MW-4	1:30			4		1	2								
05	Bldg 1800 MW-1	10/13 ~~8/1~~	5:50		4		1	2								
06	MW-2		6:20		4		1	2								
07	MW-3		6:00		4		1	2								
08	MW-4		6:30		4		1	2								
	See Attached.	Less bottles														

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]							
Relinquished	Date:	Time:	Received by:	Received for laboratory by: Caren Thierry	Date: 10-1[illegible]	Time: 0730	

Appendix F

Well Construction Diagrams

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 238

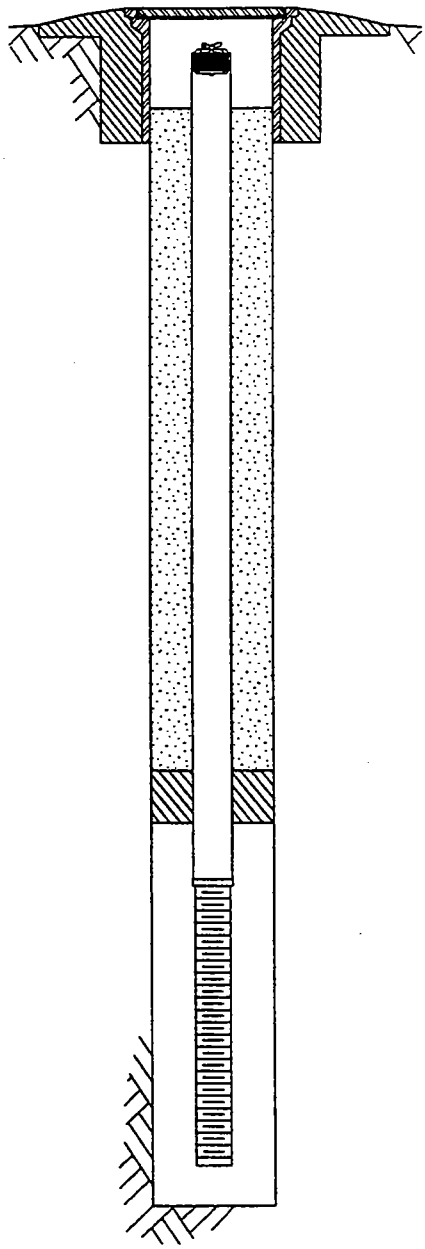
Well Number MW-4 Well Location See attached Date of Installation 5-18-94

B.M. Location and Elevation (± 0.01') West floor slab Building 238, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 95.3

Top of riser pipe elevation (±0.01'w/o cap) 95.11



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 2.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 6'

Sections used 2

Couplings 1

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Remarks:

Completed by: DJD

Depth to top of seal 2.0

Depth to bottom of seal 4.0

Depth to top of screen 6.0

Depth to bottom of screen 16'

Depth to bottom of boring 16'

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

BRAUN INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 238

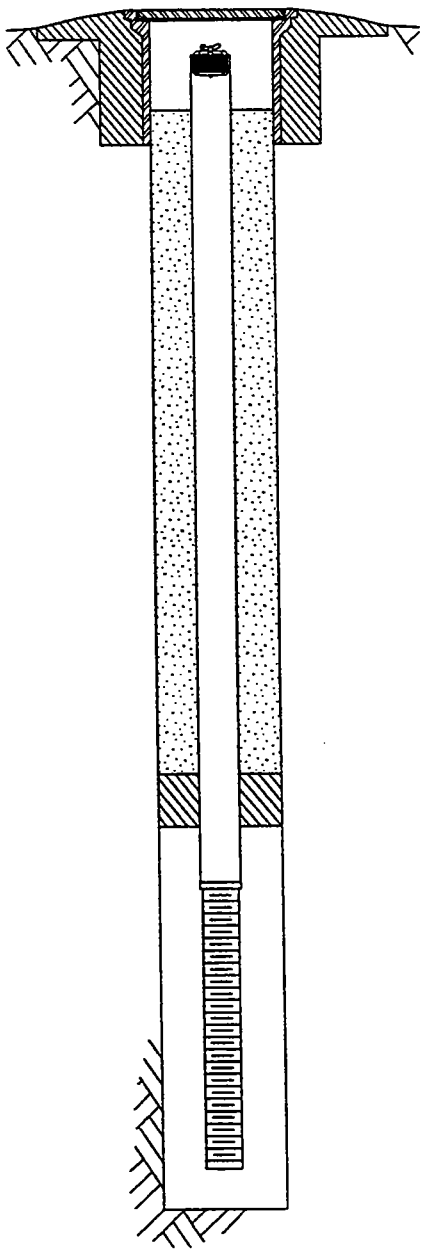
Well Number MW-3 Well Location See attached Date of Installation 5-18-94

B.M. Location and Elevation (± 0.01') West floor slab Building 888, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 95.9

Top of riser pipe elevation (±0.01'w/o cap) 95.73



Protective Vault:

Manufacturer
Model #
Diameter 6"
Hex wrench access Yes
Watertight Seal Yes

Neat Cement Grout Above Seal: 1.5

Riser Pipe:

Type PVC
Diameter 4"
Total Length 5'
Sections used 1
Couplings 0
Caps Yes X No

Seal Material Bentonite
Amount of material used (lb)

Filter Material Silica Sand
Amount of material used (lb)

Screen:

Type PVC
Slot Size .010
Length 10'
Diameter 4"
Plug/Point Plug

Remarks:

Completed by: DJD

Depth to top of seal 1.5

Depth to bottom of seal 3.5

Depth to top of screen 5.0

Depth to bottom of screen 15'

Depth to bottom of boring 15'

Method of Advance:

HSA I.D.
Casing I.D.
Tricone O.D.
Power Auger X O.D. 10-inches

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 238

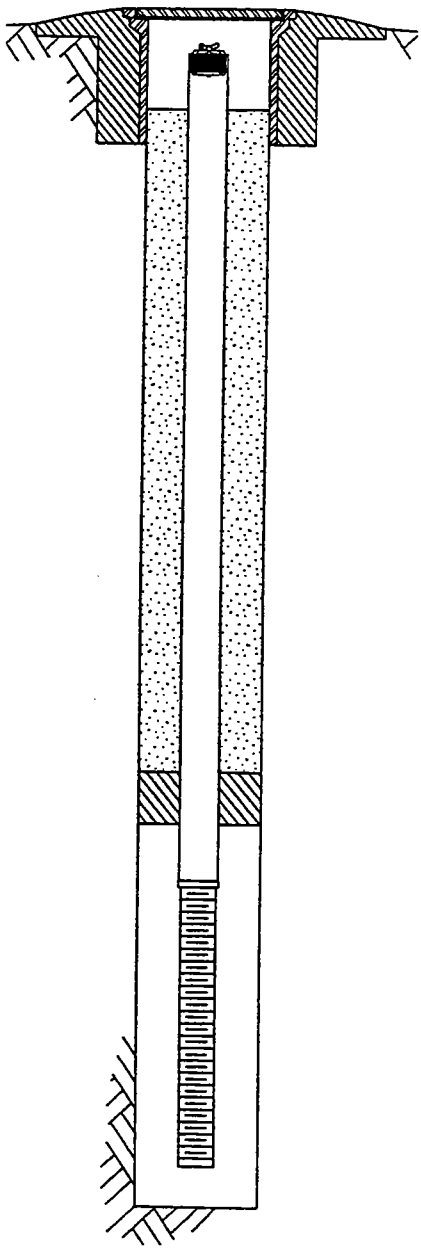
Well Number MW-2 Well Location See attached Date of Installation 5-17-94

B.M. Location and Elevation (± 0.01') West floor slab Building 238, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 96.4

Top of riser pipe elevation (±0.01'w/o cap) 96.23



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 5.0

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 1.0

Depth to bottom of seal 3.0

Depth to top of screen 5.0

Depth to bottom of screen 15'

Depth to bottom of boring 15'

Method of Advance:

HSA I.D.

sing I.D.

cone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 238

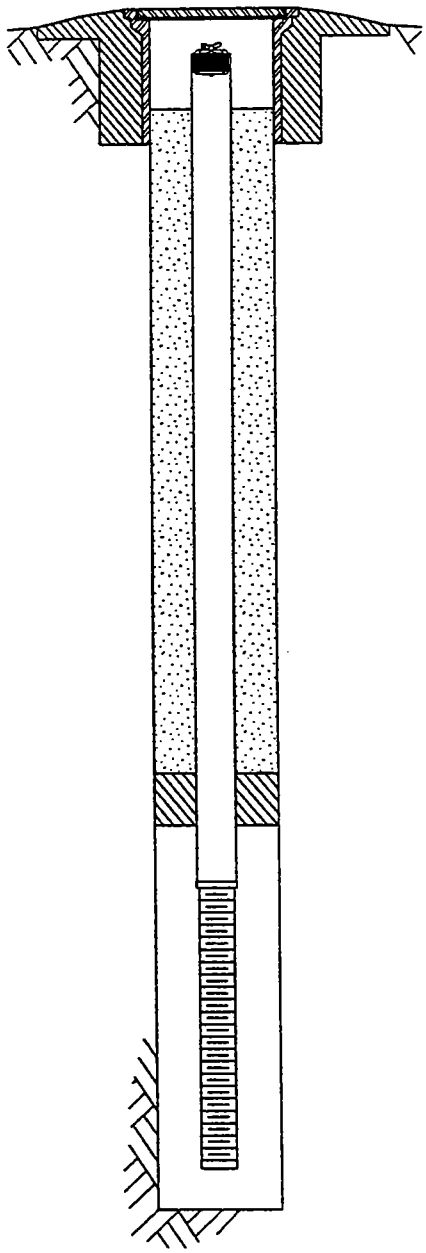
Well Number MW-1 Well Location See attached Date of Installation 5-17-94

B.M. Location and Elevation (± 0.01') West floor slab Building 888, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 99.5

Top of riser pipe elevation (±0.01'w/o cap) 99.40



Protective Vault:

Manufacturer
Model #
Diameter 6"
Hex wrench access Yes
Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC
Diameter 4"
Total Length 5'
Sections used 1
Couplings 0
Caps Yes X No

Seal Material Bentonite
Amount of material used (lb)

Filter Material Silica Sand
Amount of material used (lb)

Screen:

Type PVC
Slot Size .010
Length 10'
Diameter 4"
Plug/Point Plug

Depth to top of seal 1.0

Depth to bottom of seal 3.0

Depth to top of screen 5.0

Depth to bottom of screen 15'

Depth to bottom of boring 15'

Method of Advance:

HSA I.D.
Casing I.D.
Tricone O.D.
Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN™ INTERTEC

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ATTACHMENT 3

BUILDING 251 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments™

January 25, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 251, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8713.

Sincerely,

David Doble
Environmental Geologist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises
f:*wpfiles\cmkx\93-0180\0180.r08

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A. ADEM Closure Report Form
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D. Soil Boring Logs
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A. Background

The Underground Storage Tank (UST) at BLDG 251 is located west of the building. The Alabama Department of Environmental Management (ADEM) closure report form is included in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 500 gallons and was used to store diesel fuel for an emergency generator. The vent pipe and concrete pad protecting the top of the tank had reportedly been hit by a snow plow years earlier and the UST was no longer in use.

B. Piping Abandonment

Approximately 100 feet of product piping connected the UST to a generator engine located in building 251. The piping run was located beneath a parking between the UST and the building and consisted of two, 1-inch diameter copper lines. The product piping had been disconnected from the generator for approximately two years prior to removal of the tank. Because the product piping intersected the main communications cables for Fort McClellan, the piping was abandoned in place. In addition, because the communications cables were within 5 feet of the ground surface, the base communications office prohibited any underground work within 10 feet of the cables. Therefore, no pipe trench samples were collected from the middle 50 feet of the pipe run.

C. UST Excavation

Prior to removal of the UST, approximately 370 gallons of assumed diesel fuel contaminated water was removed from the tank and the tank was purged with fresh air. Soils around the tank were excavated and screened with the PID until the tank sides and ends were exposed and could be removed. The tank was constructed of single wall fiberglass. A crack was observed around the center of the UST . The UST was removed on May 16, 1994. The excavation limits are illustrated in Figure 2, Appendix C.

The soils of the tank basin consisted of silty sand to approximately 6 feet. A layer of cobbles was encountered beneath the UST basin. A concrete anchor pad was encountered at the bottom of the UST basin. The base of the tank rested on the concrete pad approximately 5 feet below land surface. Water was encountered near the bottom the excavation.

After removal of the tank, the excavation measured approximately 8 feet long by 8 feet wide by 7 feet deep. All of the soils removed from the excavation were placed in a stockpile area north of the excavation. The excavation was backfilled with pea gravel on May 16, 1994

D. Soil Excavation Observations

Soil samples retrieved from the side walls and base of the UST excavation were examined visually by an environmental geologist for staining and other apparent signs of contamination. A petroleum odor was noted in the soils near the anchor slab of the UST.

The soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling. The PID was used to test fresh surfaces of soil collected from the sidewalls of the excavation and to perform headspace analyses.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted through the cut. The highest reading observed on the PID is then recorded. PID headspace analysis results of the final excavation limits are listed in Table 1.

Table 1
UST Excavation PID Headspace Readings

Location	Headspace reading (ppm)
North wall	45
West wall	13
South wall	54
East wall	2.0
Base	157

E. Soil Disposal

No soil was removed from the UST basin during excavation of the UST. The concrete slab was placed directly ont he UST.

F. UST Disposal

After the UST was properly cleaned by J & D Enterprises, it was transported off-site for disposal.

G. Sludge Disposal

No sludge was encountered during removal, however approximately 370 gallons of oil contaminated water were drummed and disposed of through the local treatment works at Fort McClellan.

H. Soil Sampling and Laboratory Results

H.1. Soil Sample Collection

Soil samples were collected according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collected from each sidewall of UST excavation labeled "A". An additional four samples labeled "B" were collected from the same sampling points 2 feet further into the native soil. A composite base sample was collected from each of the four corners of the concrete base pad beneath the UST. Pipe trench samples were collected using a split spoon sampler hydraulically driven into the soil. Pipe trench samples were collected from the assumed from the bottom of the piping trench (sample "A") and a point 2 feet below the assumed from the bottom of the piping trench (sample "B"). Pipe trench samples were collected from 10 feet, 20 feet, 30 feet and 90 feet from the UST basin. Boring logs detailing the soil types encountered beneath the pipe trench are attached in Appendix D. The base communications office prohibited underground sample collection within ten feet of the communications cables. Therefore, no samples were collected near the center of the pipe run as the product pipe intersected the main communications cable at an angle.

The "B" samples collected from the UST basin and the piping trench were preserved until analysis of the "A" samples were completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples were analyzed. An additional sample was collected from the stockpile for analysis.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

H.2. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation and pipe trench are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix E.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
North Sidewall "A"	740	11	4	94-0431-01
North Sidewall "B"	45	9	4	94-0431-02
South Sidewall "A"	105	11	4	94-0431-05
South Sidewall "B"	230	12	4	94-0431-06
East Sidewall "A"	10	12	4	94-0431-03
East Sidewall "B"	NL	NL	4	94-0431-04
West Sidewall "A"	25	17	4	94-0431-07
West Sidewall "B"	NL	NL	4	94-0431-08
Base "A"	70	23	6	94-0431-09
10' Pipe Trench "A"	10	10	1.5	94-0556-01
10' Pipe Trench "B"	10	11	3.5	94-0556-02
20' Pipe Trench "A"	20	38	1.5	94-0556-03
20' Pipe Trench "B"	55	41	3.5	94-0556-04
30' Pipe Trench "A"	95	8	1.5	94-0556-05
30' Pipe Trench "B"	5800	12	3.5	94-0556-06
90' Pipe Trench "A"	85	10	1.5	94-0556-07
90' Pipe Trench "B"	850	19	3.5	94-0556-08

NL= No laboratory analyses conducted on "B" sample.
NA=Not applicable

I. Groundwater Sampling and Analyses

I.1. Monitoring Well Installation

Four monitoring wells were installed near the UST to collect groundwater samples for analyses in accordance with ADEM rules and contract specifications. Each monitoring well was constructed of 4-inch diameter, flush-threaded PVC riser pipe and a 10-foot long, 4-inch diameter, 0.010-inch PVC screen. Silica sand was placed around the screen as a filter pack, and a bentonite seal was installed. Wells were finished using protective at-grade well vaults placed over the riser pipe, around which a concrete pad was constructed.

I.2. Monitoring Well Development Procedures

The monitoring wells were developed by removing groundwater from the well using a precleaned 4-foot PVC bailer. Groundwater was purged from each well until relatively clear, sediment-free water was produced, the well was bailed dry, or 10 well volumes were removed.

I.3. Groundwater Sampling Procedures

To sample the groundwater from monitoring wells, each well was purged using a precleaned Teflon® bailer until the water in the well exhibited consistent pH, temperature, and specific conductance readings. The criteria for consistency were ± 0.01 unit (pH), ± 0.5° celsius (temperature) and ± 5 percent for specific conductance. Samples were collected using a Teflon® bailer and placed in clean, glass, screw-top VOA vials having Teflon®-lined caps. The sample vials were labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

I.4. Groundwater Measurements

Four monitoring wells were installed at the site. Appendix F includes Well Construction Diagrams.

Depth to groundwater was measured at each of the four monitoring wells present on site. Groundwater elevation data collected on October 14, 1994 indicate that groundwater movement is toward the west. Table 3 summarizes the groundwater elevation data collected at the site.

Table 3
Groundwater Measurements

Location	Top of riser	Water level
MW-1	95.15	89.24
MW-2	95.20	91.27
MW-3	95.13	91.60
MW-4	96.76	92.92

I.5. Groundwater Chemical Analysis

All analyses were performed using EPA or other recognized standard procedures. Data were reviewed prior to release and all quality control guidelines were met. Specific information on standard operating procedures is available upon request.

I.6. Groundwater Analytical Chemistry Results

One round of groundwater sampling was performed on October 13, 1994, on monitoring wells MW-1, MW-2, MW-3 and MW-4. Sample parameters for the sampling were benzene, ethyl benzene, toluene and xylenes (BETX) and Polynuclear Aromatic Hydrocarbons (PAHs). Laboratory reports and Chain-of-Custody forms are included in Appendix C.

No BETX or PAH compounds were detected at or above the analytical method detection limits in monitoring wells MW-1, MW-2, MW-3 or MW-4 during the sampling event with the exception of fluorene detected in MW-1 at a concentration of 0.19 micrograms per liter (μg/l).

J. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum contaminated soils were encountered in the tank basin and in the pipe trench. The vertical and horizontal extent of the petroleum contaminated soils was not determined during the limited amount of excavation to remove the tank. Water was encountered beneath tank basin during the

excavation process. The analyses of the soil samples collected from the sidewalls and the base of the excavation show a TPH concentrations ranging from 10 ppm to 740 ppm. Analyses of the pipe trench sample indicated high concentrations of TPH and lead in the sample collected from directly beneath the pipe.

Groundwater samples were collected from four monitoring wells installed near the UST basin. Laboratory analyses of the groundwater samples collected from the monitoring wells detected no VOCs, or PAHs at or above analytical method detection limits with the exception of fluorene. The fluorene was detected in one downgradient monitoring well.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: _____ - _____ - _____

Date of this Report: January 25, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 251
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 0
Closure Date: 5-16-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	4' X 6.5'				
Tank Capacity	600				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Diesel				
Type of Product Piping (pressurized/suction)	Suction				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
   YES __NO X_____ If not, provide the depth from the ground surface to the groundwater table. __approx. 4.5 feet___ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _4 monitoring wells installed near the UST basin_____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
   YES _X____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____X_____ NO _____
   If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval X_____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO ___X_____
   If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

g. Were visible holes noted in the tank(s)? YES __X_____ NO _____
   If yes, please indicate which tank(s) by the Identification Number _____.
   Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
   Center seam of the UST appeared to be cracked around the entire circumference.
   _____
   _____
   _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
0-6 feet silty sand with a layer of cobbles,brown, moist to water bearing

i. Was the excavation backfilled? YES X NO _____
If yes, provide the date. 5-16-94

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

g. Specify the inert solid material used to fill the tank(s). _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES _____ NO ___

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____
_____)

f. Was there water in the piping trench? YES _____ NO _____
1. One time discharge to sanitary sewer with local approval _____
_____
2. Hauled to facility capable of treating constituents of petroleum products in water
_____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____
_____

g. Was there free product found in the piping trench? YES _____ NO _____
If yes,
1. How was the free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Were visible holes noted in the piping? YES _____ NO _____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____
_____
_____
_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES X NO ___ If no, provide the depth from the ground surface to the groundwater table. 4 to 5 feet

f. Was there a notable product odor found in the bore holes?
YES X NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO X
If yes; 1. Now was free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Boring logs attached.

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES X NO _____ If yes, provide the date 6-8-94

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction West base on groundwater elevations in the monitoring wells

b. Was a monitoring well used? YES X NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 6 cubic yards.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.

c. Indicate the final destination of the sludge and attach invoices or receipts. _____

_____

_____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: 1-27-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl
Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: _____ for Earl Windahl Date: 1-27-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

= =

For ADEM Use:

Reviewed by: ______________________________ Date: ____________

Comments: ____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: _____ - _____ - _____

Date of this Report: January 25, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 251

Location: Fort McClellan

Contact: Mr. Ray Murphy/Lee Jaye

Address: Fort McClellan, AL 36205

Contact Telephone No.: (205) 848- 6155/(205) 848-3539

Name of Consultant who performed calculations: David Doble, Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

Sample 1	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 2	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 3	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 4	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 5	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 6	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 7	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 0	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 9	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 10	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 11	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 12	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 13	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 14	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 15	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 16	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 17	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 18	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 19	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 20	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
								TOTAL POTENTIAL EMISSIONS	_____ lbs VOC emissions

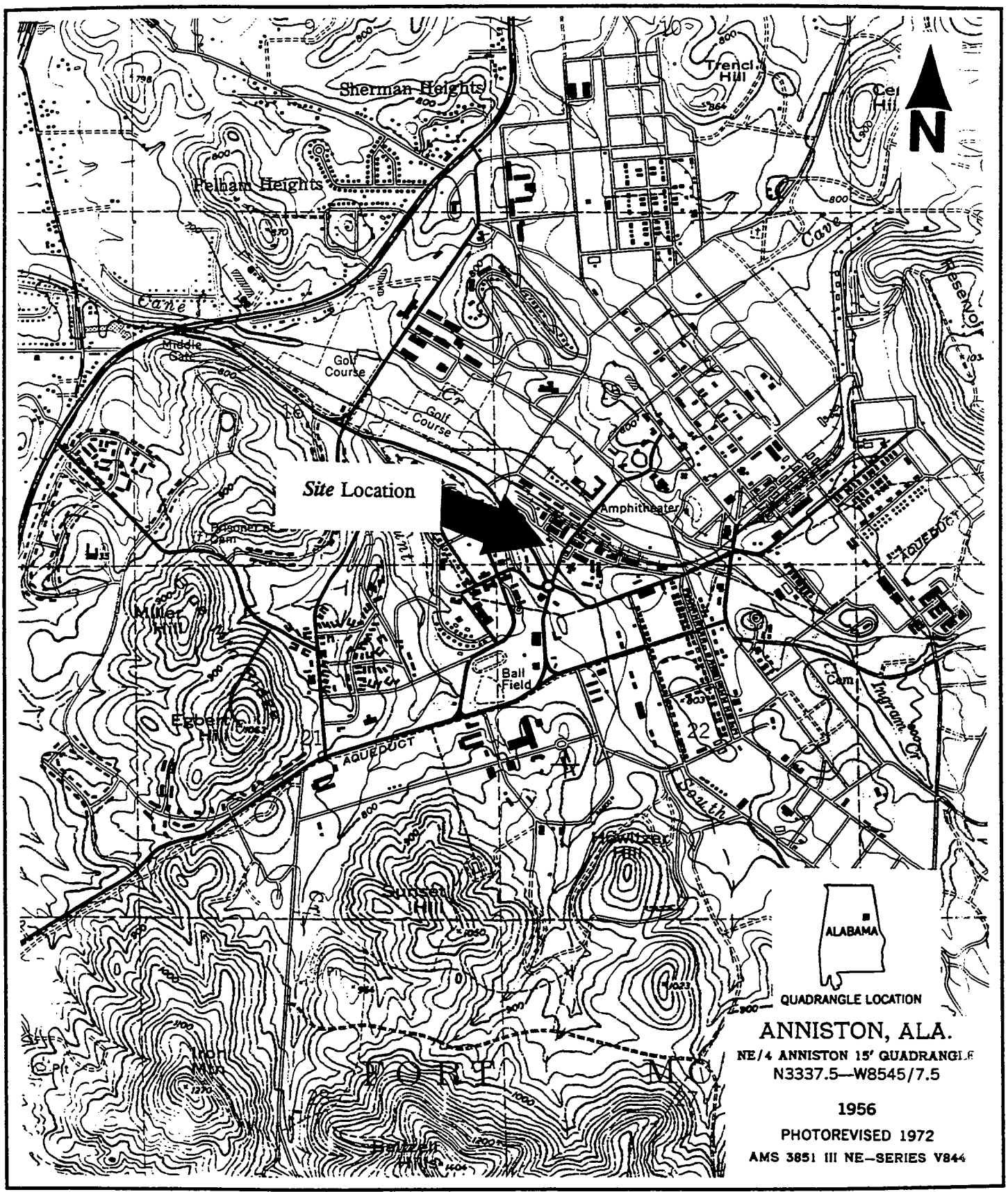
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

f:\wpfiles\cmxx\forms\ADEMUST

Appendix B

Site Location



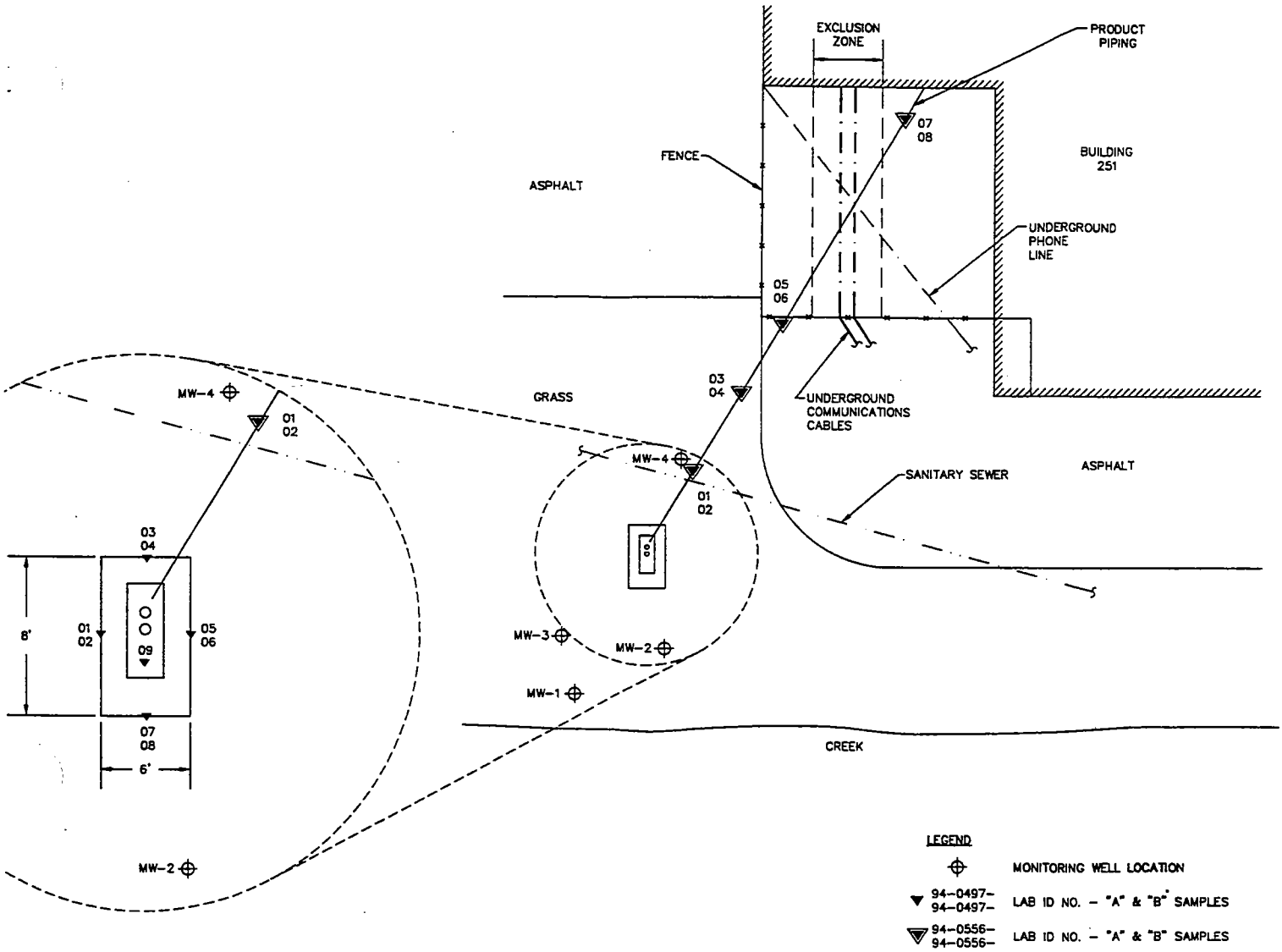
BRAUN INTERTEC

Site Location Map
Waste oil UST program
Building 251
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations


EXCLUSION ZONE
PRODUCT PIPING
07
08
BUILDING 251
FENCE
ASPHALT
UNDERGROUND PHONE LINE
05
06
03
04
GRASS
UNDERGROUND COMMUNICATIONS CABLES
MW-4
01
02
SANITARY SEWER
ASPHALT
03
04
8'
01
02
05
06
09
07
08
6'
MW-3
MW-2
MW-1
CREEK
LEGEND
MONITORING WELL LOCATION
94-0497-
94-0497-
LAB ID NO. - "A" & "B" SAMPLES
94-0556-
94-0556-
LAB ID NO. - "A" & "B" SAMPLES

Appendix D

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 251-10

LOCATION:
See attached sketch.

DATE: 6/8/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
97.3	0.2	CL	2" Bituminous			
			LEAN CLAY, brown, moist.			
94.0	3.5					
			END OF BORING			
			Water not observed after withdrawal of auger.			
			Boring backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 251-20 LOCATION: See attached sketch. DATE: 6/8/94	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
97.9	0.0					
97.7	0.2	CL	2" Bituminous LEAN CLAY, brown, moist.			
94.4	3.5		END OF BORING Water not observed after withdrawal of auger. Boring backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 251-30 LOCATION: See attached sketch. DATE: 6/8/94 SCALE: 1" = 4'

Elev. 98.4	Depth 0.0	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.2	0.2	CL	2" Bituminous LEAN CLAY, brown, moist.			
94.9	3.5		END OF BORING Water not observed after withdrawal of auger. Boring backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 251-90

LOCATION:
See attached sketch.

DATE: 6/8/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.9	0.0					
98.7	0.2	CL	2" Bituminous LEAN CLAY, brown, moist.			
95.4	3.5		END OF BORING Water not observed after withdrawal of auger. Boring backfilled with cuttings.			

Appendix E

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 27, 1994
Revised January 20, 1995

Project CMKX-93-0180D
Report 08-94-0497R

Mr. Marty Pelkey
J & ND Enterprises
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on nine (9) soil samples received on May 20, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref.:

94-0497-01	BLDG. 251	North "A"
94-0497-02	BLDG. 251	North "B"
94-0497-03	BLDG. 251	East "A"
94-0497-04	BLDG. 251	East "B"
94-0497-05	BLDG. 251	South "A"
94-0497-06	BLDG. 251	South "B"
94-0497-07	BLDG. 251	West "A"
94-0497-08	BLDG. 251	West "B"
94-0497-09	BLDG. 251	Bottom

Analysis performed on May 25, and 26, 1994.

Methods: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
01	740.	11.
02	45.	9.
03	10.	12.
04	**	**
05	105.	11.
06	230.	12.
07	25.	17.
08	**	**
09	70.	23.
Spike Recovery, %	103.74	104.00
Relative Percent Difference on Duplicate, %	0.28	1.04

** = Testing not required

Sincerely,

Jason Dahl
Lead Chemist

Thomas Hallquist
Supervisor, Chemistry

jd/th:ljc

k:\system\800\misc\J&Nent07.18R

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: J & INID ENTERPRISES
Client Contact:
Ref(s):
Site Location: FORT McCLELLAN ANNISTON, ALABAMA
P.O. #
Log In No. 08-94-0497 Project No. ~~[illegible]~~ - CMKX-93-0180 TASK 10

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:
LEGAL CASE ☐ Yes ☒ No
Requested Due Date:
RUSH ☐ Yes ☒ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	LEAD	REMARKS	Refrigerated	Preserved
1	5/16	3:00	BLDG 251 NORTH A	X												X	X			
2	↓	↓	BLDG 251 NORTH B	X														HOLD		
3			BLDG 251 EAST A	X												X	X			
4			BLDG 251 EAST B	X														HOLD		
5			BLDG 251 SOUTH A	X												X	X			
6			BLDG 251 SOUTH B	X														HOLD		
7			BLDG 251 WEST A	X												X	X			
8			BLDG 251 WEST B	X														HOLD		
9			BLDG 251 BOTTOM	X												X	X			
0	5/13	2:00	BLDG 213 SPOIL PILE	X												X	X			

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by: [signature]	5/20/94 11:20	Received by:	
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by:		Received by:	

BRAUN℠ INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page 1 of 2

Site Identification

Fort McClellan
Anniston, Ala.

Project #:

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: D. Doble

Sampled by: D. Doble

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	Bldg 251 North A	5-16	3:00													TPH - Lead (total)
	North B															Hold
	East A															
	East B															Hold
	South A															
	South B															Hold
	West A															
	West B															Hold
	Bottom															
	Building 215 Spoil Pile	5-13	2:00													TPH - Lead

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5-19-94	12:30	5-20-94 10:20 [signature]				

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

June 22, 1994

Project CMKX-93-0180D
Report 08-94-0556

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on eight (8) soil samples received on June 10, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0556-01	BLDG. 251	Pipe Trench	10' A
94-0556-02	BLDG. 251	Pipe Trench	10' B
94-0556-03	BLDG. 251	Pipe Trench	20' A
94-0556-04	BLDG. 251	Pipe Trench	20' B
94-0556-05	BLDG. 251	Pipe Trench	30' A
94-0556-06	BLDG. 251	Pipe Trench	30' B
94-0556-07	BLDG. 251	Pipe Trench	90' A
94-0556-08	BLDG. 251	Pipe Trench	90' B

Analysis performed on June 22, 1994.

Methods: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
01	10	10
02	10	11
03	20	38
04	55	41
05	95	8
06	5800	12
07	85	10
08	850	19
Spike Recovery, %	94.93	104.35
Relative Percent Difference on Duplicate, %	0.53	7.30

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

K:\800\system\800\misc\J&NDEN\06.22

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: J-D Enterprises
Client Contact: Rani Douville
Ref(s):
Site Location: Ft. McClellan
P.O. # Request
Log In No. 94.0556 Project No. CMKX-93-0180D

Provide Verbal Results? ☒ Yes ☐ No
Phone Number: Dave Dable 612-683-2713
Provide Fax Results? ☒ Yes ☐ No
Fax Number: Dave Dable 612-683-8888
Requested Due Date:
LEGAL CASE ☐ Yes ☒ No
RUSH ☐ Yes ☒ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	Lead	REMARKS	Refrigerated	Preserved
1	6-8	2:20	Bldg 251 pipetrench 10'A	X																
2		2:20	10'B	X																
3		2:20	20'A	X														Hold		
4		2:20	20'B	X																
5		3:00	30'A	X														Hold		
6		3:00	30'B	X																
7		3:45	90'A	X																
8		3:45	90'B	X														Hold		
9																				
0																				

ANALYSES TO BE PERFORMED

LAB USE ONLY

Relinquished by: [signature]	Date/Time: 6-9-94	Relinquished by:
Received by: Jamie Hajek	6-10-94/10:05	Received by:
Relinquished by: Jamie Hajek	Date/Time: 6-10-94/10:30	Relinquished by:
Received by: Thomas Halbuist		Received by:

Date/Time:

Date/Time:

White - Client Yellow - Company files Pink - Department files

Appendix F

Well Construction Report Form

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

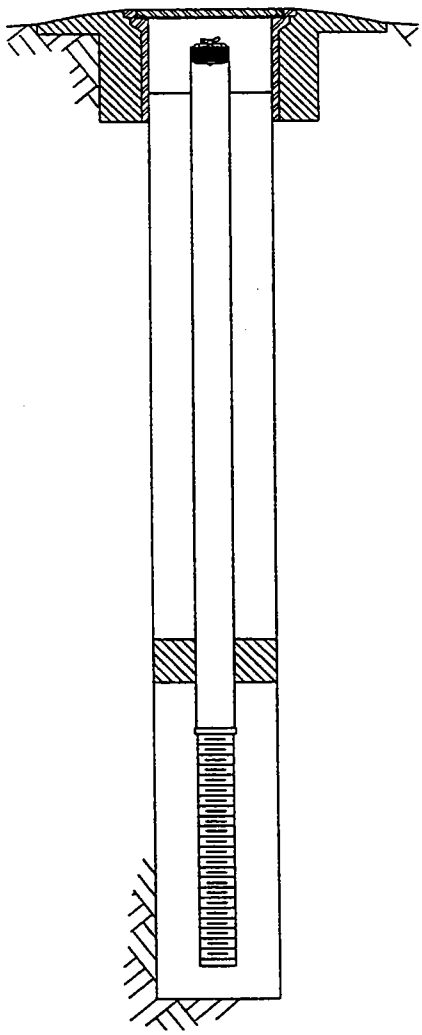
Well Number MW-1 Well Location See attached Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 96.0

Top of riser pipe elevation (±0.01'w/o cap) 95.15



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 0.5

Riser Pipe:

Type PVC

Diameter 4"

Total Length 2'

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 0.5

Depth to bottom of seal 1.0

Depth to top of screen 2.0

Depth to bottom of screen 12'

Depth to bottom of boring 12'

Method of Advance:

HSA I.D.

Casing I.D.

Triconc O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

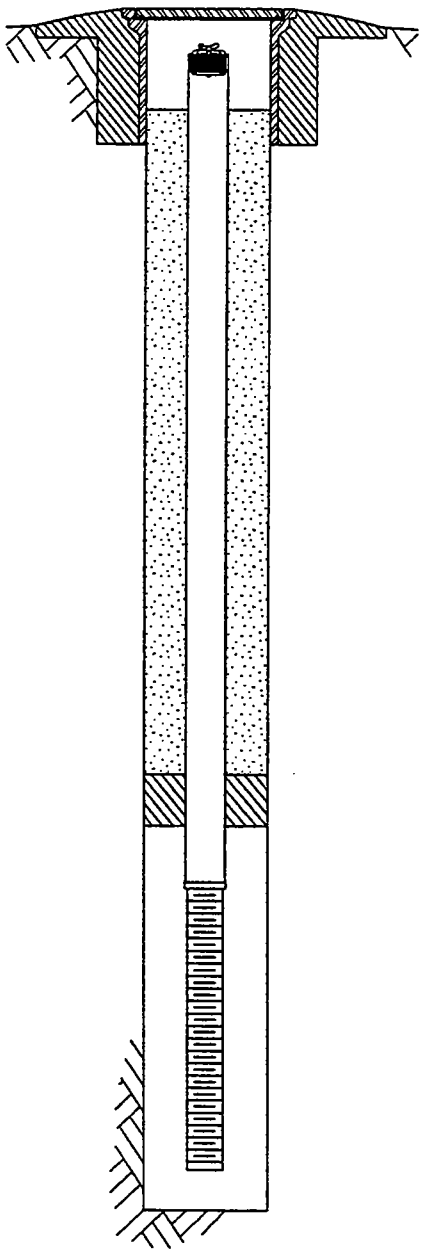
Well Number MW-2 Well Location See attched Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 95.4

Top of riser pipe elevation (±0.01'w/o cap) 95.20



Protective Vault:

Manufacturer
Model #
Diameter 6"
Hex wrench access Yes
Watertight Seal Yes

Neat Cement Grout Above Seal: 0.5

Riser Pipe:

Type PVC
Diameter 4"
Total Length 2'
Sections used 1
Couplings 0
Caps Yes X No

Seal Material Bentonite
Amount of material used (lb)

Filter Material Silica Sand
Amount of material used (lb)

Screen:

Type PVC
Slot Size .010
Length 10'
Diameter 4"
Plug/Point Plug

Depth to top of seal 0.5

Depth to bottom of seal 1.0

Depth to top of screen 2.0

Depth to bottom of screen 12'

Depth to bottom of boring 12'

Method of Advance:

HSA I.D.
Casing I.D.
Tricone O.D.
Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

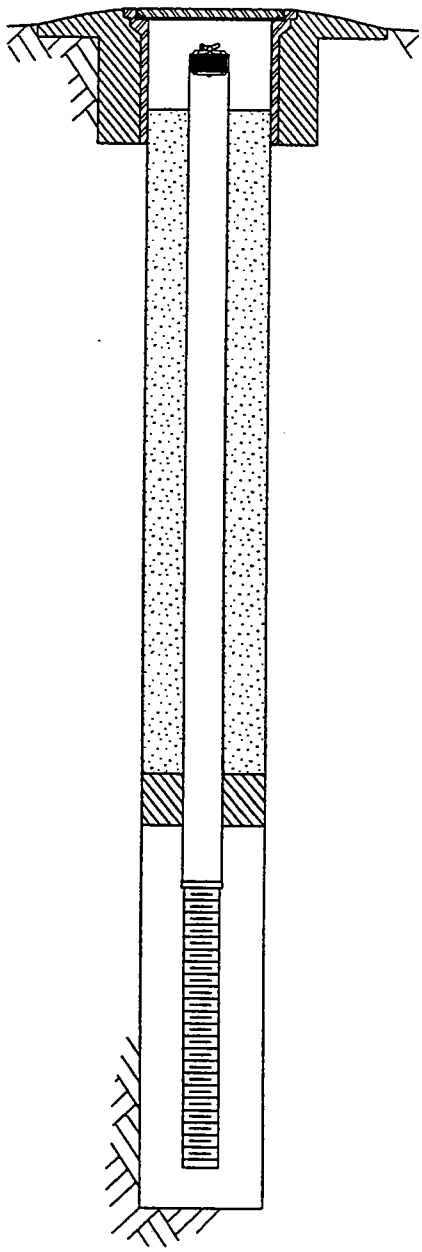
Well Number MW-3 Well Location See attached Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 95.4

Top of riser pipe elevation (±0.01'w/o cap) 95.13



Depth to top of seal 0.7

Depth to bottom of seal 0.7

Depth to top of screen 2.5'

Depth to bottom of screen 10'

Depth to bottom of boring 10'

Method of Advance:

HSA _____ I.D. _____

Casing _____ I.D. _____

Tricone _____ O.D. _____

Power Auger X O.D. 10-inches

Protective Vault:

Manufacturer _____

Model # _____

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 0.7

Riser Pipe:

Type PVC

Diameter 4"

Total Length 2.5

Sections used 1

Couplings 0

Caps Yes X No _____

Seal Material Bentonite

Amount of material used (lb) _____

Filter Material Silica Sand

Amount of material used (lb) _____

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Remarks: _____

Completed by: DJD

BRAUN INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

Well Number MW-4 Well Location See attached Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 96.8

Top of riser pipe elevation (±0.01'w/o cap) 96.76

Approximate water level before installation _____

Approximate depth to first water encountered in drilling _____

Depth to top of seal 0.7

Depth to bottom of seal 0.7

Depth to top of screen 2.5

Depth to bottom of screen 12.5'

Depth to bottom of boring 12.5'

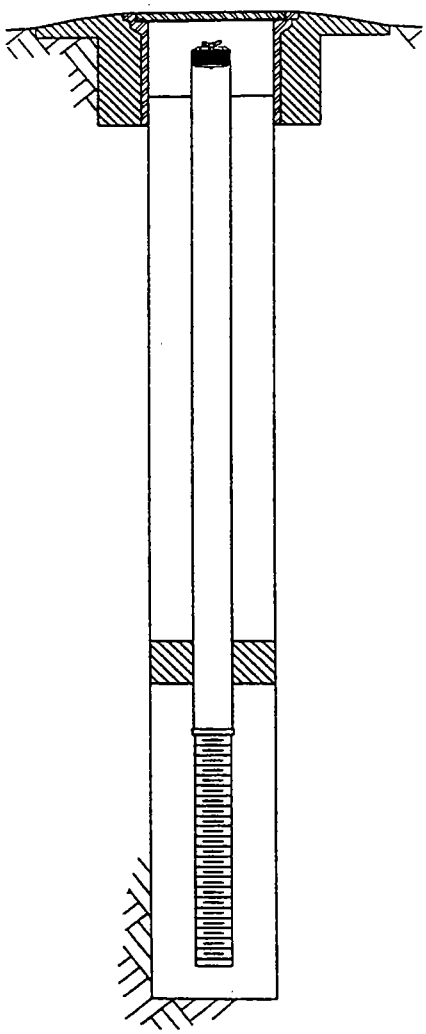
Method of Advance:

HSA _____ I.D. _____

Casing _____ I.D. _____

Tricone _____ O.D. _____

Power Auger X O.D. 10-inches



Protective Vault:

Manufacturer _____

Model # _____

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 0.7

Riser Pipe:

Type PVC

Diameter 4"

Total Length 2.5

Sections used 1

Couplings 0

Caps Yes X No _____

Seal Material Bentonite

Amount of material used (lb) _____

Filter Material Silica Sand

Amount of material used (lb) _____

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Remarks: _____

Completed by: DJD

BRAUN INTERTEC

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ATTACHMENT 3

BUILDING 251 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 25, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 251, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8713.

Sincerely,

David Doble
Environmental Geologist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises
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Table of Contents

A. Background 1

B. Piping Abandonment 1

C. UST Excavation 1

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D. Soil Boring Logs
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A. Background

The Underground Storage Tank (UST) at BLDG 251 is located west of the building. The Alabama Department of Environmental Management (ADEM) closure report form is included in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 500 gallons and was used to store diesel fuel for an emergency generator. The vent pipe and concrete pad protecting the top of the tank had reportedly been hit by a snow plow years earlier and the UST was no longer in use.

B. Piping Abandonment

Approximately 100 feet of product piping connected the UST to a generator engine located in building 251. The piping run was located beneath a parking between the UST and the building and consisted of two, 1-inch diameter copper lines. The product piping had been disconnected from the generator for approximately two years prior to removal of the tank. Because the product piping intersected the main communications cables for Fort McClellan, the piping was abandoned in place. In addition, because the communications cables were within 5 feet of the ground surface, the base communications office prohibited any underground work within 10 feet of the cables. Therefore, no pipe trench samples were collected from the middle 50 feet of the pipe run.

C. UST Excavation

Prior to removal of the UST, approximately 370 gallons of assumed diesel fuel contaminated water was removed from the tank and the tank was purged with fresh air. Soils around the tank were excavated and screened with the PID until the tank sides and ends were exposed and could be removed. The tank was constructed of single wall fiberglass. A crack was observed around the center of the UST . The UST was removed on May 16, 1994. The excavation limits are illustrated in Figure 2, Appendix C.

The soils of the tank basin consisted of silty sand to approximately 6 feet. A layer of cobbles was encountered beneath the UST basin. A concrete anchor pad was encountered at the bottom of the UST basin. The base of the tank rested on the concrete pad approximately 5 feet below land surface. Water was encountered near the bottom the excavation.

After removal of the tank, the excavation measured approximately 8 feet long by 8 feet wide by 7 feet deep. All of the soils removed from the excavation were placed in a stockpile area north of the excavation. The excavation was backfilled with pea gravel on May 16, 1994

D. Soil Excavation Observations

Soil samples retrieved from the side walls and base of the UST excavation were examined visually by an environmental geologist for staining and other apparent signs of contamination. A petroleum odor was noted in the soils near the anchor slab of the UST.

The soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling. The PID was used to test fresh surfaces of soil collected from the sidewalls of the excavation and to perform headspace analyses.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted through the cut. The highest reading observed on the PID is then recorded. PID headspace analysis results of the final excavation limits are listed in Table 1.

Table 1
UST Excavation PID Headspace Readings

Location	Headspace reading (ppm)
North wall	45
West wall	13
South wall	54
East wall	2.0
Base	157

E. Soil Disposal

No soil was removed from the UST basin during excavation of the UST. The concrete slab was placed directly ont he UST.

F. UST Disposal

After the UST was properly cleaned by J & D Enterprises, it was transported off-site for disposal.

G. Sludge Disposal

No sludge was encountered during removal, however approximately 370 gallons of oil contaminated water were drummed and disposed of through the local treatment works at Fort McClellan.

H. Soil Sampling and Laboratory Results

H.1. Soil Sample Collection

Soil samples were collected according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collected from each sidewall of UST excavation labeled "A". An additional four samples labeled "B" were collected from the same sampling points 2 feet further into the native soil. A composite base sample was collected from each of the four corners of the concrete base pad beneath the UST. Pipe trench samples were collected using a split spoon sampler hydraulically driven into the soil. Pipe trench samples were collected from the assumed from the bottom of the piping trench (sample "A") and a point 2 feet below the assumed from the bottom of the piping trench (sample "B"). Pipe trench samples were collected from 10 feet, 20 feet, 30 feet and 90 feet from the UST basin. Boring logs detailing the soil types encountered beneath the pipe trench are attached in Appendix D. The base communications office prohibited underground sample collection within ten feet of the communications cables. Therefore, no samples were collected near the center of the pipe run as the product pipe intersected the main communications cable at an angle.

The "B" samples collected from the UST basin and the piping trench were preserved until analysis of the "A" samples were completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples were analyzed. An additional sample was collected from the stockpile for analysis.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

H.2. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation and pipe trench are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix E.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
North Sidewall "A"	740	11	4	94-0431-01
North Sidewall "B"	45	9	4	94-0431-02
South Sidewall "A"	105	11	4	94-0431-05
South Sidewall "B"	230	12	4	94-0431-06
East Sidewall "A"	10	12	4	94-0431-03
East Sidewall "B"	NL	NL	4	94-0431-04
West Sidewall "A"	25	17	4	94-0431-07
West Sidewall "B"	NL	NL	4	94-0431-08
Base "A"	70	23	6	94-0431-09
10' Pipe Trench "A"	10	10	1.5	94-0556-01
10' Pipe Trench "B"	10	11	3.5	94-0556-02
20' Pipe Trench "A"	20	38	1.5	94-0556-03
20' Pipe Trench "B"	55	41	3.5	94-0556-04
30' Pipe Trench "A"	95	8	1.5	94-0556-05
30' Pipe Trench "B"	5800	12	3.5	94-0556-06
90' Pipe Trench "A"	85	10	1.5	94-0556-07
90' Pipe Trench "B"	850	19	3.5	94-0556-08

NL= No laboratory analyses conducted on "B" sample.
NA=Not applicable

I. Groundwater Sampling and Analyses

I.1. Monitoring Well Installation

Four monitoring wells were installed near the UST to collect groundwater samples for analyses in accordance with ADEM rules and contract specifications. Each monitoring well was constructed of 4-inch diameter, flush-threaded PVC riser pipe and a 10-foot long, 4-inch diameter, 0.010-inch PVC screen. Silica sand was placed around the screen as a filter pack, and a bentonite seal was installed. Wells were finished using protective at-grade well vaults placed over the riser pipe, around which a concrete pad was constructed.

I.2. Monitoring Well Development Procedures

The monitoring wells were developed by removing groundwater from the well using a precleaned 4-foot PVC bailer. Groundwater was purged from each well until relatively clear, sediment-free water was produced, the well was bailed dry, or 10 well volumes were removed.

I.3. Groundwater Sampling Procedures

To sample the groundwater from monitoring wells, each well was purged using a precleaned Teflon® bailer until the water in the well exhibited consistent pH, temperature, and specific conductance readings. The criteria for consistency were ± 0.01 unit (pH), ± 0.5° celsius (temperature) and ± 5 percent for specific conductance. Samples were collected using a Teflon® bailer and placed in clean, glass, screw-top VOA vials having Teflon®-lined caps. The sample vials were labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

I.4. Groundwater Measurements

Four monitoring wells were installed at the site. Appendix F includes Well Construction Diagrams.

Depth to groundwater was measured at each of the four monitoring wells present on site. Groundwater elevation data collected on October 14, 1994 indicate that groundwater movement is toward the west. Table 3 summarizes the groundwater elevation data collected at the site.

Table 3
Groundwater Measurements

Location	Top of riser	Water level
MW-1	95.15	89.24
MW-2	95.20	91.27
MW-3	95.13	91.60
MW-4	96.76	92.92

I.5. Groundwater Chemical Analysis

All analyses were performed using EPA or other recognized standard procedures. Data were reviewed prior to release and all quality control guidelines were met. Specific information on standard operating procedures is available upon request.

I.6. Groundwater Analytical Chemistry Results

One round of groundwater sampling was performed on October 13, 1994, on monitoring wells MW-1, MW-2, MW-3 and MW-4. Sample parameters for the sampling were benzene, ethyl benzene, toluene and xylenes (BETX) and Polynuclear Aromatic Hydrocarbons (PAHs). Laboratory reports and Chain-of-Custody forms are included in Appendix C.

No BETX or PAH compounds were detected at or above the analytical method detection limits in monitoring wells MW-1, MW-2, MW-3 or MW-4 during the sampling event with the exception of fluorene detected in MW-1 at a concentration of 0.19 micrograms per liter (μg/l).

J. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum contaminated soils were encountered in the tank basin and in the pipe trench. The vertical and horizontal extent of the petroleum contaminated soils was not determined during the limited amount of excavation to remove the tank. Water was encountered beneath tank basin during the

excavation process. The analyses of the soil samples collected from the sidewalls and the base of the excavation show a TPH concentrations ranging from 10 ppm to 740 ppm. Analyses of the pipe trench sample indicated high concentrations of TPH and lead in the sample collected from directly beneath the pipe.

Groundwater samples were collected from four monitoring wells installed near the UST basin. Laboratory analyses of the groundwater samples collected from the monitoring wells detected no VOCs, or PAHs at or above analytical method detection limits with the exception of fluorene. The fluorene was detected in one downgradient monitoring well.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: _____ - _____ - _____

Date of this Report: January 25, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 251

Location: Ft. McClellan

Contact: Mr. Ray Murphy/Lee Jave

Address: Ft. McClellan, Alabama

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 0

Closure Date: 5-16-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	4' X 6.5'				
Tank Capacity	600				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Diesel				
Type of Product Piping (pressurized/suction)	Suction				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
   YES __NO X_____ If not, provide the depth from the ground surface to the groundwater table. __approx. 4.5 feet___ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _4 monitoring wells installed near the UST basin_____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
   YES _X_____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____X_____ NO _____
   If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _X_____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO ___X_____
   If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES __X_____ NO _____
   If yes, please indicate which tank(s) by the Identification Number _____.
   Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
   Center seam of the UST appeared to be cracked around the entire circumference.

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
0-6 feet silty sand with a layer of cobbles,brown, moist to water bearing

i. Was the excavation backfilled? YES X NO _____
If yes, provide the date. 5-16-94

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

g. Specify the inert solid material used to fill the tank(s). _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES _____ NO __

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____
_____)

f. Was there water in the piping trench? YES _____ NO _____
1. One time discharge to sanitary sewer with local approval _____
_____
2. Hauled to facility capable of treating constituents of petroleum products in water
_____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO _____
If yes,
1. How was the free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Were visible holes noted in the piping? YES _____ NO _____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____
_____
_____
_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES X NO ___ If no, provide the depth from the ground surface to the groundwater table. 4 to 5 feet

f. Was there a notable product odor found in the bore holes?
YES X NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO X
If yes; 1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Boring logs attached.

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES X NO _____ If yes, provide the date 6-8-94

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction West base on groundwater elevations in the monitoring wells

b. Was a monitoring well used? YES X NO _____
   If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 6 cubic yards.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.

c. Indicate the final destination of the sludge and attach invoices or receipts. _____

_____

_____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: 1-27-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl
Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: _____ for Earl Windahl Date: 1-27-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP + 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: _____ - _____ - _____

Date of this Report: January 25, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 251
Location: Fort McClellan

Address: Fort McClellan, AL 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848- 6155/(205) 848-3539

Name of Consultant who performed calculations: David Doble, Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

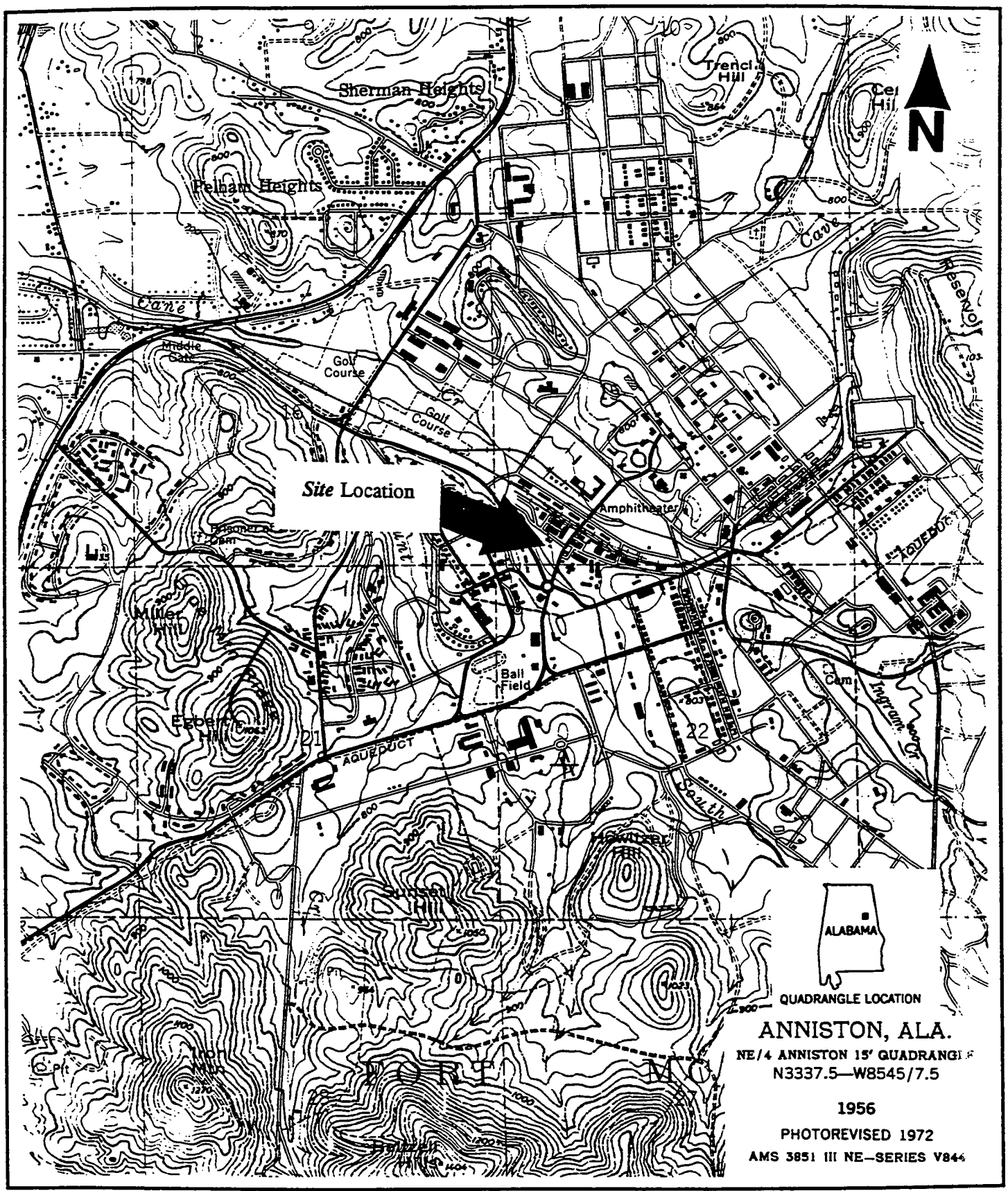
Sample 1	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 2	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 3	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 4	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 5	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 6	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 7	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 0	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 9	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 10	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 11	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 12	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 13	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 14	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 15	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 16	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 17	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 18	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 19	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 20	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
								TOTAL POTENTIAL EMISSIONS	_____ lbs VOC emissions

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

Appendix B

Site Location



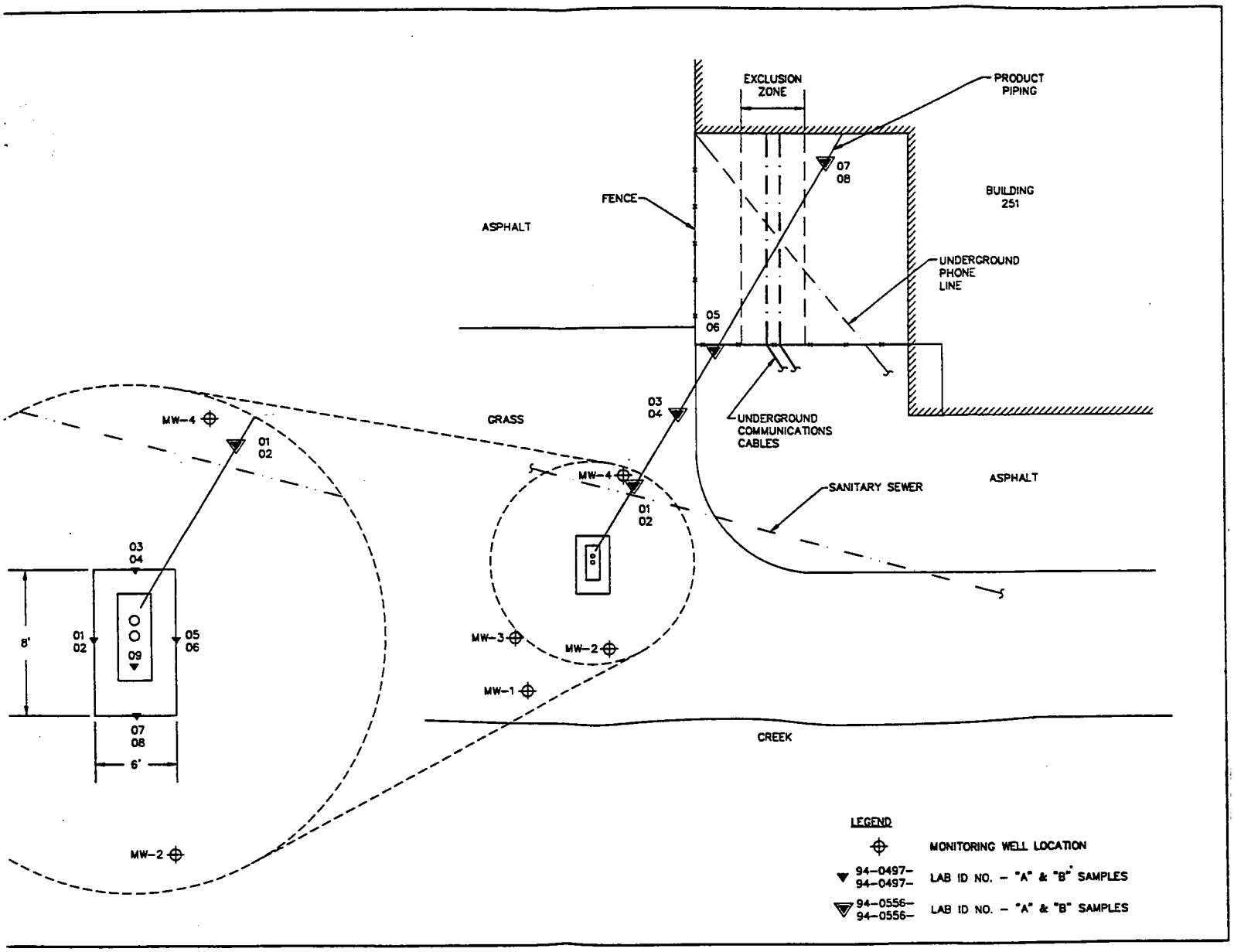
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 251
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations


EXCLUSION ZONE
PRODUCT PIPING
07
08
BUILDING 251
FENCE
ASPHALT
UNDERGROUND PHONE LINE
05
06
03
04
GRASS
UNDERGROUND COMMUNICATIONS CABLES
MW-4
01
02
SANITARY SEWER
ASPHALT
03
04
8'
01
02
05
06
09
07
08
6'
MW-3
MW-2
MW-1
CREEK
MW-2
LEGEND
MONITORING WELL LOCATION
94-0497-
94-0497-
LAB ID NO. - "A" & "B" SAMPLES
94-0556-
94-0556-
LAB ID NO. - "A" & "B" SAMPLES

Appendix D

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 251-10

LOCATION:
See attached sketch.

DATE: 6/8/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
97.5	0.0					
97.3	0.2	CL	2" Bituminous LEAN CLAY, brown, moist.			
94.0	3.5		END OF BORING Water not observed after withdrawal of auger. Boring backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 251-20 LOCATION: See attached sketch. DATE: 6/8/94 SCALE: 1" = 4'

Elev. 97.9	Depth 0.0	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
97.7	0.2	CL	2" Bituminous LEAN CLAY, brown, moist.			
94.4	3.5		END OF BORING Water not observed after withdrawal of auger. Boring backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 251-30 LOCATION: See attached sketch. DATE: 6/8/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.2	0.2	CL	2" Bituminous LEAN CLAY, brown, moist.			
94.9	3.5		END OF BORING Water not observed after withdrawal of auger. Boring backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 251-90

LOCATION:
See attached sketch.

DATE: 6/8/94

SCALE: 1" = 4'

Elev. 98.9	Depth 0.0	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.7	0.2	CL	2" Bituminous LEAN CLAY, brown, moist.			
95.4	3.5		END OF BORING Water not observed after withdrawal of auger. Boring backfilled with cuttings.			

Appendix E

Laboratory Results

BRAUN INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 27, 1994
Revised January 20, 1995

Project CMKX-93-0180D
Report 08-94-0497R

Mr. Marty Pelkey
J & ND Enterprises
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on nine (9) soil samples received on May 20, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref.:

94-0497-01	BLDG. 251	North "A"
94-0497-02	BLDG. 251	North "B"
94-0497-03	BLDG. 251	East "A"
94-0497-04	BLDG. 251	East "B"
94-0497-05	BLDG. 251	South "A"
94-0497-06	BLDG. 251	South "B"
94-0497-07	BLDG. 251	West "A"
94-0497-08	BLDG. 251	West "B"
94-0497-09	BLDG. 251	Bottom

Analysis performed on May 25, and 26, 1994.

Methods: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
01	740.	11.
02	45.	9.
03	10.	12.
04	**	**
05	105.	11.
06	230.	12.
07	25.	17.
08	**	**
09	70.	23.
Spike Recovery, %	103.74	104.00
Relative Percent Difference on Duplicate, %	0.28	1.04

** = Testing not required

Sincerely,

Jason Dahl
Lead Chemist

Thomas Hallquist
Supervisor, Chemistry

jd/th:ljc

k:\system\800\misc\J&Nent07.18R

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: J & NID ENTERPRISES
Client Contact:
Ref(s):
Site Location: FORT McCLELLAN ANNISTON, ALABAMA
P.O. #
Log In No. 08-94-0497 Project No. ~~[illegible]~~ - CMKX-93-0180 TASK 1D

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:
LEGAL CASE ☐ Yes ☑ No
Requested Due Date:
RUSH ☐ Yes ☑ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	LEAD										REMARKS	Refrigerated	Preserved
1	5/16	3:00	BLDG 251 NORTH A	X												X	X												
2			BLDG 251 NORTH B	X																							HOLD		
3			BLDG 251 EAST A	X												X	X												
4			BLDG 251 EAST B	X																							HOLD		
5			BLDG 251 SOUTH A	X												X	X												
6			BLDG 251 SOUTH B	X																							HOLD		
7			BLDG 251 WEST A	X												X	X												
8			BLDG 251 WEST B	X																							HOLD		
9			BLDG 251 BOTTOM	X												X	X												
0	5/13	2:00	BLDG 213 SOIL PILE	X												X	X												

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by: [signature]	5/20/94 11:20	Received by:	
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by:		Received by:	

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page 1 of 2

Site Identification
Fort McClellan
Anniston, Ala.

Project #:

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: D. Doble

Sampled by: D. Doble

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	Bldg 251 North A	5-16	3:00													TPH - Lead (total)
	North B															Hold
	East A															
	East B															Hold
	South A															
	South B															Hold
	West A															
	West B															Hold
	Bottom															
	Building 215 Spoil Pile	5-13	2:00													TPH - Lead

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5-19-94	12:30	[signature] 5-20-94 10:20 am				

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

June 22, 1994

Project CMKX-93-0180D
Report 08-94-0556

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on eight (8) soil samples received on June 10, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0556-01	BLDG. 251	Pipe Trench	10' A
94-0556-02	BLDG. 251	Pipe Trench	10' B
94-0556-03	BLDG. 251	Pipe Trench	20' A
94-0556-04	BLDG. 251	Pipe Trench	20' B
94-0556-05	BLDG. 251	Pipe Trench	30' A
94-0556-06	BLDG. 251	Pipe Trench	30' B
94-0556-07	BLDG. 251	Pipe Trench	90' A
94-0556-08	BLDG. 251	Pipe Trench	90' B

Analysis performed on June 22, 1994.

Methods: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
01	10	10
02	10	11
03	20	38
04	55	41
05	95	8
06	5800	12
07	85	10
08	850	19
Spike Recovery, %	94.93	104.35
Relative Percent Difference on Duplicate, %	0.53	7.30

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

K:\800\system\800\misc\J&NDEN\06.22

Appendix F

Well Construction Report Form

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

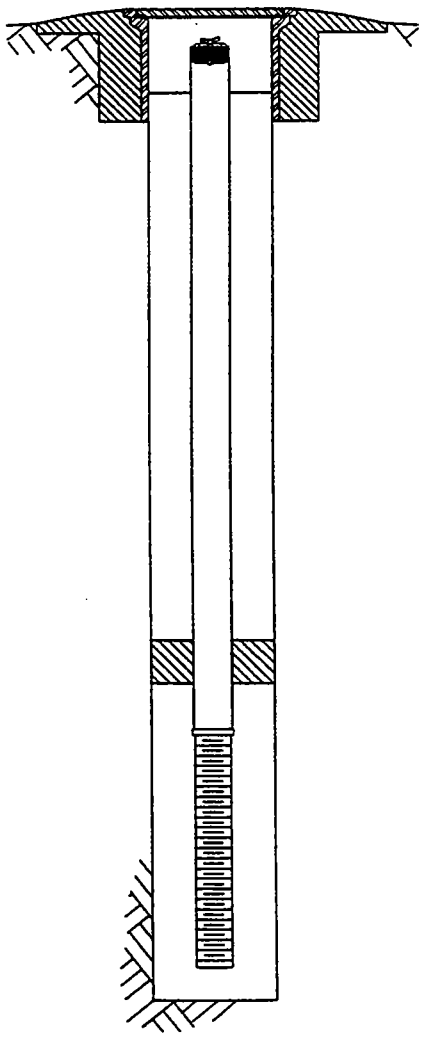
Well Number MW-1 Well Location See attached Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 96.0

Top of riser pipe elevation (±0.01'w/o cap) 95.15



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 0.5

Riser Pipe:

Type PVC

Diameter 4"

Total Length 2'

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 0.5

Depth to bottom of seal 1.0

Depth to top of screen 2.0

Depth to bottom of screen 12'

Depth to bottom of boring 12'

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

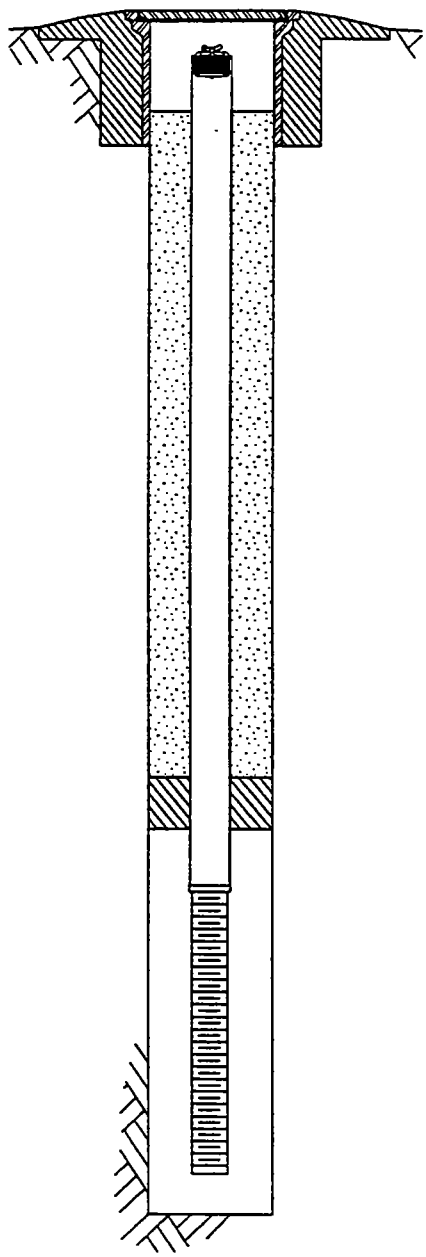
Well Number MW-2 Well Location See attched Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 95.4

Top of riser pipe elevation (±0.01'w/o cap) 95.20



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 0.5

Riser Pipe:

Type PVC

Diameter 4"

Total Length 2'

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 0.5

Depth to bottom of seal 1.0

Depth to top of screen 2.0

Depth to bottom of screen 12'

Depth to bottom of boring 12'

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

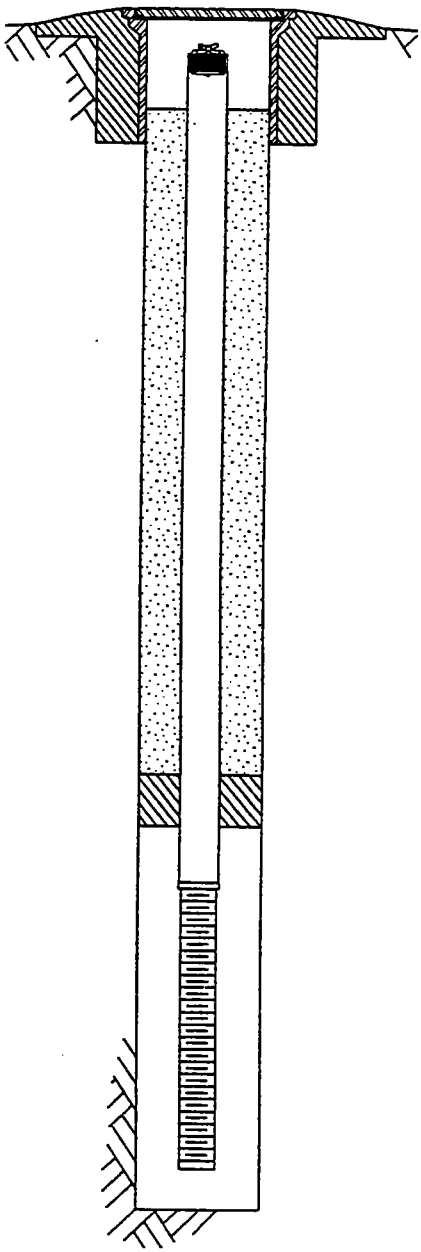
Well Number MW-3 Well Location See attached Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 95.4

Top of riser pipe elevation (±0.01'w/o cap) 95.13



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 0.7

Riser Pipe:

Type PVC

Diameter 4"

Total Length 2.5

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 0.7

Depth to bottom of seal 0.7

Depth to top of screen 2.5'

Depth to bottom of screen 10'

Depth to bottom of boring 10'

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 251

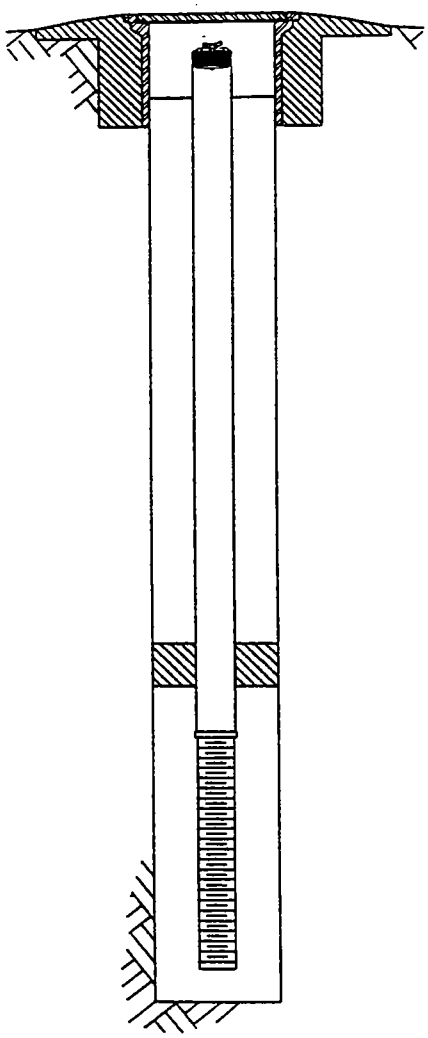
Well Number MW-4 Well Location See attached Date of Installation 10-12-94

B.M. Location and Elevation (± 0.01') Floor slab Building 251, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 96.8

Top of riser pipe elevation (±0.01'w/o cap) 96.76



Approximate water level before installation _____

Approximate depth to first water encountered in drilling _____

Depth to top of seal 0.7

Depth to bottom of seal 0.7

Depth to top of screen 2.5

Depth to bottom of screen 12.5'

Depth to bottom of boring 12.5'

Method of Advance:

HSA _____ I.D. _____

Casing _____ I.D. _____

Tricone _____ O.D. _____

Power Auger X O.D. 10-inches

Protective Vault:

Manufacturer _____

Model # _____

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 0.7

Riser Pipe:

Type PVC

Diameter 4"

Total Length 2.5

Sections used 1

Couplings 0

Caps Yes X No _____

Seal Material Bentonite

Amount of material used (lb) _____

Filter Material Silica Sand

Amount of material used (lb) _____

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Remarks: _____

Completed by: DJD

BRAUN INTERTEC

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ATTACHMENT 4

BUILDING 338 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments[SM]

February 1, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 338, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above-referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8737.

Sincerely,

David J. Doble
Environmental Scientist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J&D Enterprises

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A. Background 1

B. Piping Removal 1

C. UST Closure In Place 1

D. Soil Disposal 1

E. Sludge Disposal 2

F. Soil Sampling and Laboratory Results 2

F.1. Soil Sampling Procedures 2
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F.6. Analytical Analyses Results 4

G. Conclusions 4

Appendices

A. ADEM Closure Report Form
B. Site Location
C. Site Plan with Sample Locations
D. Hazardous Waste Manifest and Certificate of Disposal
E. Soil Boring Logs
F. Organic Field Vapor Data Sheets
G. Laboratory Results

A. Background

The underground storage tank (UST) at building 338 is located south of the building in a grassy area between the building and a paved parking lot. The existing UST is located adjacent to the wall footings of building 338. Therefore, in-place abandonment was chosen as the closure method. The UST capacity was approximately 2,000 gallons and was used to store waste oil. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

B. Piping Removal

Waste oil was placed into a drain sink on the south wall of the building and gravity fed by underground PVC pipe to the UST. The piping run was approximately 7 feet long and was removed on April 28, 1994. Apparent petroleum-contaminated soils were encountered during the removal of the piping. These soils were removed to a stockpile. One soil sample was collected for analysis from the piping trench. The location is illustrated in Figure 2, Appendix C.

C. UST Closure In Place

Prior to closure in place of the UST the remaining product was removed, the tank was purged with fresh air and cleaned. The UST was constructed of single wall steel. No holes were observed from the interior of the UST, and it appeared to be in fair condition. Petroleum-contaminated soils were encountered where the piping entered the tank. These soils were removed to a stockpile. The tank was filled with concrete slurry on May 5, 1994.

D. Soil Disposal

The excavated soils removed from over the top of the tank and the piping trench were stockpiled and covered with polyethylene plastic sheeting. The stockpile was bermed with clean soils. Approximately 3 yards of soil was removed and thin-spread at the Fort McClellan Landfill.

E. Sludge Disposal

No sludge was encountered during removal, however, 50 gallons of waste oil was drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

F. Soil Sampling and Laboratory Results

F.1. Soil Sampling Procedures

One power auger boring (labeled 338-S) was completed at the site using a truck-mounted core and auger drill. Due to the location of the UST, the existing building, overhead power lines and underground utilities, only one soil boring location was accessible. The boring was continued to auger refusal at 7.5 feet below land surface. All down-hole equipment was steam cleaned prior to use, and clean augers were used for each borehole.

The power auger boring was advanced 2.5-foot intervals below land surface then removed by dead lifting. Split-spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140 pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2.5-foot vertical intervals to the termination depth of the borings.

F.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

F.3. Soil Boring Observations

The soils encountered in the soil borings completed near the UST basin consisted of poorly graded sand fill and lean clay with sand over shale bedrock. Groundwater depth was not determined at the site. A broken water main located adjacent to the existing UST had saturated the soils in the area of the UST. According to the Ft. McClellan site contact, the water main had

been broken for several months. Three to six inches of standing water were apparent on the ground surface at the time the soil boring was completed. Water was noted to be flowing from apparent breaks in the water main in two locations near the UST basin. Complete Soil Boring Logs are attached in Appendix E.

F.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split-spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

F.5. Chemical Soil Sampling

A soil sample was collected for chemical analysis from the depth of 7.5 feet below land surface in the soil boring. In addition, soil samples were collected beneath the piping trench and from the soil excavated from the top of the UST according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collect from below the piping run labeled "A." An additional sample labeled "B" was collected from the same sampling points 2 feet further into the native soil. The "B" sample was preserved until analysis of the "A" sample was completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples was analyzed. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

F.6. Analytical Analyses Results

The analytical results of the soil samples collected from the soil borings and pipe trench are summarized in Table 1. Complete laboratory reports and original chain of custody is attached in Appendix G.

Table 1
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
338-S	<5	20	7.5	94-0431-12
Spoil pile	650	120	N/A	94-0431-42
Pipe trench "A"	4100	140	2.0	94-0452-20
Pipe trench "B"	*	*	4.0	94-0452-41

*=Pipe trench "B" sample was broken during shipping. No analyses were completed.

G. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum-contaminated soils were encountered in the soils samples collected beneath the piping trench and from the soils excavated from above the UST. The vertical and horizontal extent of the petroleum-contaminated soils was not determined during this assessment.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015840

Date of this Report: February 1, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

Facility County: Calhoun
Facility Name: Building 338
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6111/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1 CIP

Number of tanks remaining at site: 1
Closure Date: 5-5-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	4' X 12'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
   YES __NO ___ If not, provide the depth from the ground surface to the groundwater table.
   ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
      (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
   YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
      _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
      (other _____)

e. Was there water in the excavation? YES _____ NO _____
   If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
   If yes:
   1. How was free product handled? _____
      _____
      _____
   2. What was the measured thickness of free product? _____
      _____
      _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
   If yes, please indicate which tank(s) by the Identification Number _____.
   Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
   _____
   _____
   _____
   _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
_____
_____
_____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable.
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES Not determined NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
   1. Boring or Monitor Well Broken Main near UST
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO X If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO X
If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Poorly graded sand fill and lean clay with sand over shale.

g. Specify the inert solid material used to fill the tank(s). Concrete slurry

h. Provide the date the tank(s) were filled. 5-5-94

i. Were the bore holes properly sealed with bentonite/soil?
Yes X No _____ If yes, provide date: 4-26-94

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES Not determined NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES X NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____)

f. Was there water in the piping trench? YES _____ NO X
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO X
If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO X_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
Lean clay with sand to 3 feet

j. Was the piping trench backfilled? YES X_____ NO _____
If yes, provide the date 4-28-94 _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

   _____

   _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 3 cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

_____

_____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David J. Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: 2-1-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: _____ Date: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: February 1, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

Facility County: Calhoun
Facility Name: Building 338
Location: Fort McClellan

Address: Fort McClellan, AL 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

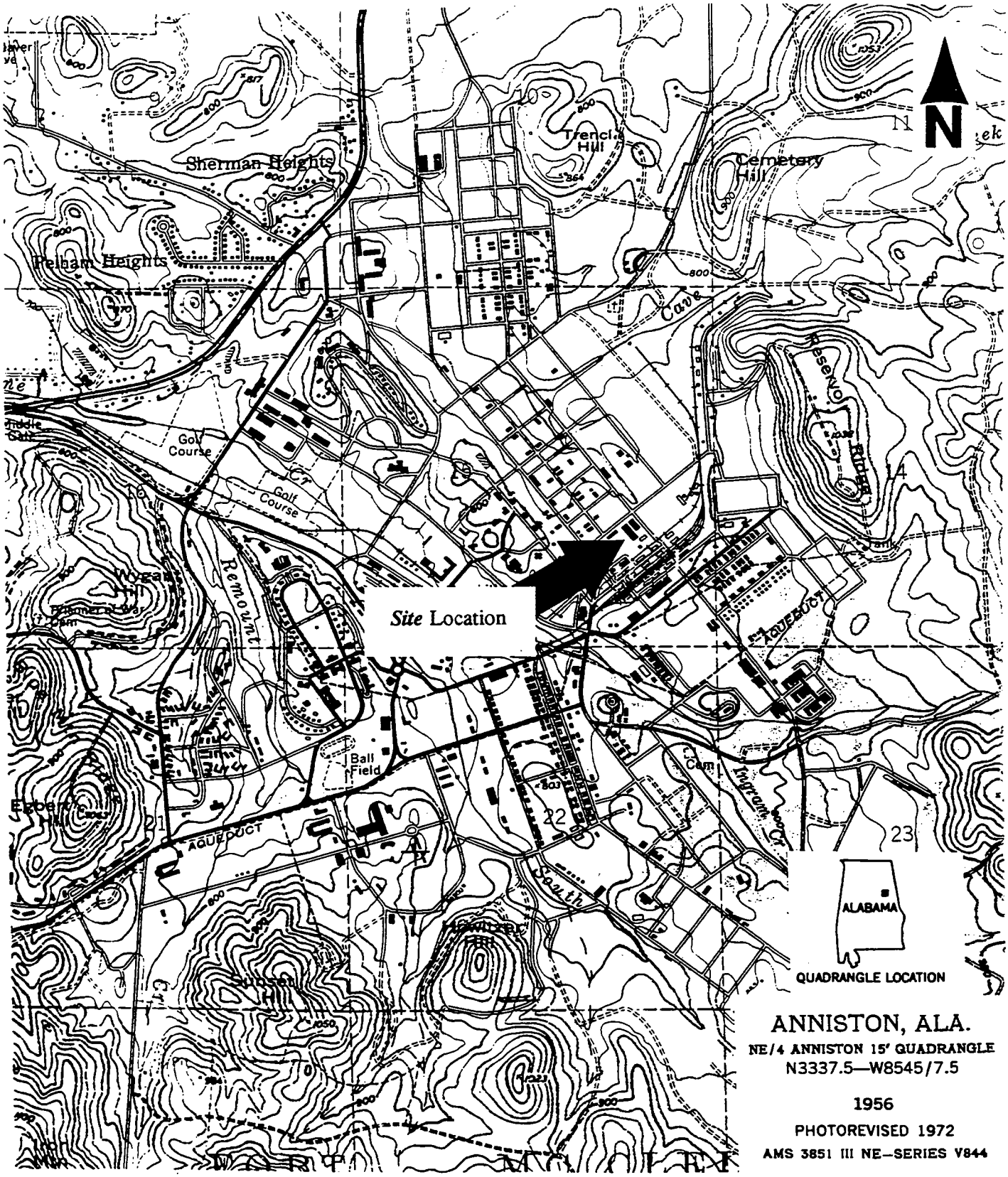
Sample 1	650	ppm	x	3	cyds	x	.002	=	3.9	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 0		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions
						TOTAL POTENTIAL EMISSIONS			3.9	lbs VOC emissions

- Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

Appendix B

Site Location



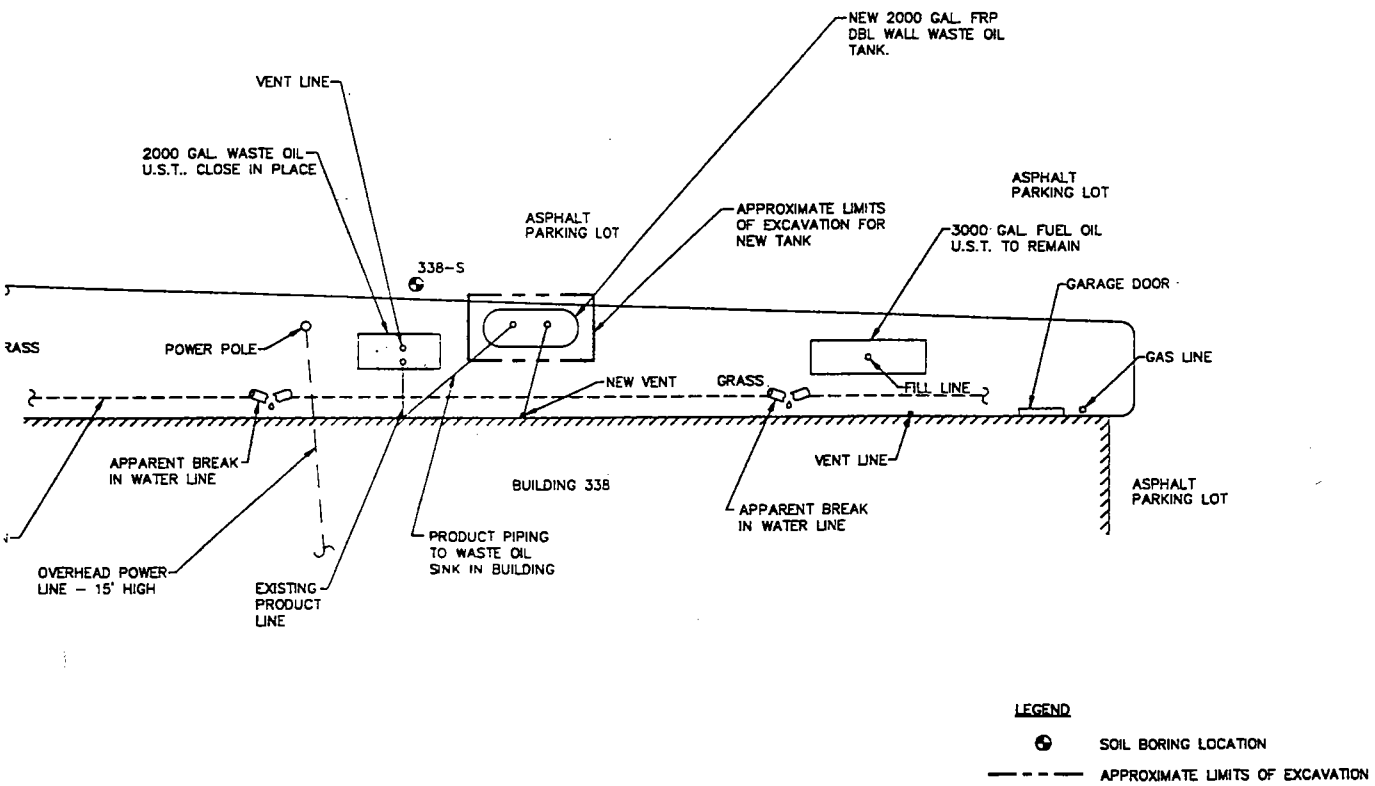
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 338
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations



BRAUN INTERTEC

SITE MAP
WASTE OIL U.S.T. PROGRAM
BUILDING 338
FORT McCLELLAN, ALABAMA

INT	DATE
DRAWN BY: JAG	1-19-95
APP'D BY: JTP	1-19-95
JOB No. CMKX-93-0180	

FIGURE NO.

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FORT MCCLELLAN, SOMMERALL GATE, ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Fisher Industrial Service, Inc., 402 Webster Chapel Rd., Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. OIL SOLIDS, NON HAZARDOUS/NON REGULATED — FIS Profile #: 18901	40	CM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406
Purchase Order #: DAVE DOBLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: Nolan L Jaye Jr
Month Day Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: John W. Oliver
Month Day Year: 06 06 9

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doble
Signature: David J Doble
Month Day Year: 06 06 9

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: NOLAN L. JAYE, JR. NJ
Signature: Nolan L Jaye Jr NJ
Month Day Year

GENERATOR / TRANSPORTER / FACILITY

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-9

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id.: ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste materi identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-9

Appendix E

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 338-S

LOCATION:
See attached sketch.

DATE: 4/26/94

SCALE: 1" = 4'

Elev. 101.0	Depth 0.0	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.0	2.0	SP	FILL: Poorly Graded Sand, fine to coarse grained, brown, moist.			Asssumed elevation of 100.0 feet established on the floor slab of bldg. 338.
95.0	6.0	CL	LEAN CLAY with SAND, brown, wet, rather soft to soft. (Residual Clay)	6 1		
93.5	7.5		SHALE, grey. (Weathered Bedrock)	50+		
			END OF BORING Auger refusal at 7.5 feet. Water down 5 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

Appendix F

Organic Field Vapor Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 338S *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5		0	0	
7.5		0	0	

Appendix G

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on four (4) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0431-12	BLDG. 338	South
94-0431-20	BLDG. 338	Pipe Trench "A"
94-0431-41	BLDG. 338	Pipe Trench "B"
94-0431-42	BLDG. 338	Stock Pile

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
12	<5	20
20	4100	140
Spike Recovery, %	85.07	96.78
Relative Percent Difference on Duplicate, %	1.63	1.80

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
41	*	*
42	650	120
Spike Recovery, %	104.30	106.44
Relative Percent Difference on Duplicate, % . . .	0.62	2.08

* = Not tested

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\j&ndcn07.20

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: Braun Intertec
Client Contact: DAVE DOBLE
Ref(s):
Site Location:
P.O. #
Log In No. 94-~~04~~ 0431 Project No. CMKX-93-0180D

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:
Requested Due Date:
LEGAL CASE ☐ Yes ☒ No
RUSH ☐ Yes ☒ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	ANALYSES TO BE PERFORMED: pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	LEAD (Pb)	LAB USE ONLY: REMARKS	Refrigerated	Preserved
41	4/28		BIDG 338 Pipe Trench (B)	X												X	X	Hold Broken		
42	4/28		BIDG 338 STOCK PILE	X												X	X			
43	4/28		BIDG 1696 PIPE Trench (A)	X												X	X			
44	4/28		BIDG 1696 PIPE Trench (B)	X												X	X	Hold		
45	4/28		BIDG 1800 SPOIL PILE	X												X	X	Broken		
46	4/28		BIDG 1696 SPOIL PILE	X												X	X			
47																				
8																				
9																				
0																				

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by: Jason [signature]	3 MAY 94 2:00pm	Received by:	
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by:		Received by:	

ATTACHMENT 5

BUILDING 503 (BRAUN)

BRAUN℠
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 20, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 503, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or John Phillips at (612) 683-8737.

Sincerely,

John Phillips
Environmental Scientist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises

*f:\wpfiles\cmkx\93-0180\0180.R04

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Appendices

A. ADEM Closure Report Form
B. Site Location
C. Hazardous Waste Manifest and Certificate of Disposal
D. Site Plan with Sample Locations
E. Soil Boring Logs
F. Organic Vapor Field Data Sheets
G. Laboratory Results

A. Background

The underground storage tank (UST) is located east of Building 503 in a grassy area between the building and the bituminous parking lot. The UST capacity is approximately 20,000 gallons and was used to store fuel oil for the boiler. Because the UST was located adjacent to the wall footings of Building 503, in-place abandonment was chosen as the closer option. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

B. In-place Piping Abandonment

Product piping consisted of two 1-inch copper feed and return lines for the boiler in Building 503. Approximately 25 feet of piping ran from the tank underneath the footing of a free-standing wall and a concrete equipment pad for an air-conditioner chiller unit. The lines were capped at both ends and abandoned in place. Due to equipment and structures over the piping, no soil samples were collected. The location is illustrated in Figure 2, Appendix C. The piping was abandoned in place on May 12, 1994.

C. In-place UST Abandonment

Prior to abandoning the UST, approximately 1,500 gallons of used oil was removed from the tank. After the product was removed, the tank was continually purged with fresh air and cleaned. The UST was constructed of single wall steel, no holes were observed from the interior. The UST appeared to be in fair condition. The tank was filled with concrete slurry on May 12, 1994. The excavation limits are illustrated in Appendix C.

D. Sludge Disposal

No sludge was encountered during removal, however. 130 gallons of used oil was drummed, and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

E. Soil Sampling and Laboratory Results

E.1. Soil Sampling Procedures

Three power auger borings (labeled 503-E, 503-S, and 503-W) were performed on each accessible side of the UST using a truck-mounted core and auger drill. Borings were extended to a depth near the assumed base of the UST. The excavation for the replacement UST, approximately 40 east of the existing UST basin, was completed approximately 20 feet below land surface and did not encounter groundwater to the bottom depth of the excavation. All down-hole equipment was steam-cleaned prior to use, and clean augers were used for each borehole.

Power auger borings were advanced 2.5-foot intervals below land surface then removed by dead lifting. Split spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140-pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2 1/2-foot vertical intervals to the termination depth of the borings.

E.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

E.3. Soil Boring Observations.

The soils encountered in the soil borings completed near the UST basin consisted of 7 to 8 feet of lean clay with sand over weathered shale and shale bedrock. Groundwater was not encountered to the auger refusal depth of approximately 10 feet. Complete Soil Boring Logs are attached in Appendix E.

E.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

E.5. Chemical Soil Sampling

Soil samples were collected for chemical analysis from the depth of 10 feet below land surface in each of the three soil borings. The soil samples collected from the soil borings were analyzed for the presence of total petroleum hydrocarbons (THC) and total lead. A 5-foot long by 3-foot wide manway vault was in-place above the existing UST. Therefore, no soil was removed and stockpiled during abandonment. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

E.6. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation, pipe trench and the soil stockpile are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix G.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
503-S	<5	17	10	94-0431-13
503-E	10	24	10	94-0431-14
503-W	<5	23	10	94-0431-15

F. Conclusions

The 20,000-gallon fuel oil UST located at Building 503 was abandoned in-place on May 13, 1994. Three soil borings were completed near the UST and soil samples were collected from a depth of 10 feet below land surface. TPH concentrations ranged from <5 ppm to 10 ppm in the soil samples collected and total lead concentrations ranged from 17 ppm to 24 ppm.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015818

Date of this Report: January 20, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 503
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy

Contact Telephone No.: (205) 848-6155

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1 CIP

Number of tanks remaining at site: 1
Closure Date: 5-13-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	5' X 12'				
Tank Capacity	20,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Fuel Oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES __NO ___ If not, provide the depth from the ground surface to the groundwater table. _____ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____ NO _____
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
If yes, please indicate which tank(s) by the Identification Number _____.
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

_____

_____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable.
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES __X__ NO _____

If no, provide the depth from the ground surface to the groundwater table. _____ ft.
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO __X__

If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO __X__
If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Lean clay with sand, brown, moist to 10 feet; shale bedrock

g. Specify the inert solid material used to fill the tank(s). Cement sand slurry

h. Provide the date the tank(s) were filled. 5-12-94

i. Were the bore holes properly sealed with bentonite/soil?
Yes X No _____ If yes, provide date: 4-26-94

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____)

f. Was there water in the piping trench? YES _____ NO _____
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO X_____
If yes,
1. How was the free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Were visible holes noted in the piping? YES _____ NO _____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes: _____
_____
_____
_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
_____
_____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. <u>Product Piping Closure Without Removal</u>

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____X_____ NO _____

d. Was the piping capped? YES ____X____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES __X_____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
1. Now was free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

   _____

   _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed ____0_____ cubic yards.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES __X___ NO _____ If no, describe how tank(s) were cleaned. _____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank. _0____ gallons.

c. Indicate the final destination of the sludge and attach invoices or receipts. _____

_____

_____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David J. Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: 1-21-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: J. Michael Valentine Date: 1-21-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==

For ADEM Use:

Reviewed by: ______________________________ Date: __________

Comments: ______________________________

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: January 18, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 503
Location: Fort McClellan

Address: Fort McClellan, AL 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy

Contact Telephone No.: (205) 848-6155

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8737

No soils disposed of for this site.

Sample 1	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 2	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 3	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 4	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 5	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 6	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 7	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 0	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 9	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 10	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 11	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 12	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 13	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 14	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 15	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 16	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 17	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 18	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 19	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 20	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
								TOTAL POTENTIAL EMISSIONS	_____ lbs VOC emissions

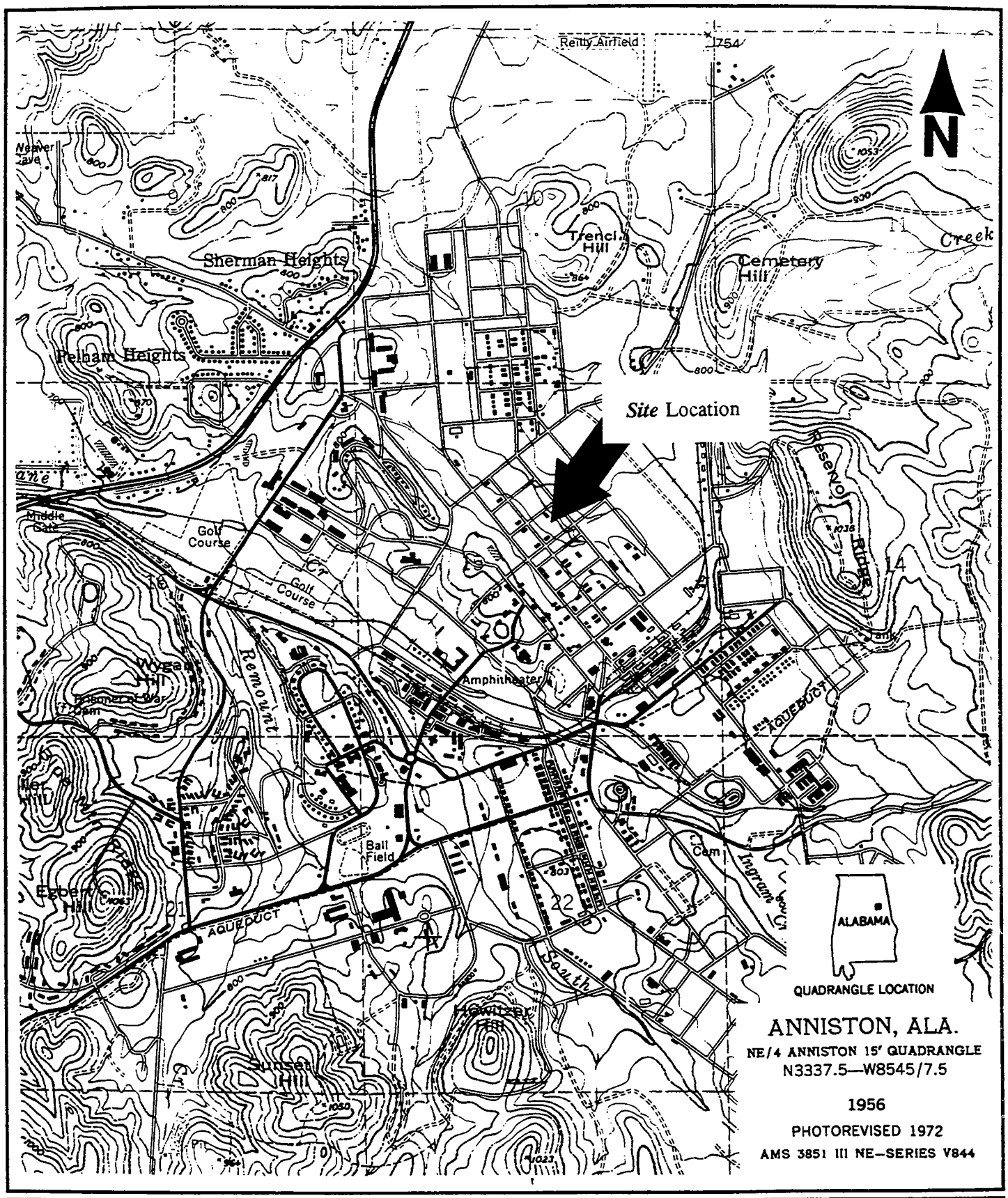
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

f:\wpfiles\cmkx\93-0180\0180.R04

Appendix B

Site Location



BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 503
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Hazardous Waste Manifest and Certificate of Disposal

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id.: ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste materi identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-9

Date [redacted]

HAZARDOUS WASTE MANIFEST
(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: [illegible] SOMMERALL GATE ANNISTON, AL 36205-
4. Generator's Phone ((205) 848-6155
A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:
C. State Transporter's ID:
D. Transporter's Phone:
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address:
Fisher Industrial Service, Inc.
402 Webster Chapel Rd.
Glencoe, AL 35905
10. US EPA ID Number: ALD981020894

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quanitity	14. Unit Wt/Vol	I. Waste No.
a. [illegible] FIS Profile #: 19901	40	CM	2200	G	[illegible]
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: DAVE DOBLE CD
Work Order #: 005319/940406
Purchase Order #:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: [signature]
Month Day Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: John W. Oliver
Month Day Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doble
Signature: [signature]
Month Day Year: 06 06 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: NOLAN L. JAYE, JR. NLJ
Signature: [signature] NLJ
Month Day Year

GENERATOR / TRANSPORTER / FACILITY

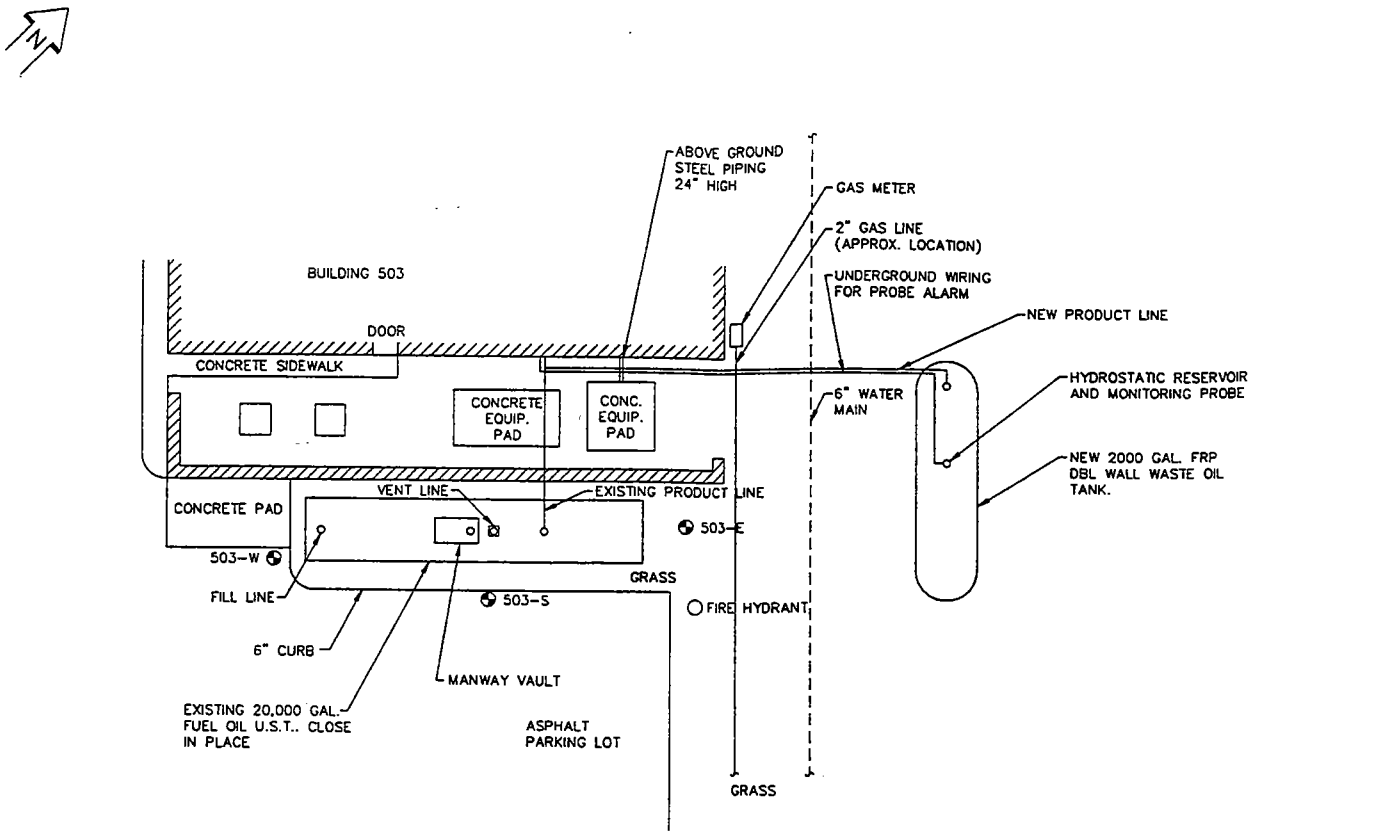
EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91

Appendix D

Site Plan with Sample Locations



LEGEND

SOIL BORING LOCATION

Appendix E

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellen Ft. McClellen, Alabama	BORING: 503-S LOCATION: See attached sketch. DATE: 4/26/94 SCALE: 1" = 4'

Elev. 96.9	Depth 0.0	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
95.9	1.0		2" Bituminous over Aggregate base			
		CL	LEAN CLAY with SAND, brown, moist, rather stiff to stiff. (Residual Clay)	10 14		
89.9	7.0		SHALE, grey. (Weathered Bedrock)	44 64		
86.4	10.5		END OF BORING Auger refusal at 10.5 feet. Water not observed to 10.5 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellen

Ft. McClellen, Alabama

BORING: 503-E

LOCATION:
See attached sketch.

DATE: 4/26/94

SCALE: 1" = 4'

Elev. 96.8	Depth 0.0	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
95.8	1.0		2" Bituminous over Aggregate base			Asssumed elevation of 100.0 feet established on the top nut of fire hydrant located near the east corner bldg. 503.
		CL	LEAN CLAY with SAND, brown, moist, rather stiff to stiff. (Residual Clay)	12		
				15		
89.8	7.0		SHALE, grey, moist. (Weathered Bedrock)	22		
86.8	10.0			50/6"		
			END OF BORING Auger refusal at 10 feet. Water not observed to 10 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellen

Ft. McClellen, Alabama

BORING: 503-W

LOCATION:
See attached sketch.

DATE: 4/26/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
97.1	0.0					
96.1	1.0		2" Bituminous over Aggregate base			
		CL	LEAN CLAY with SAND, brown, moist, rather stiff to stiff. (Residual Clay)	16		
				11		
91.1	6.0					
			SHALE, grey. (Weathered Bedrock)	28		
				88		
86.6	10.5					
			END OF BORING Auger refusal at 10.5 feet. Water not observed to 10 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

Appendix F

Organic Vapor Field Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 503S *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5		0	0	
7.5		0	0	
10		0	0	

Organic Vapor Field Data Sheet

Boring Identification: 503E *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5		-	-	No sample recovery
7.5		0	0	
10		0	3.5	

Organic Vapor Field Data Sheet

Boring Identification: 503W *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5		-	-	No sample recovery
7.5		0	0	
10		0	3.5	

Appendix G

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on three (3) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0431-13	BLDG. 503	South
94-0431-14	BLDG. 503	East
94-0431-15	BLDG. 503	West

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:
(Units: mg/Kg, ppm)

	Total Petroleum Hydrocarbons	Lead, (Pb)
13	<5	17
14	10	24
15	<5	23
Spike Recovery, %	85.07	96.78
Relative Percent Difference on Duplicate, % ..	1.63	1.80

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\j&ndcn07.20

BRAUN[SM] INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-0431

Page 1 of 1

Site Identification

Bldg 503
Ft. McClellan

Project #: CMKX-93-0180

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: Dave Dell

Sampled by: D. Dell

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
-13	South	4-27		a				1								TPH lead
-14	East							1								
-15	West							1								

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
D. Dell	5-2-94		Jason Dell				

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

ATTACHMENT 6

BUILDING 888 (BRAUN)

BRAUN INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 20, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 888, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or John Phillips at (612) 683-8737.

Sincerely,

for: John Phillips
Environmental Scientist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises
f:*wpfiles\cmkx\93-0180\0180.r07

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Appendices

A. ADEM Closure Report Form
B. Site Location
C. Site Plan with Sample Locations
D. Hazardous Waste Manifest and Certificate of Disposal
E. Laboratory Results
F. Well Construction Diagrams

A. Background

The Underground Storage Tank (UST) at BLDG 888 is located east of the building, south of the concrete ramps. The Alabama Department of Environmental Management (ADEM) UST Closure report form is included in Appendix A.The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 2,000 gallons and was used to store waste oil.

B. Piping Removal

Product was placed into a drain pan and transferred by aboveground PVC pipe to the UST. No surfical staining was observed where the piping entered the UST. The soil beneath the piping run from the pan to the UST caved into the excavation during the removal of the UST and was removed.

C. UST Excavation

Prior to removal of the UST, approximately 200 gallons of waste oil was removed from the tank. After the product was removed, the tank was purged with fresh air. Soils around the tank were excavated and screened with the PID until the tank sides and ends were exposed and could be removed. The tank was steel, no holes were observed, and it appeared to be in fair condition. The tank and piping were removed on March 30, 1994. The excavation limits are illustrated in Figure 2, Appendix C.

The soils of the tank basin consisted of silty clayey sand with gravel from the surface to 3 feet overlying crushed gravel from 3 feet to 10 feet. Water was encountered in the excavation at three feet below grade, in the crush gravel fill.

After removal of the tank, the excavation measured approximately 20 feet long by 14 feet wide by 10 feet deep. All of the soils removed from the excavation were removed to a stockpile area east of the excavation.

D. Soil Observations

Soil samples retrieved from the side walls and base of the UST excavation were examined visually by an environmental geologist for staining and other apparent signs of contamination. In addition, the soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling. The PID was used to test fresh surfaces of soil collected from the sidewalls of the excavation and to perform headspace analyses.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. PID headspace analysis results of the final excavation limits are listed in Table 1.

Table 1
PID Headspace Readings

Location	Headspace reading (ppm)
North wall	8
West wall	31
South wall	36
East wall	28
Base	4

E. Soil Disposal

Approximately 9 yards of soil were removed from the UST basin during excavation of the UST. The contaminated soils were transported to the base landfill for thinspreading.

F. UST Disposal

After the UST was properly cleaned by J & D Enterprises, it was transported off-site for disposal By Shorty's Scrap Metal, according to the contract requirements.

F. Sludge Disposal

No sludge was encountered during removal, however 75 gallons of used oil was drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

G. Soil Sampling and Laboratory Results

G.1. Soil Sample Collection

Soil samples were collected according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collected from each sidewall and the base of UST excavation labeled "A". An additional five samples labeled "B" were collected from the same sampling points 2 feet further into the native soil. The "B" samples were preserved until analysis of the "A" samples were completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples were analyzed. An additional sample was collected from the stockpile for analysis.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

G.2. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation and the soil stockpile are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix E.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
North Sidewall "A"	750	24	3	94-0452-01
North Sidewall "B"	825	16	3	94-0452-07
South Sidewall "A"	5500	23	3	94-0452-02
South Sidewall "B"	8100	22	3	94-0452-08
East Sidewall "A"	4500	19	3	94-0452-03
East Sidewall "B"	3200	15	3	94-0452-09
West Sidewall "A"	2300	15	3	94-0452-04
West Sidewall "B"	2500	14	3	94-0452-10
Base "A"	800	5.3	9	94-0452-05
Base "B"	1050	11	11	94-0452-11
Stockpile	450	16	NA	94-0452-06

H. Groundwater Sampling and Analyses

H.1. Monitoring Well Installation

Four monitoring wells were installed near the UST to collect groundwater samples for analyses in accordance with ADEM rules and contract specifications. Each monitoring well was constructed of 4-inch diameter, flush-threaded PVC riser pipe and a 10-foot long, 4-inch diameter, 0.010-inch PVC screen. Silica sand was placed around the screen as a filter pack, and a bentonite seal was installed. Wells were finished using protective at-grade well vaults placed over the riser pipe, around which a concrete pad was constructed.

H.2. Monitoring Well Development Procedures

The monitoring wells were developed by removing groundwater from the well using a precleaned 4-foot PVC bailer. Groundwater was purged from each well until relatively clear, sediment-free water was produced, the well was bailed dry, or 10 well volumes were removed.

H.3. Groundwater Sampling Procedures

To sample the groundwater from monitoring wells, each well was purged using a precleaned Teflon® bailer until the water in the well exhibited consistent pH, temperature, and specific conductance readings. The criteria for consistency were ± 0.01 unit (pH), ± 0.5° celsius (temperature) and ± 5 percent for specific conductance. Samples were collected using a Teflon® bailer and placed in clean, glass, screw-top VOA vials having Teflon®-lined caps. The sample vials were labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

H.4. Groundwater Measurements

Four monitoring wells were installed at the site. Appendix F includes Well Construction Diagrams.

Depth to groundwater was measured at each of the four monitoring wells present on site. Groundwater elevation data collected on October 13, 1994 indicate that groundwater movement is toward the northwest. Table 3 summarizes groundwater elevation data.

Table 3
Groundwater Measurements

Location	Top of riser	Water level
MW-1	99.40	97.33
MW-2	96.23	97.76
MW-3	95.73	97.48
MW-4	95.11	97.42

H.5. Groundwater Chemical Analysis

All analyses were performed using EPA or other recognized standard procedures. Data were reviewed prior to release and all quality control guidelines were met. Specific information on standard operating procedures is available upon request.

H.6. Groundwater Analytical Chemistry Results

One round of groundwater sampling was performed on October 14, 1994, on monitoring wells MW-1, MW-2, MW-3 and MW-4. Sample parameters for the sampling were volatile organic compounds (VOCs), total lead, and Polynuclear Aromatic Hydrocarbons (PAHs). Laboratory reports and Chain-of-Custody forms are included in Appendix E.

No VOCs or PAHs were detected at or above the analytical method detection limits in monitoring wells MW-1, MW-2, MW-3 or MW-4 during the sampling event. Total lead was detected in above the analytical method detection limit only in MW-2 at a concentration of 7 micrograms per liter μg/l.

I. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum contaminated soils were encountered in the tank basin. The vertical and horizontal extent of the petroleum contaminated soils was not determined during the limited amount of excavation to remove the tank. Water was encountered in the tank basin during the excavation process. The analyses of the soil samples collected from the sidewalls and the base of the excavation show a TPH concentrations ranging from 8,100 ppm to 750 ppm and total lead ranging from 5.3 ppm to 24 ppm.

Groundwater samples were collected from four monitoring wells installed near the UST basin. Laboratory analyses of the groundwater samples collected from the monitoring wells detected no VOCs, or PAHs at or above analytical method detection limits. Total lead levels above the analytical method detection limits were detected in only one of the groundwater samples. Lead was detected in MW-2 at a concentration of 7 μg/l. However, groundwater measurements taken at the time of sampling indicate that MW-2 is located upgradient of the UST.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: _____ - _____ - _____

Date of this Report: January 25, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 888

Location: Ft. McClellan

Contact: Mr. Ray Murphy/Lee Jaye

Address: Ft. McClellan, Alabama 36205

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 0
Closure Date: 4-30-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	5' X 13'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	Gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
   YES __NO X_____ If not, provide the depth from the ground surface to the groundwater table. __approx. 5 feet___ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _4 monitoring wells installed near the UST basin_____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
   YES _X_____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe mild to strong, USED OIL_____ _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____X_____ NO _____
   If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _Left in hole_____

f. Was there free product in the excavation? YES _____ NO ___X_____
   If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ___X_____
   If yes, please indicate which tank(s) by the Identification Number _____.
   Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
   _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-3 feet silty clayey sand with gravel,brown, moist; 3 feet to 10 feet crushed gravel, waterbearing

i. Was the excavation backfilled? YES X NO _____
If yes, provide the date. 4-30-94

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

g. Specify the inert solid material used to fill the tank(s). _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

PIPING WAS ABOVEGROUND

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES _____X_____ NO _

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES _X_____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
   1. Excavation extended 5 feet below base of trench _____
   2. Boring or Monitoring Well _4 monitoring wells installed at the site_____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO _____X____ If yes:
   1. The odor strength was (mild) (strong) (other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____
   _____)

f. Was there water in the piping trench? YES _____ NO ___X_____
   1. One time discharge to sanitary sewer with local approval _____
   _____
   2. Hauled to facility capable of treating constituents of petroleum products in water
   _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____
   _____

g. Was there free product found in the piping trench? YES ___ NO X_____
If yes,
   1. How was the free product handled? _____
   _____
   2. What was the measured thickness of the free product? _____
   _____

h. Were visible holes noted in the piping? YES ___ NO __X_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____
_____
_____
_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
_____
_____
_____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. <u>Product Piping Closure Without Removal</u>

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____
If yes;
1. Now was free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction North, based on groundwater elevations in the monitoring wells.

b. Was a monitoring well used? YES X NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 9 cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other Moved to base landfill for thinspreading
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
   Moved to base landfill for thinspreading

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____
b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: John Phillips
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8737

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: for: John Phillips Date: 1-27-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: for Earl Windahl Date: 1-27-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____
Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: ____-____-____

Date of this Report: ____

Incident No. (If applicable)
UST ____-____-____
Facility County: Calhoun
Facility Name: Building 888
Location: Fort McClellan

Address: Ft. McClellan, Alabama 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Consultant who performed calculations: John Phillips, Braun Intertec Corporation

Consultants Phone Number: (612) 683-8737

Sample 1	450	ppm	x	9	cyds	x	.002	=	8.1	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 0		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions

TOTAL POTENTIAL EMISSIONS 8.1 lbs VOC emissions

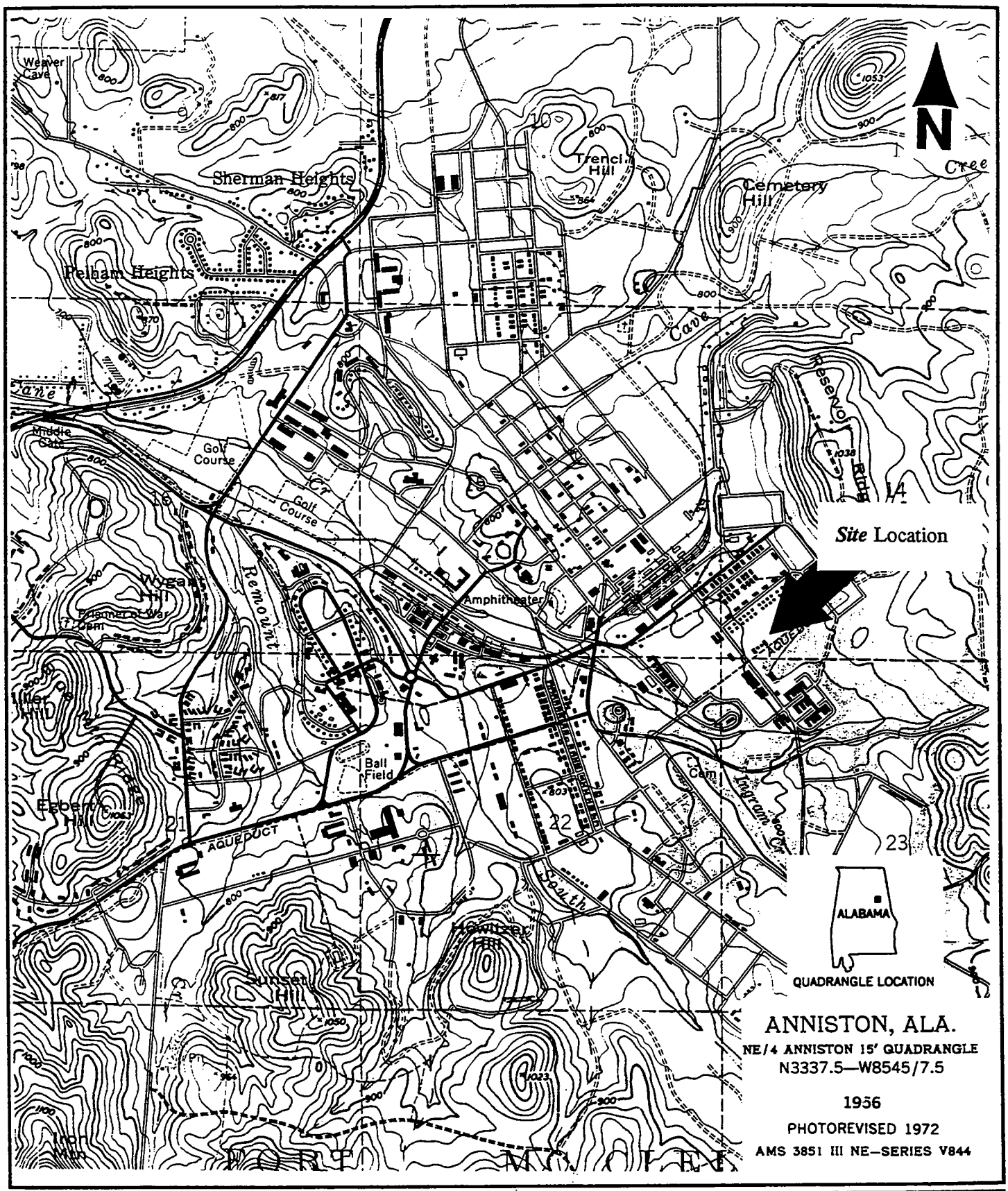
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

f:\wpfiles\cmxx\forms\ADEMUST

Appendix B

Site Location



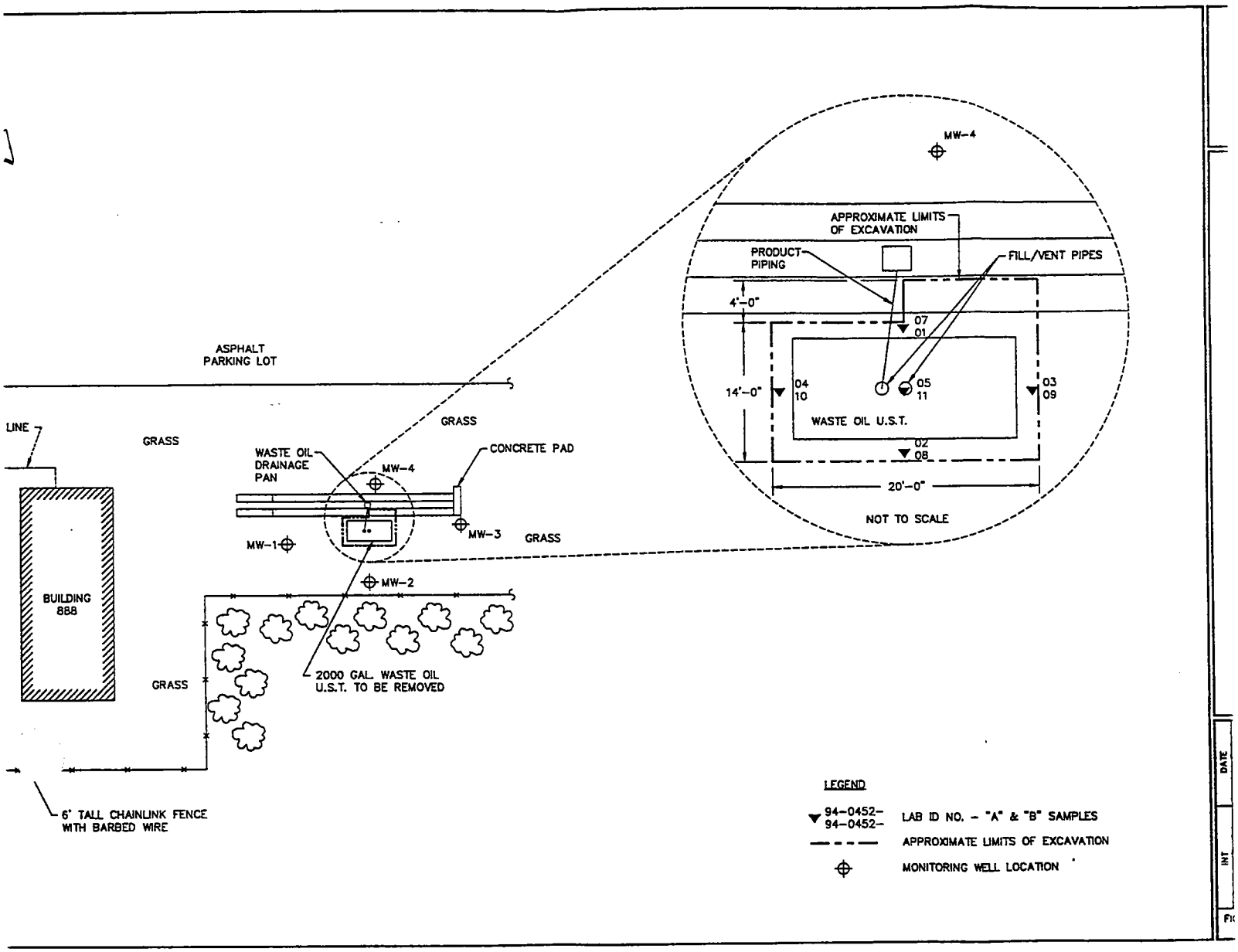
BRAUN INTERTEC

Site Location Map
Waste oil UST program
Building 888
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY: •		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations


MW-4
APPROXIMATE LIMITS OF EXCAVATION
PRODUCT PIPING
FILL/VENT PIPES
4'-0"
07
01
14'-0"
04
10
05
11
03
09
WASTE OIL U.S.T.
02
08
20'-0"
NOT TO SCALE
ASPHALT PARKING LOT
LINE
GRASS
GRASS
WASTE OIL DRAINAGE PAN
MW-4
CONCRETE PAD
MW-3
GRASS
MW-1
MW-2
BUILDING 888
GRASS
2000 GAL. WASTE OIL U.S.T. TO BE REMOVED
6' TALL CHAINLINK FENCE WITH BARBED WIRE
LEGEND
94-0452-
94-0452-
LAB ID NO. - "A" & "B" SAMPLES
APPROXIMATE LIMITS OF EXCAVATION
MONITORING WELL LOCATION

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

HAZARDOUS WASTE MANIFEST
(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: A L [illegible] 1 0 2 0 5 [illegible]
Manifest Document No.: 9401
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
SOMMERALL GATE
ANNISTON, AL 36205-
4. Generator's Phone (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: A L D 9 8 1 0 2 0 8 9 4
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
Fisher Industrial Service, Inc.
402 Webster Chapel Rd.
Glencoe, AL 35905
10. US EPA ID Number: A L D 9 8 1 0 2 0 8 9 4
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. FIS Profile #: 18901	40	DM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406
Purchase Order #: DAVE DORLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: [signature]
Month / Day / Year:

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: [signature]
Month / Day / Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doyle
Signature: [signature]
Month / Day / Year: 06 06 94

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: ~~NOLAN~~ L. JAYE, JR. NRD
Signature: [signature] NRD
Month / Day / Year:

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Appendix E

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0452

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on eleven (11) soil samples received on May 6, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0452-01	BLDG. 888	North	Sidewall "A"	3'
94-0452-02	BLDG. 888	South	Sidewall "A"	3'
94-0452-03	BLDG. 888	East	Sidewall "A"	3'
94-0452-04	BLDG. 888	West	Sidewall "A"	3'
94-0452-05	BLDG. 888	Base	"A"	9'
94-0452-06	BLDG. 888	SP-1		
94-0452-07	BLDG. 888	North	Sidewall "B"	
94-0452-08	BLDG. 888	South	Sidewall "B"	
94-0452-09	BLDG. 888	East	Sidewall "B"	
94-0452-10	BLDG. 888	West	Sidewall "B"	
94-0452-11	BLDG. 888	Base	"B"	

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
01	750	24
02	5500	23
03	4500	19
04	2300	15
05	800	5.3
06	450	16
07	825	16
08	8100	22
09	3200	15
10	2500	14
Spike Recovery, %	**	98.77
Relative Percent Difference on Duplicate, %	0.69	1.71
11	1050	11
Spike Recovery, %	97.97	106.44
Relative Percent Difference on Duplicate, %	0.39	2.08

** = Not applicable due to high sample contamination.

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd/th:ljh

k:\system\800\misc\j&nden07.21

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page _____ of _____

Site Identification

FORT McCLELLAN
ANNISTON ALABAMA
Bldg 888

Project #: CMKX-93-0180 TASK D

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) A

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: JOHN PHILLIPS

Sampled by: JOHN PHILLIPS

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	Bldg 888 NORTH SIDEWALL "A" 3'	4-30	—	A				1								TPH, Lead
	BLD 888 3' SOUTH SIDEWALL "A"	↓	—	↓				1								TPH, Lead
	BLDG 888 3' EAST SIDEWALL "A"		—					1								TPH, Lead
	BLDG 888 3' WEST SIDEWALL A"		—					1								TPH, Lead
	BLDG 888 9' BASE "A"		—					1								TPH, Lead
	BLDG 888 SP-1		—					2								TPH, Lead
	BLDG 888 3 NORTH SIDEWALL "B"		—					1								HOLD
	BLDG 888 SOUTH SIDEWALL "B"		—					1								HOLD
	BLDG 888 EAST SIDEWALL "B"		—					1								HOLD
	BLDG 888 WEST SIDEWALL "B"	✓	—	↓				1								HOLD

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5-4-94	0901					

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:
				Thomas Hallquist	5-6-94	12:00

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page _____ of _____

Site Identification

FORT McCLELLAN
ANNISTON ALABAMA
BIDG 888

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) A

Evidence tape intact? (Check One) Yes ◯ No ◯ N A ◯

Project Manager: JOHN PHILLIPS

Sampled by: JOHN PHILLIPS

Comments:

Project #: CMAX-93-0180 TASK-D

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	BIDG 888 BASE 8" 11"	4-30	—	A				1								HOLD

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5-4-94	0982	Thomas Holliquist	→	5-6-94	12:10	
Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:	

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
6875 Washington Avenue South
P.O. Box 39108
Minneapolis, Minnesota 55439-0108
612-941-5600 Fax: 942-4844

Engineers and Scientists Serving the Built and Natural Environments®

November 18, 1994

Project CMKX-93-0180
Report 94-3503 (Revised)

Mr. David Doble
Braun Intertec Corporation

Re: Fort McClellan

Amiston, AL

Braun Intertec Corporation received your analytical request on October 17, 1994. Analytical results are summarized on the following laboratory report.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed. No anomalies were encountered in the analysis of these samples.

We appreciate the opportunity to meet your analytical needs. If you have any questions or need additional information, please call Thomas Wagner at 612-942-4932.

Sincerely,

Thomas P. Wagner
Project Manager

Dirk W. Hoogenboom
Quality Assurance Coordinator

Attachments
Chain of Custody
Laboratory Results

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/14/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-13	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/14/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-13	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/14/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-13	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/21/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/14/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-14	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/14/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-14	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/14/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-14	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/21/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	7	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/14/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-15	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/14/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-15	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/14/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-15	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/21/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/14/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-16	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/14/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-16	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/26/94	MDH 465E	10/26/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/14/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-16	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 888 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/21/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/21/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/21/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-3503

Page 2 of 3

Site Identification: Fort Mc Clellan

Project #: CMKX-93-0180

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager:

Sampled by:

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
94-3503-09	Bldg 215 MW 1	10/14/94	1150		4		1	1								VOC, lead, PAH 610
10	MW 2		1210		4		1	2								
11	MW 3		1230		4		1	2								
12	MW 4		1250		4		1	2								
13	Bldg 888 MW 1		1015		4		1	2								
14	MW 2		1030		4		1	2								
15	MW 3		1100		4		1	2								
16	MW 4		1045		4		1	2								

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:	Received for laboratory by: Cavin Thien	Date: 10-17-94	Time: 0730	

Appendix F

Well Construction Diagrams

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 888

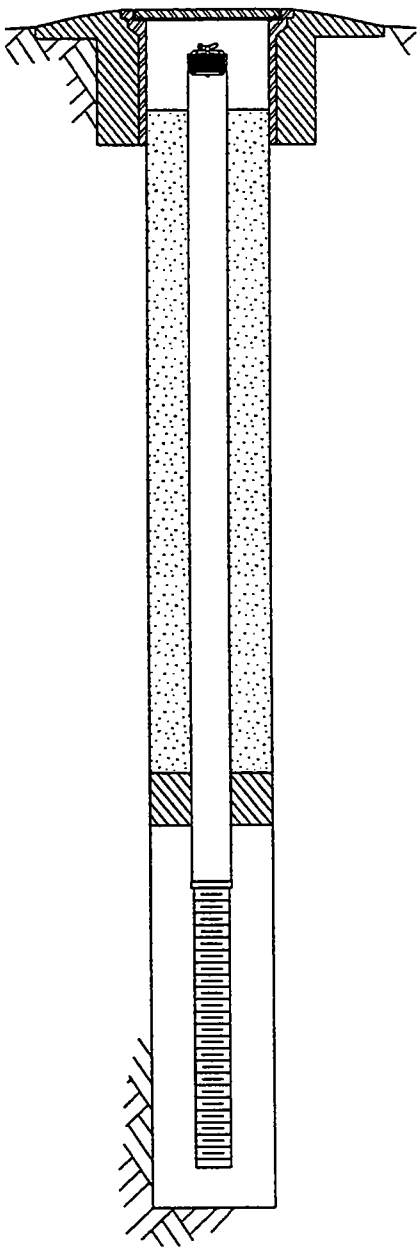
Well Number MW-1 Well Location See attached Date of Installation 6-7-94

B.M. Location and Elevation (± 0.01') Floor slab Building 888, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 102.7

Top of riser pipe elevation (±0.01'w/o cap) 102.54



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 4.0"

Sections used 1

Couplings 0

Caps Yes X No

Depth to top of seal 1.0

Depth to bottom of seal 2.5

Depth to top of screen 4.0

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to bottom of screen 14.0

Depth to bottom of boring 14.0

Remarks:

Completed by: DJD

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

BRAUN INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 888

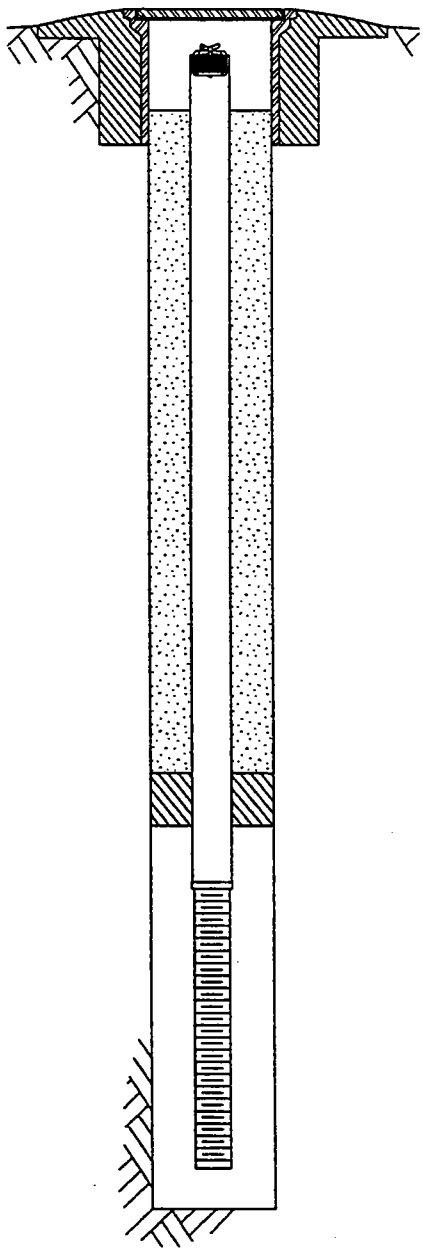
Well Number MW-2 Well Location See attached Date of Installation 6-8-94

B.M. Location and Elevation (± 0.01') Floor slab Building 888, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 102.9

Top of riser pipe elevation (±0.01'w/o cap) 102.74



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 4.5'

Sections used 1

Couplings 0

Caps Yes X No

Depth to top of seal 1.0

Depth to bottom of seal 2.5

Depth to top of screen 4.5

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to bottom of screen 14.5

Depth to bottom of boring 14.5

Remarks:

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Completed by: DJD

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 888

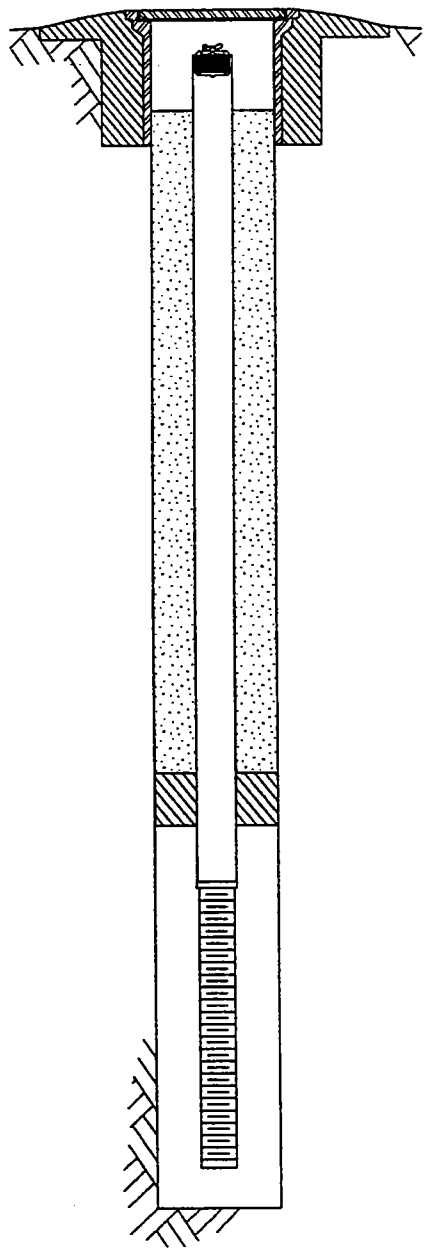
Well Number MW-3 Well Location See attached Date of Installation 6-8-94

B.M. Location and Elevation (± 0.01') Floor slab Building 888, assumed 100.00

Geologist _____

Ground surface elevation (±0.1') 102.6

Top of riser pipe elevation (±0.01'w/o cap) 102.44



Protective Vault:

Manufacturer _____
Model # _____
Diameter 6"
Hex wrench access Yes
Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0'

Riser Pipe:

Type	PVC
Diameter	4"
Total Length	3.0'
Sections used	1
Couplings	0
Caps	Yes X No ___

Depth to top of seal 1.0'

Depth to bottom of seal 2.0'

Depth to top of screen 3.0'

Seal Material Bentonite
Amount of material used (lb) _____

Filter Material Silica Sand
Amount of material used (lb) _____

Screen:

Type	PVC
Slot Size	.010
Length	10'
Diameter	4"
Plug/Point	Plug

Depth to bottom of screen 13

Depth to bottom of boring 13

Remarks: _____

Completed by: DJD

Method of Advance:

HSA _____ I.D. _____
Casing _____ I.D. _____
Tricone _____ O.D. _____
Power Auger X O.D. 10-inches

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 888

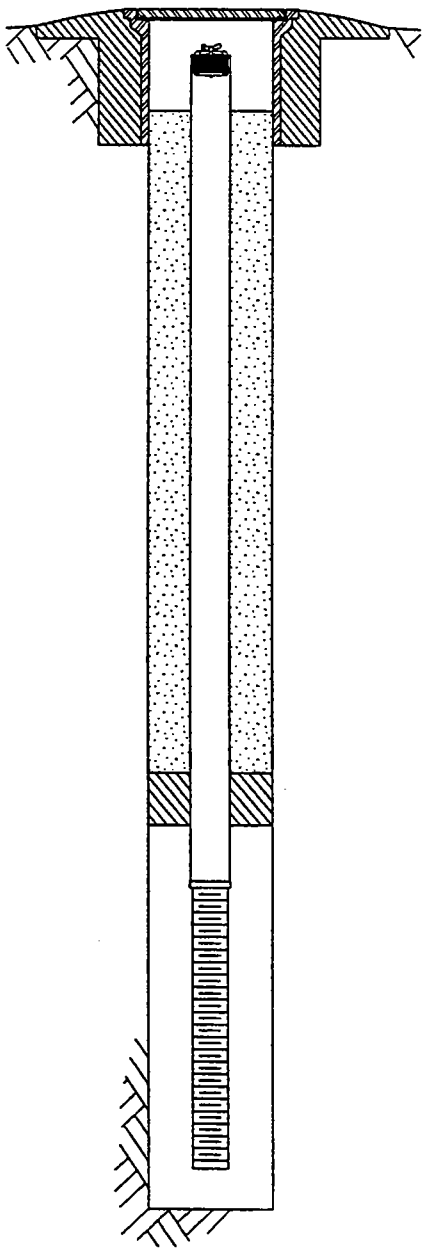
Well Number MW-4 Well Location See attached Date of Installation 6-8-94

B.M. Location and Elevation (± 0.01') Floor slab Building 888, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 103.5

Top of riser pipe elevation (±0.01')(w/o cap) 103.15



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0'

Riser Pipe:

Type PVC

Diameter 4"

Total Length 4.5'

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 1.0

Depth to bottom of seal 2.5

Depth to top of screen 4.5

Depth to bottom of screen 14.5

Depth to bottom of boring 14.5

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN INTERTEC

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ATTACHMENT 7

BUILDING 1012
BUILDING 3716
BUILDING 1800A
BUILDING 1966
BUILDING 1997
BUILDING 3212
BUILDING 3213
BUILDING 1876
BUILDING 3138
BUILDING 1338
BUILDING 3691
BUILDING 5700

SEMS, Inc.

Southern Environmental Management & Specialties

February 27, 1997

Project No.: 155-0001

Ms. Diane Israel
Contracting Officer/Directorate of Contracting
U.S. Army CMPC & FM
Building 241C
Fort McClellan, Alabama 36205

Closure Report
Underground Storage Tank Removals,
Site Remediation, and Site Restoration
Fort McClellan, Alabama

Dear Ms. Israel:

Southern Environmental Management & Specialties (SEMS) is pleased to submit the above referenced report. List of Attachments are as follows:

- Attachment A — Field Activity Logs
- Attachment B — Laboratory Analysis
- Attachment C — ADEM UST Closure - Site Assessment Report

The project was completed in accordance with industry standards and Alabama Department of Environmental Management guidelines. We believe a successful closure has been achieved.

If you have any questions or comments, please contact the undersigned at your convenience.

Sincerely,
SEMS, Inc.

Mark L. Morgan, P.E.
Alabama P. E. #19618

ALABAMA REGISTERED NO. 19618 PROFESSIONAL ENGINEER MARK L. MORGAN

MLM;pam

s:\mcclella\closure.rpt

2844 Fellsway Drive • Baton Rouge, LA 70814
(504) 924-2002 • (504) 924-2004 FAX

Closure Report
Underground Storage Tank Program
UST Removal At
Fort McClellan, Alabama

Department Of The Army
U.S. Army Chemical & Military Police
Centers and Fort McClellan
Fort McClellan, Alabama 38205-5000

February 1997

Closure Report
Underground Storage Tank Removal/Replacements

Fort McClellan, Alabama

Southern Environmental Management & Specialties (SEMS, Inc.) is pleased to submit this Closure Report summarizing the removal, replacement, and closure of the tanks at the referenced location. As part of the Closure and Replacement Notice submitted to the Alabama Department of Environmental Management (ADEM), the twelve (12) Underground Storage Tanks (UST's) were removed or closed-in-place and eleven (11) of the tanks were replaced. Table 1 shows the size tank removed and replaced. On September 20, 1996, Mr. Earl Moore was notified of the tank closures at Fort McClellan. The local ADEM coordinated was contacted and advised of the tank closure schedule. All tanks are numbered (by ADEM) 11953-015-Building Number/Location. Below is a summary of events, dates and include the building number.

Subcontractors utilized on the projects were Davis Oil Company, to remove fuel and transport the tanks, Inchcape Testing Services for any testing the may be required, Wilson Electric company installed interstitial monitoring devices on the newly installed tanks and EMTEK Mechanical Contractor installed the double-walled piping and performed all testing.

On October 9, 1996 Davis Oil removed 4,350 gallons of fuel from the 5,000 gallon tank located at Building 1012. The tank was removed, labeled, and transported on October 16, 1996 by Davis Oil. The tank was replaced with a 5,000 gallon double-walled fiberglass tank with interstitial monitoring on October 17, 1996.

On October 9, 1996 Davis Oil removed fuel from the 150 gallon tank located at Building 1338. The tank was removed, labeled, and transported on October 16, 1996. This tank was replaced with a 550 gallon double-walled fiberglass tank with interstitial monitoring on November 8, 1996.

On October 9, 1996 Davis Oil removed 1,550 gallons of fuel from the 2,000 gallon tank located at Building 1800A. The tank was removed, labeled, and transported on that day. This tank was

replaced with a 2,000 gallon double-walled fiberglass tank with interstitial monitoring on October 29, 1996.

On October 11, 1996 Davis Oil removed fuel from the 500 gallon tank located at Building 1876. The tank was removed, labeled, and transported on November 12, 1996. This tank was replaced with a 500 gallon double-walled fiberglass tank with interstitial monitoring on November 12, 1996.

On October 11, 1996 Davis Oil removed 800 gallons of fuel from the 1,000 gallon tank located at Building 1966. Because of utilities the tank was closed in-place. This tank was replaced with a 1,000 gallon double-walled fiberglass tank with interstitial monitoring on October 29, 1996.

On October 9, 1996 Davis Oil removed 2,250 gallons of fuel from the 2,500 gallon tank located at Building 1997. The tank was removed, labeled, and transported on October 24, 1996 by Davis Oil. This tank was replaced with a 2,500 gallon double-walled fiberglass tank with interstitial monitoring on October 28, 1996.

On October 18, 1996 Davis Oil removed 4,650 gallons of fuel from the 5,000 gallon tank located at Building 3138. Samples was not collected at this building. The tank was removed, labeled, and transported on October 21, 1996. This tank was replaced with a 3,000 gallon double-walled fiberglass tank with interstitial monitoring on October 22, 1996.

On October 11, 1996 Davis Oil removed fuel from the 550 gallon tank located at Building 3176. The tank was closed in-place because of proximity to building. This tank was replaced with a 500 gallon double-walled fiberglass tank with interstitial monitoring on November 8, 1996.

On October 11, 1996 Davis Oil removed 2,950 gallons of fuel from the 2,500 gallon tank located at Building 3212. The tank was closed in-place due to utilities, water, gas, electrical, over the tank. This tank was replaced with a 2,500 gallon double-walled fiberglass tank with interstitial monitoring on October 24, 1996.

On October 11, 1996 Davis Oil removed 3,550 gallons and on October 23 removed 100 gallons of fuel from the 4,000 gallon tank located at Building 3213. A slight sheen was observed on the

water at the bottom of the pit, we applied four (4) absorbent pads. Four (4) samples were collected at this building (Table 2). The tank was removed on October 23, 1996 and was not replaced.

On October 9, 1996 Davis Oil removed fuel from the 150 gallon tank located at Building 3691. This tank was closed in-place. A separate tank hold was excavated for the new replacement double-walled tank. The tank was installed on November 4, 1997.

On October 8, 1996 Davis Oil removed 134.8 gallons of fuel from the 150 gallon tank located at Building 5700. Two (2) samples was collected at this building (Table 2), no visual contamination. The tank was removed, labeled, and transported on October 16, 1996. This tank was replaced with a 500 gallon tank on October 15, 1996.

A total of 20,435 gallons of fuel was recycled by Davis Oil Company. All excess soil was transported to the Fort McClellan Landfill. According to sample analysis and field screening, none of the soil was contaminated by these seldom used emergency and heating oil tanks. We have attached closure assessment forms for the only permanent closure at 11953-015-003213 and facility QA/QC reports for all work.

Table 1
Underground Storage Tank Summary
Underground Storage Tank Program
Fort McClellan, Alabama

Building Number	Product	Date Removed	Size Tank Removed	Date Replaced	Size Tank Replaced
1012	Fuel Oil	10/16/96	5,000	10/17/96	5,000
1338	Gasoline	10/16/96	150	11/18/96	500
1800	Fuel Oil	10/31/96	2,000	10/29/96	2,500
1876	Fuel Oil	11/12/96	500	11/12/96	500
1966	Fuel Oil	12/16/96[1]	1,000	10/29/96	1,000
1997	Fuel Oil	10/24/96	2,500	10/28/96	2,500
3138	Fuel Oil	10/21/96	5,000	10/22/96	3,000
3176	Fuel Oil	12/16/96[1]	550	11/08/96	500
3212	Fuel Oil	12/16/96[1]	2,500	10/24/96	2,500
3213	Fuel Oil	10/23/96	4,000	NA	NR
3691	Gasoline	12/16/96[1]	150	11/04/96	500
5700	Gasoline	10/08/96	150	10/08/96	500

NOTES:

NA = Not Applicable

NR = Not Replaced, (tank closed in place)

[1]= Closed in-place, filled with concrete

Table 2
Analytical Data
Underground Storage Tank Program
Fort McClellan, Alabama

Building	Sample ID	Sample Date	Compound	Sample Type	Detection
1997	TP1-1997	10/28/96	Total Petroleum Hydrocarbon	Water	<DL
5700	TP1-5700	10/08/96	Total Petroleum Hydrocarbon	Solid	<DL
5700	TP2-5700	10/08/96	Total Petroleum Hydrocarbon	Solid	<DL
3213	TP1-	10/23/96	Total Petroleum Hydrocarbon	Solid	<DL
3213	TP2-	10/23/96	Total Petroleum Hydrocarbon	Solid	<DL
3213	TP3-	10/23/96	Total Petroleum Hydrocarbon	Solid	<DL
3213	TP4-	10/23/96	Total Petroleum Hydrocarbon	Solid	84.7

Attachment A

Field Activity Logs

SEMS, Inc. Southern Environmental Management & Specialties	WORK DAY # 1 **DATE:** 10/08/96 (Tuesday)	**OCTOBER 8,1996** **BEGIN FIELD OPERATIONS**

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY) : Warrior Tractor delivers backhoe. Field Operations begin. Davis Oil removes 134.8 gallons of fuel from site 5700 tank. Said tank inerted. Tank removed, labeled and transported off-site by Davis Oil. Soil Sample TP15700 & TP25700 taken. No visual contamination.

PROBLEMS ENCOUNTERED: Hand digging for utilities. 09/29/96 RH & JB met @ the Directorate of Environment office as temporary services & utility investigations discussed. 1400 hours 10/08/96 before utility investigation begins.

DELAYS: Utility investigation not completed prior to mobilization @ building 5700 resulted in a 4 hour delay.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____

SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR DATE; 10/08/96

SEMS, Inc. Southern Environmental & Management Specialties

WORK DAY # 2

DATE: 10/09/96 (Wednesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY) : Emergency Response Plan Simulation completed. Davis Oil removes 4,350 gallons of fuel from the existing 5,000 gallon tank @ building 1012. 2,250 gallons removed from building (tank) 1997. 1,550 gallons removed from building (tank) 1800. Begin excavation of new tankhold @ building 5700. Excavation efforts were ceased when we hit an unmarked utility line.

PROBLEMS ENCOUNTERED: As the new tankhold excavation was in progress an unmarked sanitary sewer relief line was struck. Excavation was ceased. This resulted in the loss of the last 3-1/2 hours of the work day. We will await an alternate location and approval of our safe excavation plan.

DELAYS: 3-1/2 hours lost due to unmarked utilities.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____

SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR DATE; 10/09/96

SEMS, Inc. Southern Environmental & Management Specialties

WORK DAY # 3

DATE: 10/10/96 (Thursday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Escorted Vulcan Materials trucks into buildings 5700 & 1012. Prepare Deadmen for placement. Above ground Pressure test on 5700 tank. Excavation new tankhold @ 5700. Place deadmen in tankhold (5700). 12" rock base brought to grade (5700).

PROBLEMS ENCOUNTERED: At the north end of the new excavation @ 5700 another unmarked tile line was hit and stopped excavation. Earthwork awaited approval of Excavation Plan.

DELAYS: Unmarked utility line as described. A further delay was ensued as we waited for approval of the excavation design we presented to coincide with proper excavation safety requirements. Total of 4 hour delay.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/10/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 4

DATE: 10/11/96 (Friday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Davis Oil Co. Removes the following fuel...Bldg. 3212 – 2,950 gallons. Bldg. 3213– 3,550 gallons. Bldg. 1966–800 gallons. Stage 5,000 gallon tank @ 1012. Stage tanks @ buildings 3138,1966, 1997, & 1800 also. Model erection crane was used to load and stage said tanks. Work day closed @ 1300 hours.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/11/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 5

DATE: 10/15/96 (Tuesday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Note: Monday October 14, 1996 = Federal Holiday (Columbus Day). No Work. Place Tank in new excavation @ building 5700. In ground pressure test completed @ 5700. Mobilize @ building 1012 with an above ground pressure test with Mr. Lee Jaye present. Semi-truck delivery (Piping) staged @ tool trailer. 4 boxes arrive @ DOE building (Electrical). Visual inspection sites3212, 3213, 3138, & 1800.

PROBLEMS ENCOUNTERED: As I was inspecting site 1800, the superintendant @ the building approached me in regard to the loss of hot water availability during the tank replacement procedures.

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/15/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 6

DATE: 10/16/96 (Wednesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Excavator & Dump truck along with EMTEK cre arrive @ building 1012. Kirby McCarthy was contacted @ building 215 in regard to buried phone cable. Verbal clearance provided. All phone service is @ the front of building 1012. Received Cable Location Request Forms for the future excavation locations. Excavation begins @ bldg. 1012. Inert existing tank @ 1012. Soil being transported to the landfill. 5,000 gallon tank removed, labeled, and removed by Davis Oil Co. 550 gallon fuel tank unloaded and placed at staging area. Approximately 20 tons of crushed stone placed in old tankhold location. New excavation begins.

PROBLEMS ENCOUNTERED: Clay drain pipe hit (unmarked) in removal excavation halting activities. Unmarked 3 phase electric in PVC conduit encountered ceasing excavation. Utility group had not a clue of service or orgin. Concrete Manway removal proposed problems. Encountered extreme difficulties to the extent that it should have been subject to closure rather than removal. The existing 5,000 gallon tank was installed in 6" to 8" of fresh concrete. Removing the tank required the full capacities of the excavator and the backhoe. A transformer pad was in danger of damage during this excavation. Upon removal of the tank immediate backfill (crushed stone) was necessary to maintain the transformer foundation.

DELAYS: There was a combined delay of 3 hours between coordinating with the utility group & removing the 5,000 gallon tank from the concrete hold.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/16/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 7

DATE: 10/17/96 (Thursday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Trenching work on building 5700. Deadmen delivered to bldg. 1012 by EMTEK. Primary piping completed @ 5700. Pressure test completed. Continued excavation on new tankhold @ building 1012. New tank placed @ 1012 & 3/4 backfill. Built pad for electricians work area(reference to problems encountered).

PROBLEMS ENCOUNTERED: As we completing the new 1012 excavation an unmarked 13K line was damaged terminating service to the Truman Gym. We were told the line was 32' to the NE. We were unable to continue until the electricians had completed the preliminary work in repairing this service.

DELAYS: A total of 3 hours was lost (7 man crew) due to the 13K line being damaged.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/17/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 8

DATE: 10/18/96 (Friday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Vulcan Materials delivers crushed stone to building 1012, 5700, 3212. In ground pressure test @ 1012. Excavator transported to building 3138. Mr. McCarthy visits site 3138 and clears area for excavation (telephone). We are waiting for the remaining utility investigations. Vulcan Material delivery to 3138. Preliminary backfill completed @ 1012. Connected supply & return lines @ 5700. Installed vent pipe @ 5700.

PROBLEMS ENCOUNTERED:

DELAYS: 2 hour delay due to the lack of a timely utility investigation as requested @ building 3138.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/18/96

S.E.M.S. Inc.
Southern Environmental
Management & Specialties

WORK DAY # 9

DATE: October 21, 1996 (Monday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Begin excavation/removal @ building 3138. Pipe trench @ 1012 in progress. Electrician (Wilson Electric) arrives @ 5700 for site orientation/instructions. Tank @ building 3138 removed, labeled, and removed by Davis Oil Co. Drilling @ 1012 for service lines into building. Vulcan Materials trucks escorted to 3138,1997, & 3212. Above ground pressure test on 3138 tank. Asphalt cut @ 1012 for pipe trench. Begin placing rock in pipe trench @ 1012.

PROBLEMS ENCOUNTERED: Contract drawings call for the removal of a 3,000 gallon tank @ building 3138. 2 trips were Made by Davis Oil Company to remove 4,650 gallons of fuel. This postponed excavation. A stakebody truck was sent to remove/haul a 3,000 gallon tank. Difficulties were incurred loading the 24' long tank (5,000 gallon). 3 overhead utilities along with extremely close working area due to buildings & fence slowed progress extensively.

DELAYS: 2-1/2 hour delay due to building 3138 tank being 5,000 gallons as opposed to 3,000 as listed in the contract drawings. Overhead utilities, fence, trailers, slowed progress extensively.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/21/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 10

DATE: October 22, 1996 (Tuesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Excavation in progress @ 3138. Deliver deadmen to 3212. Excavation completed @ 3138. Record excavation survey. Tank placed, secured, and partially backfilled @ building 3138. Begin excavation @ 3212. Above ground tank pressure test @ 3212. Backfill pipe trench @ 5700. Vulcan Materials escorted to building 3138 with 2 loads of crushed stone.

PROBLEMS ENCOUNTERED: James Bleke was informed that there would be a utility investigation completed @ building 3212 before noon today. @ 1340 hours the excavation was initiated and a water line was hit on top of the existing tank. This resulted in shutting the job down @ 1430 hours.

DELAYS: Our excavator was moved from 3138 to 3212 with a proper utility investigation incomplete. We prepared for the removal of the existing tank and a water line was busted. This tank should have definitely been closed in place due to several imposing utilities. 2 lost hours.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/22/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 11

DATE: October 23,1996 (Wednesday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Moved crew from building 3212 to 3213 until a proper utility investigation is completed. Vulcan Materials escorted with 2 loads of crushed stone to building 1012. Saw cut asphalt for tank removal/replacement @ building 1997. Davis Oil contacted to pump small amount of fuel remaining in the tank @ 3213. Fiberglass tank removed and placed in berm constructed today @ 3213.

PROBLEMS ENCOUNTERED: Contract Drawings delineated a steel tank @ 3213. It was fiberglass and slightly damaged as we were attempting to remove it. This required 2 hours to carefully remove the residue by hand. There was a slight sheen on the water in the tankhold as we placed absorbent pads to remove the small amount of spillage.

DELAYS: 2 hours as described in PROBLEMS ENCOUNTERED.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

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SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/23/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 12

DATE: October 24, 1996 (Thursday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Vulcan Materials escorted to deliver 3 loads of crushed stone to building 1800. Excavation completed @ building 3212. Above ground tank pressure test completed @ building 3212. Tank @ building 3212 in place, level, and hold down straps secured. Partial backfill completed. Backfill @ 3213 complete and rough graded. Pipe pressure test at building 1012. Inert tank @ 1997. Utility investigation complete @ 1997 with clearance for excavation. Removed, labeled, and transported (Davis Oil) tank from 1997. Excavation survey recorded @ 3212.

PROBLEMS ENCOUNTERED: No major problems encountered today.

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/24/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 13

DATE: October 25, 1996 (Friday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Continued excavation @ building 1997. Saw cut pipe trench across parking lot @ building 3138. Above ground pressure test completed @ 1997. Rain begins @ 1020 hours. In ground tank pressure test OK'd @ 3138. Secured all sites with barricades, visqueen, berms, etc.. Crew shut down @ 1200 hours.

PROBLEMS ENCOUNTERED: Rain sets in @ 1020 hours. Crew shut down @ 1200 hours.

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/25/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 14

DATE: October 28, 1996 (Monday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Pumped 6,930 gallons of water from the excavated tankhold @ building 1997. Deliver deadmen to building 1966. Backhoe is excavating @ 1966. We constructed shoring for tankhold @ 1997. The existing subgrade was substandard and collapsing. 3138 piping activities ongoing. Place deadmen @ 1997 and construct rock base. Above ground pressure test completed @ 1997. Tank placed @ building 1997, straps secured and begin backfill. 1966 above ground test completed. 1966 utilities hand dug. Deadmen delivered to building 1800. Light rain begins @ 1630 hours.

PROBLEMS ENCOUNTERED: @ building 1966 there is a gas line, water line, and an underground electric. As the utility investigations are being done there is no instrumentation or probes being used. This requires hand digging to locate services without damage. Said hand digging not provided by utility group.

DELAYS: 2 man crew spent 3 hours digging with pick and shovels locating said utilities @ building 1966. Shoring placed @ building 1997 was due to poor existing subgrade. $80.00 materials and 3 men @ 1 hour.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/28/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 15

DATE: 10/29/96 (Tuesday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Cleaned all debris and organized supplies @ staging area/tool trailer. Above ground pressure test @ building 1800. Soil removal from 1966 to landfill. RLH does site investigation/excavation plan for buildings 3691 & 1338. Also made request for temporary services be placed to prevent further delays. Request to be @ 3691 @ noon 10/30/96. Piping pressure test @ 3138. Place deadmen @ 1966. Place tank @ 1966. Case 580 backhoe hydraulic chipper continues excavation of 3' of rock @ 1800. Place 1880 tank and secure/partial backfill. 3,990 gallons of water pumped from 1800 tankhold before continuing excavation today.

PROBLEMS ENCOUNTERED: Excavation @ 1800 began On 10/28/96 and required said Case chipper to complete the last 3'. Photographs taken and available upon request define this extremely difficult excavation. The proper depth was achieved with maximum effort.

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/29/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 16

DATE: October 30, 1996 (Wednesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Vulcan Materials escorted to buildings 1966 (1/2 load) & 1997 (1/2 load). In ground pressure test @ 1966 completed. 1800 driveway area cleaned. 1800 in ground pressure test completed. Piping pressure test @ 1997. Handdug pipe trench @ 1966 exposing without damage a gas, water, and electric conduit. Base placed in piping trench @ building 3138. Deliver materials @ 3691 for tank hold down. Hand dig utilities over tank @ 1800. This tank should be closed in place. Begin digging pipe trench @ 1800. Deliver tank to site 3691. We are ready to excavate @ 3691 upon approval

PROBLEMS ENCOUNTERED: The pipe trench route @ 1800 is blocked by the existing tank. If we cut the tank and filled it with concrete/closure, it would provide enough clearance for the piping.

DELAYS: We are awaiting approval to excavate @ 3691 pending temporary services and utility investigation.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/30/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 17

DATE: October 31, 1996 (Thursday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Continued to hand dig trench @ 1800. Cut and close tank in place @ 1800. This allows enough clearance for the pipe run at the proper elevation. The pipe trench was initiated with the backhoe as an unmarked gas line was struck pulling it away from the meter. We cleared the site. Travel to 3691 to see if it is ready for excavation to begin. Deliver tank to site 1338.

PROBLEMS ENCOUNTERED: Unmarked gas line hit @ building 3212 ceasing trenching operations.
We were ready to begin on site 3691 @ 1200 hours 10/30/96. Request was made on 10/29/96.

DELAYS: Temporary services still not installed @ building 3691. Utility investigation has not been completed as requested either.
We were ready to begin on site 3691 @ 1200 hours 10/30/96. Request was made on 10/29/96. (12 hours)

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 10/31/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 18

DATE: November 1, 1996 (Friday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Piping in progress @ 1800. Still awaiting approval from Ray Mulholland to begin excavation @ building 3691. Relocate stone stockpile to optimize working area @ 3691. This site is in tight quarters due to fence, guide wire, building, woods, and existing berm. It was required to remove a portion of the berm to facilitate an area for the backhoe to work. 0800 hours I receive permission from Ray Mulholland to begin excavation. Site 3691 contained very workable soil and was completed by 1200 hours. Excavation survey recorded.

PROBLEMS ENCOUNTERED:

DELAYS: 13 working hours passed from the time we were prepared to begin the excavation @ building 3691 before we received permission to proceed. The utility investigation and the installment of temporary services delayed our schedule. There is only 1 unit for temporary services and it is being relocated from one site to another which is extremely slow.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/01/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 19

DATE: 11/04/96 (Monday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Deliver tank to building 3176 & 1876. 2 loads of soil delivered to building 3213 from 3691 to bring it to grade. Fiberglass tank from building 3213 was transported to the landfill and crushed in small pieces and covered as instructed. Soil spread and compacted @ 3213. Tank placed, secured, and partially backfilled @ site 3691.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/04/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 20

DATE: 11/05/96 (Tuesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Hand dig pipe trench @ building 3691. Layout proposed location for new tankhold location @ building 1338. We are told that there is a water line in the vicinity of the excavation @ 1338, though the utility group does not know where, what size, or what composition this line is. The water main was marked but did not effect our work. After observing the main crossing the creek & then the depth of the ditch @ the road crossing it is obviously deeper than our excavation. It is the service line that I am concerned with. Utilities never marked the line. Excavation completed @ 1338. Deadmen placed, base leveled, tank set, secured, and partially backfilled. Deadmen delivered to site 1876. Deadmen delivered to site 3176.

PROBLEMS ENCOUNTERED: Water line location, depth, and composition @ 1338.

DELAYS: 2 man crew spends 2 hours digging for the aforementioned water line.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/05/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 21

DATE: 11/06/96 (Wednesday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Saw cut asphalt @ building 1338 and begin hand digging pipe trench due to uncertainty of the water service location. Piping test @ building 3138 OK'd by RM. Said trench completed and moved to building 3176 to begin the excavation. This tank must be closed in place due to proximity of existing slab. Utilities marked a water line. We hand dug 4' deep over a 10' span and never found any utilities. Begin excavation @ 3176.

PROBLEMS ENCOUNTERED: Unable to dig pipe trench @ 1338 due to a water line that was never found. Once again no instrumentation or probes are being used to locate these utilities. Now we are merely being told (verbal) of utilities. They do not even mark the general location.

DELAYS: 3 men @ 6 hours digging 24' of trench 2' wide & 2' + deep @ 1338. The backhoe could have dug this trench in 45 minutes. 2 men @ 4 hours hand digging for a water line that is impossible to be at the marked location.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/06/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 22

DATE: November 7, 1996 (Thursday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Contact Ray Mulholland @ 0745 hours to explain the utility situation @ building 3176. There is a concrete carrier vault running from the boiler plant (3176) west to the adjacent building. The utility group marked a water line between the back of curb and building 3176. We hand dug the depth of the top of the vault from the b.o.c. to the building. The H2O line is in the edge of the parking area. RM agrees. Completed excavation, recorded survey data, and set deadmen in tankhiold. Heavy rains forecasted. We placed visqueen over the stockpile of soil in the edge of the parking lot @ 3176. As we were beginning to place the tank in the tankhold, RM stated that he was concerned about the soil spreading into the parking area during the coming rains. I immediately sent RB to bring a dump truck out as we removed all of the said soil from the parking area and totally cleaned the area. (4 loads removed). This negated the time to place the tank @ 3176. Pipe pressure test OK'd @ building 3212.

PROBLEMS ENCOUNTERED: We continue to search for utilities that are not properly marked. We have made a strong attempt to avoid obstructing existing utilities by hand digging. This is not our responsibility under contract.

DELAYS: 1-1/2 hours lost due to hand digging mismarked water line. (3 men)

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bieke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/07/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 23

DATE: November 8, 1996 (Friday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Heavy rains last night. 0630 hours KN sent to provide report on 3176 tankhold status. The wall against the building collapsed during the rains. This was a concern. We were unable to set the tank and backfill due to removing the soil from the site as requested. It was necessary to remove the excess soil, remove the cables & turnbuckles, and then reinstall. We placed the tank, secured, and partially backfilled. Extremely wet area @ rock stockpile (3176). Transporting rock for backfill damaged grass. This will require cleanup. Pipefitters complete detail work @ 3212. We have been awaiting clearance to remove the fuel from the boiler plant @ building 1876.

PROBLEMS ENCOUNTERED: The wall of the tankhold excavation @ building 3176 collapsed due to heavy rains last night. We were unable to place, secure, and backfill the tank on 11/07/96 due to removing the soil from the parking lot. After the rains the area containing our rock stockpile was extremely wet. Transporting the backfill material damaged the soil in this area. We did not receive clearance to remove the fuel from 1876 until we were through with 3176. This creates down time for a 3 man crew and compliclates scheduling for Davis Oil Co.

DELAYS: 4-1/2 hours total. (1-1/2 cleaning tankhold collapse) (2 hours to repair stockpile area) (1 hour-fuel removal).

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/08/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 24

DATE: November 12, 1996 (Tuesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Inert tank @ building 1876. Excavation begins and old tank is removed by 0800 hours. Begin new excavation and deadmen are ready for placement by 0930 hours. New tank placed and partially backfilled @ 1200 hours. Relocate to site 3213. Begin removing soil from previous containment area. Return to site 1876 to assist Davis Oil Co. Load old tank. Cleaned 1876 premise; secured for the night. Note: In place pressure test approved @ site 1876.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

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SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/12/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 25

DATE: November 13,1996 (Wednesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): 3 loads of soil removed from site 1876. 1876 site cleaned and secured. 1 load of soil removed from site 3176. Soil removed from site 5700. Dump truck with 1 load of soil from site 3213, backhoe, and RLH arrive at landfill. The landfill is open between 1300 & 1400 hours. We extended the containment/visqueen and dumped said load from 3213. Returned to 3213 for final load to be taken to landfill. Soil removed from site 1338. Soil removed from site 1966. Electricians @ site 1800 installing Environ system.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/13/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 26

DATE:November 14, 1996 (Thursday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Remove soil from site 1966. Relocate to 1876 to complete pipe trench & then remove soil. Remaining soil removed from site 5700 & gravel brought to grade for form work. Piping test @ 3176. Begin piping @ building 1876. Rebuild berm @ site 3691 that we moved for access with the backhoe and remove excess soil removed during the excavation. Basic activitiy for the day was removing the bulk of the soil from excavations.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/14/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 27

DATE: November 15, 1996 (Friday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Today's activities consisted of placing additional rock necessary to bring tankholds up to grade to prepare for forms. ½ load @ 1966, ½ load @ 1338 per Vulcan Materials. 1 load @ 1012. Keith Norris & Ricky Bramlett work on bringing sites to grade for forms. Pipefitters finish piping @ building 1876. Fiberglassed tank @ 1338. Completed piping @ 3176 & fiberglassed. Miscellaneous cleanup.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/15/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 28

DATE: November 19, 1996 (Tuesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Note: Monday 11/18/96 was a rainout. As the crew met at the field office RLH shut it down for the day. Rain continued all day long. Begin 11/19/96. Pipefitters finish piping @ 1338. Tested pumps @ 1012, 1966, 3138, & 1997. 1966 , 1800, & 3176 need fuel in tank for startup test. 1997 & 3138 pumps bad. Fiberglassed fiberglass manways @ 1876, 1997, 1338, 1012, & 3691. Grade for forms: 1966, 1997 brought to grade. 1338 needs electrical completed. Materials for forms delivered to site by Keith Norris per RLH. RLH & KN begin delivering materials at sites as SP purchases and returns with additional necessary materials. 5700 completed and ready for concrete.

PROBLEMS ENCOUNTERED: Johnson Controls need to fill remaining tanks with fuel as requested and repair pumps that are listed inoperable above.

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/19/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 29

DATE: November 20, 1996 (Wednesday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Form constructed @ building 1012. Form constructed @ building 1338. 1966 & 1800 grade work for forms. All sites were previously backfilled 3/4 capacity to allow room for pipe work. It requires additional fill & grade work to prepare base for forms. Materials being staged throughout sites--lumber, rebar, wire, etc. Pipefitters complete Punchlist items to close piping activities. RLH is working on preparing an excavation summary for pay items to be submitted to Mark Morgan and then the DOE.

PROBLEMS ENCOUNTERED:

DELAYS: Johnson Controls needs to complete fuel placement and repairing inoperable pumps for final test so we can begin to pour concrete hold down pads.

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/20/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 30

DATE: November 21, 1996 (Thursday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Begin form @ 1966. Continued to distribute materials to sites. RM requested that we backfill the area where the H2O line was damaged on top of the tank @ site 3212. Sites 1966, 1800, & 1997 form work ongoing. Drizzling rain all morning, increasing by noon. 1320 hours rain too excessive to work. Adjustments made to form @ building 1997. Existing surface grade required slight deviations from design dimensions. 1420 hours rain diminishes. 11/22/96 concrete scheduled for buildings 5700 & 1012 tank hold downs.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/21/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 31

DATE: November 22, 1996

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): 0800 hours begin SRM arrives @ building 5700 and pour begins with Ray Mulholland present. 0830 SRM truck escorted to building 1012 as 5700/initial float. 0850 hours RM present during pour and slump test. He departs with return scheduled for finishing @ each location/brooming. Continued form work on building 1800 hold down. Site 1800 lacks only rebar to be ready for concrete. Sites 5700 & 1012 poured, finished & approved.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/22/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 32

DATE: November 25, 1996(Monday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Concrete for 1338 & 1966 was tentatively scheduled for today. Rain now forecasted for intermittent showers all day long. Removed forms from sites 5700 & 1012. Complete forms on 1966 & 1997. Concrete scheduled for 11/26/96 for sites 1338 & 1966.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/25/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 33

DATE: November 26, 1966 (Tuesday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Concrete delivered for tank hold downs @ sites 1338 & 1966. RM contacted and on site for start. Slump test approved and pour completed with RM on locations. Concrete work is going well with favorable results. Site 3138 brought to final grade with form completed and ready for concrete. Cleanup in progress as brooming activities ongoing. Excess soil stockpiled, materials gathered, with barricades placed at the end of each working day.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/26/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 34

DATE: November 27, 1996 (Wednesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Final preparation @ site 1800 form. RM contacted and concrete arrives @ site 1997, Motor Pool. SRM fails to bring test molds/canisters. RLH returns from SRM yard with test molds as the 2" slump is approved by RM. Relocate SRM truck to building 1800 and begin pour. 3 additional yds. Delivered to complete said pour. 1-3/4" slump recorded and approved by RM. Due to the cold temperatures RLH requested approval to add 1% accelerator to today's concrete. It resulted in a quick set but would prove difficult to finish if locations were very far apart. SEMS, Inc. Box van arrives to remove contents of trailer and deliver to home office/Baton Rouge. Attempted to bring site 3176 to grade. Vehicles blocked access as operations were abandoned and site 3138 being prepared. All sites secured and barricaded for long (Thanksgiving) weekend.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 11/27/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 35

DATE: December 2, 1996 (Monday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): 0600 arrive @ building 3176 to barricade (3 parking spaces) for working area. Inspect all sites for barricades etc. after 4 day weekend. Site 3176 brought to grade. Electrician contacted to complete system @ 3176 so we place the concrete form. Site 3138 form completed and ready for concrete. Building 3212 tankhold brought to grade for placement of form.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 12/02/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 36

DATE: December 3, 1996 (Tuesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Remove form boards from sites 1997 & 1966 & 1800. Final prep @ site 3176 for concrete scheduled today. Grade work @ site 3212 partially completed. Pour building 3176 & 3138 tank hold downs. Also tank fill pad @ 3138. Return to site 3212 after pours and bring pad to grade and place form less plastic, wire & rebar. Site 3691 grade work initiated to close the day.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 12/03/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 37

DATE: December 4, 1996 (Wednesday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Remove form from building 1338 tank hold down. Materials loaded and transported off site 1338. Form work (visqueen, wire & rebar) @ building 3212 completed. Vulcan Materials truck escorted to building 3691. RM arrives @ site and pour completed with slump test approved. Small portion of concrete remaining from said pour was utilized to fill ballards @ site 1012. Tank hold down pad brought to grade at 3691 with partial form work completed. It was required that RB (concrete finisher) remain @ site 3212 until dark to properly broom finish.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 12/04/96

Inc.
Southern Environmental
Management & Specialties

WORK DAY # 38

DATE: December 5, 1996 (Thursday)

CONTRACT # DABT02-96-C-0008	PROJECT DESCRIPTION: Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Tank hold down form completed @ building 3691. Forecast of 60% chance of showers today eliminates opportunity to pour concrete. Site 1876 tank hold down pad brought to proper grade. Form boards removed, materials loaded, and removed from building 3138. 1130 showers increase in strength. Emtek employee (RB) sent back to his office. KN & RH return to site 1876 & complete form as showers permitted. Site 1876 ready for concrete.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 12/05/96

SEMS, Inc.
Southern Environmental
Management & Specialties

WORK DAY # 39

DATE: December 6, 1996 (Friday)

CONTRACT # DABT02-96-C-0008	**PROJECT DESCRIPTION:** Underground Storage Tank Program	Fort McClellan, Anniston, Alabama U.S. Army & Directorate of Environment

WORK COMPLETED (SUMMARY): Comoplete forms & pour tank hold down pads @ buildings 1876 & 3691 to complete the concrete work for this project. Remove form board from site 3212. Sites secured for the weekend. Basic cleanup at sites 1876 & 3691 as concrete was being finished. Materials gathered and day ended @ 8 hours.

PROBLEMS ENCOUNTERED:

DELAYS:

NAME AND TITLE OF PERSON IN CHARGE OF FIELD OPERATIONS

NAME: James H. Bleke

TITLE: Project Engineer

SIGNATURE_____

I HEREBY CERTIFY THAT THE ABOVE DESCRIBED WORK WAS COMPLETED AS REQUIRED IN THE CONTRACT SPECIFICATIONS.

_____
SIGNATURE OF CONTRACTOR QUALITY CONTROL INSPECTOR

DATE; 12/06/96

Attachment B

Laboratory Analysis

Inchcape Testing Services
Environmental Laboratories

ANALYTICAL RESULTS FOR SAMPLES TESTED BY

INCHCAPE TESTING SERVICES

ENVIRONMENTAL LABORATORIES

7979 GSRI AVENUE

BATON ROUGE, LA 70820-7979

REPORT TO: SEMS Inc.
2844 Fellsway Drive

Baton Rouge , LA 70814

ATTENTION: MR. MARK MORGAN
CLIENT ID: 2733
GROUP NO : 9609244
DATE : 10/16/96

Inchcape Testing Services
Environmental Laboratories

TO: SEMS Inc.

GROUP NO. : 9609244
PROJECT NO.:
REPORT DATE: 10/16/96

SAMPLE SUMMARY INFORMATION

Sample Identification	Lab ID	Matrix	Sample Date	Sample Time
SOIL TP1 5700	9610100082	SOLID	10/08/96	15:30
SOIL TP2 5700	9610100083	SOLID	10/08/96	15:40

Inchcape Testing Services
Environmental Laboratories

TO: SEMS Inc.

GROUP NO. : 9609244
PROJECT NO.:
REPORT DATE: 10/16/96

Sample receipt at Inchcape Testing Services is documented for your designated sample(s). Chain-of-custody documentation, if provided, is included in this report.

Sample analysis was performed in accordance with Environmental Protection Agency protocol or other approved methods. All Quality Control criteria was found to be within Method Control Limits unless otherwise noted.

This report may contain the following abbreviations:

< DL = Result is less than the Detection Limit
DO = Diluted Out
fld = Desination for analysis performed in the field denoted in the analyst position on the report
MI = Matrix Interference
NA = Not Applicable
ND = Not Detected
subc = Designation for subcontracted data denoted in the analyst position of the report
TNTC = Too Numerous to Count
00:00 = Denotes sample time was not provided on Chain of Custody or when sample time specified is midnight

In accordance with ISO Guide 25, this report shall not be reproduced except in full, without the written permission of Inchcape Testing Services. The results herein relate only to the sample(s) tested. Documented results are shown on the following page(s).

We appreciate this opportunity to provide you with this analytical service. If we can be of further assistance, please do not hesitate to contact us a (504) 769-4900.

Scott A. Bailey
Operations Manager

Inchcape Testing Services
Environmental Laboratories

CLIENT: SEMS Inc.
SAMPLE: SOIL TP1 5700
LAB ID: 9610100082
MATRIX: SOLID

GROUP NO. : 9609244
REPORT DATE: 10/16/96
PROJECT NO.:

SAMPLE DATE: 10/08/96 **SAMPLE TIME:** 15:30

COMPOUND	RESULT	UNITS	DET LIM	PREP DATE/TIME	ANALYSIS DATE/TIME	METHOD ANALYST
Total Petroleum Hydrocarbon	<DL	(mg/kg)	30	10/14/96 14:00	10/15/96 12:43	9071/9073 jea
QC Batch 52349						

Inchcape Testing Services
Environmental Laboratories

CLIENT: SEMS Inc.
SAMPLE: SOIL TP2 5700
LAB ID: 9610100083
MATRIX: SOLID

GROUP NO. : 9609244
REPORT DATE: 10/16/96
PROJECT NO.:

SAMPLE DATE: 10/08/96 **SAMPLE TIME:** 15:40

COMPOUND	RESULT	UNITS	DET LIM	PREP DATE/TIME	ANALYSIS DATE/TIME	METHOD ANALYST
Total Petroleum Hydrocarbon	<DL	(mg/kg)	30	10/14/96 14:00	10/15/96 12:44	9071/9073 jea
QC Batch 52349						

QUALITY CONTROL SUMMARY

Report#: 9609244

Parameter	Units	METHOD BLANK Detection Limit	METHOD BLANK Result	LABORATORY CONTROL STANDARD Spiked Amount	LABORATORY CONTROL STANDARD Recovered Amount	LABORATORY CONTROL STANDARD Percent Recovery	DUPLICATE Result 1	DUPLICATE Result 2	DUPLICATE RPD	SPIKE Spiked Amount	SPIKE Recovered Amount	SPIKE Percent Recovery
QC Batch 52349												
Total Petroleum Hydrocarbons	(mg/kg)			333.	269	81				NA	NA	

BORM-#1 1X 75 06674

CHAIN OF C ODY RECORD

Inc pe Testing Services
Environmental Laboratories
7979 GSRI Ave. • Baton Rouge, LA 70820
(504) 769-4900 • Fax (504) 767-5717

Lab use only			
Sems	2733	9609241	10-11-96
Client Name	Client #	Group #	Due Date

Submitted by
Client: SEMS INC
Address: 2844 FELSWAY
BATON ROUGE, LA
Contact: MARK MORGAN
Phone: 504 924 2002
Fax: 504 924

Bill to
Client: SEMS INC
Address:
Contact:
Phone:

P.O. Number:
Project Name/Number: McCLENNEN

Sampled By: J. MALAGA

Analytical Requests: 418.1

Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	418.1	Remarks	Lab ID
S	10/8/96	15:30		✓	SOIL TP1 5700	ICE	1	✓		961010
S	10/8/96	15:40		✓	SOIL TP2 5700	ICE	1	✓		-82
										-83

Lab use only:
LAB M
Gen Chem
Metals
GC/MS VOA
GC/MS Semi-V
GC/Semi-V
GC
Extractions
Client Services
Ship
Info Request

Lab use only:
Custody Seal
used ☑ yes ☐ no
in tact ☑ yes ☐ no
Temperature °C 0

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Jerry Malaga			
FED. EX.	Dana Haydel	10/14/96	0845

Note:

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Water
✓ Solid
Oil
Sludge

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

NOV 0 6 1996

Inchcape Testing Services
Environmental Laboratories

ANALYTICAL RESULTS FOR SAMPLES TESTED BY

INCHCAPE TESTING SERVICES

ENVIRONMENTAL LABORATORIES

7979 GSRI AVENUE

BATON ROUGE, LA 70820-7979

REPORT TO: SEMS Inc.
2844 Fellsway Drive

Baton Rouge , LA 70814

ATTENTION: MR. MARK MORGAN
CLIENT ID: 2733
GROUP NO : 9609680
DATE : 10/31/96

Inchcape Testing Services
Environmental Laboratories

TO: SEMS Inc.

GROUP NO. : 9609680
PROJECT NO.:
REPORT DATE: 10/31/96

SAMPLE SUMMARY INFORMATION

Sample Identification	Lab ID	Matrix	Sample Date	Sample Time
TP1	9610250087	SOLID	10/23/96	13:00
TP2	9610250088	SOLID	10/23/96	13:00
TP3	9610250089	SOLID	10/23/96	14:20
TP4	9610250090	SOLID	10/23/96	14:25

Inchcape Testing Services
Environmental Laboratories

TO: SEMS Inc.

GROUP NO. : 9609680
PROJECT NO.:
REPORT DATE: 10/31/96

Sample receipt at Inchcape Testing Services is documented for your designated sample(s). Chain-of-custody documentation, if provided, is included in this report.

Sample analysis was performed in accordance with Environmental Protection Agency protocol or other approved methods. All Quality Control criteria was found to be within Method Control Limits unless otherwise noted.

This report may contain the following abbreviations:

< DL = Result is less than the Detection Limit
DO = Diluted Out
fld = Desination for analysis performed in the field denoted in the analyst position on the report
MI = Matrix Interference
NA = Not Applicable
ND = Not Detected
subc = Designation for subcontracted data denoted in the analyst position of the report
TNTC = Too Numerous to Count
00:00 = Denotes sample time was not provided on Chain of Custody or when sample time specified is midnight

In accordance with ISO Guide 25, this report shall not be reproduced except in full, without the written permission of Inchcape Testing Services. The results herein relate only to the sample(s) tested. Documented results are shown on the following page(s).

We appreciate this opportunity to provide you with this analytical service. If we can be of further assistance, please do not hesitate to contact us a (504) 769-4900.

Scott A. Bailey
Operations Manager

Inchcape Testing Services
Environmental Laboratories

TO: SEMS Inc.

GROUP NO. : 9609680
PROJECT NO.:
REPORT DATE: 10/31/96
METHOD : 9071/9073

PARAMETER: Total Petroleum Hydrocarbons
TEST CODE: TPH IR
MATRIX : SOLID

ALL UNITS ARE REPORTED IN (mg/kg)

PREP REQUIRED: Y

SAMPLE NUMBER	CLIENT ID	ANALYSIS RESULT	DET LIM	SAMPLE DATE/TIME	PREP DATE	ANALYSIS DATE/TIME	ANALYST INITALS
9610250087	TP1	<DL	30	10/23/96 13:00	10/28/96 09:00	10/29/96 09:42	jea
9610250088	TP2	<DL	30	10/23/96 13:00	10/28/96 09:00	10/29/96 09:44	jea
9610250089	TP3	<DL	30	10/23/96 14:20	10/28/96 09:00	10/29/96 09:46	jea
9610250090	TP4	84.7	30	10/23/96 14:25	10/28/96 09:00	10/29/96 09:54	jea

QUALITY CONTROL SUMMARY

Report#: 9609680

Parameter	Units	METHOD BLANK Detection Limit	METHOD BLANK Result	LABORATORY CONTROL STANDARD Spiked Amount	LABORATORY CONTROL STANDARD Recovered Amount	LABORATORY CONTROL STANDARD Percent Recovery	DUPLICATE Result 1	DUPLICATE Result 2	DUPLICATE RPD	SPIKE Spiked Amount	SPIKE Recovered Amount	SPIKE Percent Recovery
QC Batch 53250												
Total Petroleum Hydrocarbons	(mg/kg)			333.	287	86				NA	NA	
QC Batch 53371												
Total Petroleum Hydrocarbons	(mg/kg)			333.	287	86				NA	NA	

CHAIN OF CUSTODY RECORD

Inc. pe Testing Services
Environmental Laboratories
7979 GSRI Ave. • Baton Rouge, LA 70820
(504) 769-4900 • Fax (504) 767-5717

Lab use only	Client Name	Client #	Group #	Due Date
	SEMS	2733	9609680	11-1-96

Submitted by
Client: SEMS INC
Address: BATON ROUGE LA
Contact: MARK MORGAN
Phone: 504 924 2002
Fax: 504 924 2004

Bill to
Client: SEMS INC
Address: BATON ROUGE LA
Contact: MARK MORGAN
Phone: 504 924 2002

P.O. Number:
Project Name/Number: FORT MCCLELLAN 3213
Sampled By: J. MALAGA + RANDY HILTON

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	Analytical Requests: TPH-IR	Lab ID
S	10/23/96	1300		✓	TP1	ICE	1	X	91025 87
S	"	1300		✓	TP2	"	1		88
S	"	14:20		✓	TP3	"	1		89
S	"	14:25		✓	TP4	"	1		90

Remarks:

Lab use only:
LAB M ☐ ☐
Gen Chem ☐
Metals ☐
GC/MS VOA ☐
GC/MS Semi-V ☐
GC/Semi-V ☐
GC ☐
Extractions ☐ ☐
Client Services ☐ ☐
Ship ☐ ☐
Info Request ☐

Lab use only:
Custody Seal
used ☐ yes ☐ no
in tact ☐ yes ☐ no
Temperature °C 5

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Jerry Malaga		10/23/96	16:00
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
From Fed X	[illegible]	10/25/96	09:00
Relinquished by: (Signature)	Received by: (Signature)	Date: /	Time:

Note:

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Water
Soil
Sludge

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

TS-06

Inchcape Testing Services
Environmental Laboratories

Facsimile Transmission

To: MR. MARK MORGAN
Co: SEMS Inc.
Fax: 924-2004

From: Kim Litel
Date: 07-nov-1996 17:14:06

If you do not receive all pages, please call (504)769-4900.

Message:

Inchcape Testing Services
Environmental Laboratories/Dallas
Accredited by
A2LA
Certificate # 465.01
ISO/IEC guide 25-1990

Confidentiality Notice: This facsimile contains confidential information that also may be legally privileged and is intended only for use by the addressee(s). If you are not the intended recipient of this facsimile, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination or copying of facsimile is strictly prohibited. If you have received this facsimile in error, please immediately notify us by telephone and return the original facsimile to us at the above address by United States mail. Thank You.

Inchcape Testing Services - Baton Rouge
Sample Summary by Group
As of Thursday November 07, 1996

Customer Name: SEMS Inc.
Customer Number: 2733 Group Number: 9609811

Sample#: 9610310022 Sample ID: TP1-1997 Sample Date: Oct 28, 1996 07:30

Parameter/Test	Result	Detect Lmt	Units	Analysis	Analyst
Total Petroleum Hydrocarbons	<DL	6.4400	(mg/L)	10/31/96	jea

PRELIMINARY UNVALIDATED
DATA SUBJECT TO CHANGE

3

Inchcape Testing Services - Baton Rouge
Sample Summary by Group
As of Friday November 01, 1996

Customer Name: SEMS Inc.
Customer Number: 2733 Group Number: 9609680

Sample#: 9610250087 Sample ID: TP1 Sample Date: Oct 23, 1996 13:00

Parameter/Test	Result	Detect Lmt	Units	Analysis	Analyst
Total Petroleum Hydrocarbons	<DL	30.0000	(mg/kg)	10/29/96	jea

Sample#: 9610250088 Sample ID: TP2 Sample Date: Oct 23, 1996 13:00

Parameter/Test	Result	Detect Lmt	Units	Analysis	Analyst
Total Petroleum Hydrocarbons	<DL	30.0000	(mg/kg)	10/29/96	jea

Sample#: 9610250089 Sample ID: TP3 Sample Date: Oct 23, 1996 14:20

Parameter/Test	Result	Detect Lmt	Units	Analysis	Analyst
Total Petroleum Hydrocarbons	<DL	30.0000	(mg/kg)	10/29/96	jea

Sample#: 9610250090 Sample ID: TP4 Sample Date: Oct 23, 1996 14:25

Parameter/Test	Result	Detect Lmt	Units	Analysis	Analyst
Total Petroleum Hydrocarbons	84.7	30.0000	(mg/kg)	10/29/96	jea

Reported to: Nolan Lafaye
1895 11/5/96

PRELIMINARY UNVALIDATED
DATA SUBJECT TO CHANGE

Inchcape Testing Services
Environmental Laboratories

Facsimile Transmission

To: MR. MARK MORGAN
Co: SEMS Inc.
Fax: 924-2004

From: Kim Litel
Date: 18-oct-1996 10:26:05

If you do not receive all pages, please call (504)769-4900.

Message:

Inchcape Testing Services
Environmental Laboratories/Baton Rouge
Accredited by
A2LA
Certificate # 465.01
ISO/IEC guide 25-1990

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Inchcape Testing Services - Baton Rouge
Sample Summary by Group
As of Friday October 18, 1996

Customer Name: SEMS Inc.
Customer Number: 2733 Group Number: 9609244

Sample#: 9610100082 Sample ID: SOIL TP1 5700 Sample Date: Oct 08, 1996 15:30

Parameter/Test	Result	Detect Lmt	Units	Analysis	Analyst
Total Petroleum Hydrocarbons	<DL	30.0000	(mg/kg)	10/15/96	jea

Sample#: 9610100083 Sample ID: SOIL TP2 5700 Sample Date: Oct 08, 1996 15:40

Parameter/Test	Result	Detect Lmt	Units	Analysis	Analyst
Total Petroleum Hydrocarbons	<DL	30.0000	(mg/kg)	10/15/96	jea

PRELIMINARY UNVALIDATED
DATA SUBJECT TO CHANGE

Inchcape Testing Services
Environmental Laboratories

ANALYTICAL RESULTS FOR SAMPLES TESTED BY

INCHCAPE TESTING SERVICES

ENVIRONMENTAL LABORATORIES

7979 GSRI AVENUE

BATON ROUGE, LA 70820-7979

REPORT TO: SEMS Inc.
2844 Fellsway Drive

Baton Rouge , LA 70814

ATTENTION: MR. MARK MORGAN
CLIENT ID: 2733
GROUP NO : 9609811
DATE : 11/08/96

Inchcape Testing Services
Environmental Laboratories

TO: SEMS Inc.

GROUP NO. : 9609811
PROJECT NO.:
REPORT DATE: 11/08/96

SAMPLE SUMMARY INFORMATION

Sample Identification	Lab ID	Matrix	Sample Date	Sample Time
TP1-1997	9610310022	WATER	10/28/96	07:30

Inchcape Testing Services
Environmental Laboratories

TO: SEMS Inc.

GROUP NO. : 9609811
PROJECT NO.:
REPORT DATE: 11/08/96

Sample receipt at Inchcape Testing Services is documented for your designated sample(s). Chain-of-custody documentation, if provided, is included in this report.

Sample analysis was performed in accordance with Environmental Protection Agency protocol or other approved methods. All Quality Control criteria was found to be within Method Control Limits unless otherwise noted.

This report may contain the following abbreviations:

< DL = Result is less than the Detection Limit
DO = Diluted Out
fld = Desination for analysis performed in the field denoted in the analyst position on the report
MI = Matrix Interference
NA = Not Applicable
ND = Not Detected
subc = Designation for subcontracted data denoted in the analyst position of the report
TNTC = Too Numerous to Count
00:00 = Denotes sample time was not provided on Chain of Custody or when sample time specified is midnight

In accordance with ISO Guide 25, this report shall not be reproduced except in full, without the written permission of Inchcape Testing Services. The results herein relate only to the sample(s) tested. Documented results are shown on the following page(s).

We appreciate this opportunity to provide you with this analytical service. If we can be of further assistance, please do not hesitate to contact us a (504) 769-4900.

Scott A. Bailey
Operations Manager

Inchcape Testing Services
Environmental Laboratories

CLIENT: SEMS Inc.
SAMPLE: TP1-1997
LAB ID: 9610310022
MATRIX: WATER

GROUP NO. : 9609811
REPORT DATE: 11/08/96
PROJECT NO.:

SAMPLE DATE: 10/28/96 SAMPLE TIME: 07:30

COMPOUND	RESULT	UNITS	DET LIM	PREP DATE/TIME	ANALYSIS DATE/TIME	METHOD ANALYST
Total Petroleum Hydrocarbon	<DL	(mg/L)	6.44	10/31/96 14:30	10/31/96 15:44	418.1 jea
QC Batch 53568						

QUALITY CONTROL SUMMARY

Report#: 9609811

Parameter	Units	METHOD BLANK Detection Limit	METHOD BLANK Result	LABORATORY CONTROL STANDARD Spiked Amount	LABORATORY CONTROL STANDARD Recovered Amount	LABORATORY CONTROL STANDARD Percent Recovery	DUPLICATE Result 1	DUPLICATE Result 2	DUPLICATE RPD	SPIKE Spiked Amount	SPIKE Recovered Amount	SPIKE Percent Recovery
QC Batch 53568												
Total Petroleum Hydrocarbons	(mg/L)			10.	9.17	92				NA	NA	

CHAIN OF CUSTODY RECORD

Inc. .pe Testing Services
Environmental Laboratories
7979 GSRI Ave. • Baton Rouge, LA 70820
(504) 769-4900 • Fax (504) 767-5717

Lab use only	Client Name	Client #	Group #	Due Date
	SEMS	2733	9609811	11/7/96

Submitted by
Client: SEMS INC
Address: BATON ROUGE, LA
Contact: MARK MORGAN
Phone: 504 924 2002
Fax: 504 924 2004

Bill to
Client: SEMS INC
Address:
Contact:
Phone:

P.O. Number:
Project Name/Number: FORT McCLELLAN
Sampled By: J. MALAGA

Analytical Requests: TPH - IR, CBL

Lab use only:
LAB M [ ]
Gen Chem [ ]
Metals [ ]
GC/MS VOA [ ]
GC/MS Semi-V [ ]
GC/Semi-V [ ]
GC [ ]
Extractions [ ]
Client Services [ ]
Ship [ ]
Info Request [ ]

Matrix	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No. Containers	Remarks	Lab ID
W	10/28/96	0730		✓	WATER SAMPLE - TPI 1997	NONE HCL	3 ~~[illegible]~~		10131 -22

Lab use only:
Custody Seal
used ☑ yes [ ] no
In tact ☐ yes [ ] no
Temperature °C 6

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☑ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Jerry Malaga			
FED. EX. 1352 7104 50	Dana Hoyle	10/31/96	0830

Note: ~~Only~~ 3 container rec'd @ LAB w/ 1 container (litr) 40 vials in it. + 2 VOA vials. COC corrections by K. Litel - ITS.

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

Attachment C

ADEM UST Closure - Site Assessment Report

BUILDING 1012

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-001012

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-__ __-__ __

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

CONTACT NAME: Raymond J. Mulholland

LOCATION: Building 1012

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 10/16/96

UNIQUE TANK #:	1012				
TANK SIZE:	5,000 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	10/16/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Silty Clay

i. Was the excavation backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth: YES NO
1. Boring or monitoring well: ☐ ☐
2. Topographic features (Method must be approved by ADEM prior to use): ☐ ☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☒ NO ☐
If yes, was the product properly disposed of? ☒ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

e. Was there a notable odor found in the piping trench? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain:	[ ]	[ ]

_____

g. Was free product found in the piping trench? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES [ ] NO [X]

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? YES ☐ NO ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): YES ☐ NO ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with clean backfill. **Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [illegible]

Date: 3/19/97

Alabama P.E. Registration Number: 19618

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

_____

_____

_____

_____

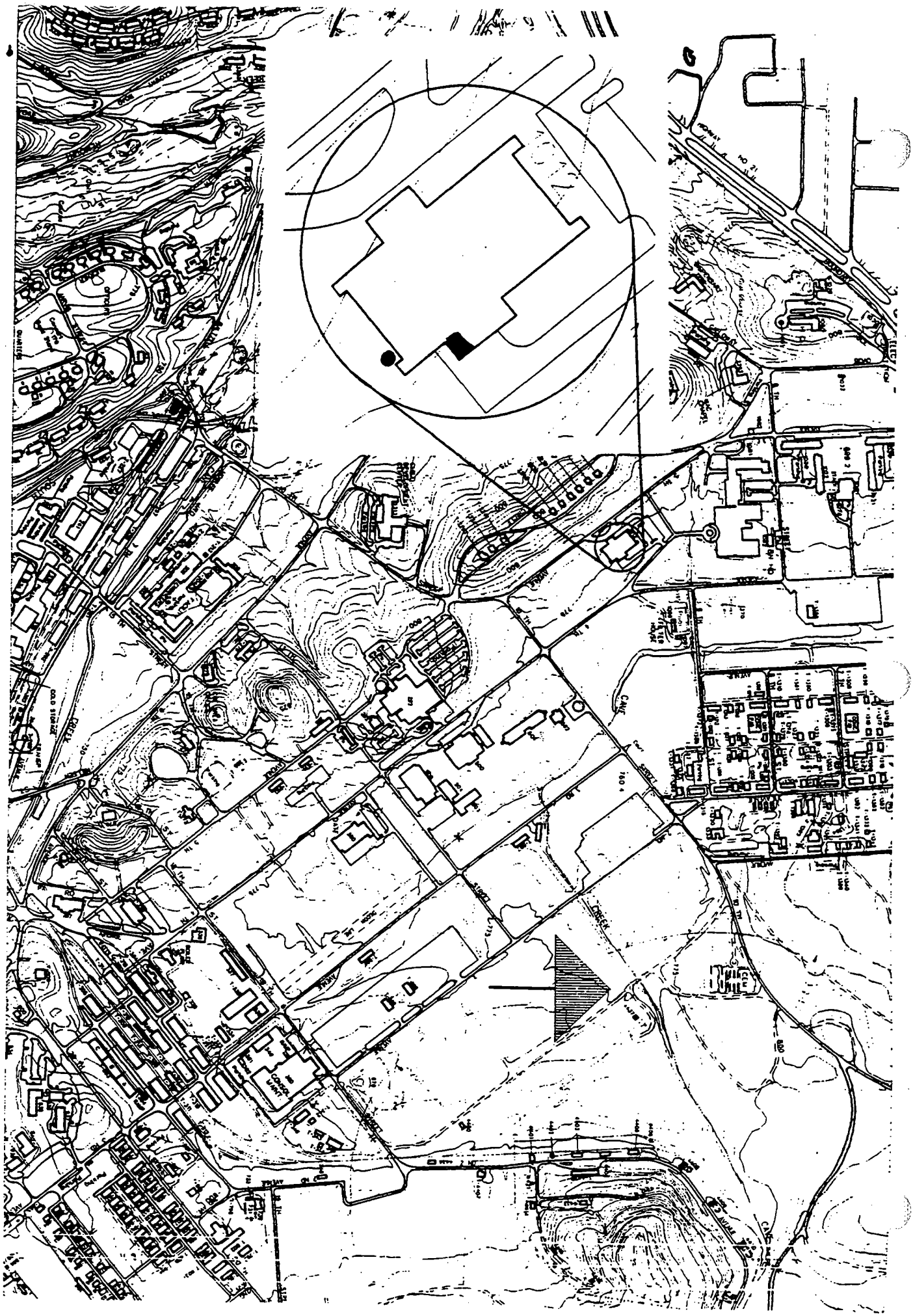
_____

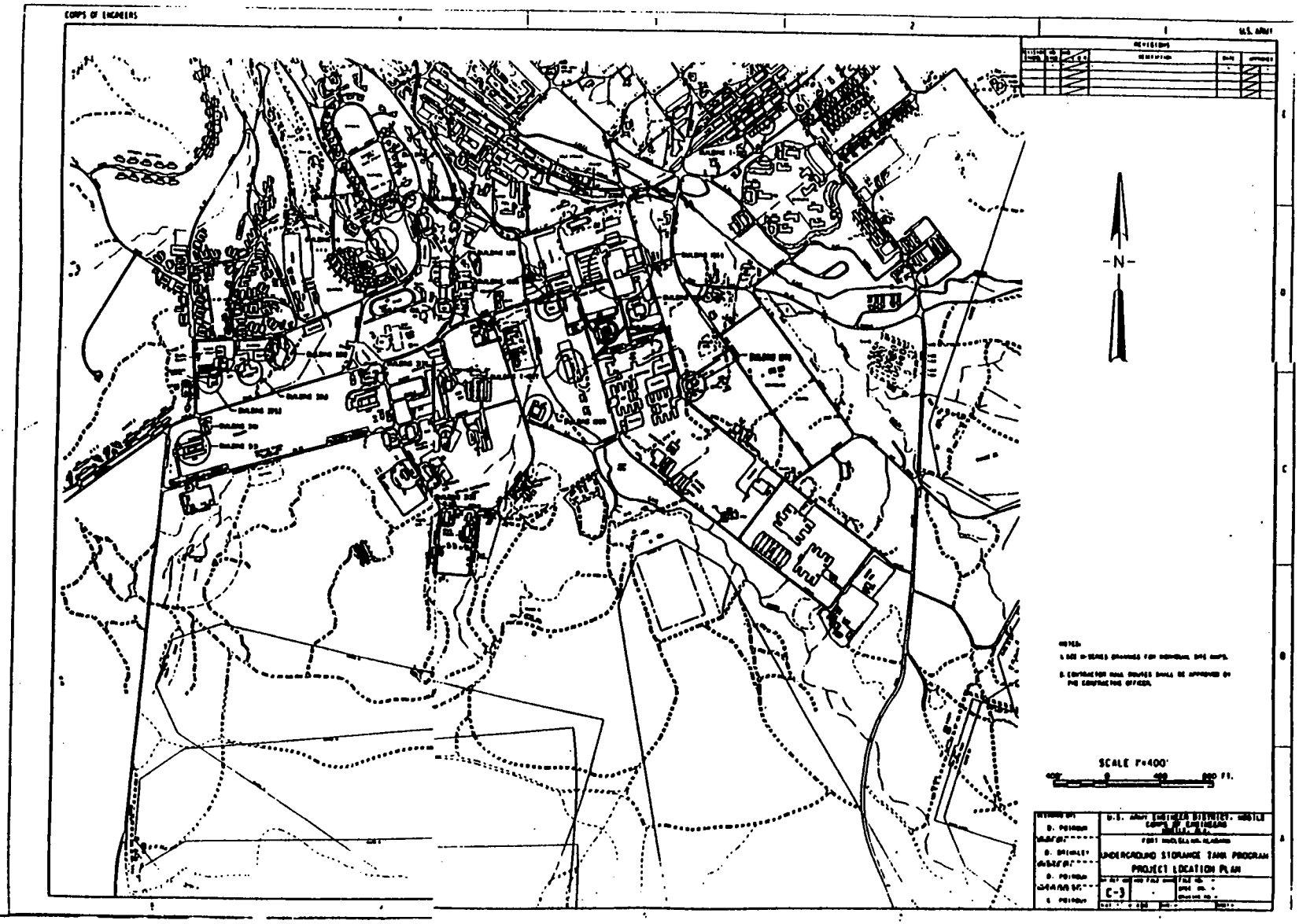
_____

_____

FORM 1133
5/8/95

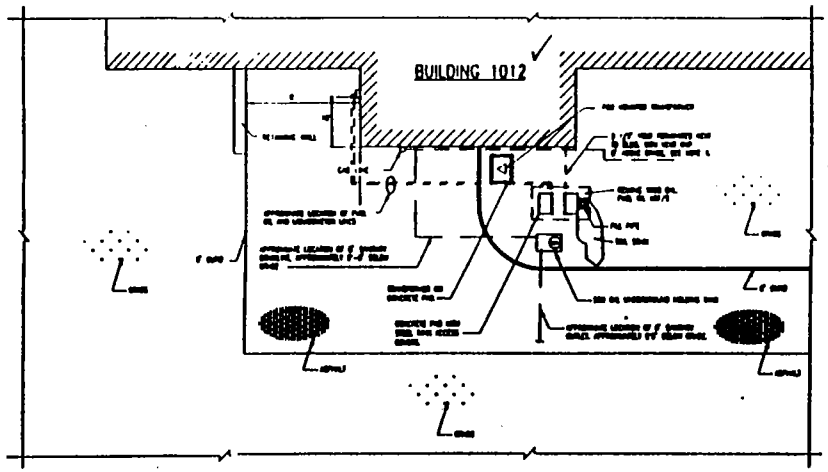
Attachments: UST Closure Guidelines




CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALA.
FORT McCLELLAN, ALABAMA
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS

U.S. ARMY



BUILDING 1012 SITE REMOVAL PLAN

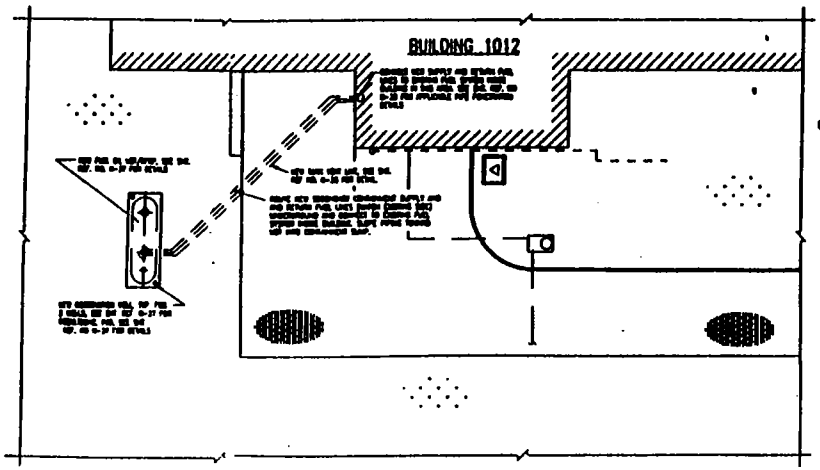
ASPHALT

50' * 3' = 150 ft²

Depth 0.5'

150 * 2.5 = 3 c.y.

SITE 1012 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
[illegible]	[illegible]	[illegible]	[illegible]



BUILDING 1012 SITE REPLACEMENT PLAN

ASPHALT

40' * 0.5 * 3 = 30 c.y.

SITE 1012 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
[illegible]	[illegible]	[illegible]	[illegible]

NOTES

U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALABAMA

FORT MCCLELLAN, AL

UNDERGROUND STORAGE TANK PROGRAM
SITE 1012 REMOVAL AND REPLACEMENT TANK
PLAN LEGEND SCHEDULES AND NOTES

N-11

BUILDING 3716

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-003176

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-__ __-__ __

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 3176

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 12/16/96

UNIQUE TANK #:	3176				
TANK SIZE:	550 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	12/16/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☐	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the excavation? YES ☐ NO ☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☐

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☐

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

_____
_____
_____
_____

i. Was the excavation backfilled? YES ☐ NO ☐

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Boring or monitoring well:	☐	☐
2. Topographic features (Method must be approved by ADEM prior to use):	☐	☐
3. Excavation of new tank.	X	

d. Was there a notable odor found in the bore holes? YES ☐ NO ☒

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☒

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:
Silty Clay

g. Specify the inert solid material used to fill the tank(s):
Cement Grout

h. Provide the date the tank(s) were filled: 11/8/96

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: NA

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☒ NO ☐
If yes, was the product properly disposed of? ☒ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

e. Was there a notable odor found in the piping trench? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain:	☐	☐

_____

g. Was free product found in the piping trench? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☐ NO ☒

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? ☐ ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): ☐ ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)

2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with clean backfill. **Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: _____

Date: _____

Alabama P.E. Registration Number: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

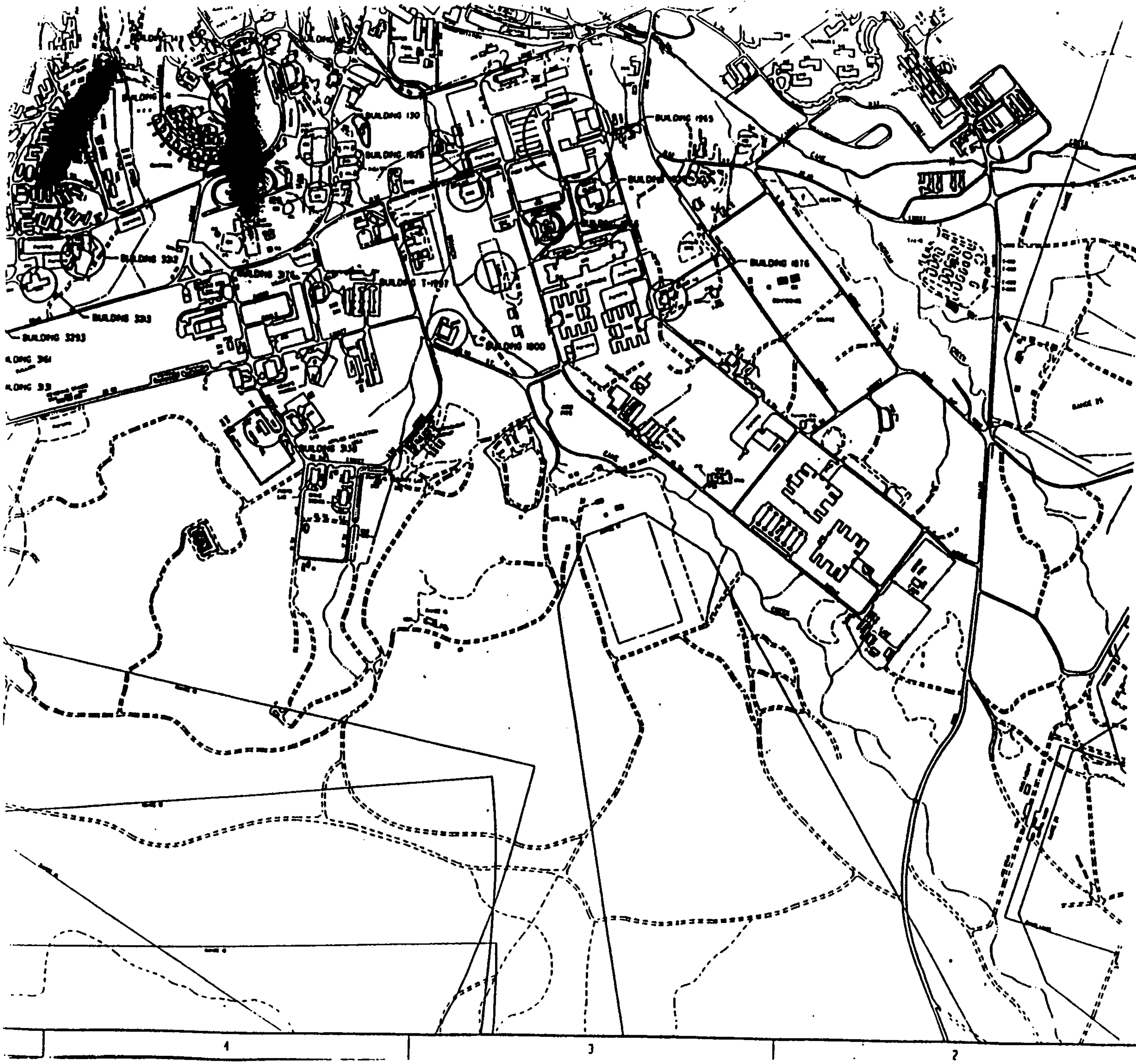
Reviewed By: _____ Date: _____

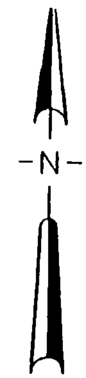
COMMENTS:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

FORM 1133
5/8/95

Attachments: UST Closure Guidelines





NOTES:

1. SEE H-SERIES DRAWINGS FOR INDIVIDUAL SITE MAPS.

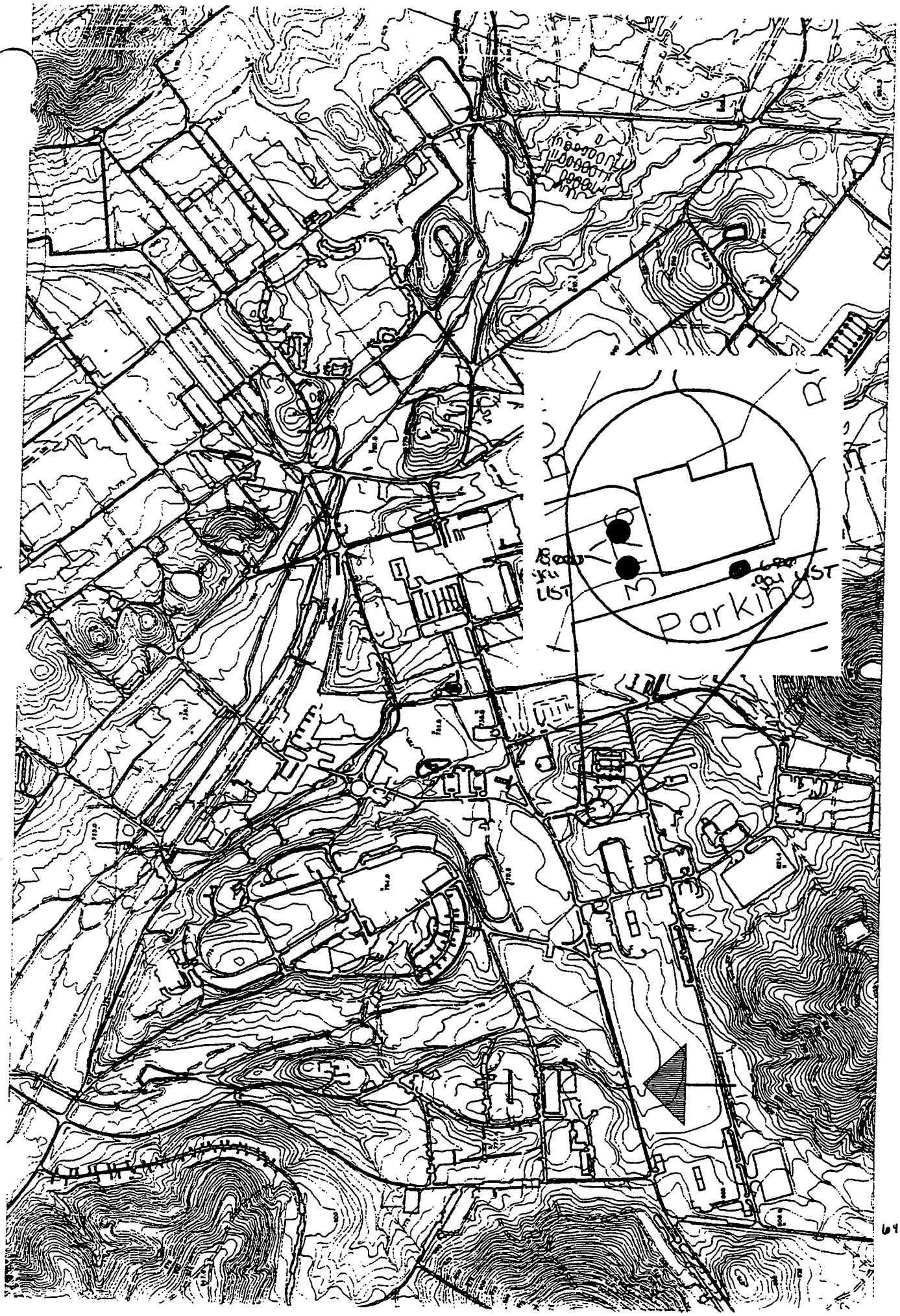
2. CONTRACTOR HAUL ROUTES SHALL BE APPROVED BY THE CONTRACTING OFFICER.

SCALE 1"=400'

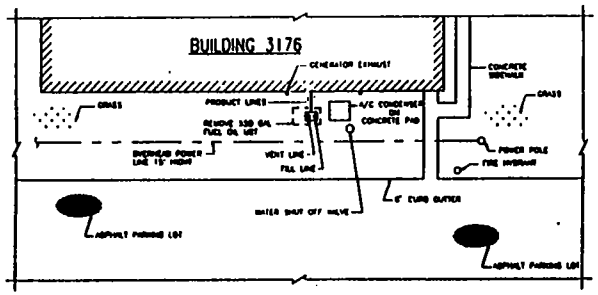
400' 0 400 800 FT.

DESIGNED BY: D. POIROUX	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALA.		
DRAWN BY: D. BRINKLEY	FORT McCLELLAN, ALABAMA UNDERGROUND STORANGE TANK PROGRAM PROJECT LOCATION PLAN		
CHECKED BY: D. POIROUX	SH REF NO: C-3	CADD FILE NAME: -	FILE NO.: - SPEC. NO. - DRAWING NO. -
SUBMITTED BY: G. POIROUX	SCALE: 1" = 400'	DATE: -	SHEET -

3176



CORPS OF ENGINEERS | 4 | 3 | 2 | 1 | U.S. ARMY



BUILDING 3176 SITE REMOVAL PLAN

SCALE 1" = 10'-0"

REVISIONS

SYMBOL	ZONE	ZONE	DESCRIPTION	DATE	APPROVED

SITE 3176 REMOVAL TANK SCHEDULE

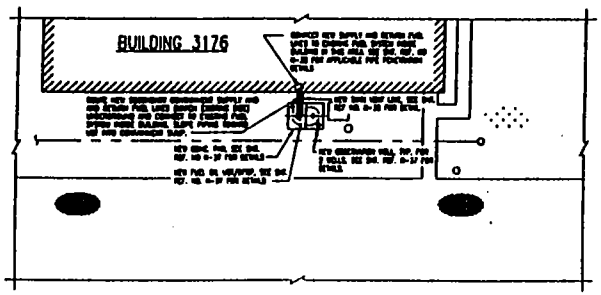
DESCRIPTION	CAPACITY	TYPE	NOTES
(1) FUEL OIL STORAGE TANK	550 GAL	VTP/S	ONE (1) STEEL TANK WITH ESTIMATED DIMENSIONS OF 4'-0" X 8'-10"

GENERAL NOTES

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED
2. REMOVE PRODUCT, VENT LINES AND CONCRETE PAD
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ACCURATE, THE INDICATED DIMENSIONS OF UNDERGROUND TANK AND PIPINGS BEING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND DIMENSIONS OF THE TANK
4. THE INDICATED LOCATION OF UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL UTILITIES AT THE SITE PRIOR TO BEGINNING ANY EXCAVATION
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTIONS 02221
6. THE SURFACE AND SURROUNDING AREA SHALL BE RESTORED TO ORIGINAL CONDITION, REPLACE DAMAGED PAVED AND CURBS AND GROUND SPECIES OR SHRUBS. REPLACE DAMAGED AREAS WITH SIMILAR GRADE SPECIES.
7. SOIL SAMPLING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET G-10
8. SEE SHEET G-1 FOR LEGEND

SCALE: 1" = 10'

DRAWN BY: DUANE POROUR
DESIGN BY: MOLLY GANG
REVIEWED BY: DUANE POROUR
REVIEWED BY: MIKE THOMPSON



BUILDING 3176 SITE REPLACEMENT PLAN

SCALE 1" = 10'-0"

SITE 3176 REPLACEMENT TANK SCHEDULE

DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	550 GAL	VTP/SUMP	ONE (1) STEEL TANK TOP TANK WITH A POLYURETHANE DISPENSER PAD, TANK SHALL BE PROVIDED WITH A LEAK DETECTION SYSTEM
	0		

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION WORK TO RETHATCH THE NEW SUMP/PAD, SYSTEM TO THE EXISTING SYSTEM
3. ALL AREAS DISTURBED BY STARTED DURING TANK REMOVAL, TANK INSTALLATION AND SUMP WORK SHALL BE RESTORED AND RETURNED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS AND REQUIREMENTS & APPLICABLE TO ALL SITES.
4. INSTALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO DISPENSER, PITCHED AS SHOWN ON THE DRAWING. NEW PIPING SHALL SLOPE TOWARD TANK AND DISPENSER SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND ROUTING OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD AFTER LOCATION OF ALL EXISTING UTILITIES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER
6. SEE MODIFICATION MAP THE REF NO C-3 FOR LOCATION OF BUILDING 3176 SITE

SCALE: 1" = 10'-0"

DESIGNED BY: JACK PHELPS
DRAWN BY: JACK PHELPS
CHECKED BY: MARTY SMITH
PLOTTED BY: 1-MAY-1992

U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALABAMA

FORT MCCLELLAN, AL

UNDERGROUND STORAGE TANK PROGRAM
SITE 3176 REMOVAL AND REPLACEMENT TANK
PLAN, LEGEND, SCHEDULES AND NOTES

DR REF NO: N-29
CADD FILE NAME: N29.DWG
FILE NO:
SPEC NO:
DRAWING NO:
SCALE: AS NOTED
SHEET: 1
OF: 1

BUILDING 1800A

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-001800A

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-__ __-__ __

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 1800A

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 10/31/96

UNIQUE TANK #:	1800A				
TANK SIZE:	2,000 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	10/31/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Silty Clay

i. Was the excavation backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth: YES NO
1. Boring or monitoring well: ☐ ☐
2. Topographic features (Method must be approved by ADEM prior to use): ☐ ☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was the product properly disposed of? ☐ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

e. Was there a notable odor found in the piping trench? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain:	[ ]	[ ]

_____

g. Was free product found in the piping trench? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES [ ] NO [X]

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? ☐ ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): ☐ ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [illegible]

Date: [illegible]

Alabama P.E. Registration Number: 19618

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

_____

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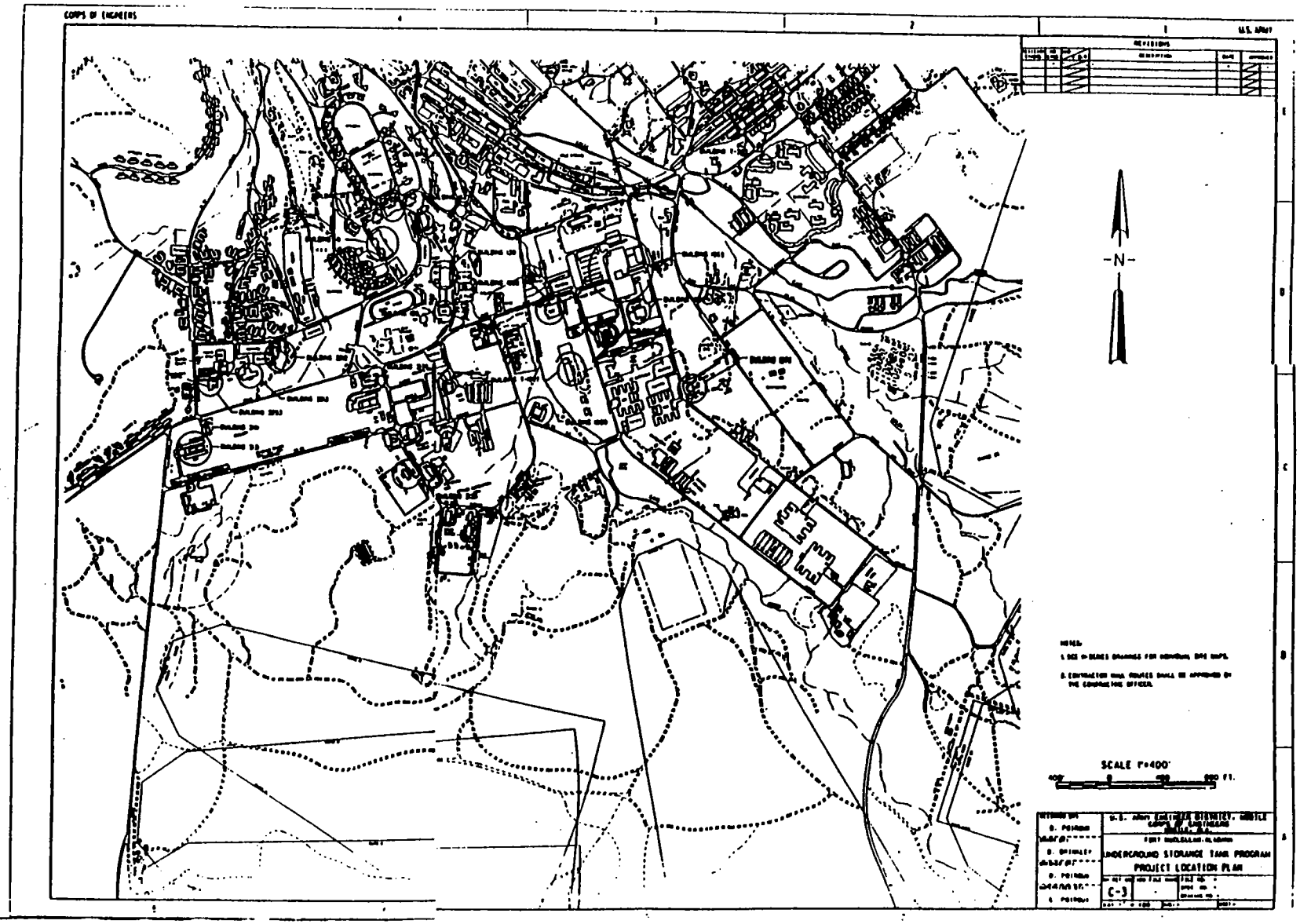
FORM 1133
5/8/95

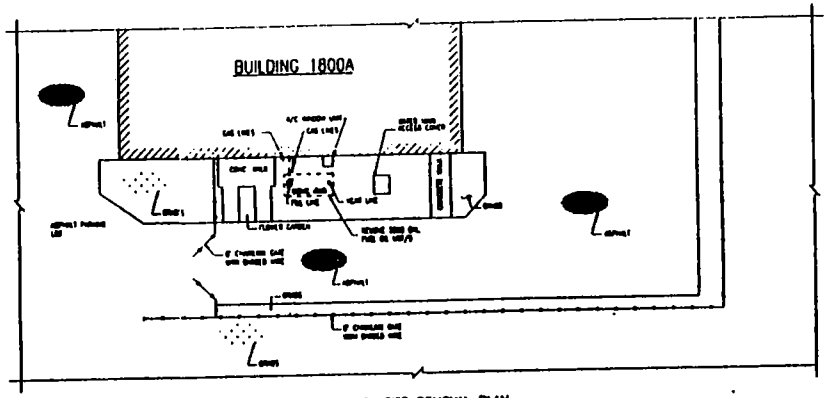
Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400 0 400 800 FT.
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS

U.S. ARMY

REVISIONS



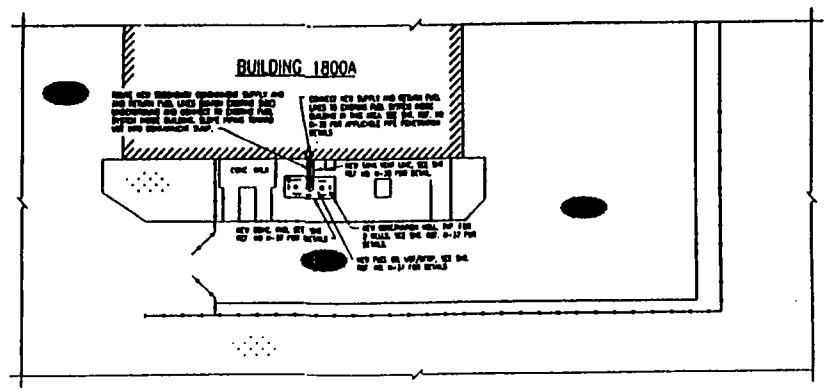
BUILDING 1800A SITE REMOVAL PLAN

SCALE 1" = 10'-0"

SITE 1800A REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	2000 GAL	VERT/S	ONE (1) SINGLE WALL STEEL TANK WITH TANK SUPPORTING CONTAINED TO BE 1'-0" X 12'-0"

GENERAL NOTES

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED
2. REMOVE PRODUCT, VENT LINES AND CONCRETE PAD
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ACCURATE. THE DIMENSIONS BETWEEN OF UNDERGROUND TANK AND PRODUCT PIPING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND DIMENSIONS OF THE TANK.
4. THE INDICATED LOCATION OF VALVES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL VALVES AT THE SITE PRIOR TO DEMOLITION AND EXCAVATION
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH UNDERGROUND SECTION SHEET
6. THE SURFACE AND SURROUNDING AREA SHALL BE RESTORED TO ORIGINAL CONDITIONS. REPLACE DAMAGED TREES AND SHRUBS WITH SIMILAR SPECIES OR SIMILAR REPLACE DAMAGED AREAS WITH SIMILAR GRASS SPECIES.
7. SITE SAMPLING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET G-3B.
8. SEE SHEET G-1 FOR LEGEND



BUILDING 1800A SITE REPLACEMENT PLAN

SCALE 1" = 10'-0"

SITE 1800A REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	2000 GAL	VERT/STEEL	ONE (1) SINGLE WALL FRP TANK WITH VOLUMETRIC REMOTE FUEL TANK SHALL BE PROVIDED WITH A LEAK DETECTION SYSTEM

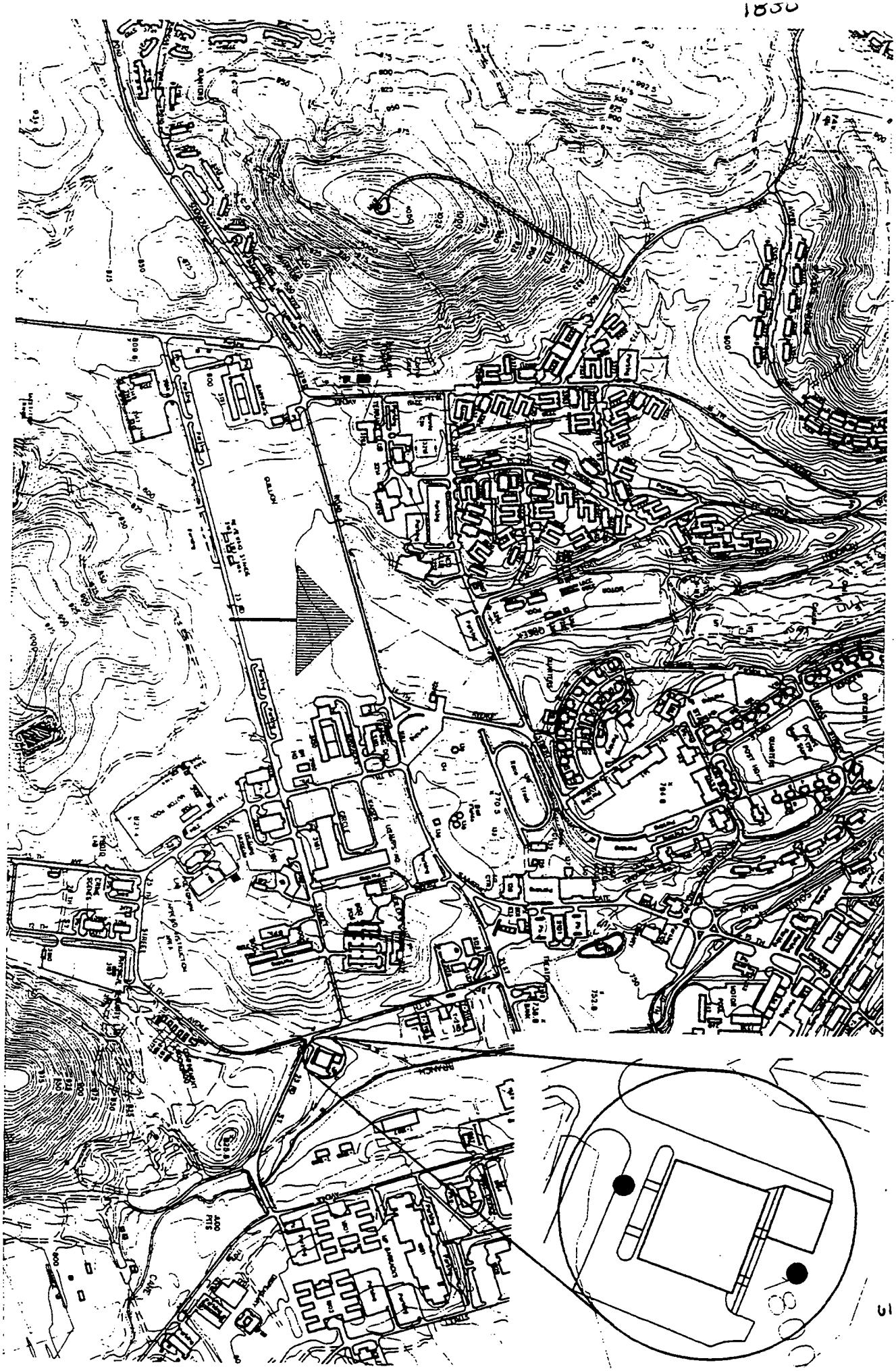
NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSTALLATION WORK TO REMOVE THE NEW TANK/FUEL SYSTEM TO THE EXISTING SYSTEM
3. ALL AREAS DISTURBED BY DAMAGED BUILDING TANK REMOVAL, TANK INSTALLATION AND SYSTEM WORK SHALL BE REGRADED AND REPAIRED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THIS REQUIREMENT IS APPLICABLE TO ALL SITES.
4. INSTALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO EXISTING SYSTEM AS SHOWN ON THE DRAWING. NEW PIPING SHALL SLOPE TOWARDS TANK AND CONTAINMENT SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND ROUTING OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD WITH LOCATION OF ALL EXISTING VALVES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER
6. SEE VICINITY/LOCATION MAP SHT REF NO G-1 FOR LOCATION OF BUILDING 1800A SITE

SCALE 1" = 10'-0"

	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
	FORT WOOLDRUM, NY
	UNDERGROUND STORAGE TANK PROGRAM SITE 1800A REMOVAL AND REPLACEMENT PLAN PLAN, LEGEND, SCHEDULES AND NOTES
	N-18

1830



61

BUILDING 1966

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-001966

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-__ __-__ __

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 1966

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 12/16/96

UNIQUE TANK #:	1966				
TANK SIZE:	1,000 gallon				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	12/16/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☐	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the excavation? YES ☐ NO ☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☐

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____		

f. Was free product found in the excavation? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☐

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

_____
_____
_____
_____

i. Was the excavation backfilled? YES ☐ NO ☐

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Boring or monitoring well:	☐	☐
2. Topographic features (Method must be approved by ADEM prior to use):	☐	☐
3. Excavation of new tank.	X	

d. Was there a notable odor found in the bore holes? YES ☐ NO ☒

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☒

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:
Silty Clay

g. Specify the inert solid material used to fill the tank(s):
Cement Grout

h. Provide the date the tank(s) were filled: 10/29/96

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: NA

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☒ NO ☐
If yes, was the product properly disposed of? ☒ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic feanures (Method must be approved by ADEM prior to use):	☐	☒

e. Was there a notable odor found in the piping trench? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain:	☐	☐

_____

g. Was free product found in the piping trench? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☐ NO ☒

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? YES ☐ NO ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): YES ☐ NO ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other)
describe: _____

(2) The odor indicates what type of product:
(gasoline) (diesel) (waste oil) (kerosene) (other)
describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [illegible]

Date: [illegible]

Alabama P.E. Registration Number: 16618

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

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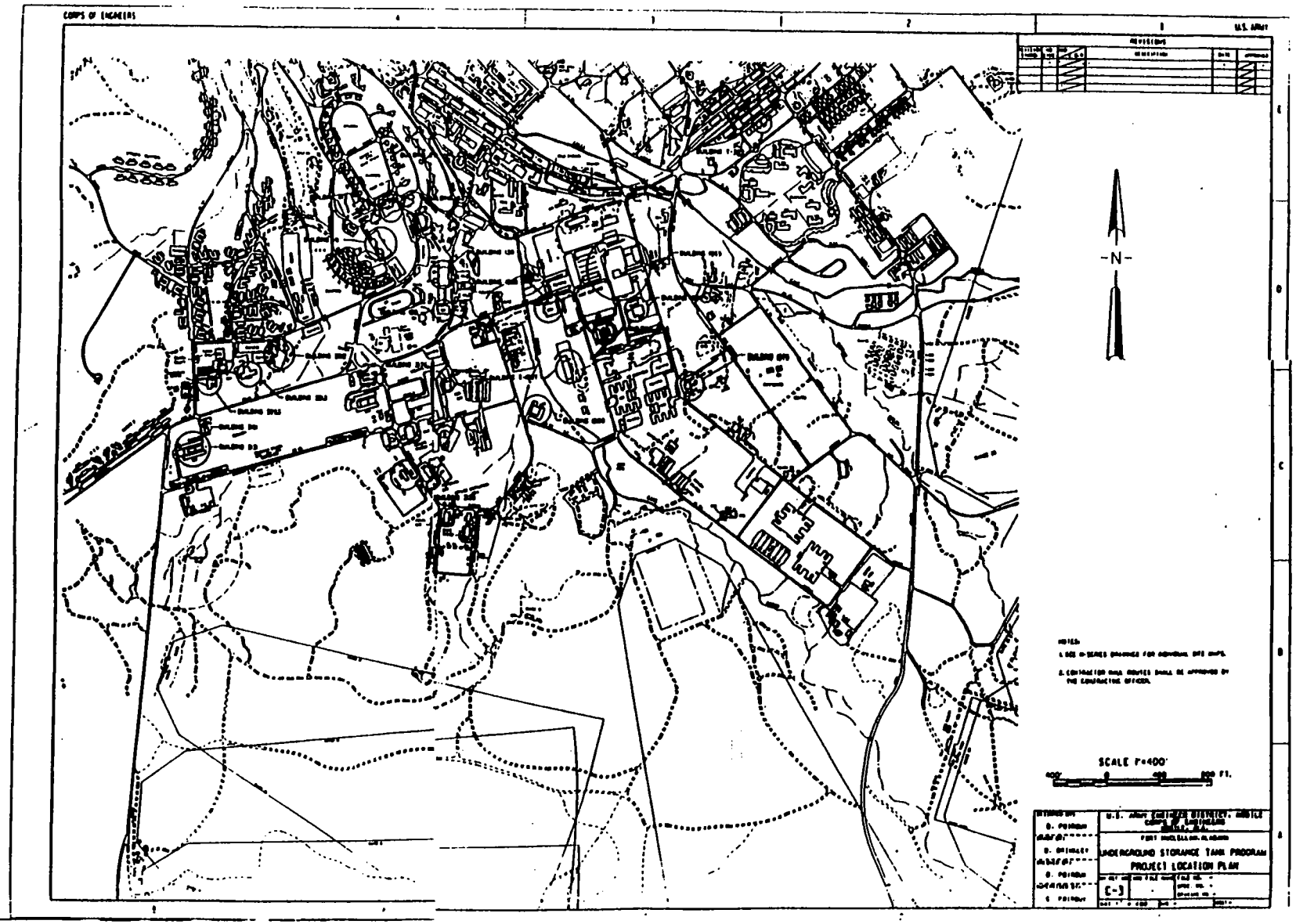
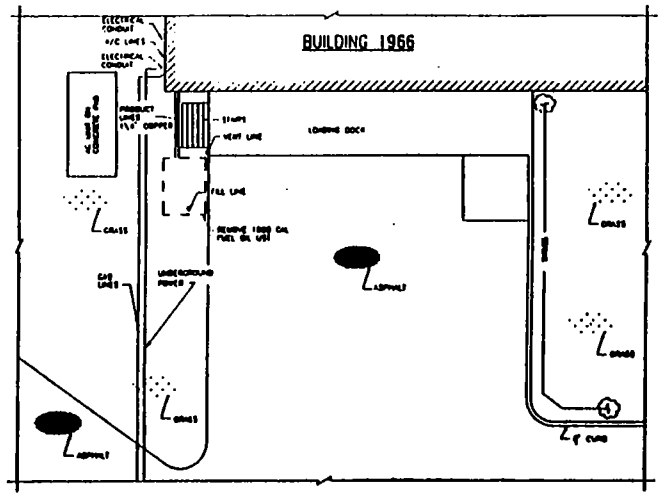
_____

FORM 1133
5/8/95

Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
FORT MCCLELLAN, ALABAMA
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS | U.S. ARMY

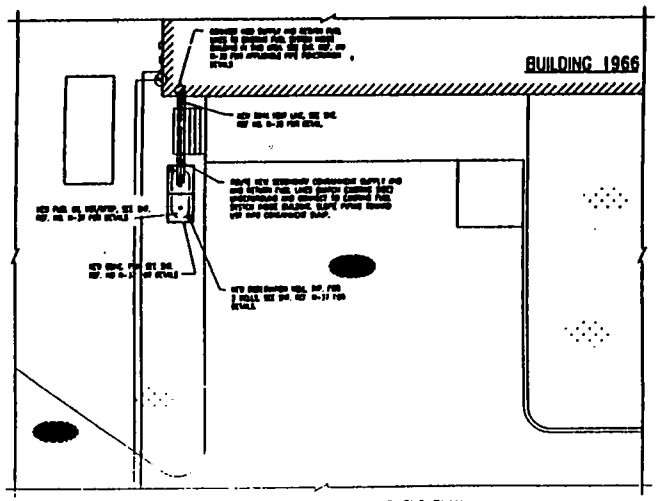


BUILDING 1966 SITE REMOVAL PLAN

SITE 1966 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
[illegible]	[illegible]	[illegible]	[illegible]

NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]



BUILDING 1966 SITE REPLACEMENT PLAN

SITE 1966 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
[illegible]	[illegible]	[illegible]	[illegible]

NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]

U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALABAMA

UNDERGROUND STORAGE TANK PROGRAM
SITE 1966 REMOVAL AND REPLACEMENT TANK
PLAN, LEGEND, SCHEDULES AND NOTES

N-23

1966

64

BUILDING 1997

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-001977

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-__

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 1997

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Inchcape Testing Services

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 10/24/96

UNIQUE TANK #:	1997				
TANK SIZE:	2,500 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	10/24/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Silty Clay

i. Was the excavation backfilled? YES ☒ NO ☐

If yes, provide the date of backfilling: 10/24/96

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth: YES NO
1. Boring or monitoring well: ☐ ☐
2. Topographic features (Method must be approved by ADEM prior to use): ☐ ☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was the product properly disposed of? YES ☐ NO ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

e. Was there a notable odor found in the piping trench? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain:	[ ]	[ ]

_____

g. Was free product found in the piping trench? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES [ ] NO [X]

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? YES ☐ NO ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): YES ☐ NO ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: Jerry Malaga

Company: SEMS, Inc.

Telephone Number: (615) 690-0282

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: _____

Date: _____

Alabama P.E. Registration Number: 19618

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

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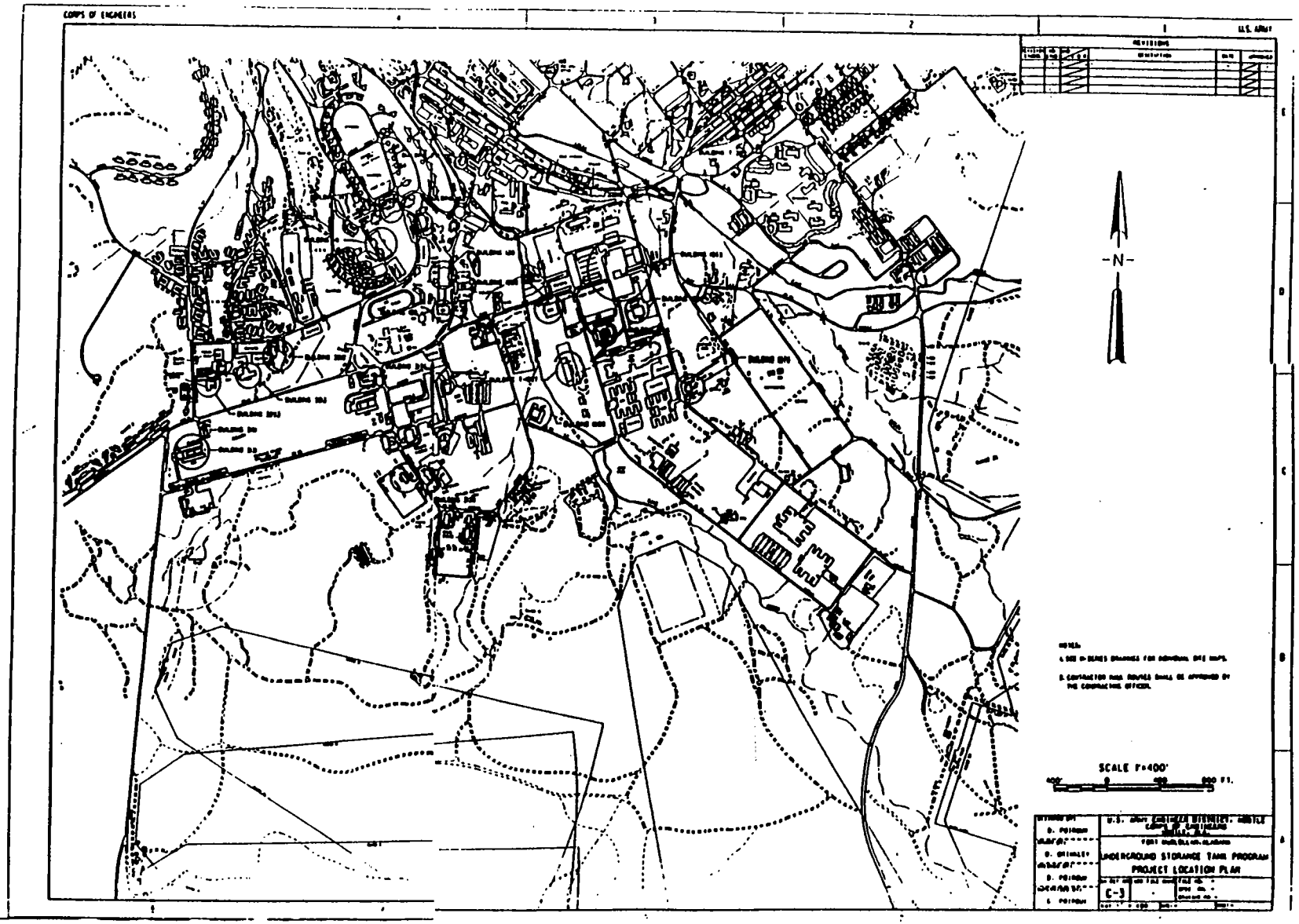
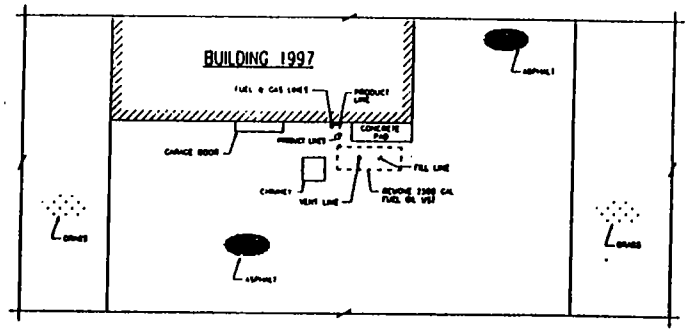
FORM 1133
5/8/95

Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALA.
FORT MCCLELLAN, ALABAMA
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS

U.S. ARMY



BUILDING 1997 SITE REMOVAL PLAN

SCALE: 1" = 10'-0"

Asphalt

Tank – 20 x 7 x 0.5 = 3

Piping – 10 x 3 x 0.5 = 0.8

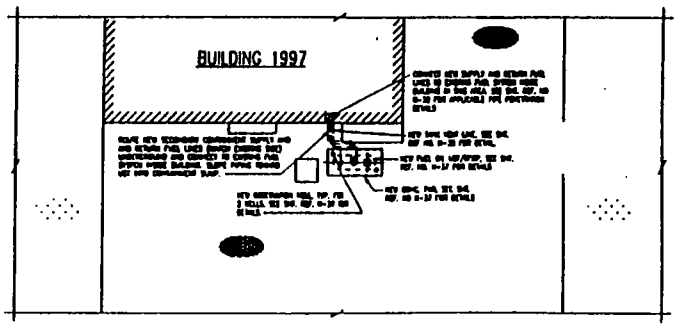
TOTAL = 3.8 C.Y.

SITE 1997 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	2500 GAL	VST/U	ONE (1) TANK WITH CONCRETE ENCLOSURE AT 2'-0" X 10'-10"

GENERAL NOTES

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED
2. REMOVE PRODUCT, VENT LINES AND CONCRETE PAD
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ASSUMED. THE INDICATED ENCLOSURE OF UNDERGROUND TANK AND PRODUCT PIPING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND DIMENSIONS OF THE TANK
4. THE INDICATED LOCATION OF VALVES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL VALVES IN THE SITE PRIOR TO REMOVAL AND EXCAVATION
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02221.
6. THE TANK PIT AND ENVIRONMENTAL AREA SHALL BE RESTORED TO ORIGINAL CONDITION. REPLACE DAMAGED VALVES AND ENGINE WITH ORIGINAL SPECS OR SIMILAR. REPLACE DAMAGED AREAS WITH SIMILAR GRADE SPECIES.
7. SITE DISPLAYS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET 0-20.
8. SEE SHEET 0-1 FOR LEGEND.

SCALE: 1" = 10'



BUILDING 1997 SITE REPLACEMENT PLAN

SCALE: 1" = 10'-0"

Asphalt

2 C.Y.

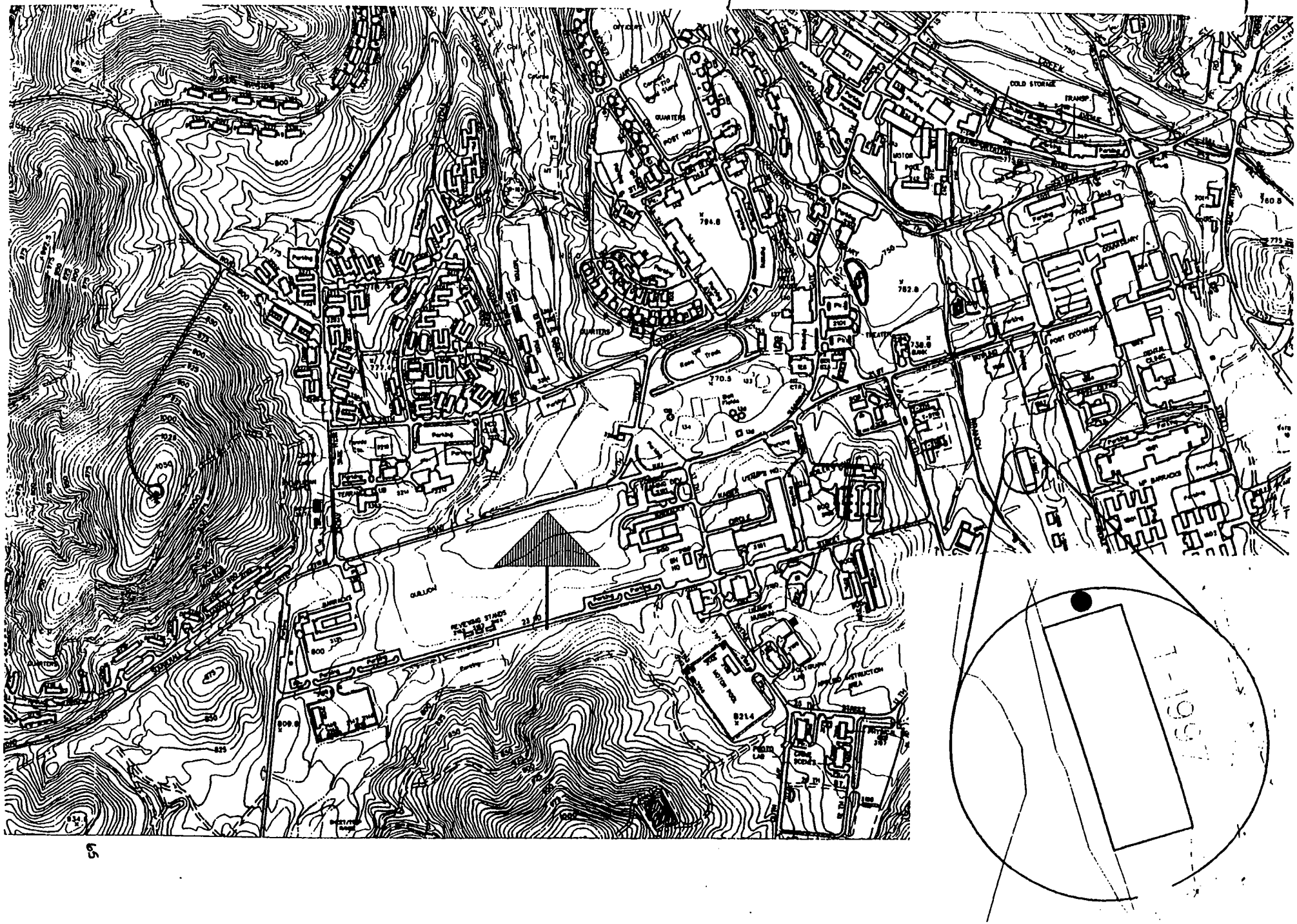
SITE 1997 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	2500 GAL	VST/STP	ONE (1) DOUBLE WALL FRP TANK WITH A FIBERGLASS CONCRETE PAD. TANK SHALL BE PROVIDED WITH A LEAK DETECTION SYSTEM

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND SERVICE SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION NEEDED TO REMOVE THE NEW TANK/FUEL SYSTEM TO THE LAYOUT SHOWN.
3. ALL AREAS DISTURBED OR DAMAGED DURING TANK REMOVAL, TANK INSTALLATION AND SITE WORK SHALL BE REGRADED AND RESTORED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS THIS REQUIREMENT IS APPLICABLE TO ALL SITES.
4. OVERALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO ENGINE SYSTEM AS SHOWN ON THE DRAWING. NEW PIPING SHALL SLOPE TOWARD TANK AND CONTAINMENT SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND REMOVAL OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD WITH LOCATION OF ALL ENGINE LINES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER
6. SEE VICINITY/LOCATION MAP ON SHEET 0-0 AND C-1 FOR LOCATION OF BUILDING 1997 SITE.

SCALE: 1" = 10'

DESIGNED BY: JACK PHILLIPS	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
DRAWN BY: JACK PHILLIPS	FORT McCLELLAN, AL
REVIEWED BY:	UNDERGROUND STORAGE TANK PROGRAM SITE 1997 REMOVAL PLAN, LEGEND, SCHEDULES AND NOTES
APPROVED BY:	11-24


COLD STORAGE
TRANSP
MOTOR POOL
QUARTERS
POST HQ
TREATING
POST EXCHANGE
COURTESY
DENTAL CLINIC
BARRACKS
GULLION
REVERSING STAKES
LIBRARY
MOTOR POOL
HANDLING INSTRUCTION AREA
FIRING PODS
FIELD LAB
DIRECTION BASE
CURTIS
SUNDAY
BRANCH
CREEK
RIVER SIDE
AVENUE
DRIVE
STREET
ROAD
PARKING
800
850
825
1050
1000
794.8
782.8
770.5
738.8
780.8
809.8
821.4

BUILDING 3212

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-003212

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-__

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

CONTACT NAME: Raymond J. Mulholland

LOCATION: Building 3212

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 12/16/96

UNIQUE TANK #:	3212				
TANK SIZE:	2,500 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	12/16/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:	☐	☐	☐	☐	☐
HEATING OIL TANK:	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☐	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the excavation? YES ☐ NO ☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☐

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☐

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

_____
_____
_____
_____

i. Was the excavation backfilled? YES ☐ NO ☐

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth: YES NO
1. Boring or monitoring well: ☐ ☐
2. Topographic features (Method must be approved by ADEM prior to use): ☐ ☐
3. Excavation of new tank. X

d. Was there a notable odor found in the bore holes? YES ☐ NO ☒

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☒

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:
Silty Clay

g. Specify the inert solid material used to fill the tank(s):
Cement Grout

h. Provide the date the tank(s) were filled: 12/16/96

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: NA

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☒ NO ☐
If yes, was the product properly disposed of? ☒ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

e. Was there a notable odor found in the piping trench? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain:	☐	☐

_____

g. Was free product found in the piping trench? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☐ NO ☒

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? YES ☐ NO ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): YES ☐ NO ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [illegible]

Date: 3/10/02

Alabama P.E. Registration Number: [illegible]

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

_____

_____

_____

_____

_____

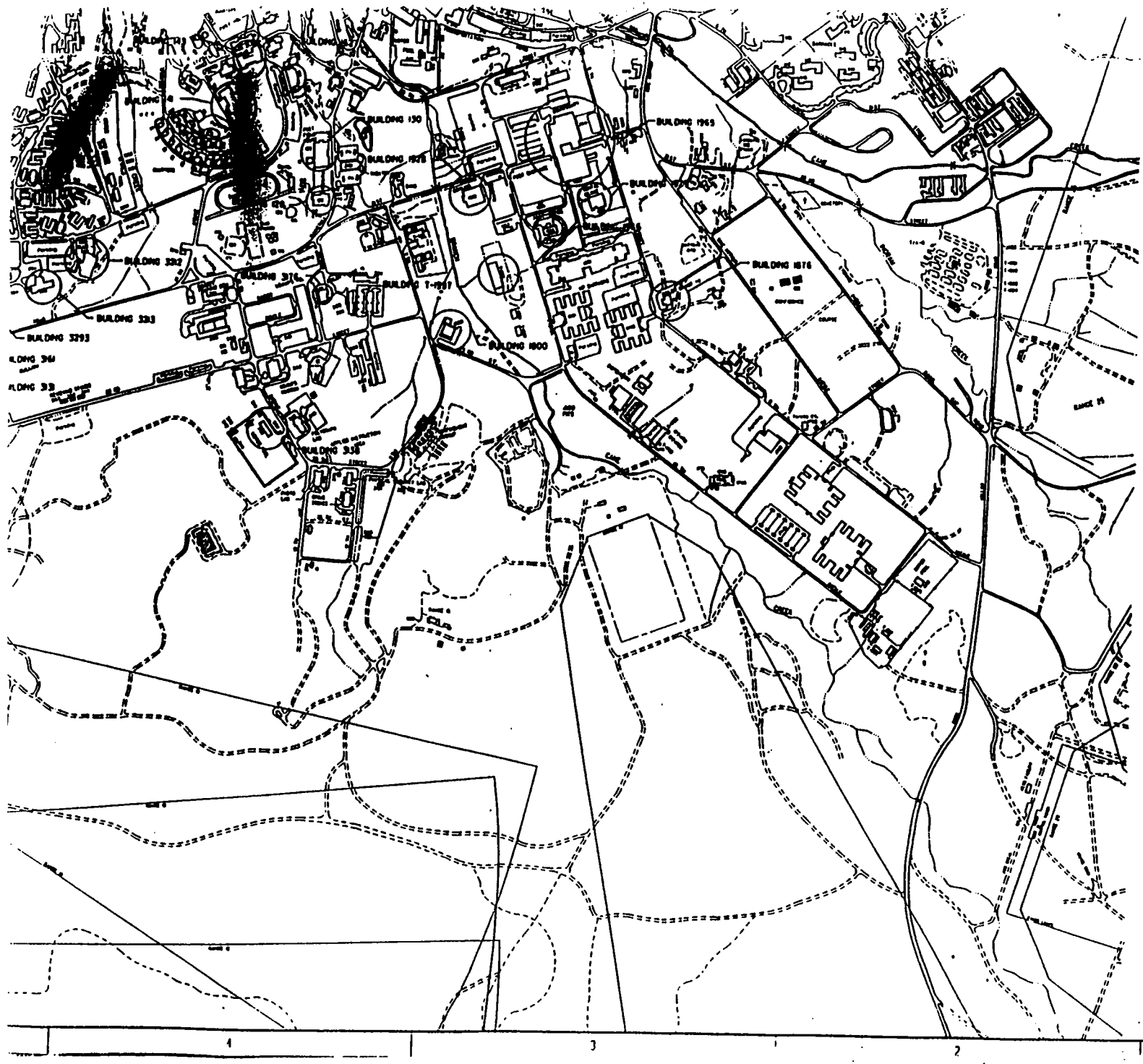
_____

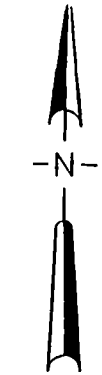
_____

_____

FORM 1133
5/8/95

Attachments: UST Closure Guidelines





NOTES:

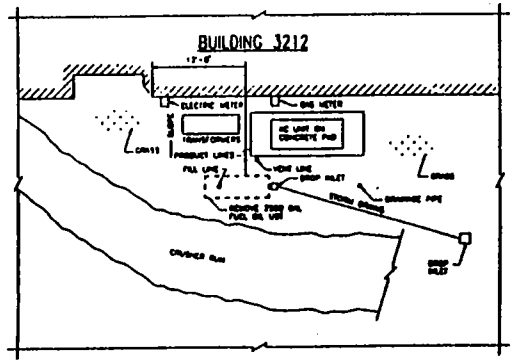
1. SEE N-SERIES DRAWINGS FOR INDIVIDUAL SITE MAPS.
2. CONTRACTOR HAUL ROUTES SHALL BE APPROVED BY THE CONTRACTING OFFICER.

SCALE 1"=400'

400' 0 400 800 FT.

DESIGNED BY: D. POIROUX	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALA.
DRAWN BY: D. BRINKLEY	FORT McCLELLAN, ALABAMA
CHECKED BY: D. POIROUX	UNDERGROUND STORANGE TANK PROGRAM PROJECT LOCATION PLAN
SUPERVISED BY: G. POIROUX	SH REF NO: C-3 · CADD FILE NAME: - · FILE NO. - · SPEC. NO. - · DRAWING NO. -
	SCALE: 1" = 400' · SITE: - · SHEET -

CORPS OF ENGINEERS | U.S. ARMY



BUILDING 3212 SITE REMOVAL PLAN

SCALE 1" = 10'-0"

SITE 3212 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	2500 GAL	VERT/FP	ONE (1) SAFED TANK WITH FERRONITE DIMENSIONS OF 8'-0" X 10'-0"

GENERAL NOTES

REMOVE UNDERGROUND STORAGE TANK AS INDICATED

REMOVE PRODUCT, VENT LINES AND CONCRETE PAD.

LOCATION OF TANK FILL PIPES AND VENT PIPES IS APPROXIMATE. THE INDICATED ENCIRCLEMENT OF UNDERGROUND TANK AND PRODUCT PIPING APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF EXCAVATION OF THE TANK.

THE INDICATED LOCATION OF VALVES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL VALVES AT THE TIME OF REMOVAL AND DISMANTLING.

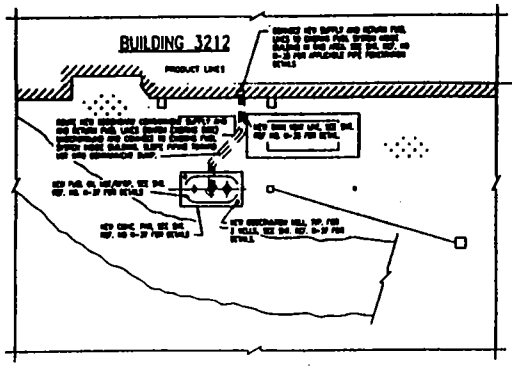
THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH INSTALLATION BACKFILL INSTRUCTIONS.

THE SURFACE AND DRAINAGEWAYS AREA SHALL BE RESTORED TO ORIGINAL CONDITION. REPLACE DRAINAGE PIPES AND DRAINS WITH PIPES OF SIMILAR REPLACE DRAINAGE AREAS WITH PLANT GRASS SPECIES.

TANK DISPOSAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET N-30.

SEE SHEET N-1 FOR LOCATION

SCALE 1" = 10'



BUILDING 3212 SITE REPLACEMENT PLAN

SCALE 1" = 10'-0"

SITE 3212 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	2500 GAL	VERT/FP	ONE (1) SAFED TANK WITH FERRONITE DIMENSIONS OF 8'-0" X 10'-0"

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION WORK TO REMOVE THE NEW TANK/FUEL SYSTEM TO THE EXISTING SYSTEM.
3. ALL AREAS DISTURBED BY REMOVED TANKS REMOVAL, TANK DISMANTLING AND OTHER WORK SHALL BE RESTORED AND REPAIRED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE RESTORATION IS SPECIFIED TO ALL SITES.
4. INSTALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO EXISTING SYSTEM AS SHOWN ON THE DRAWING. NEW PIPING SHALL SLOPE TOWARD TANK AND DISPENSER SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND DRAINAGE OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED BY THE FIELD ACTUAL LOCATION OF ALL EXISTING UTILITIES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER.
6. SEE VICINITY/LOCATION MAP ON THE REF NO C-1 FOR LOCATION OF BUILDING 3212 SITE

SCALE 1" = 10'-0"

DESIGNED BY JACK PHELPS	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
DRAWN BY JACK PHELPS	FORT McCLELLAN, AL
CHECKED BY MAJOR SHAW	UNDERGROUND STORAGE TANK PROGRAM SITE 3212 REMOVAL AND REPLACEMENT TANK PLAN, LEGEND, SCHEDULES AND NOTES
SUPERVISED BY DIRECTOR FORM/STUD	N-30

DRAWING BY DAVID PARSONS
DRAWN ON SHELLY DAVIS
CHECKED ON DAVID PARSONS
SUPERVISED BY MIKE DAVIDSON

REVISIONS					
DRAWING NUMBER	SHEET	ZONE	DESCRIPTION	DATE	APPROVED

3212
QUARTERS
POST HQ
COLD STORAGE
TRANSP.
MOTOR POOL
COMMISSARY
POST EXCHANGE
DENTAL CLINIC
MP BARRACKS
JUDO PITS
CANE
GUILLION
REVIEWING STANDS
23 RD
CIRCLE
APPLIED INSTRUCTION AREA
PHYSICAL SECURITY
PHOTO LAB
CRIME SCENES
MOTOR POOL
BARRACKS
Parking
794.8
752.8
770.5
821.4
809.6
825.5

BUILDING 3213

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-003213

DATE OF THIS REPORT: 2/24/97

INCIDENT NO. (If applicable). UST __ __-___-___

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate of the Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 3213

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Inchcape Testing Services

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: one (1)

NUMBER OF TANKS REMAINING AT SITE: unknown

CLOSURE DATE: 10/23/96

UNIQUE TANK #:	3213				
TANK SIZE:	4,000 gal				
TANK CAPACITY:					
TANK AGE:	unknown				
DATE TANK LAST USED:	10/23/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	☒	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

d. Was there a notable odor found in the excavation? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain: _____	[ ]	[ ]

f. Was free product found in the excavation? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

Silty Clay

i. Was the excavation backfilled? YES ☒ NO ☐

If yes, provide the date of backfilling: 10/24/96

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Boring or monitoring well:	☐	☐
2. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☒ NO ☐
If yes, was the product properly disposed of? ☒ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

e. Was there a notable odor found in the piping trench? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain:	☐	☐

_____

g. Was free product found in the piping trench? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☐ NO ☒

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☒ NO ☐

If yes, provide the date of backfilling: 10/24/96

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? ☐ ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:
1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): ☐ ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with clean backfill. **Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 60 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

Soil was used as backfill

d. Check the method of soil disposal used or to be used:

- [X] Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- [ ] Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- [ ] Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- [ ] Incineration.
- [ ] Thermal volatilization.
- [ ] Recycling facility
- [ ] Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	[X]	[ ]

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: Jerry Malaga

Company: SEMS, Inc.

Telephone Number: (615)690-6282

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: [signature] for Jerry Malaga Date: 2/25/97

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [signature]

Date: 2/26/97

Alabama P.E. Registration Number: 19618

ALABAMA REGISTERED NO. 19618 PROFESSIONAL ENGINEER MARK L. MORGAN

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

FORM 1133
5/8/95

Attachments: UST Closure Guidelines

FOR ADEM OFFICE USE ONLY

TO: _____ Air Division

FROM: _____ UST Compliance Section

MEMORANDUM

January 28, 1991

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

FACILITY I.D. NO.: _____

DATE OF THIS REPORT: _____

INCIDENT NO. (If applicable). UST __ __-___-___

UST OWNER:

FACILITY COUNTY: _____

ADDRESS: _____

FACILITY NAME: _____

CONTACT NAME: _____

LOCATION: _____

CONTACT PHONE #: _____

ADDRESS: _____

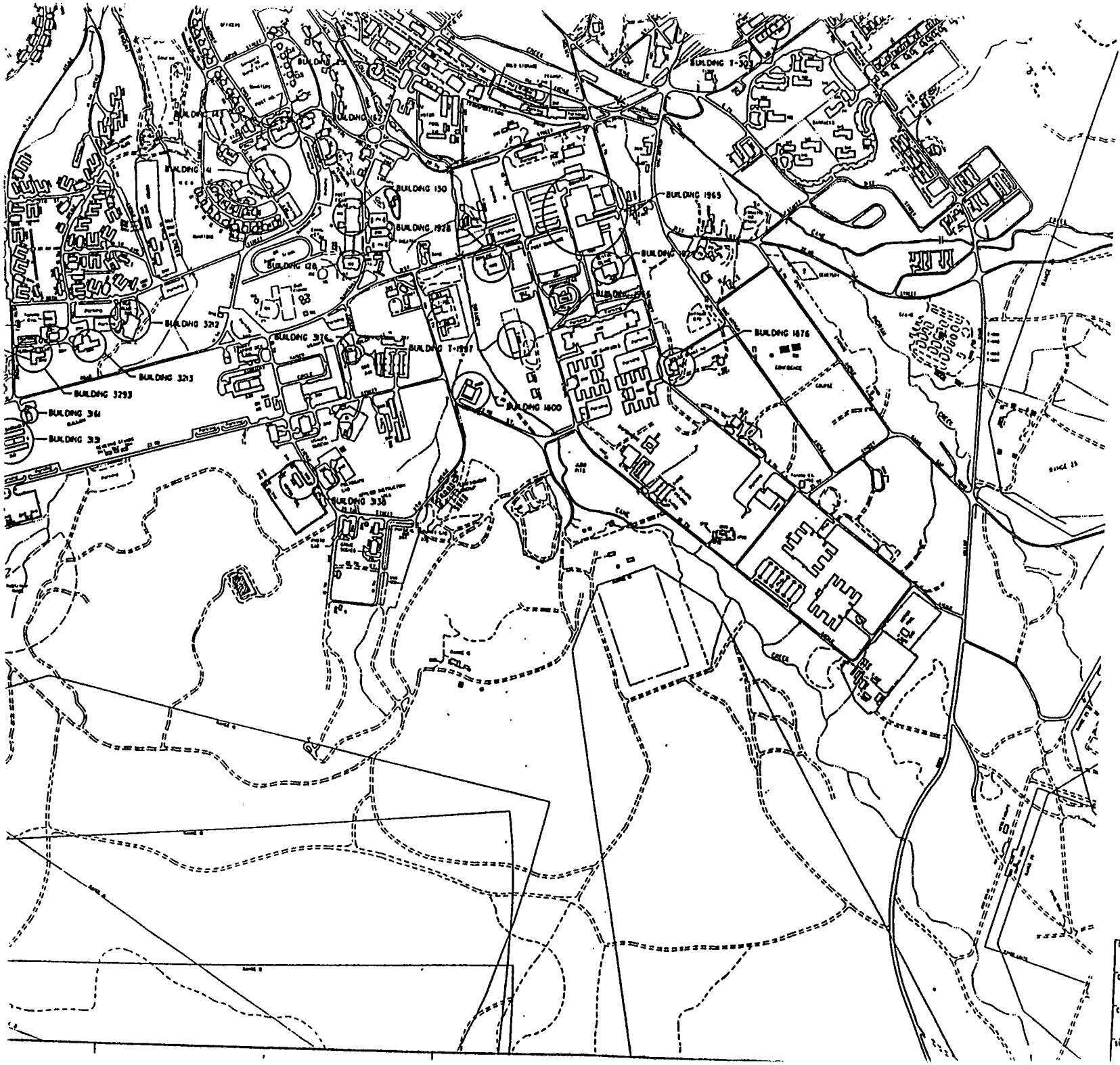
Name of Consultant who performed calculations: _____

Consultant's Phone Number: _____

	a		b		c	
Sample 1	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 2	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 3	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 4	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 5	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 6	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 7	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 8	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 9	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 10	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 11	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 12	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 13	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 14	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions
Sample 15	_____	ppm x	_____	cyds x .002 =	_____	lbs. VOC emissions

TOTAL POTENTIAL EMISSIONS = [ ] lbs. VOC emissions

*** NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary. This form must be completed and submitted with the ADEM UST Closure Site Assessment Report Form.**



NOTES:

1. SEE N-SERIES DRAWINGS FOR INDIVIDUAL SITE MAPS.

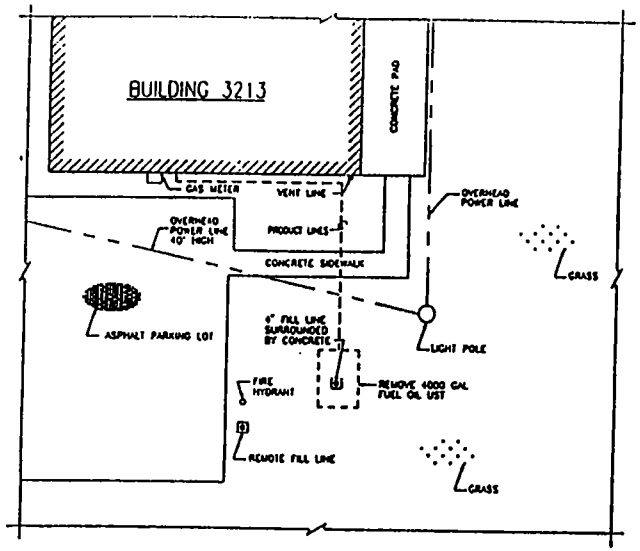
2. CONTRACTOR HAUL ROUTES SHALL BE APPROVED BY THE CONTRACTING OFFICER.

SCALE 1"=400'

400' 0 400 800 FT.

DESIGNED BY: D. POIROUX	U.S. ARMY ENGINEER DISTRICT, MOBI CORPS OF ENGINEERS MOBILE, ALA.
DRAWN BY: D. BRINKLEY	FORT McCLELLAN, ALABAMA
CHECKED BY: D. POIROUX	UNDERGROUND STORAGE TANK PROGR PROJECT LOCATION PLAN
SUPERVISED BY:	SH REF NO: C-3 · CADD FILE NAME: - · FILE NO. - · SPEC. NO. -

CORPS OF ENGINEERS | 4 | 3 | 2



BUILDING 3213 SITE REMOVAL PLAN

SCALE: 1" = 10'-0"

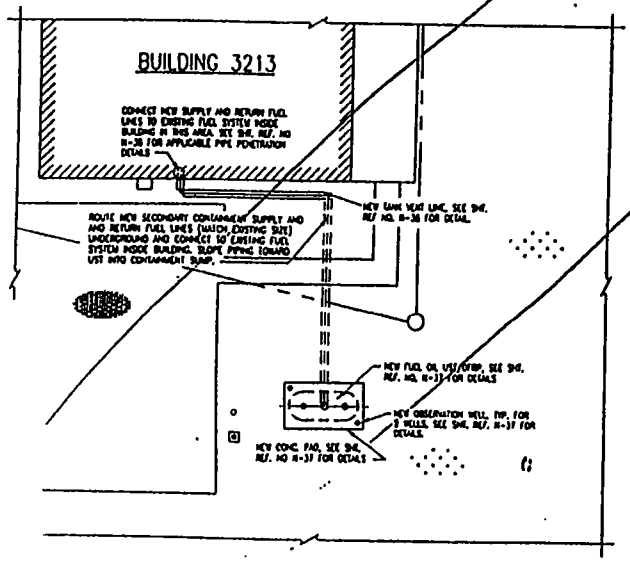
SITE 3213 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
#2 FUEL OIL STORAGE TANK	4000 GAL	UST/S	ONE (1) STEEL TANK WITH ESTIMATED DIMENSIONS OF 8'-0" x 11'-6".

Concrete
5' x 5' x .5
1 C.Y.

GENERAL NOTES:

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED
2. REMOVE PRODUCT, VENT LINES AND CONCRETE PAD.
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ACCURATE. THE INDICATED ORIENTATION OF UNDERGROUND TANK AND PRODUCT PIPING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND ORIENTATION OF THE TANK.
4. THE INDICATED LOCATION OF UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL UTILITIES AT THE SITE PRIOR TO BEGINNING ANY EXCAVATION.
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTIONS 02671.
6. THE SURFACE AND SURROUNDING AREA SHALL BE RESTORED TO ORIGINAL CONDITION. REPLACE DAMAGED TREES AND SHRUBS WITH ORIGINAL SPECIES OR SIMILAR. REPLACE GRASSED AREAS WITH SIMILAR GRASS SPECIES.
7. SOIL SAMPLING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET H-36.
8. SEE SHEET H-1 FOR LEGEND.

DESIGNED BY: DUANE PORTOLA
DRAWN BY: HOLLY DAVIS
CHECKED BY: DUANE PORTOLA
REVIEWED BY: MIKE THOMPSON



BUILDING 3213 SITE REPLACEMENT PLAN

SCALE: 1" = 10'-0"

SITE 3213 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
FUEL OIL STORAGE TANK	4000 GAL	UST/DWP	ONE (1) DOUBLE WALL TYP TANK WITH A MOLDOWN CONCRETE PAD. TANK SHALL BE PROVIDED WITH A LEAK DETECTION SYSTEM

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURE'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY WORK TO RETROFIT THE NEW TANK/FUEL SYSTEM TO THE EXISTING SYSTEM.
3. ALL AREAS DISTURBED OR SCARRED DURING TANK REMOVAL, TANK INSTALLATION AND OTHER WORK SHALL BE RESTORED AND REPAIRED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THIS REQUIREMENT IS APPLICABLE TO ALL SITES.
4. INSTALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO EXISTING SYSTEM AS SHOWN ON THIS DRAWING. NEW PIPING SHALL SLOPE TOWARD TANK AND CONTAINMENT SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND ROUTING OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD AFTER LOCATION OF ALL EXISTING UTILITIES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER.
6. SEE VICINITY/LOCATION MAP SHT. REF. NO. C-3 FOR LOCATION OF BUILDING 3213 SITE.

SCALE: 1" = ...

DESIGNED BY: JACK PHELPS	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
DRAWN BY: JACK PHELPS	FORT MCCLELLAN, AL
CHECKED BY: HOLLY DAVIS	UNDERGROUND STORAGE TANK PROGRAM SITE 3213 REMOVAL AND REPLACEMENT TANK SCHEDULES AND NOTES

BUILDING 1876

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-001876

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-__

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

CONTACT NAME: Raymond J. Mulholland

LOCATION: Building 1876

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 11/12/96

UNIQUE TANK #:	1876				
TANK SIZE:	500 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	11/12/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Silty Clay

i. Was the excavation backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth: YES NO
1. Boring or monitoring well: ☐ ☐
2. Topographic features (Method must be approved by ADEM prior to use): ☐ ☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was the product properly disposed of? YES ☐ NO ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

e. Was there a notable odor found in the piping trench? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain:	☐	☐

_____

g. Was free product found in the piping trench? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☐ NO ☒

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? ☐ ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): ☐ ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [illegible]

Date: [illegible]

Alabama P.E. Registration Number: 19018

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

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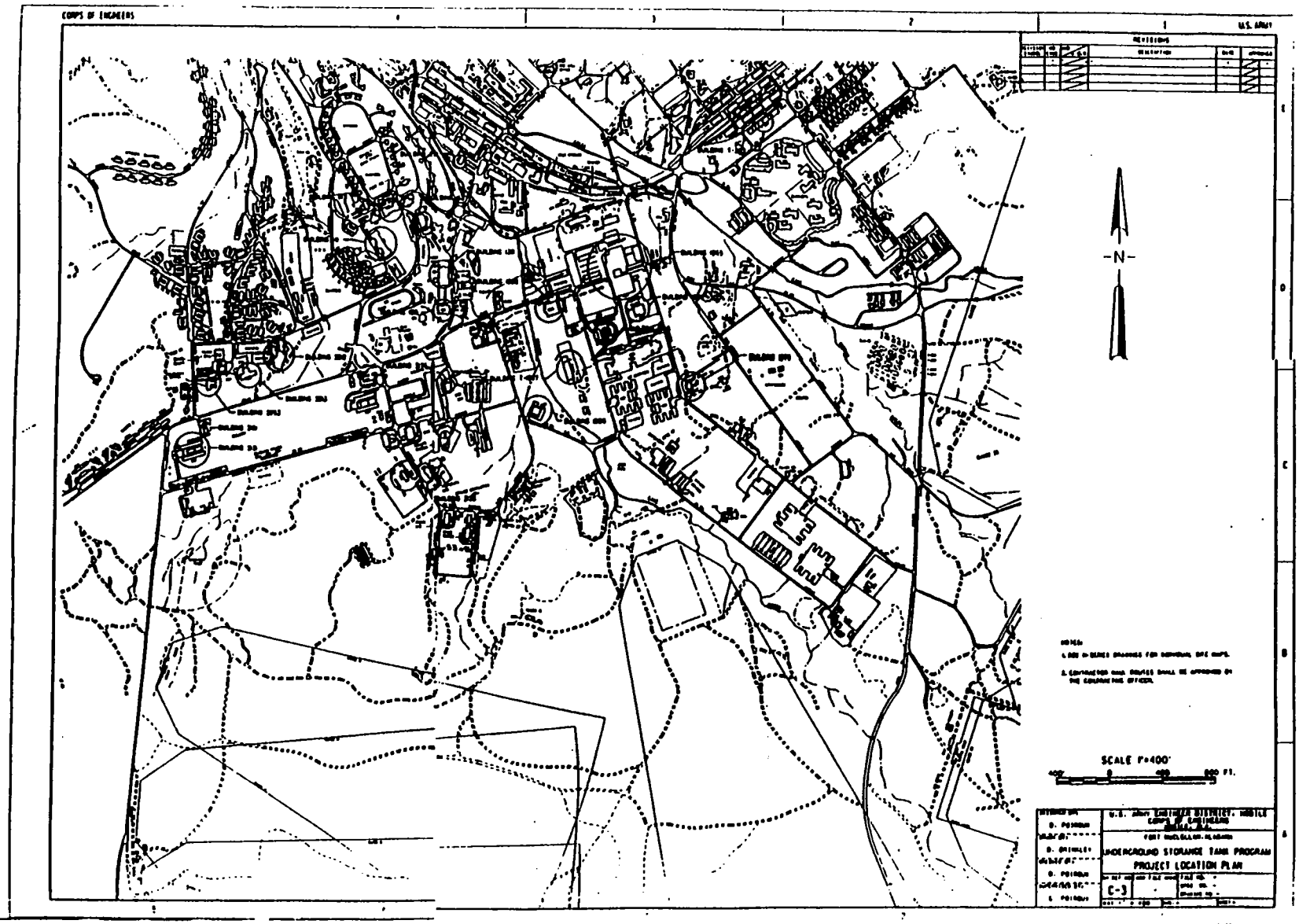
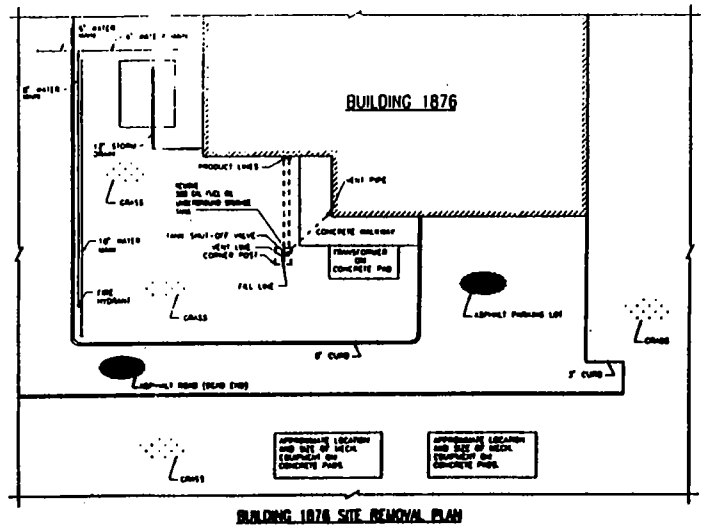
FORM 1133
5/8/95

Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
FORT McCLELLAN, ALABAMA
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS

U.S. ARMY



BUILDING 1876 SITE REMOVAL PLAN

REVISIONS					
			DESCRIPTION	DATE	APPROVED

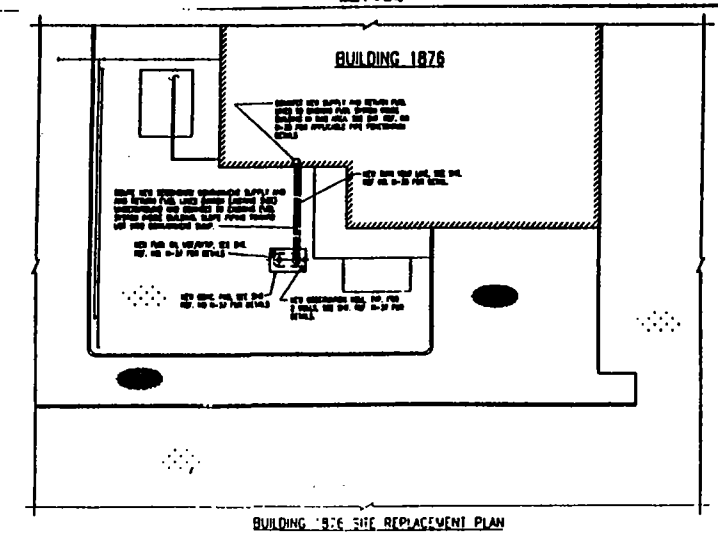
SITE 1876 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
(1) FUEL OIL STORAGE TANK	500 GAL	VERT	ONE (1) TANK OF SIMILAR CONSTRUCTION WITH ESTIMATED DIMENSIONS OF 5' x 8'-10"

GENERAL NOTES

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED
2. REMOVE PRODUCT, VENT LINES AND CONCRETE PAD
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ACCURATE. THE INDICATED DIMENSIONS OF UNDERGROUND TANK AND PRODUCT PIPING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND DIMENSIONS OF THE TANK.
4. THE INDICATED LOCATION OF VALVES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL VALVES AT THE SITE PRIOR TO REMOVAL AND EXCAVATION
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02221
6. THE SURFACE AND SUBSURFACE AREA SHALL BE RESTORED TO ORIGINAL CONDITION. REPLACE DAMAGED FIELD AND DRIVEWAY WITH SIMILAR SIZES OR SIMILAR MATERIALS. DAMAGED AREAS WITH SIMILAR GRASS SPECIES
7. SOIL SAMPLING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET N-20
8. SEE SHEET N-1 FOR LEGEND

SCALE: 1" = 10'

DRAWN BY: DUANE PERRIGUE
DESIGN BY: MOLLY BANG
CHECKED BY: DUANE PERRIGUE
CHECKED BY: JAKE THOMPSON



BUILDING 1876 SITE REPLACEMENT PLAN

SITE 1876 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
(1) FUEL OIL STORAGE TANK	500 GAL	VERT/DWP	ONE (1) DOUBLE WALL FRP TANK WITH A HOLDING CONCRETE PAD. TANK SHALL BE PROVIDED WITH LEAK DETECTION SYSTEM

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY WORK TO REMOVE THE NEW TANK/FILL STATION IN THE EXISTING SPACE.
3. ALL AREAS DISTURBED BY SCARIFIED DURING TANK REMOVAL, TANK INSTALLATION AND SERVICE WORK SHALL BE RECORDED AND REPAIRED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS AND REQUIREMENT IS APPLICABLE TO ALL SITES
4. SIGNAL NEW ECONOMIC CONDUCTED FUEL PIPING FROM NEW TANK TO DISPENSE TYPICAL AS SHOWN ON THE DRAWING. NEW PIPING SHALL TERMINATE TANK AND DISPENSER SUMP
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND DRAWING OF NEW DISPENSER CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD AFTER REMOVAL OF ALL EXISTING VALVES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER
6. SEE COMPOSITE MAP SHEET N-1 FOR LOCATION OF BUILDING 1876 SITE

SCALE: 1" = 10'

DESIGNED BY: JACK PHELPS	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
DRAWN BY: JACK PHELPS	FORT McCLELLAN, AL
CHECKED BY: MARK SHAW	UNDERGROUND STORAGE TANK PROGRAM SITE 1876 REMOVAL AND REPLACEMENT TANK PLAN LEGEND SCHEDULES AND NOTES
APPROVED BY:	SHEET NO. N-19
DATE:	

1016

67

BUILDING 3138

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-003138

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-__

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

CONTACT NAME: Raymond J. Mulholland

LOCATION: Building 3138

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 10/21/96

UNIQUE TANK #:	3138				
TANK SIZE:	5,000 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	10/21/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Silty Clay

i. Was the excavation backfilled? YES ☒ NO ☐

If yes, provide the date of backfilling: 10/21/96

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Boring or monitoring well:	☐	☐
2. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was the product properly disposed of? YES ☐ NO ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

e. Was there a notable odor found in the piping trench? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain:	[ ]	[ ]

_____

g. Was free product found in the piping trench? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES [ ] NO [X]

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? ☐ ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): ☐ ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: _____

Date: _____

Alabama P.E. Registration Number: 19618

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

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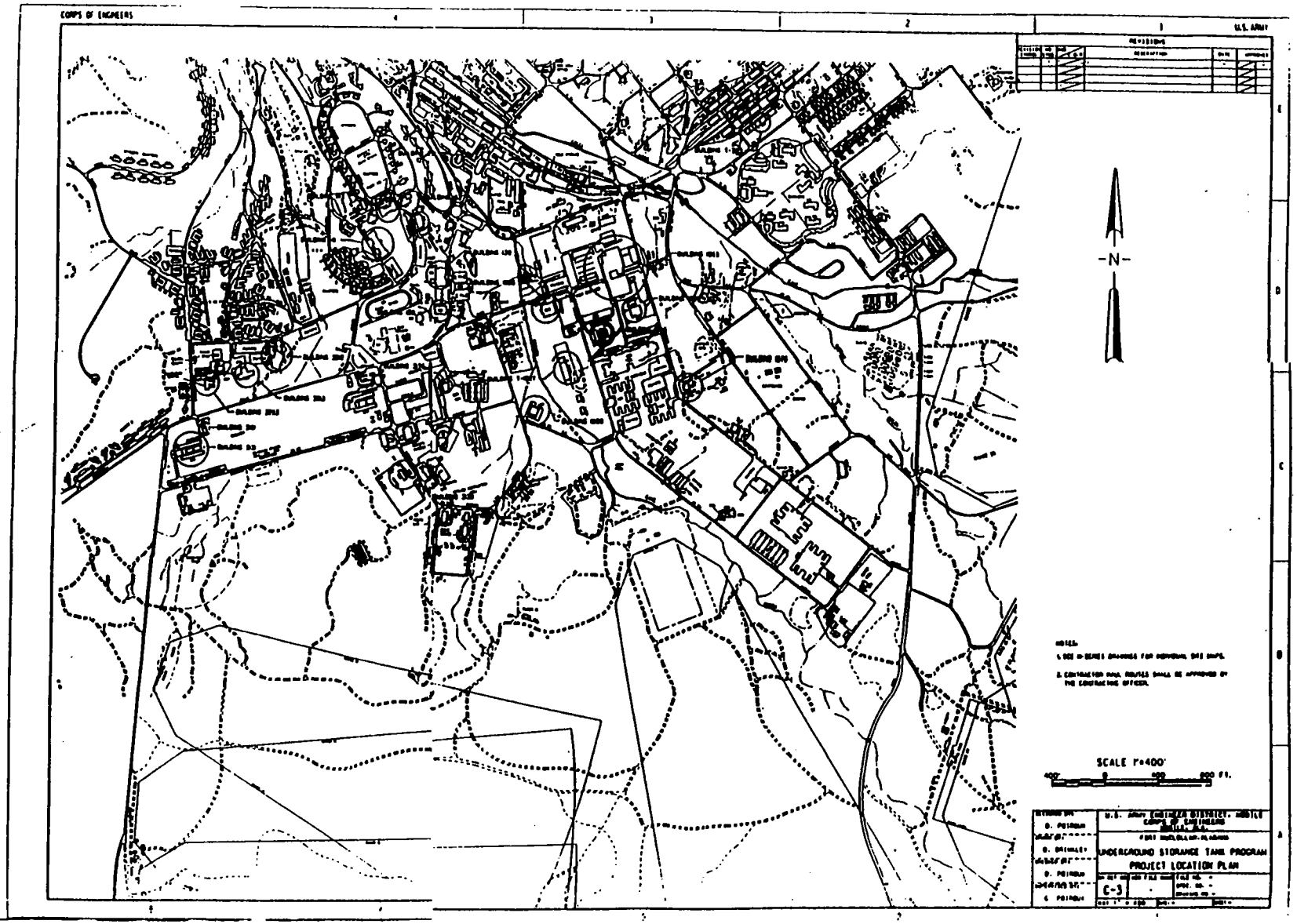
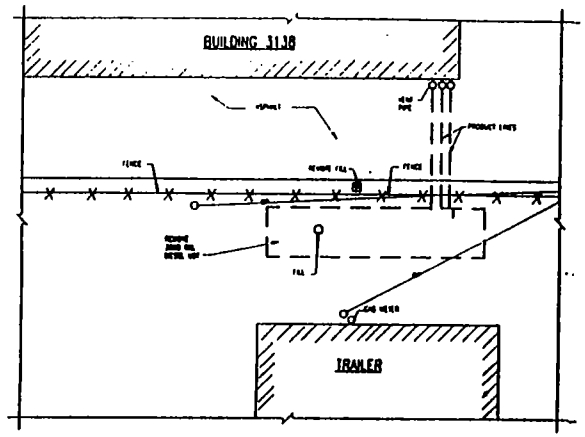
FORM 1133
5/8/95

Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS



BUILDING 3138 TANK REMOVAL SITE

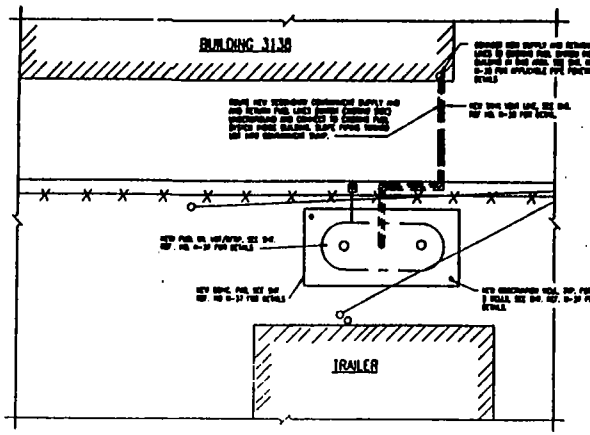
5 x 15 x .5 = 2 C.Y.

SITE 3138 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
DIESEL STORAGE TANK	3000 GAL	UST/S	[illegible]

GENERAL NOTES

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED
2. REMOVE PRODUCT, VENT LINES AND CONCRETE PAD
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ACCURATE. THE INDICATED ORIENTATION OF UNDERGROUND TANK AND PRODUCT PIPING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND ORIENTATION OF THE TANK
4. THE INDICATED LOCATION OF VALVES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL VALVES AT THE SITE PRIOR TO BEGINNING HIS EXCAVATION
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTIONS 02671
6. THE SURFACE AND SURROUNDING AREA SHALL BE RESTORED TO ORIGINAL CONDITIONS. REPLACE DAMAGED FACES AND SHRUBS WITH ORIGINAL SPECIES OR SIMILAR. REPLACE DAMAGED AREAS WITH SIMILAR GRADE SPECIES
7. SOIL SAMPLING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET N-35
8. SEE SHEET N-1 FOR LEGEND

SCALE: 1" = 10'-0"



BUILDING 3138 SITE REPLACEMENT PLAN

2 C.Y.

SITE 3138 REPLACEMENT SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
DIESEL STORAGE TANK	3000 GAL	UST/STP	[illegible]

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY WORK TO RETROFIT THE NEW TANK/FUEL SYSTEM TO THE EXISTING SYSTEM
3. ALL AREAS DISTURBED OR SCARRED DURING TANK REMOVAL, TANK INSTALLATION AND OTHER WORK SHALL BE RESTORED AND REPAIRED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THIS REQUIREMENT IS APPLICABLE TO ALL SITES.
4. INSTALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO EXISTING SYSTEM AS SHOWN ON THIS DRAWING. NEW PIPING SHALL SLOPE TOWARD TANK AND CONTAINMENT SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND ROUTING OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD AFTER LOCATION OF ALL EXISTING VALVES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER
6. SEE VICINITY/LOCATION MAP SHT. REF. NO. C-3 FOR LOCATION OF BUILDING 3138 SITE

SCALE: 1" = 10'-0"

DESIGNED BY: JACK PHELPS	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
DRAWN BY: JACK PHELPS	FORT McCLELLAN, AL UNDERGROUND STORAGE TANK PROGRAM SITE 3138 REMOVAL AND REPLACEMENT TANK PLAN, LEGEND, SCHEDULES AND NOTES
CHECKED BY: HALEY SAHR	DR. REF. NO. N-27
SUPERVISED BY: ROBERT FORRESTER	CADD FILE NAME: [illegible]
	SHEET NO.
	SCALE: AS NOTED

BUILDING 1338

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-001338

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-__

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 1338

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 10/16/96

UNIQUE TANK #:	1338				
TANK SIZE:	150 gallon				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	10/16/96				
SUBSTANCE STORED:	Gasoline				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:	☐	☐	☐	☐	☐
HEATING OIL TANK:	XXX ☐	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

Silty Clay

i. Was the excavation backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Boring or monitoring well:	☐	☐
2. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was the product properly disposed of? YES ☐ NO ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

e. Was there a notable odor found in the piping trench? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain:		

_____

g. Was free product found in the piping trench? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES [ ] NO [X]

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? YES ☐ NO ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): YES ☐ NO ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [illegible]

Date: [illegible]

Alabama P.E. Registration Number: 19618

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

_____

_____

_____

_____

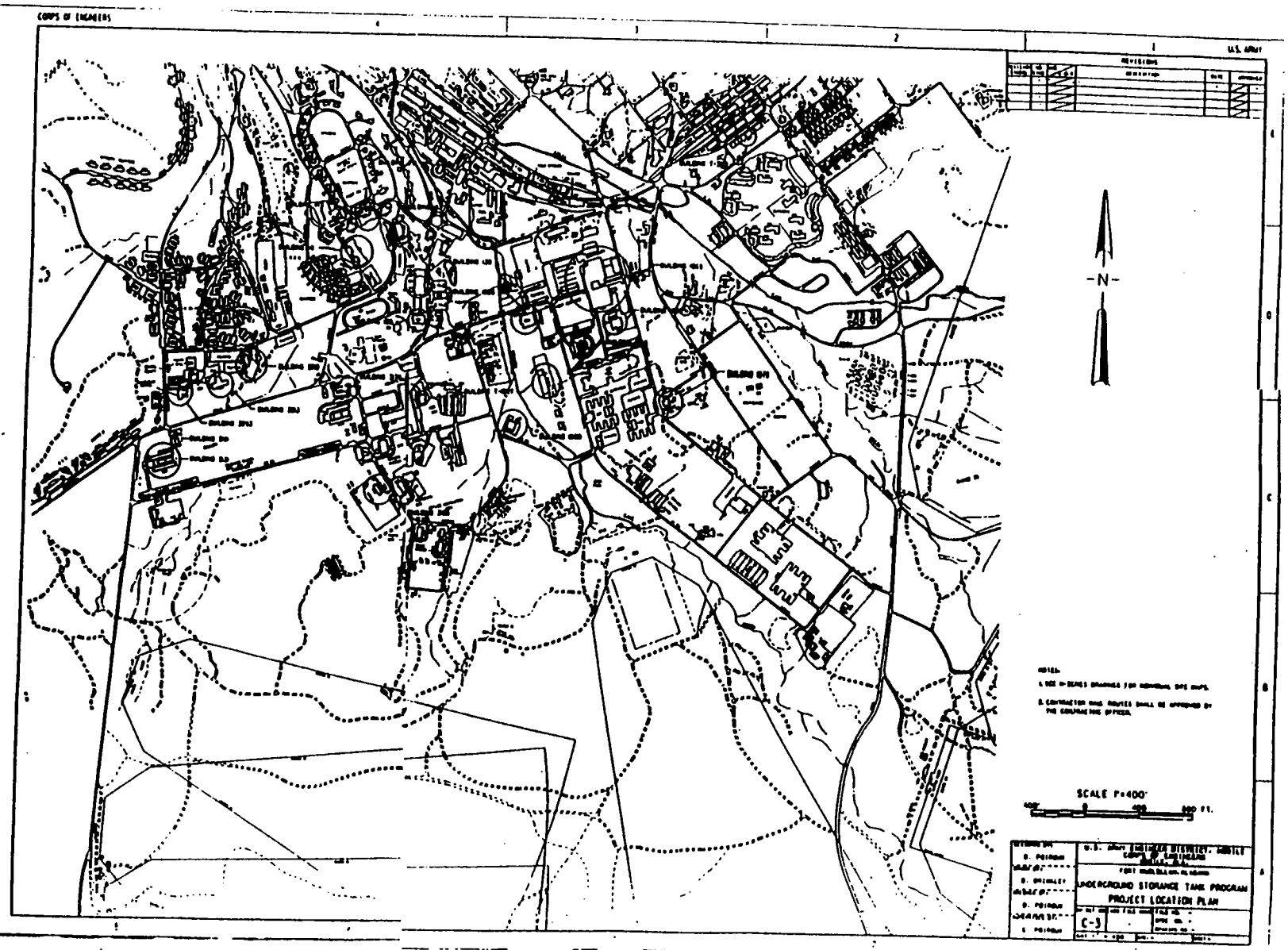
_____

_____

_____

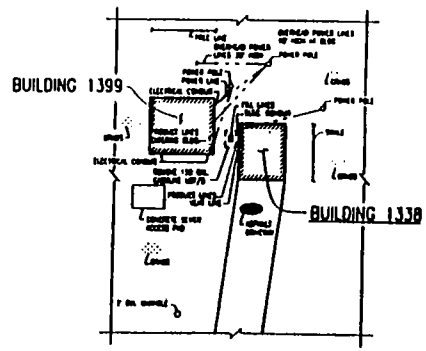
FORM 1133
5/8/95

Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
FORT McCLELLAN, ALABAMA
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS

J.S. ARMY



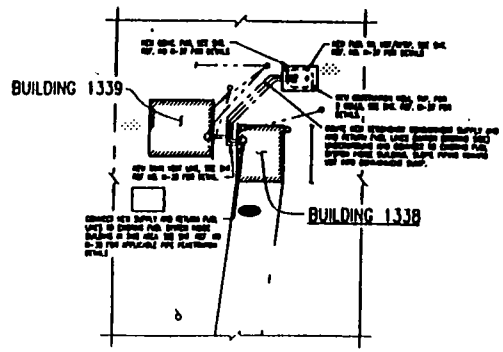
BUILDING 1338 SITE REMOVAL PLAN

SCALE 1" = 10'-0"

SITE 1338 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
[illegible]	[illegible]	[illegible]	[illegible]

Close-in-place

SCALE 1" = 10'-0"



BUILDING 1338 SITE REPLACEMENT PLAN

SCALE 1" = 10'-0"

SITE 1338 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
[illegible]	[illegible]	[illegible]	[illegible]

NOTES

SCALE 1" = 10'-0"

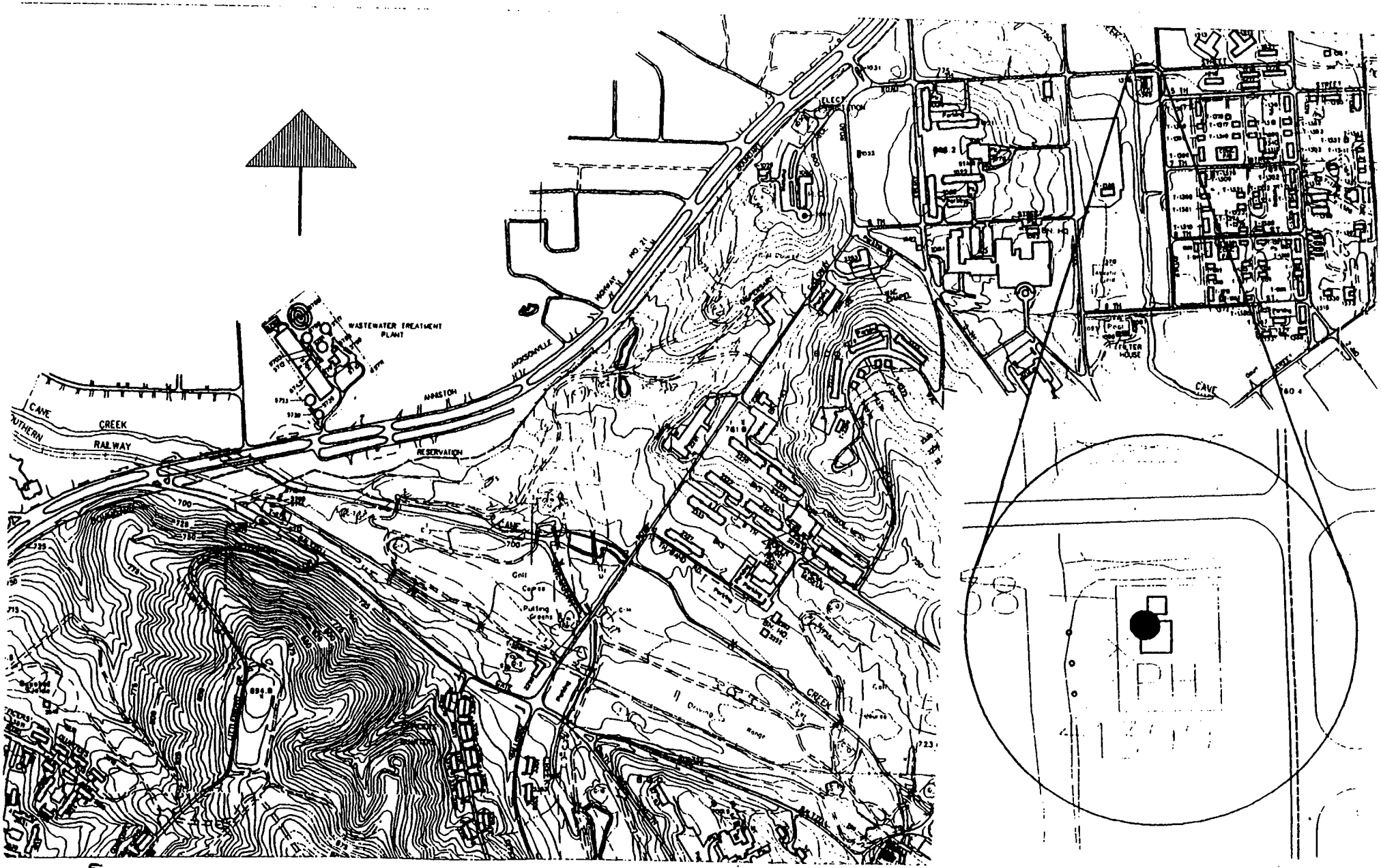
U.S. ARMY ENGINEER DISTRICT MOBILE
CORPS OF ENGINEERS
MOBILE, ALABAMA

FORT McCLELLAN, AL

UNDERGROUND STORAGE TANK PROGRAM
SITE 1338 REMOVAL AND REPLACEMENT TANK
PLAN LEGEND SCHEDULES AND NOTES

DESIGNED BY JACK PHELPS
DRAWN BY JACK PHELPS
CHECKED BY HULEN SHAW
REVIEWED BY ROBERT FORRESTER

Fe-17


WASTEWATER TREATMENT PLANT
CANE
CREEK
RAILWAY
ANNISTON
RESERVATION
JACKSONVILLE
HIGHWAY NO. 21
Golf
Course
Putting Greens
Driving Range
CREEK
CAVE
FILTER HOUSE
PH

BUILDING 3691

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-003691

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-__

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 3691

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 12/16/96

UNIQUE TANK #:	3691				
TANK SIZE:	150 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	12/16/96				
SUBSTANCE STORED:	Gasoline				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:					
HEATING OIL TANK:	☐	☐	☐	☐	☐
	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

	YES	NO
c. Is the groundwater more than 5 feet below the bottom of the excavation?	☐	☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:	YES	NO
1. Excavation extended 5 feet below base of pit:	☐	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

	YES	NO
d. Was there a notable odor found in the excavation?	☐	☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

	YES	NO
e. Was there water in the excavation?	☐	☐

If yes, how was it handled?	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____		

	YES	NO
f. Was free product found in the excavation?	☐	☐

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☐

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

_____
_____
_____
_____

i. Was the excavation backfilled? YES ☐ NO ☐

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Boring or monitoring well:	☐	☐
2. Topographic features (Method must be approved by ADEM prior to use):	☐	☐
3. Excavation of new tank.	X	

d. Was there a notable odor found in the bore holes? YES ☐ NO ☒

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☒

If yes,
1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:
Silty Clay

g. Specify the inert solid material used to fill the tank(s):
Cement Grout

h. Provide the date the tank(s) were filled: 12/16/96

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: NA

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☒ NO ☐
If yes, was the product properly disposed of? ☒ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

e. Was there a notable odor found in the piping trench? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain:	☐	☐

_____

g. Was free product found in the piping trench? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☐ NO ☒

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? YES ☐ NO ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): YES ☐ NO ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with clean backfill. **Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: _____

Date: _____

Alabama P.E. Registration Number: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

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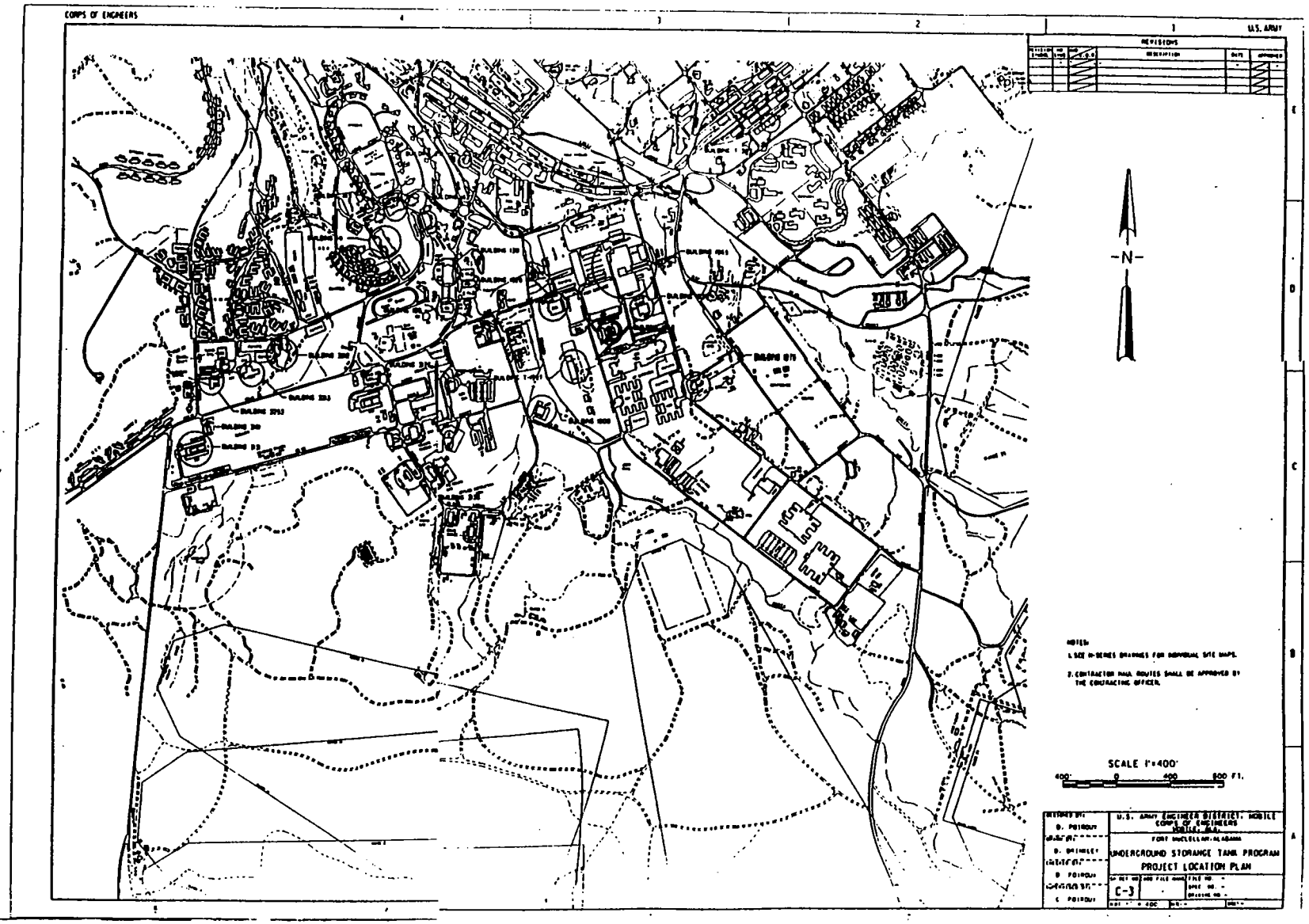
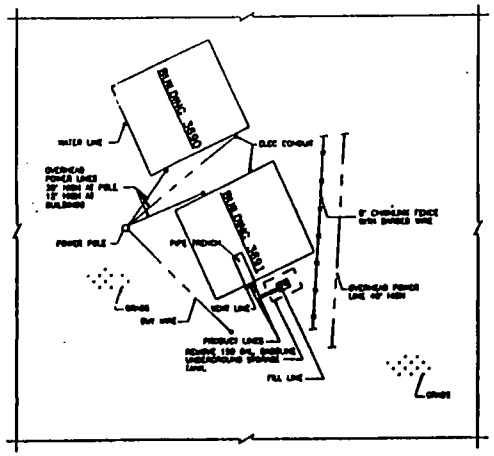
FORM 1133
5/8/95

Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
NOTES:
1. SEE H-SERIES DRAWINGS FOR INDIVIDUAL SITE MAPS.
2. CONTRACTOR HAUL ROUTES SHALL BE APPROVED BY THE CONTRACTING OFFICER.
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALA.
FORT MCCLELLAN, ALABAMA
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS | U.S. ARMY



BUILDING 3691 SITE REMOVAL PLAN

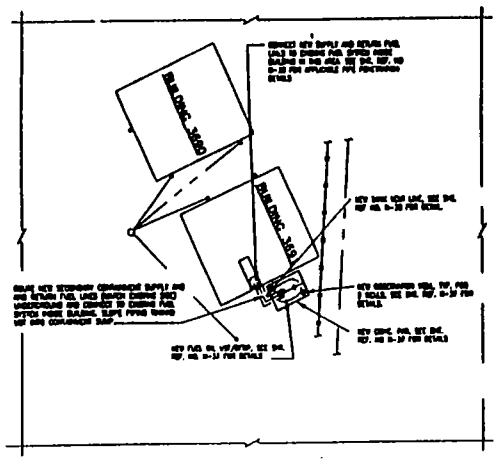
SCALE 1" = 5'-0"

SITE 3691 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
GASOLINE STORAGE TANK	150 GAL	VTR/D	SEE (1) TANK OF MINIMUM CONSTRUCTION WITH STRAPPED ENCIRCLING OF 2'-7" X 4'-0"

GENERAL NOTES

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED.
2. REMOVE PRODUCT, VENT LINES AND CONCRETE PAD.
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ASSUMED. THE INDICATED ENCIRCLING OF UNDERGROUND TANK AND PRODUCT PIPING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND DIMENSION OF THE TANK.
4. THE INDICATED LOCATION OF VALVES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL VALVES AT THE SITE PRIOR TO EXCAVATION AND DISCHARGE.
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02221.
6. THE SURFACE AND SUBSURFACE AREA SHALL BE RESTORED TO ORIGINAL CONDITION. REPLACE DAMAGED FENCE AND GATES WITH ORIGINAL SPECIES OR EQUAL. REPLACE DAMAGED AREAS WITH SIMILAR GRASS SPECIES.
7. SOIL DISPOSAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET G-2.
8. SEE SHEET G-1 FOR LEGEND.

SCALE 1" = 5'



BUILDING 3691 SITE REPLACEMENT PLAN

SCALE 1" = 5'-0"

SITE 3691 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
GASOLINE STORAGE TANK	500 GAL	VTR/RTRP	SEE (1) TANK SHALL BE FITTED WITH A LEAK DETECTION SWITCH

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY WORK TO INTEGRATE THE NEW DIESEL/FUEL SYSTEM TO THE EXISTING SYSTEM.
3. ALL AREAS DISTURBED OR DAMAGED DURING TANK REMOVAL, TANK INSTALLATION AND SITE WORK SHALL BE REGRADED AND REPAIRED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THIS REQUIREMENT IS APPLICABLE TO ALL SITES.
4. INSTALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO EXISTING SYSTEM AS SHOWN ON THE DRAWING. NEW PIPING SHALL SLOPE DOWN TANK FOR CONTAINMENT SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND PLACING OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD AFTER LOCATION OF ALL EXISTING UTILITIES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER.
6. SEE VICINITY/LOCATION MAP ON SHEET G-1 FOR LOCATION OF BUILDING 3691 SITE.

SCALE 1" = 10'-0"

DESIGNED BY JACK PHELPS	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
DRAWN BY JACK PHELPS	FORT RUCKER, AL
CHECKED BY HALEY SHAW	UNDERGROUND STORAGE TANK PROGRAM SITE 3691 REMOVAL AND REPLACEMENT TANK PLAN, LEGEND, SCHEDULES AND NOTES
SUPERVISED BY ROBERT FORRESTER	N-33

ANNISTON
JACKSONVILLE
HIGHWAY
NO. 21
YOUTH CENTER
3691

ADEM UST CLOSURE SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-005700

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-___

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environment
Fort McClellan, Alabama 36205

FACILITY NAME: Fort McClellan

LOCATION: Building 5700

CONTACT NAME: Raymond J. Mulholland

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Inchcape Testing Services

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 10/08/96

UNIQUE TANK #:	5700				
TANK SIZE:	150 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	10/08/96				
SUBSTANCE STORED:	Gasoline				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:	☐	☐	☐	☐	☐
HEATING OIL TANK:	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Silty Clay

i. Was the excavation backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Boring or monitoring well:	☐	☐
2. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

g. Specify the inert solid material used to fill the tank(s):

_____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was the product properly disposed of? YES ☐ NO ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

e. Was there a notable odor found in the piping trench? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain:	[ ]	[ ]

_____

g. Was free product found in the piping trench? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES [ ] NO [X]

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? YES ☐ NO ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): YES ☐ NO ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction:

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with clean backfill. **Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

_____

_____

_____

_____

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

_____

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

_____

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

_____

ADEM UST CLOSURE SITE ASSESSMENT FORM

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: Jerry Malaga

Company: SFMS, Inc.

Telephone Number: (615) 690-6282

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [illegible]

Date: 3/18/97

Alabama P.E. Registration Number: 19618

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

ADEM UST CLOSURE SITE ASSESSMENT FORM

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

_____

_____

_____

_____

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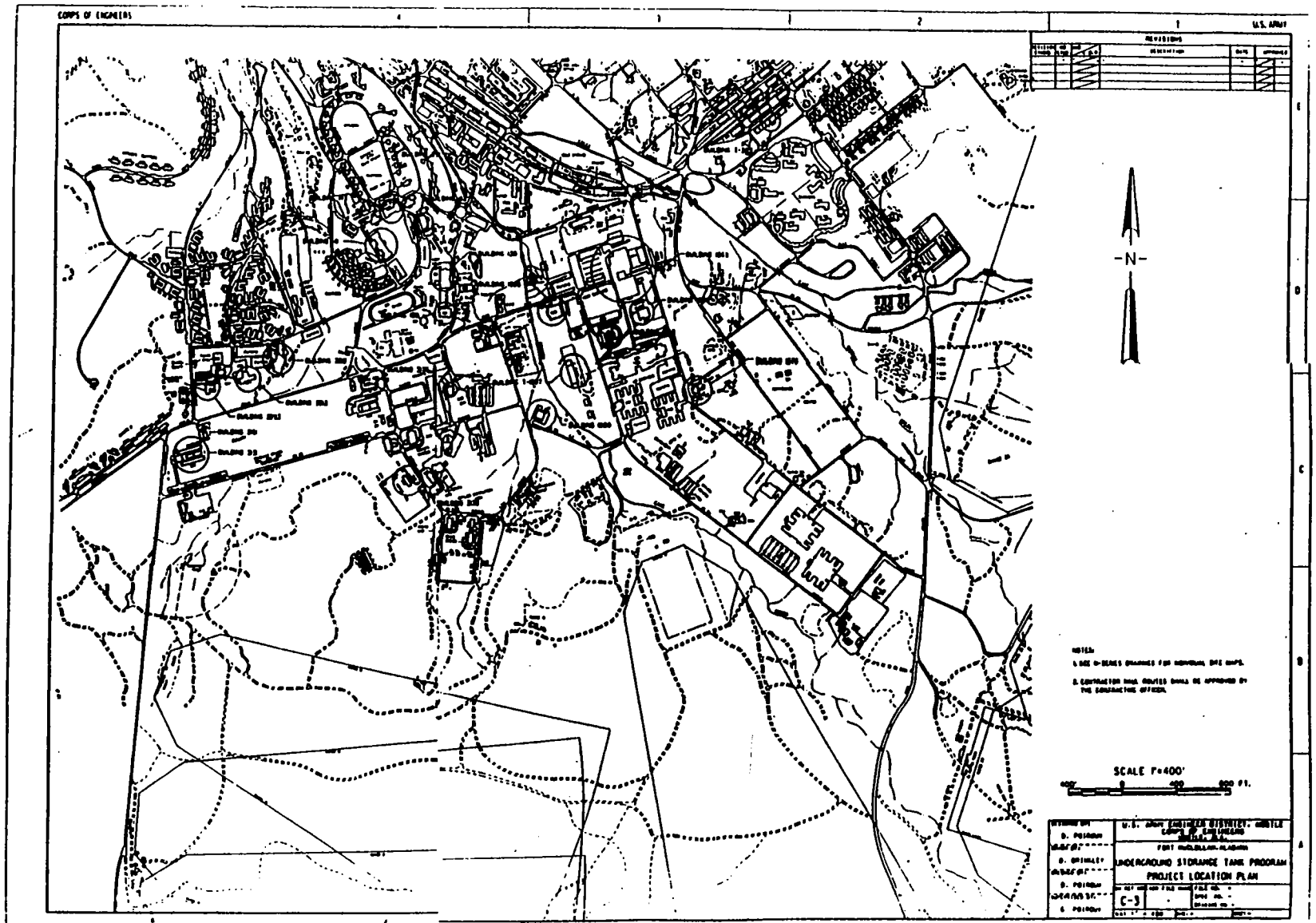
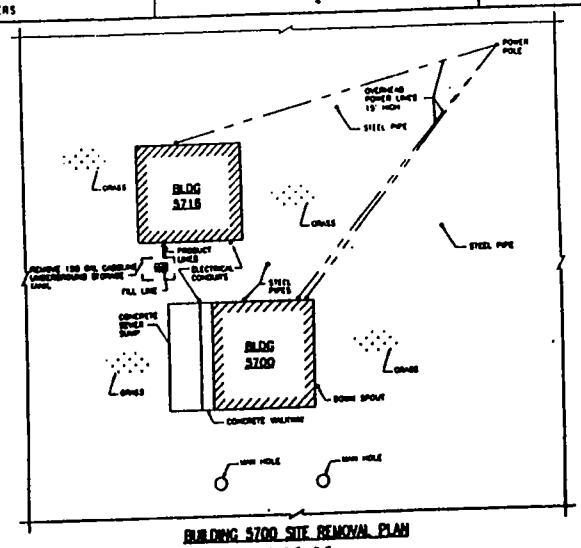
FORM 1133
5/8/95

Attachments: UST Closure Guidelines


CORPS OF ENGINEERS
U.S. ARMY
REVISIONS
-N-
SCALE 1"=400'
400' 0 400 800 FT.
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
FORT McCLELLAN, ALABAMA
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3

CORPS OF ENGINEERS

U.S. ARMY



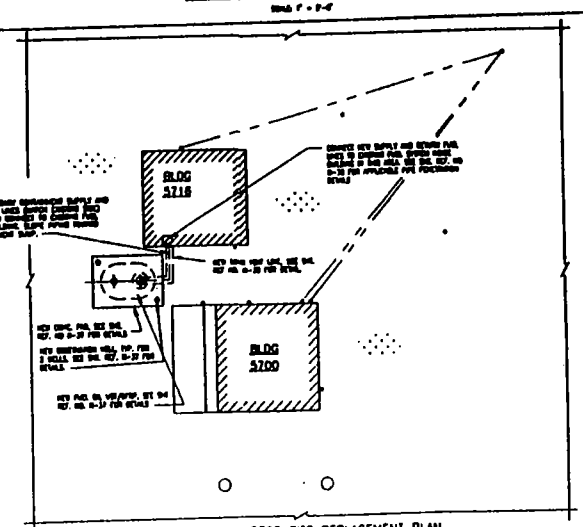
BUILDING 5700 SITE REMOVAL PLAN

SCALE: 1" = 5'-0"

SITE 5700 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
GASOLINE STORAGE TANK	150 GAL	VST/W	ONE (1) TANK OF MINIMUM CONSTRUCTION WITH EXTENDED DIMENSIONS OF 2'-7" X 2'-6"

REMOVAL NOTES

1. REMOVE UNDERGROUND STORAGE TANK AS INDICATED
2. REMOVE PRODUCT, HEAT LINES AND CONCRETE PAD
3. LOCATION OF TANK FILL PIPES AND VENT PIPES IS ACCURATE. THE INDICATED ORIENTATION OF UNDERGROUND TANK AND PRODUCT PIPING IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND ORIENTATION OF THE TANK.
4. THE INDICATED LOCATION OF VALVES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL VALVES AT THE SITE PRIOR TO BEGINNING ANY EXCAVATION
5. THE EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTIONS [illegible].
6. THE SURFACE AND SURROUNDING AREA SHALL BE RESTORED TO ORIGINAL CONDITION. REPLACE DAMAGED SIDES AND SHRUBS WITH ORIGINAL SPECIES OR SIMILAR. REPLACE DAMAGED AREAS WITH SIMILAR GRASS SPECIES.
7. SOIL SAMPLING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET N-3[illegible]
8. SEE SHEET N-1 FOR LEGEND



BUILDING 5700 SITE REPLACEMENT PLAN

SCALE: 1" = 5'-0"

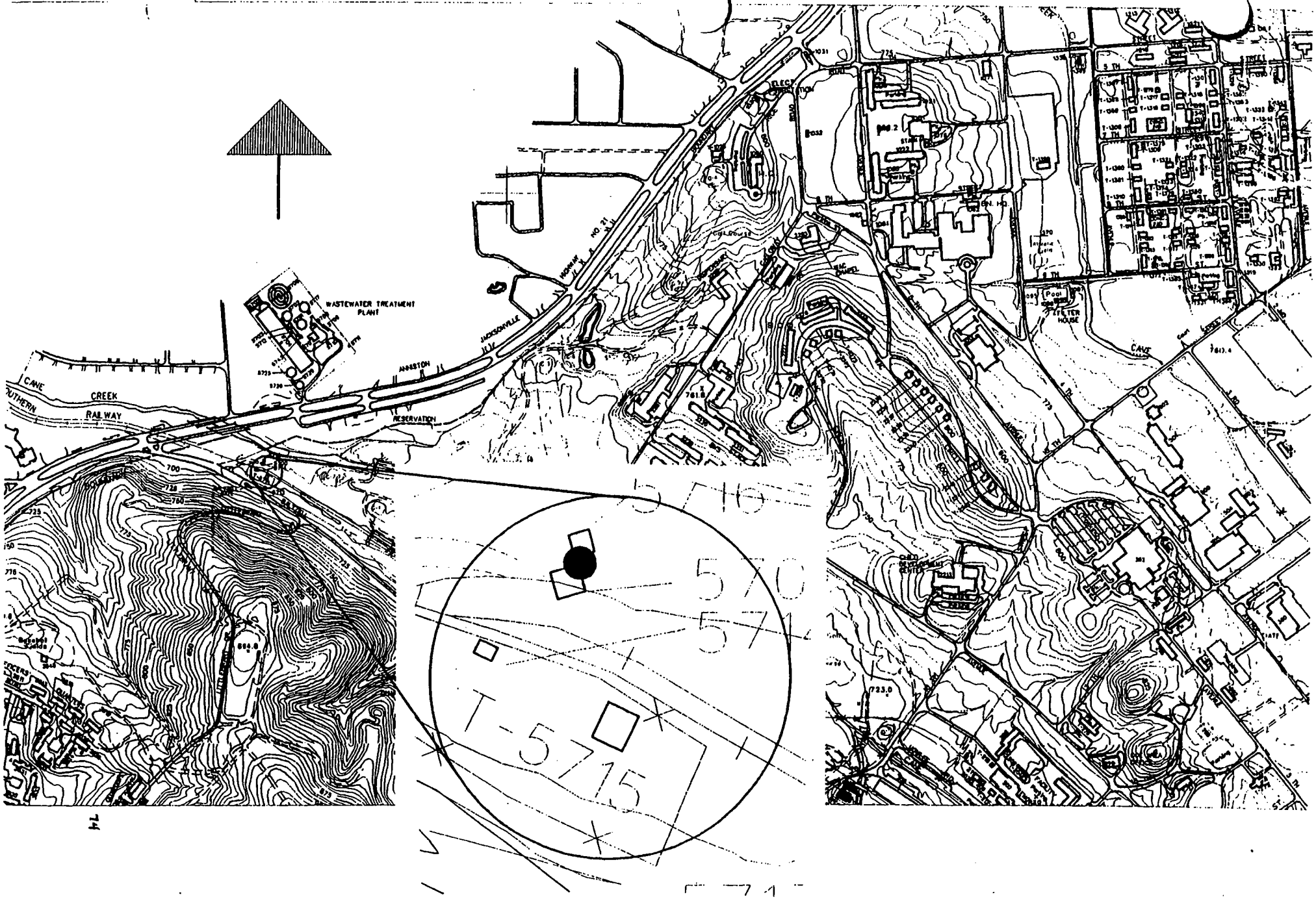
SITE 5700 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES
GASOLINE STORAGE TANK	500 GAL	VST/STP	ONE (1) DOUBLE WALL FRP TANK WITH A HOLDBOWN CONCRETE PAD. TANK SHALL BE PROVIDED WITH A LEAK DETECTION SYSTEM

NOTES

1. NEW FUEL STORAGE TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND CONTRACT SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY WORK TO REMOVE THE NEW TANK/FUEL SYSTEM TO THE EXISTING SYSTEM
3. ALL AREAS DISTURBED OR SCARRED DURING TANK REMOVAL, TANK INSTALLATION AND OTHER WORK SHALL BE REGRADED AND REPAIRED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THIS REQUIREMENT IS APPLICABLE TO ALL SITES.
4. INSTALL NEW SECONDARY CONTAINMENT FUEL PIPING FROM NEW TANK TO EXISTING SYSTEM AS SHOWN ON THIS DRAWING. NEW PIPING SHALL SLOPE TOWARD TANK AND CONTAINMENT SUMP.
5. FINAL LOCATION OF NEW REPLACEMENT TANK AND ORIENTATION OF NEW SECONDARY CONTAINMENT PIPING SHALL BE DETERMINED IN THE FIELD AFTER LOCATION OF ALL EXISTING VALVES AND REMOVAL OF EXISTING UNDERGROUND STORAGE TANKS. FINAL LOCATION SHALL BE APPROVED BY THE CONTRACTING OFFICER
6. SEE VICINITY/LOCATION MAP SHT. REF. NO. C-2 FOR LOCATION OF BUILDING 5700 SITE

SCALE: 1" = 5'-0"

DESIGNED BY: JACK PHELPS	U.S. ARMY ENGINEER DISTRICT, MOBILE CORPS OF ENGINEERS MOBILE, ALABAMA
DRAWN BY: JACK PHELPS	FORT McCLELLAN, AL
CHECKED BY: HULEN SHAW	UNDERGROUND STORAGE TANK PROGRAM SITE 5700 REMOVAL AND REPLACEMENT TANK PLAN, LEGEND, SCHEDULES AND NOTES
SUPERVISED BY: ROBERT FORRESTER	DR. REF. NO. N-34 · CADD FILE NAME N34-1050.DWG · FILE NO. · SPEC. NO. · DRAWING NO. · SCALE: AS NOTED · SHEET


WASTEWATER TREATMENT PLANT
CANE CREEK
RAILWAY
ANNISTON
JACKSONVILLE
RESERVATION
HIGHWAY NO. 21
FILTER HOUSE
CAVE
T-5715

BUILDING 5700

ATTACHMENT 8

BUILDING 1696 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

February 1, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 1696, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above-referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8737.

Sincerely,

David J. Doble
Environmental Scientist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J&D Enterprises

f:\wpfiles\cmkx\93-0180\0180.R12

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D. Hazardous Waste Manifest and Certificate of Disposal
E. Soil Boring Logs
F. Organic Field Vapor Data Sheets
G. Laboratory Results

A. Background

The underground storage tank (UST) at building 1697 is located south of building 1696 in a grassy area between the building and the newly installed replacement UST. The existing UST is located adjacent to the wall footings of building 1696. Therefore, in-place abandonment was chosen as the closure method. The UST capacity was approximately 2,000 gallons and was used to store waste oil. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

B. Piping Removal

Waste oil was placed into a drain sink on the south wall of the building and gravity fed by underground PVC pipe to the UST. The piping run was approximately 7 feet long and was removed on April 28, 1994. One soil sample was collected for analysis from the piping trench. The location is illustrated in Figure 2, Appendix C.

C. UST Closure In Place

Prior to closure in place of the UST the remaining product was removed, the tank was purged with fresh air and cleaned. The UST was constructed of single wall steel. No holes were observed from the interior of the UST, and it appeared to be in fair condition. The tank was filled with concrete slurry on April 29, 1994.

D. Soil Disposal

The excavated soils removed from over the top of the tank and the piping trench were stockpiled and covered with polyethylene plastic sheeting. The stockpile was bermed with clean soils. Approximately 2 yards of soil was removed and thin-spread at the Fort McClellan Landfill.

E. Sludge Disposal

No sludge was encountered during removal, however, 175 gallons of waste oil was drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

F. Soil Sampling and Laboratory Results

F.1. Soil Sampling Procedures

One power auger boring (labeled 1696-E) was performed on the one accessible side of the UST using a truck-mounted core and auger drill. Due to the location of the UST, the existing building, the replacement UST and underground utilities, only one soil boring location was accessible. The boring was continued to 15.5 feet below land surface to determine if groundwater was present within 5 feet of the assumed bottom of the UST. All down-hole equipment was steam cleaned prior to use, and clean augers were used for each borehole.

The power auger borings were advanced 2.5-foot intervals below land surface then removed by dead lifting. Split-spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140 pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2.5-foot vertical intervals to the termination depth of the borings.

F.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

F.3. Soil Boring Observations

The soils encountered in the soil borings completed near the UST basin consisted of clayey sand and lean clay with sand to the termination depth of the boring. Groundwater was not encountered in the soil boring. Complete Soil Boring Logs are attached in Appendix E.

F.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split-spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

F.5. Chemical Soil Sampling

A soil sample was collected for chemical analysis from the depth of 7.5 feet below land surface in the soil boring. In addition, soil samples were collected beneath the piping trench and from the soil excavated from the top of the UST according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collected from below the piping run labeled "A." An additional sample labeled "B" was collected from the same sampling point 2 feet further into the native soil. The "B" sample was preserved until analysis of the "A" sample was completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples was analyzed. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

F.6. Analytical Analyses Results

The analytical results of the soil samples collected from the soil borings and pipe trench are summarized in Table 1. Complete laboratory reports and original chain of custody is attached in Appendix G.

Table 1
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
1696-E	<5	39	7.5	94-0431-08
Spoil pile	1550	7.0	N/A	94-0431-46
Pipe trench "A"	1200	44	2.0	94-0452-43
Pipe trench "B"	105	5.0	4.0	94-0452-44

G. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum-contaminated soils were encountered in the soil samples collected beneath the piping trench and from the soils excavated from above the UST. The vertical and horizontal extent of the petroleum-contaminated soils was not determined during this assessment. Groundwater was not encountered in the soil borings completed near the tank basin.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015840

Date of this Report: February 1, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 1696
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6111/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 1
Closure Date: 4-29-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	4' X 12'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES __NO ___ If not, provide the depth from the ground surface to the groundwater table. ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____ NO _____
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
If yes, please indicate which tank(s) by the Identification Number _____.
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
_____
_____
_____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES X NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well No groundwater to 15.5 in soil boring completed near UST basin
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO X If yes:
1. The odor strength was (mild) (strong) (Other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO X
If yes:
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Clayey sand and lean clay with sand to 15.5 feet.

g. Specify the inert solid material used to fill the tank(s). Concrete slurry

h. Provide the date the tank(s) were filled. 4-29-94

i. Were the bore holes properly sealed with bentonite/soil?
Yes X No _____ If yes, provide date: 4-25-94

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES X NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well Soil borings
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES X NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____)

f. Was there water in the piping trench? YES _____ NO X
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO X
If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO X_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
Clayey sand to 3 feet

j. Was the piping trench backfilled? YES X_____ NO _____
If yes, provide the date 4-29-94 _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____
   _____
   _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 2_____ cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ___X_____ NO _____ If no, describe how tank(s) were cleaned. _____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank. _0_____ gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

_____

_____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David J. Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: 2-1-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: _____ Date: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: February 1, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

Facility County: Calhoun

Facility Name: Building 3298

Location: Fort McClellan

Address: Fort McClellan, AL 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

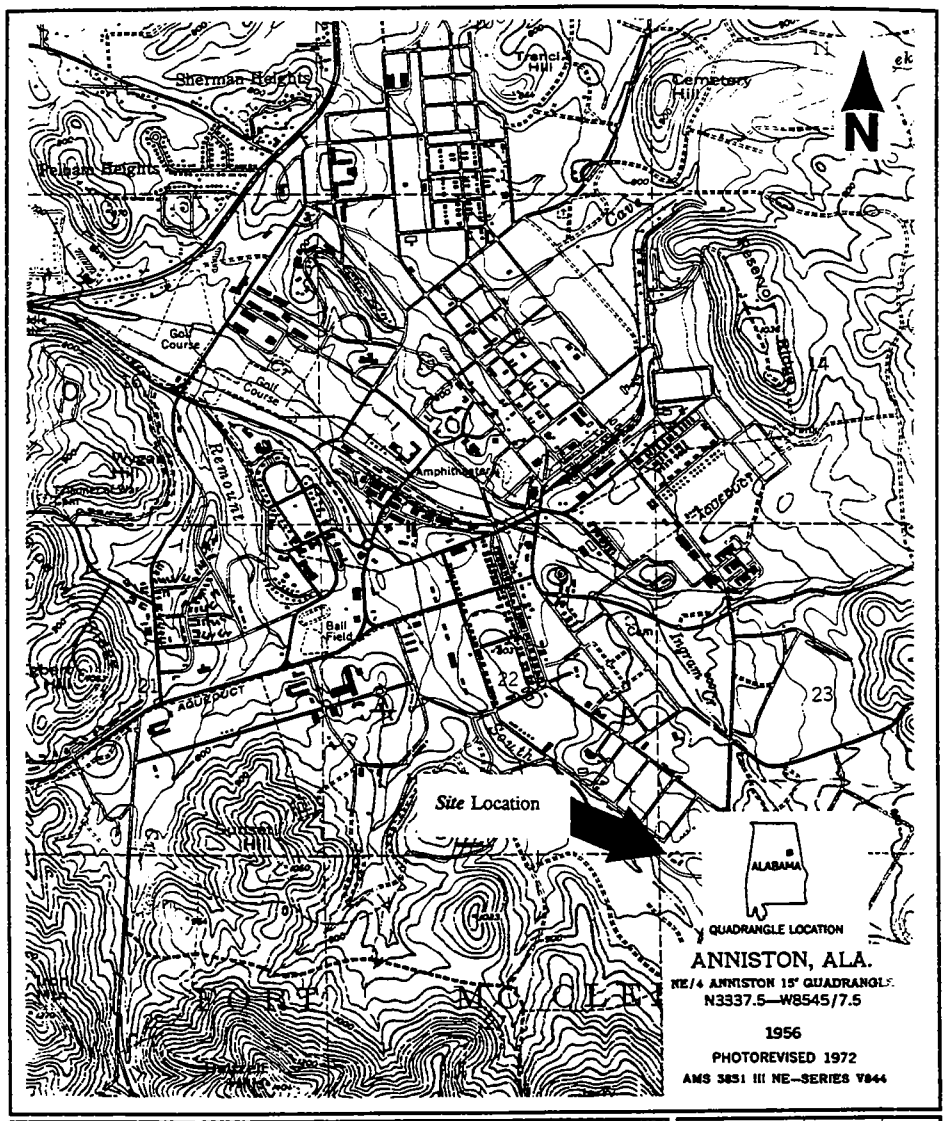
Sample 1	1550	ppm	x	2	cyds	x	.002	=	6.2	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 0		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions
								TOTAL POTENTIAL EMISSIONS	6.2	lbs VOC emissions

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

Appendix B

Site Location



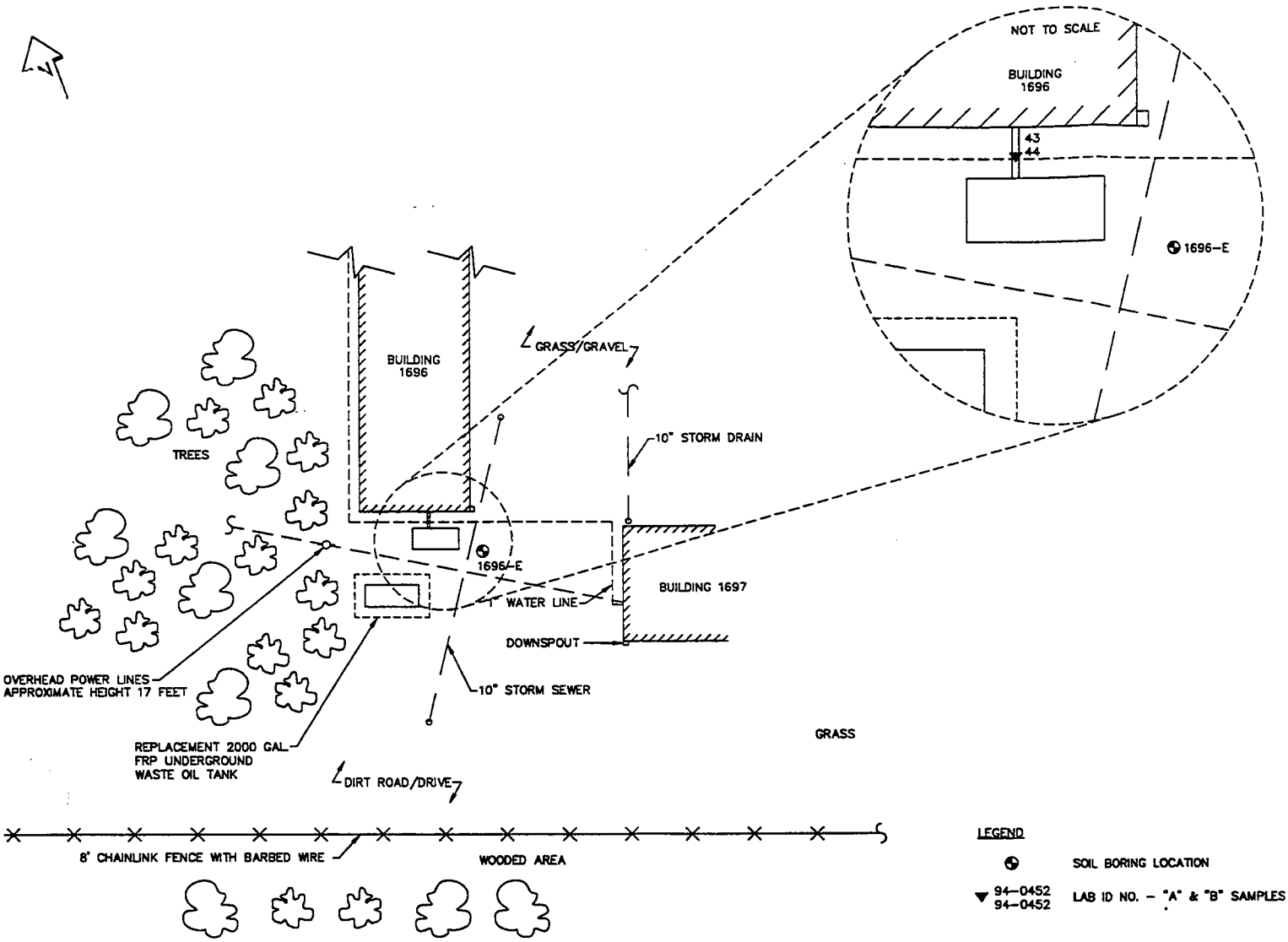
BRAUN™ INTERTEC

***Site* Location Map**
Waste oil UST program
Building 1696
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMOX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations


NOT TO SCALE
BUILDING 1696
43
44
1696-E
BUILDING 1696
GRASS/GRAVEL
10" STORM DRAIN
TREES
1696-E
WATER LINE
BUILDING 1697
DOWNSPOUT
OVERHEAD POWER LINES APPROXIMATE HEIGHT 17 FEET
10" STORM SEWER
GRASS
REPLACEMENT 2000 GAL FRP UNDERGROUND WASTE OIL TANK
DIRT ROAD/DRIVE
8' CHAINLINK FENCE WITH BARBED WIRE
WOODED AREA
LEGEND
SOIL BORING LOCATION
94-0452
94-0452
LAB ID NO. - "A" & "B" SAMPLES

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

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

297

Form Approved. OMB No. 2050-0039. Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FORT MCCLELLAN, SOMMERALL GATE, ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Fisher Industrial Service, Inc., 402 Webster Chapel Rd., Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quanitity	14. Unit Wt/Vol	I. Waste No.
a. OIL SLUDGE, NON HAZARDOUS/NON REGULATED FIS Profile #: 18901	40	CM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above: Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above:

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406
Purchase Order #: DAVE DOBLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: Nolan L. Jaye
Month Day Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: John W. Oliver
Month Day Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doble
Signature: [signature]
Month Day Year: 06 06 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: NOLAN L. JAYE, JR. NLJ
Signature: Nolan L. Jaye NLJ
Month Day Year

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8332
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Appendix E

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: **1696-E** LOCATION: See attached sketch. DATE: 4/25/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.9	0.0	SC	CLAYEY SAND, fine to medium grained, red, moist, loose to dense. (Loess) -with lenses of red Lean Clay. -with lenses of Gravel.	8 41 17		Asssumed elevation of 100.0 feet established on the floor slab of bldg. 1696.
91.4	8.5	CL	LEAN CLAY with GRAVEL, red, moist, medium to very stiff. (Residual Clay)	8 20		
84.4	15.5		END OF BORING Water not observed to 15 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

Appendix F

Organic Field Vapor Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 1696E *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0.4	1	
5		0	0	
7.5		0	0.9	
10		0	3.5	
15		0	3.9	

Appendix G

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on four (4) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref.:

94-0431-08	BLDG.	1696	South East DD
94-0431-43	BLDG.	1696	Pipe Trench "A"
94-0431-44	BLDG.	1696	Pipe Trench "B"
94-0431-46	BLDG.	1696	Spoil Pile

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
08	<5	39
Spike Recovery, %	98.57	102.77
Relative Percent Difference on Duplicate, % . .	1.43	4.46

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
43	1200	44
44	105	5.0
46	1550	7.0
Spike Recovery, %	104.30	106.44
Relative Percent Difference on Duplicate, %	0.62	2.08

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: BRAUN INTERTECH
Client Contact: DAVE DOBLE
Ref(s):
Site Location:
P.O. #
Log In No. 94-0431 Project No. CMKY-93-0180D

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:
LEGAL CASE ☐ Yes ☒ No
Requested Due Date:
RUSH ☐ Yes ☒ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	LEAD (PB)	REMARKS	Refrigerated	Preserved
41	4/28		BLDG 338 PIPE TRENCH (B)	X												X	X	HOLD BROKEN		
42	4/28		BLDG 338 STOCK PILE	X												X	X			
43	4/28		BLDG 1696 PIPE TRENCH (A)	X												X	X			
44	4/28		BLDG 1696 PIPE TRENCH (B)	X												X	X	HOLD		
45	4/28		BLDG 1800 SPOIL PILE	X												X	X	BROKEN		
46	4/28		BLDG 1696 SPOIL PILE	X												X	X			
47																				
8																				
9																				
0																				

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by: Jason Dell	3 MAY 94 2:00pm	Received by:	
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by:		Received by:	

White – Client Yellow – Company files Pink – Department files

ATTACHMENT 9

BUILDING 1697 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

February 1, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 1697, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above-referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8737.

Sincerely,

David J. Doble
Environmental Scientist

for Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J&D Enterprises

f:\wpfiles\cmkx\93-0180\0180.R14

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A. Background 1

B. Piping Removal 1

C. UST Closure In Place 1

D. Sludge Disposal 2

E. Soil Sampling and Laboratory Results 2

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- E.3. Soil Boring Observations 3
- E.4. Organic Vapor Screening 3
- E.5. Chemical Soil Sampling 3
- E.2. Analytical Analyses Results 4

F. Conclusions 4

Appendices

A. ADEM Closure Report Form
B. Site Location
C. Site Plan with Sample Locations
D. Hazardous Waste Manifest and Certificate of Disposal
E. Soil Boring Logs
F. Organic Field Vapor Data Sheets
G. Laboratory Results

A. Background

The underground storage tank (UST) is located south of building 1697 in a grassy area between the building and the gravel drive. The UST is located adjacent to the wall footings of building 1697. Therefore, in-place abandonment was chosen as the closure method. The UST capacity was approximately 2,000 gallons and was used to store waste oil. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

B. Piping Removal

Waste oil was placed into a drain sink on the south wall of the building and gravity fed by underground PVC pipe to the UST. The piping run was approximately 7 feet long and was removed on May 2, 1994. One soil sample was collected for analysis from the piping trench. The location is illustrated in Figure 2, Appendix C.

C. UST Closure In Place

Prior to closure of the UST the remaining product was removed, the tank was purged with fresh air and cleaned. The UST was constructed of single wall steel. No holes were observed from the interior of the UST, and it appeared to be in fair condition. The tank was filled with concrete slurry on May 2, 1994.

Approximately 2 yards of soil were removed from the UST basin during exposure of the UST. The soils appeared to be clean with no odors or unusual staining noted. The soils were used to cover the tank after it had been closed in-place

D. Sludge Disposal

No sludge was encountered during removal, however, 100 gallons of waste oil was drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

E. Soil Sampling and Laboratory Results

E.1. Soil Sampling Procedures

Three power auger borings (labeled 1697-E, 1697-S, and 1697-W) were performed on each accessible side of the UST using a truck-mounted core and auger drill. Borings were extended to a depth near the assumed base of the UST. One additional boring (labeled 1696-E) was completed during an in-place UST closure assessment approximately 70 feet west of the UST located at the Building 1697 site. Soil boring 1696-E was continued to 15.5 feet below land surface to determine if groundwater was present. All down-hole equipment was steam cleaned prior to use, and clean augers were used for each borehole.

The power auger borings were advanced 2.5-foot intervals below land surface then removed by dead lifting. Split-spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140 pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2.5-foot vertical intervals to the termination depth of the borings.

E.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

E.3. Soil Boring Observations

The soils encountered in the soil borings completed near the UST basin consisted of lean clay with sand to the termination depth of the borings. Groundwater was not encountered in the soil borings completed at Building 1697, nor to 15.5 feet in soil boring 1696-E. Complete Soil Boring Logs are attached in Appendix E.

E.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split-spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

E.5. Chemical Soil Sampling

Soil samples were collected for chemical analysis from the depth of 7.5 feet below land surface in each of the three soil borings completed near the UST. In addition, soil samples were collected beneath the piping trench according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collected from below the piping run labeled "A." An additional sample labeled "B" was collected from the same sampling points 2 feet further into the native soil. The "B" sample was preserved until analysis of the "A" sample was completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples was analyzed. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

E.2. Analytical Analyses Results

The analytical results of the soil samples collected from the soil borings and pipe trench are summarized in Table 1. Complete laboratory reports and original chain of custody is attached in Appendix G.

Table 1
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
1697-E	<5	15	7.5	94-0431-09
1697-S	<5	8.2	7.5	94-0431-10
1697-W	10	7.7	7.5	94-0431-11
Pipe trench "A"	3300	37	2.0	94-0452-13
Pipe trench "A"	4200	75	4.0	94-0452-14

F. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum-contaminated soils were encountered in soil borings completed near the UST basin and in the soils samples collected beneath the piping trench. The vertical and horizontal extent of the petroleum-contaminated soils was not determined during this assessment. Groundwater was not encountered in the soil borings completed near the tank basin.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015840

Date of this Report: February 1, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

Facility County: Calhoun
Facility Name: Building 1697
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jave

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1 CIP

Number of tanks remaining at site: 0
Closure Date: 5-2-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	4' X 11'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES __NO ___ If not, provide the depth from the ground surface to the groundwater table.
ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
   (other _____)

e. Was there water in the excavation? YES _____ NO _____
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
If yes, please indicate which tank(s) by the Identification Number _____.
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
_____
_____
_____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES X NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well No groundwater to 15.5 feet in soil boring completed 70 west of the UST basin
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES X NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO X
If yes:
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Lean clay with sand, hard to 8 feet.

g. Specify the inert solid material used to fill the tank(s). Concrete slurry

h. Provide the date the tank(s) were filled. 5-2-94

i. Were the bore holes properly sealed with bentonite/soil?
Yes X No _____ If yes, provide date: 4-25-94

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES X NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well Soil borings
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO X If yes:
1. The odor strength was (mild) (strong) (other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____)

f. Was there water in the piping trench? YES _____ NO X
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO X
If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO X_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
_____

j. Was the piping trench backfilled? YES X_____ NO _____
If yes, provide the date 5-2-94_____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

   _____

   _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 0 cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

_____

_____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David J. Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: 2-1-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: _____ for Earl Windahl Date: 2-1-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: February 1, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

Facility County: Calhoun

Facility Name: Building 3298

Location: Fort McClellan

Address: Fort McClellan, AL 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

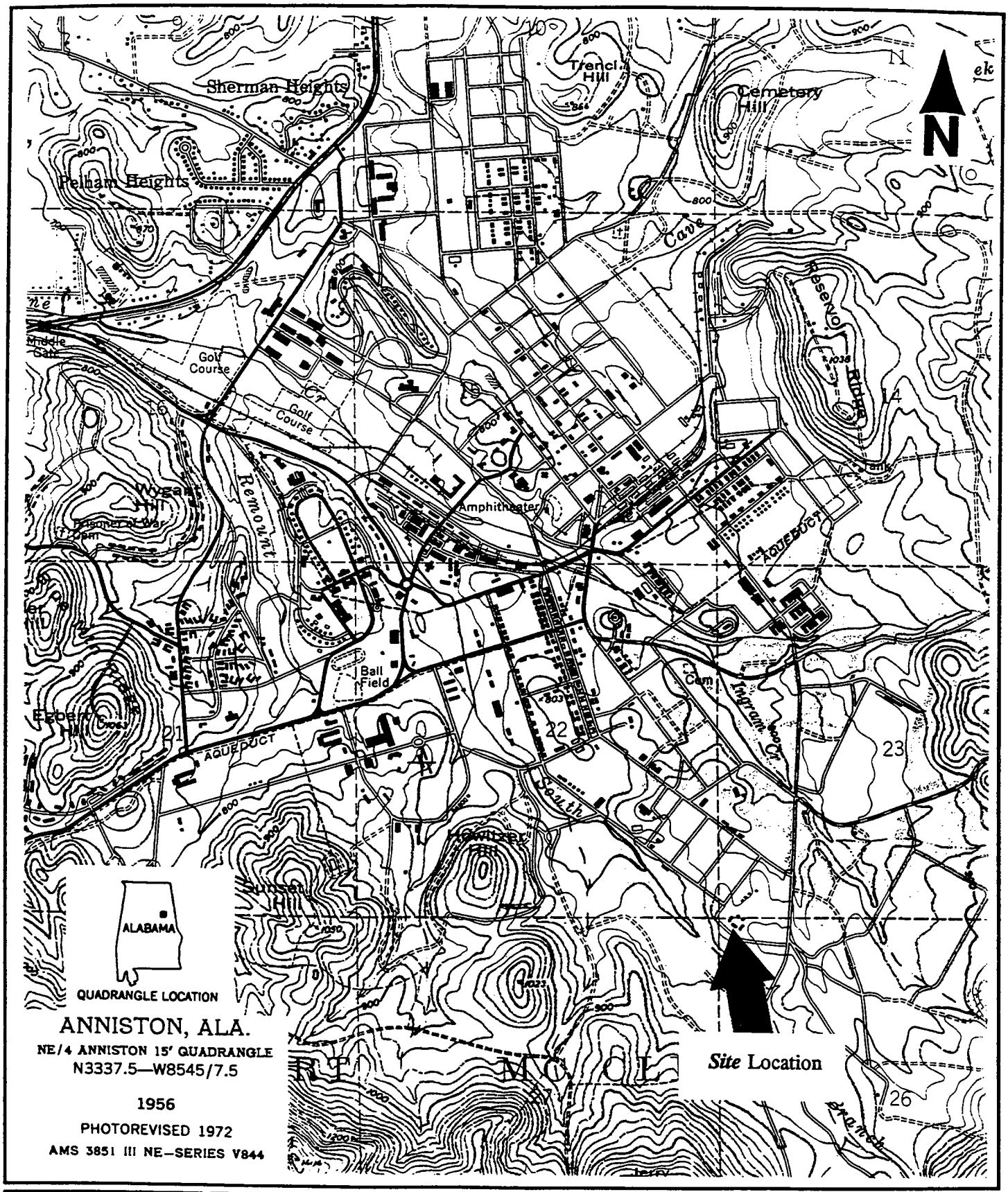
Sample 1	_____	ppm	x	0	cyds	x	.002	=	_____ lbs VOC emissions
Sample 2	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 3	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 4	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 5	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 6	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 7	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 0	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 9	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 10	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 11	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 12	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 13	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 14	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 15	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 16	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 17	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 18	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 19	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 20	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
							TOTAL POTENTIAL EMISSIONS		0 lbs VOC emissions

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

Appendix B

Site Location



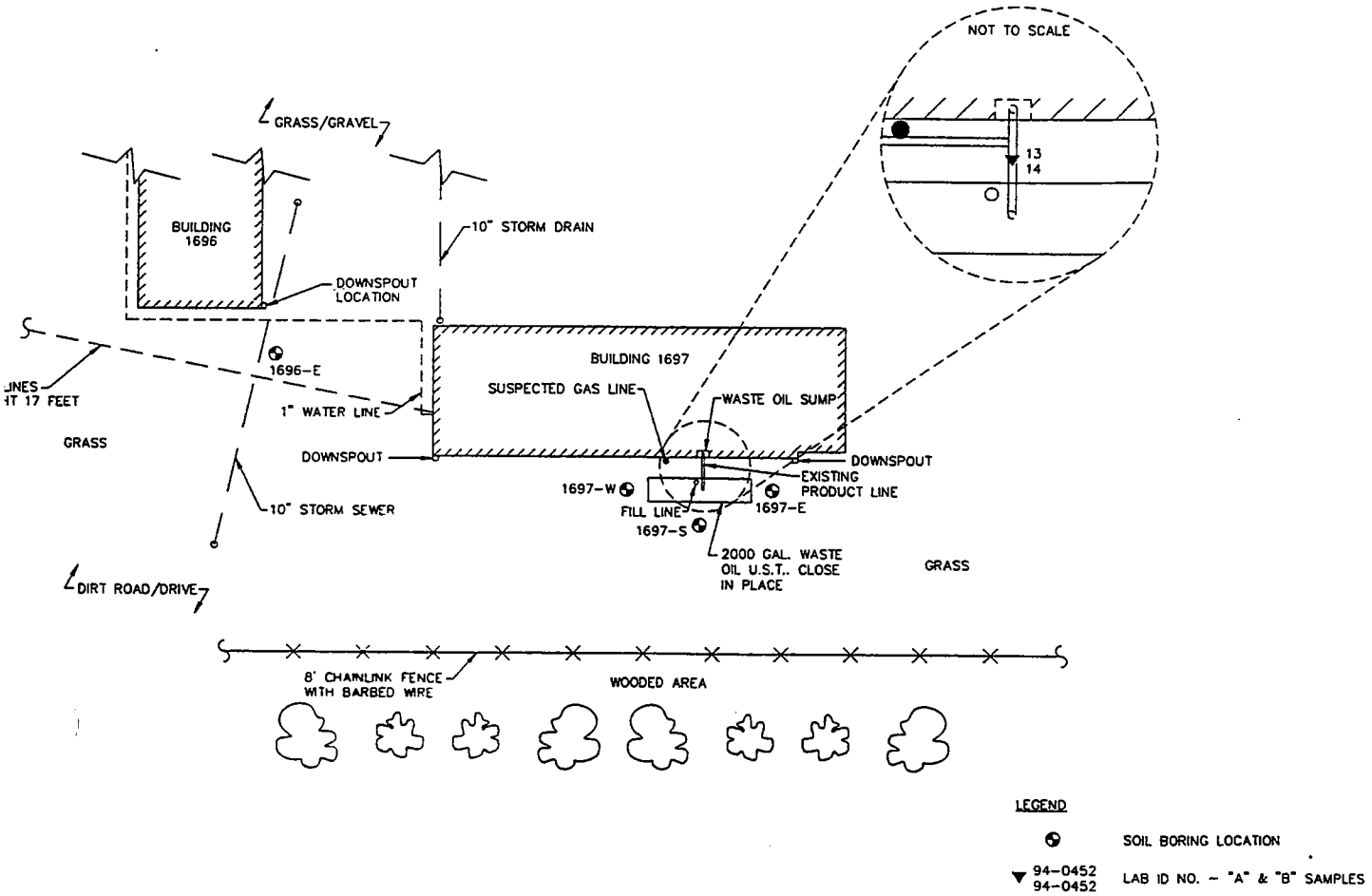
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 1697
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations



SITE MAP

DATE 1-18-95

DRAWN BY: JAG

FIGURE

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9 30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FORT MCCLELLAN, SOMMERALL GATE, ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Fisher Industrial Service, Inc., 402 Webster Chapel Rd., Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. OIL SLUDGE, NON HAZARDOUS/NON REGULATED — FIS Profile #: 18901	40	DM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406
Purchase Order #: DAVE DOBLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: Nolan L Jaye
Month Day Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: John W. Oliver
Month Day Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doble
Signature: [signature]
Month Day Year: 06 06 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: NOLAN L. JAYE, JR. NJ
Signature: Nolan L Jaye NJ
Month Day Year

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Appendix E

Soil Boring Logs

LOG OF BORING

PROJECT:	BORING: 1697-E
CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	LOCATION: See attached sketch.
	DATE: 4/25/94 — SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
100.2	0.0	CL	LEAN CLAY with SAND, red, moist, very stiff to hard. (Residual Clay)	17 27 37		Asssumed elevation of 100.0 feet established on the floor slab of bldg. 1696.
92.2	8.0		END OF BORING Water not observed to 8 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 1697-S LOCATION: See attached sketch. DATE: 4/26/94 SCALE: 1" = 4'

Elev. 99.9	Depth 0.0	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
		CL	LEAN CLAY with SAND, red, moist, very stiff to hard. (Residual Clay)	15		
				24		
91.9	8.0			58		
			END OF BORING Water not observed to 8 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 1697-W LOCATION: See attached sketch. DATE: 4/26/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
100.2	0.0	CL	LEAN CLAY with SAND, red, moist, very stiff to hard. (Residual Clay)	21 17 54		
92.2	8.0		END OF BORING Water not observed to 8 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 1696-E LOCATION: See attached sketch. DATE: 4/25/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.9	0.0	SC	CLAYEY SAND, fine to medium grained, red, moist, loose to dense. (Loess) -with lenses of red Lean Clay. -with lenses of Gravel.	8 41 17		Asssumed elevation of 100.0 feet established on the floor slab of bldg. 1696.
91.4	8.5	CL	LEAN CLAY with GRAVEL, red, moist, medium to very stiff. (Residual Clay)	8 20		
84.4	15.5		END OF BORING Water not observed to 15 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

Appendix F

Organic Field Vapor Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 1697E *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0.4	1	
5		0	2.5	
7.5		0	2.6	

Organic Vapor Field Data Sheet

Boring Identification: 1697S *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0.5	5.2	
5		0	3.5	
7.5		0	3.1	

Organic Vapor Field Data Sheet

Boring Identification: 1697W *Project No.:* CMKX-93-0180 *Date:* 4-26-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-26-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	2.5	
5		0	2.5	
7.5		0	3.4	

Appendix G

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0452

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on two (2) soil samples received on May 6, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:	94-0452-13	BLDG. 1697	Piping Trench	"A"	2'
	94-0452-14	BLDG. 1697	Piping Trench	"B"	4'

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
13	3300	37
14	4200	75
Spike Recovery, %	97.97	106.44
Relative Percent Difference on Duplicate, % ..	0.39	2.08

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\j&nden07.21

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page _____ of _____

Site Identification

FORT MC CLELLAN
BLDG 1697
ANNISTON ALABAMA

Project #: CMRX-93-0180 TASK D

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) A

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: JOHN PHILLIPS

Sampled by: JOHN PHILLIPS

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	BLDG 1697 "A" PIPING TRENCH 2'	5-2-94	—	A				1								TPH, Lead
	~~B~~			~~A~~ JTP												~~HOLD~~ JTP
	BLDG 1697 "B" PIPING TRENCH 4'	5-2-94	—	A				1								HOLD

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[illegible]	5-4-94	0905					

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:
				Thomas Hallquist	5-6-94	12:10

BRAUN℠
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on three (3) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0431-09	BLDG. 1697	East
94-0431-10	BLDG. 1697	South
94-0431-11	BLDG. 1697	West

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
09	<5	15
10	<5	8.2
Spike Recovery, %	98.57	102.77
Relative Percent Difference on Duplicate, %	1.43	4.46

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
11	10	7.7
Spike Recovery, %	85.07	96.78
Relative Percent Difference on Duplicate, % . .	1.63	1.80

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\j&ndcn07.20

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-0431

Page 1 of ____

Site Identification

Fort McClellan
Anniston Alabama

Project #: CAKX-93-080-D

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) ____

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: Dave Doble

Sampled by: D. Doble

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
09	Bldg 1697 East	4-25		9				1								TPH lead
10	South			9				1								
11	West			9				1								

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
D. Doble	5-2-94						

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

ATTACHMENT 10

BUILDING 1800 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 20, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 1800, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or Dave Doble at (612) 683-8713.

Sincerely,

David Doble
Environmental Geologist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises

*f:\wpfiles\cmkx\93-0180\0180.R06

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A. Background

The underground storage tank (UST) at Building 1800 is located east of the building, southeast of the car wash facility. The Alabama Department of Environmental Management (ADEM) UST Closure Report Form is included in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 600 gallons and was used to store used oil.

B. Piping Removal

Used oil was emptied into a drain sink on the east building wall and gravity-fed through underground PVC piping to the UST. The pipe trench was excavated on April 27, 1994. Approximately 14 feet of pipe was removed from the site. The pipe trench was excavated approximately 2 feet below the existing pipe for installation of the replacement.

C. UST Excavation

Prior to removal of the UST, approximately 500 gallons of used oil was removed from the tank. After the product was removed, the tank was purged with fresh air. Soils around the tank were excavated and screened with the PID until the tank sides and ends were exposed and could be removed. The tank was steel, no holes were observed, and it appeared to be in fair condition. The tank and piping were removed on April 27, 1994. Surface spills were noted above the UST prior to excavation. The excavation limits are illustrated in Figure 1, Appendix B.

The soils of the tank basin consisted of silty clay to approximately 11 feet overlying shale bedrock. The base of the tank rested approximately 8 feet below land surface. Water was not encountered in the excavation. However, water was encountered at bedrock when the excavation was extended to collect soil samples.

After removal of the tank, the excavation measured approximately 20 feet long by 14 feet wide by 10 feet deep. All of the soils removed from the excavation were removed to a stockpile area east of the excavation. The excavation was backfilled with pea gravel on April 27, 1994.

D. Soil Observations

Soil samples retrieved from the side walls and base of the UST excavation were examined visually by an environmental geologist for staining and other apparent signs of contamination. Surface staining was noted and stained soils were encountered to a depth below the top of the UST. Stained soils were also noted from the top to near the bottom of the east side of the UST during excavation.

The soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling. The PID was used to test fresh surfaces of soil collected from the sidewalls of the excavation and to perform headspace analyses.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. PID headspace analysis results of the final excavation limits are listed in Table 1.

Table 1
PID Headspace Readings

Location	Headspace reading (ppm)
North wall	4.5
West wall	51
South wall	13.6
East wall	117
Base	107

E. Soil Disposal

Approximately 6 yards of soil were removed from the UST basin during excavation of the UST. Contaminated soils were transported to the base landfill for thin-spreading.

F. UST Disposal

After the UST was properly cleaned by J & D Enterprises, it was transported off-site for disposal by Shorty's Scrap Metal, according to the contract requirements.

F. Sludge Disposal

No sludge was encountered during removal, however, approximately 36 gallons of used oil were drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

G. Soil Sampling and Laboratory Results

G.1. Soil Sample Collection

Soil samples were collected according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collected from each sidewall and the base of UST excavation labeled "A." An additional five samples labeled "B" were collected from the same sampling points 2 feet further into the native soil. Pipe trench samples were collected from the bottom of the piping trench (sample "A") and a point 2 feet below the base of the trench (Sample "B"). The "B" samples were preserved until analysis of the "A" samples were completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples were analyzed. An additional sample was collected from the stockpile for analysis.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum

hydrocarbons (TPH) and total lead. No analyses were performed on the stockpile sample collected on April 27, 1994 due to the sample bottle breaking during transport. A replacement sample was collected from the stockpile on May 10, 1994 and transported to the Braun Intertec laboratory for analyses.

G.2. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation, pipe trench and the soil stockpile are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix E.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
North Sidewall "A"	<5	3.9	4	94-0431-21
North Sidewall "B"	NL	NL	4	94-0431-26
South Sidewall "A"	5000	17	4	94-0431-22
South Sidewall "B"	680	7.9	4	94-0431-27
East Sidewall "A"	41,000	16	4	94-0431-23
East Sidewall "B"	45	8.5	4	94-0431-28
West Sidewall "A"	26,000	58	4	94-0431-24
West Sidewall "B"	425	7.4	4	94-0431-29
Base "A"	1200	15	6	94-0431-25
Base "B"	12,000	14	8	94-0431-30
Pipe Trench "A"	71,000	95	1.5	94-0431-31
Pipe Trench "B"	340	12	3.5	94-0431-32
Stockpile	*	*	NA	94-0431-45
Stockpile	6,700	31	NA	94-0452-11

NL= No laboratory analyses conducted on "B" sample.
NA=Not applicable
*= Sample bottle broken in transit to laboratory.

H. Groundwater Sampling and Analyses

H.1. Monitoring Well Installation

Four monitoring wells were installed near the UST to collect groundwater samples for analyses in accordance with ADEM rules and contract specifications. Each monitoring well was constructed of 4-inch diameter, flush-threaded PVC riser pipe and a 10-foot long, 4-inch diameter, 0.010-inch PVC screen. Silica sand was placed around the screen as a filter pack, and a bentonite seal was installed. Wells were finished using protective at-grade well vaults placed over the riser pipe, around which a concrete pad was constructed.

H.2. Monitoring Well Development Procedures

The monitoring wells were developed by removing groundwater from the well using a precleaned 4-foot PVC bailer. Groundwater was purged from each well until relatively clear, sediment-free water was produced, the well was bailed dry, or 10 well volumes were removed.

H.3. Groundwater Sampling Procedures

To sample the groundwater from monitoring wells, each well was purged using a precleaned Teflon® bailer until the water in the well exhibited consistent pH, temperature, and specific conductance readings. The criteria for consistency were ± 0.01 unit (pH), ± 0.5° celsius (temperature) and ± 5 percent for specific conductance. Samples were collected using a Teflon® bailer and placed in clean, glass, screw-top VOA vials having Teflon®-lined caps. The sample vials were labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

H.4. Groundwater Measurements

Four monitoring wells were installed at the site. Appendix F includes Well Construction Diagrams.

Depth to groundwater was measured at each of the four monitoring wells present on-site. Groundwater elevation data collected on October 13, 1994 indicate that groundwater movement is toward the north. Table 3 summarizes the groundwater elevation data collected at the site.

Table 3
Groundwater Measurements

Location	Top of riser	Water level
MW-1	99.15	91.31
MW-2	98.30	91.27
MW-3	97.68	91.23
MW-4	97.58	91.23

H.5. Groundwater Chemical Analysis

All analyses were performed using EPA or other recognized standard procedures. Data were reviewed prior to release and all quality control guidelines were met. Specific information on standard operating procedures is available upon request.

H.6. Groundwater Analytical Chemistry Results

One round of groundwater sampling was performed on October 13, 1994, on monitoring wells MW-1, MW-2, MW-3 and MW-4. Sample parameters for the sampling were volatile organic compounds (VOCs), total lead, and Polynuclear Aromatic Hydrocarbons (PAHs). Laboratory reports and Chain-of-Custody forms are included in Appendix E. Water sampling data sheets are included in Appendix C.

No VOCs or PAHs were detected at or above the analytical method detection limits in monitoring wells MW-1, MW-2, MW-3 or MW-4 during the sampling event with the exception of fluorene detected in MW-1 at a concentration of 0.30 micrograms per liter (μg/l) and in MW-3 at a concentration of 0.12 μg/l. Total lead was detected in above the analytical method detection limit only in MW-4 at a concentration of 3 μg/l.

I. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum-contaminated soils were encountered in the tank basin and the pipe trench. The vertical and horizontal

extent of the petroleum-contaminated soils was not determined during the limited amount of excavation to remove the tank. Water was encountered beneath tank basin during the excavation process. The analyses of the soil samples collected from the sidewalls and the base of the excavation show a TPH concentrations ranging from <5 ppm to 41,000 ppm and total lead concentrations ranging from 3.9 ppm to 58 ppm. Analyses of the pipe trench sample indicated high concentrations of TPH and lead in the sample collected from directly beneath the pipe. However, TPH and lead concentrations decreased in the "B" sample collected two feet below the "A" Sample. Excavation of the trench for new piping extended the excavation an additional foot into native soils.

Groundwater samples were collected from four monitoring wells installed near the UST basin. Laboratory analyses of the groundwater samples collected from the monitoring wells detected no VOCs, or PAHs at or above analytical method detection limits with the exception of fluorene. The fluorene was detected in the upgradient monitoring well and only one of the downgradient wells. Total lead levels above the analytical method detection limits were detected in one of the downgradient monitoring wells.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015-015840

Date of this Report: January 20, 1995

Incident No. (If applicable)
UST __ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 1800

Location: Ft. McClellan

Contact: Mr. Ray Murphy

Address: Ft. McClellan, Alabama

Contact Telephone No.: (205) 848-6155

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 1

Closure Date: 4-27-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	4' X 6.5'				
Tank Capacity	600				
Tank Age	UN				
Date Tank Last Used	4-20-94				
Substance Stored	Used Oil				
Type of Product Piping (pressurized/suction)	Gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
   YES __NO X_____ If not, provide the depth from the ground surface to the groundwater table. __approx. 7 feet___ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _4 monitoring wells installed near the UST basin_____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
   YES _X_____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe mild to strong, USED OIL _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____ NO __X_____
   If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO __X_____
   If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO __X_____
   If yes, please indicate which tank(s) by the Identification Number _____.
   Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole): _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
0-8 feet silty clay,brown, moist; shale bedrock

i. Was the excavation backfilled? YES X NO ___
If yes, provide the date. 4-27-94

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

g. Specify the inert solid material used to fill the tank(s). _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ____X____ NO_

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES _X_____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well _4 monitoring wells installed at the site_____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____X___ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____
_____)

f. Was there water in the piping trench? YES _____ NO ___X_____
1. One time discharge to sanitary sewer with local approval _____
_____
2. Hauled to facility capable of treating constituents of petroleum products in water
_____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____
_____

g. Was there free product found in the piping trench? YES ___ NO X_____
If yes,
1. How was the free product handled? _____
_____
2. What was the measured thickness of the free product? _____
_____

h. Were visible holes noted in the piping? YES ___X_____ NO _____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _PVC piping was not sealed at the joint. Waste oil leaked through the joint near the center of the piping run._____
_____
_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: Sitly clay, brown, moist. _____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date Piping trench was excavated further for installation of new product piping.
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _ NO _ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____
If yes;
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction North base on groundwater elevations in the monitoring wells

b. Was a monitoring well used? YES X NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 4 _____ cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____
_____
_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X_____ NO _____ If no, describe how tank(s) were cleaned. _____
_____
_____
b. Provide an estimate of the volume of sludge removed from the tank. ____0____ gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____
_____
_____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: David Doble
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8713

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: D Doble Date: 1-21-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: J. Michael Valentine Date: 1-21-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____
Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: January 20, 1995

Incident No. (If applicable)
UST ____ - ____ - ____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 1800

Location: Fort McClellan

Contact: Mr. Ray Murphy

Address: Fort McClellan, AL 36205

Contact Telephone No.: (205) 848- 6155

Name of Consultant who performed calculations: David Doble, Braun Intertec Corporation

Consultants Phone Number: (612) 683-8713

Sample 1	6700	ppm	x	6	cyds	x	.002	=	80.4	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 0		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions
								TOTAL POTENTIAL EMISSIONS	80.4	lbs VOC emissions

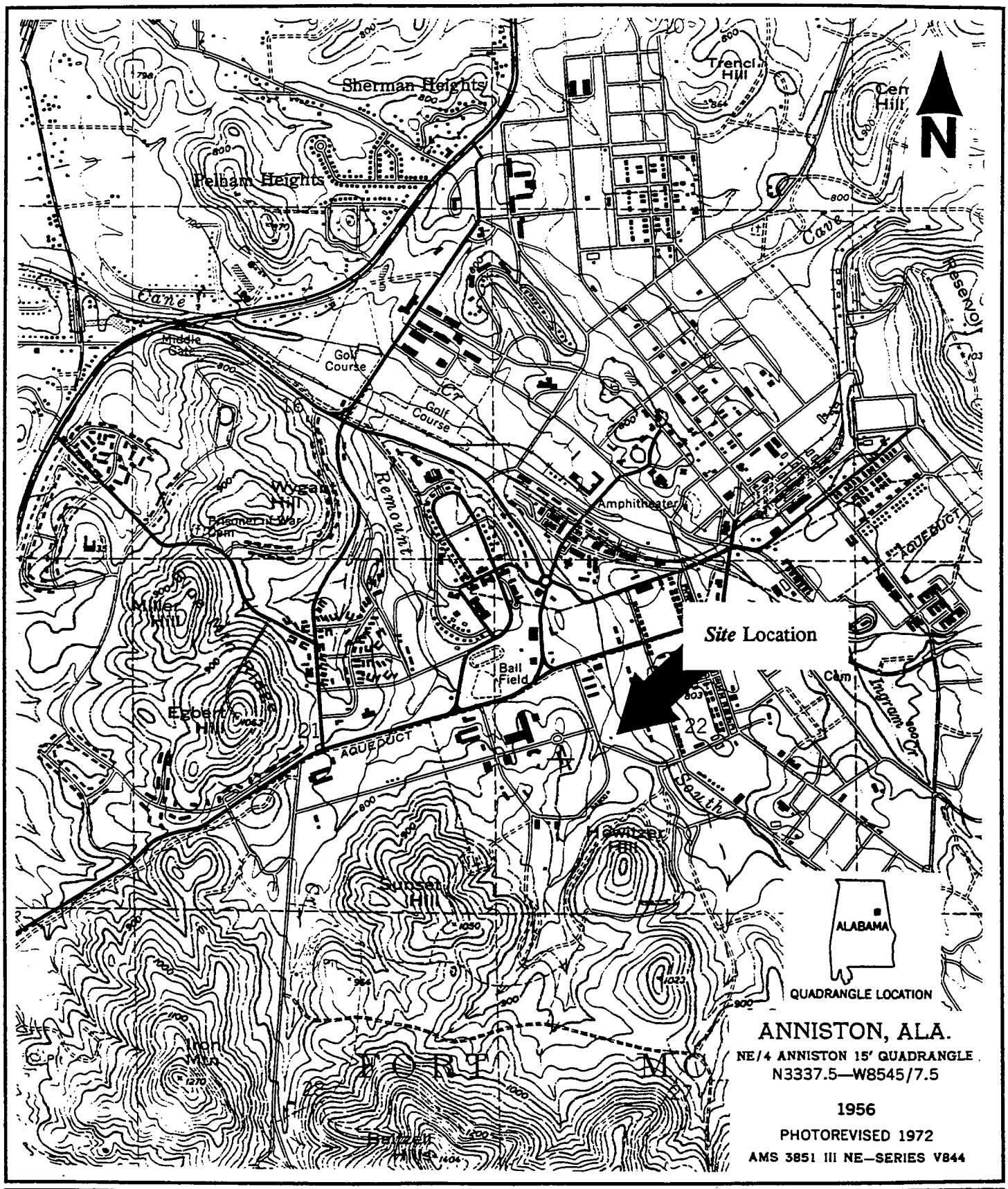
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

f:\wpfiles\cmkx\93-0180\0180.R06

Appendix B

Site Location



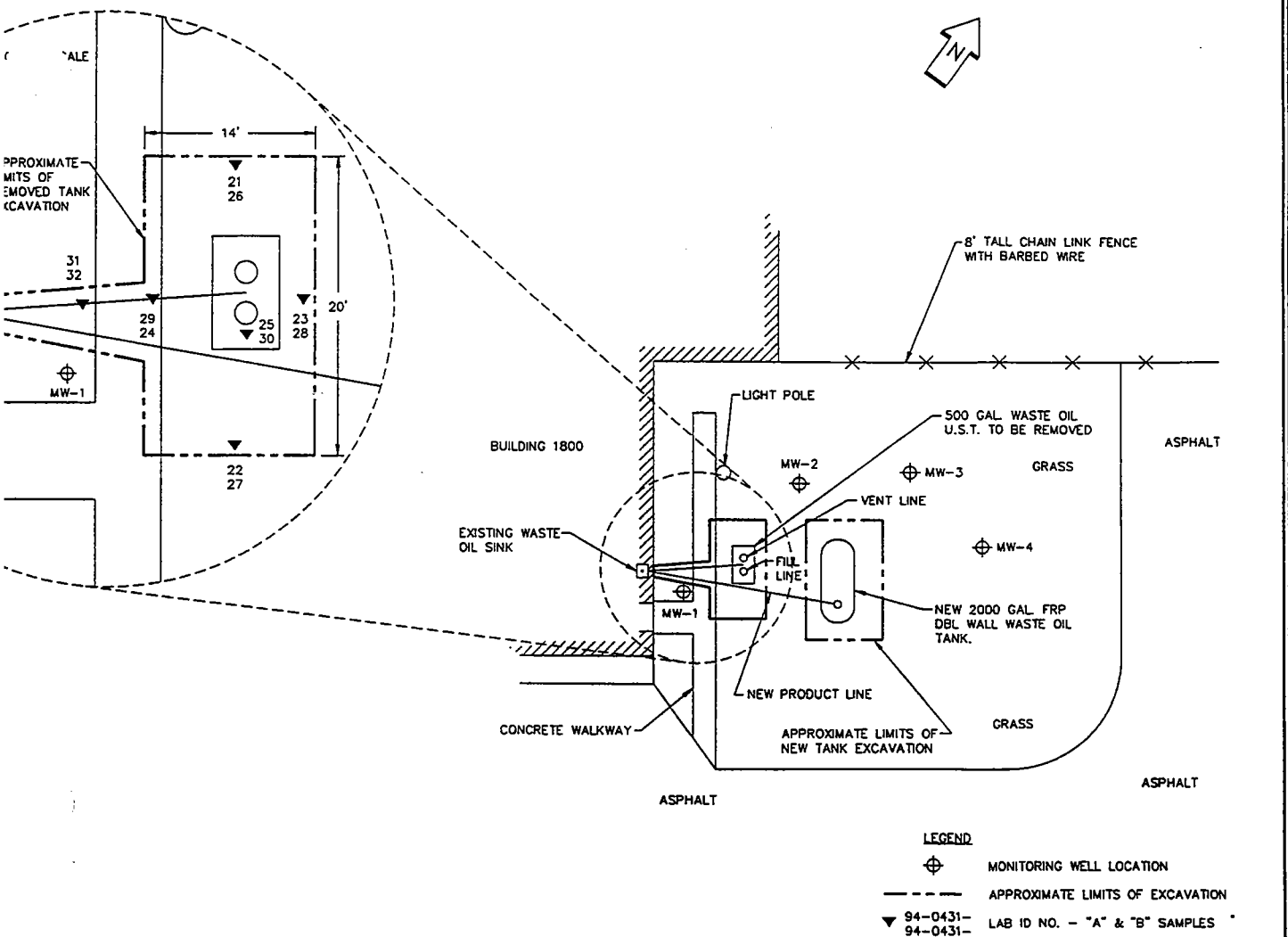
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 1800
Fort McClellan, Alabama

JNT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	-
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations



BRAUN INTERTEC

SITE MAP
WASTE OIL U.S.T. PROGRAM
BUILDING 1800
FORT McCLELLAN, ALABAMA

INT		DATE	
DRAWN BY:	JAG	1-19-95	
APP'D BY:	JTP	1-19-95	
JOB No.	CMKX-93-0180		
DWG. No.	MK30180L	SHEET	OF
SCALE	NONE		

FIGURE NO. 1

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FACILITY EPA ID NUMBER: ALD981020894

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id.: ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

HAZARDOUS WASTE MANIFEST
(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: [illegible] SOMMERALL GATE ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Fisher Industrial Service, Inc.
402 Webster Chapel Rd.
Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quanitity	14. Unit Wt/Vol	I. Waste No.
a. OIL SLUDGE, NON HAZARDOUS/NON REGULATED FIS Profile #: 18901	40	DM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number:
Work Order #: 005319/940406
Purchase Order #: DAVE DOBLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: [signature]
Month Day Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: John W. Oliver
Month Day Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doble
Signature: [signature]
Month Day Year: 06 06 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: ~~NOLAN L. JAYE, JR.~~ NRJ
Signature: [signature] NRJ
Month Day Year

GENERATOR / TRANSPORTER / FACILITY

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

Appendix E

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on thirteen (13) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0431-21	BLDG. 1800	North "A"
94-0431-22	BLDG. 1800	South "A"
94-0431-23	BLDG. 1800	East "A"
94-0431-24	BLDG. 1800	West "A"
94-0431-25	BLDG. 1800	Bottom "A"
94-0431-26	BLDG. 1800	North "B"
94-0431-27	BLDG. 1800	South "B"
94-0431-28	BLDG. 1800	East "B"
94-0431-29	BLDG. 1800	West "B"
94-0431-30	BLDG. 1800	Bottom "B"
94-0431-31	BLDG. 1800	Pipe Trench "A"
94-0431-32	BLDG. 1800	Pipe Trench "B"
94-0431-45	BLDG. 1800	Spoil Pile

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
21	<5	3.9
22	5000	17
23	41000	16
24	26000	58
25	1200	15
26	*	*
27	680	7.9
28	45	8.5
29	425	7.4
30	12000	14
Spike Recovery, %	108.12	105.17
Relative Percent Difference on Duplicate, %	**	4.34
31	71000	95
32	340	12
Spike Recovery, %	97.97	101.19
Relative Percent Difference on Duplicate, %	0.39	1.17

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
45	*	*
Spike Recovery, %	104.30	106.44
Relative Percent Difference on Duplicate, % . .	0.62	2.08

* = Not tested

** = Not applicable because sample concentration is below detection limit.

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\pelkey04.18

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-0431

Page 1 of 2

Site Identification

Bldg 1800
CMIX-93-0180D
Fort McClellan, Al

Project #:

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: D. Dodd

Sampled by: D. Dodd

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
21	North A	4-27		9				1								TPH Lead
22	South A															
23	East A															
24	West A															
25	Bottom A															
26	North B															
27	South B															
28	East B															
29	~~Bottom B~~ West B															
30	~~Pipe Trench A~~ Bottom B															

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
Dave Dodd	~~4-28~~ 5-2-94		Jason Dodd		5-3-94		

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page 2 of 2

Site Identification

Project #:

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) _____

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager:

Sampled by :

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
-31	Pipe trench A	4-27		a												TPH Lead
-32	Pipe trench B			a												
-45	Spoil Pile			a												

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5-2-94		[signature]				

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 27, 1994

Project CMKX-93-0180D
Report 08-94-0469

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on one (1) soil sample received on May 12, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref: 94-0452-11 BLDG. 1800 Spoil Pile

Analysis performed on May 25, and 26, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
11	6700	31
Spike Recovery, %	103.74	104.00
Relative Percent Difference on Duplicate, % ..	0.28	3.59

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

K:\800\system\800\miscU&NDENt07.19

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page 2 of 2

Site Identification

Bldg 1800
CMKX-93-0180-D
Fort McClellan, Anniston, Alabama

Project #:

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) _____

Evidence tape intact? (Check One) Yes ◯ No ◯ N A ◯

Project Manager: D. Dahle

Sampled by: D. Dahle

Comments: verbal results to D. Dahle U.M. Mendolia Hgts ex 8713

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	~~VOA~~ TPH	~~Filtered Metals~~ lead	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
1	Bldg 1800 spoil pile	5-10	9:00	a	X	X										

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
D. Dahle	5-10-94	5:15 pm	Charlie F. Hutchinson 5-12-94				

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
6875 Washington Avenue South
P.O. Box 39108
Minneapolis, Minnesota 55439-0108
612-941-5600 Fax: 942-4844

Engineers and Scientists Serving the Built and Natural Environments®

November 18, 1994

Project CMKX-93-0180
Report 94-3503 (Revised)

Mr. David Doble
Braun Intertec Corporation

Re: Fort McClellan

Amiston, AL

Braun Intertec Corporation received your analytical request on October 17, 1994. Analytical results are summarized on the following laboratory report.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed. No anomalies were encountered in the analysis of these samples.

We appreciate the opportunity to meet your analytical needs. If you have any questions or need additional information, please call Thomas Wagner at 612-942-4932.

Sincerely,

Thomas P. Wagner
Project Manager

Dirk W. Hoogenboom
Quality Assurance Coordinator

Attachments
Chain of Custody
Laboratory Results

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-05	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	0.30	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-05	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-1

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-06	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

lient Sample ID/Description: Bldg 1800 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	10	10	<10	ug/l
2-Dibromoethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-06	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-06	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-2

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-07	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-07	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/24/94	MDH 465E	10/24/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	0.12	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-07	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-3

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	<2	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-08	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	50	50	<50	ug/l
Allyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
n-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.7	1.7	<1.7	ug/l
Chlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.5	2.5	<2.5	ug/l
Chloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
Chloromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
2-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	10	10	<10	ug/l
1,2-Dibromoethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.5	1.5	<1.5	ug/l
1,4-Dichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Dichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	Laboratory:	Braun Intertec Corporation	Date Sampled:	10/13/94
Log-in:	94-3503	Lab Contact/Phone:	T. Wagner/612-942-4932	Date Received:	10/17/94
Project Number:	CMKX-93-0180	Sampler:	Braun Intertec	Date Reported:	11/18/94
Matrix:	Liquid	% Moisture:	Not Applicable		
Lab Sample ID:	94-3503-08	MDL:	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Isopropyltoluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methyl Ethyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Isobutyl Ketone	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Methyl Tertiary Butyl Ether	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Methylene Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Naphthalene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
n-Propylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Styrene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
1,1,2,2-Tetrachloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
Tetrachloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Tetrahydrofuran	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
Toluene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,4-Trichlorobenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,1,1-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	2.0	2.0	<2.0	ug/l
1,1,2-Trichloroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.2	1.2	<1.2	ug/l
1,1,2-Trichloroethylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	0.5	0.5	<0.5	ug/l
Trichlorofluoromethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,2,3-Trichloropropane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Trichlorotrifluoroethane	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	5.0	5.0	<5.0	ug/l
1,2,4-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
1,3,5-Trimethylbenzene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
Vinyl Chloride	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
m,p-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
o-Xylene	SW-846 5030	10/25/94	MDH 465E	10/25/94	1	1.0	1.0	<1.0	ug/l
HPLC Analysis									
Acenaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.1	1.1	<1.1	ug/l
Acenaphthene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	4.0	4.0	<4.0	ug/l
Benzo(a)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Benzo(b)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
Benzo(k)fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.010	0.01	<0.01	ug/l
Benzo(g,h,i)perylene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.190	0.19	<0.19	ug/l
Benzo(a)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Chrysene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.100	0.10	<0.10	ug/l
Fluoranthene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.30	0.30	<0.30	ug/l
Fluorene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.10	0.10	<0.10	ug/l
Indeno(1,2,3-cd)pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.140	0.14	<0.14	ug/l
1-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l

(Report continued on next page)

Client:	Fort McClellan	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	10/13/94
Log-in:	94-3503	**Lab Contact/Phone:**	T. Wagner/612-942-4932	**Date Received:**	10/17/94
Project Number:	CMKX-93-0180	**Sampler:**	Braun Intertec	**Date Reported:**	11/18/94
Matrix:	Liquid	**% Moisture:**	Not Applicable		
Lab Sample ID:	94-3503-08	**MDL:**	Method Detection Limit		
		RL:	Reporting Limit		

Client Sample ID/Description: Bldg 1800 MW-4

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
2-Methylnaphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	2.0	2.0	<2.0	ug/l
Naphthalene	EPA 610	10/18/94	EPA 610	10/20/94	1	1.3	1.3	<1.3	ug/l
Phenanthrene	EPA 610	10/18/94	EPA 610	10/20/94	1	12	12	<12	ug/l
Pyrene	EPA 610	10/18/94	EPA 610	10/20/94	1	0.40	0.40	<0.40	ug/l
Metals									
Lead, Total	-	-	EPA 239.2	10/18/94	1	2	2	3	ug/l

(Report continued on next page)

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Chain Of Custody - ECS

Log-In/Report # 94-3503

Page 1 of 3

Site Identification

Fort McClellan
~~Bldg~~ Anniston, Alabama

Project #: CMKX-93-0180

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify)

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager:

Sampled by:

Comments:
P. 2 and 3 of C of C filled out in lab.
Rec'd on ice! 6° and 9°.

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
94-3503-01	Bldg 238 MW-1	12:50	10-130		4		1	2								VOC, lead & PAH-610
02	MW-2	1:05			4		1	2								
03	MW-3	1:20			4		1	2								
04	MW-4	1:30			4		1	2								
05	Bldg 1800 MW-1	10/13	5:50		4		1	2								
06	MW-2		6:20		4		1	2								
07	MW-3		6:00		4		1	2								
08.	MW-4		6:30		4		1	2								
	See Attached.	Yes see bottles														

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]							

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:
				Cavin Thierry	10-17	0730

Appendix F

Well Construction Diagrams

Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 1800

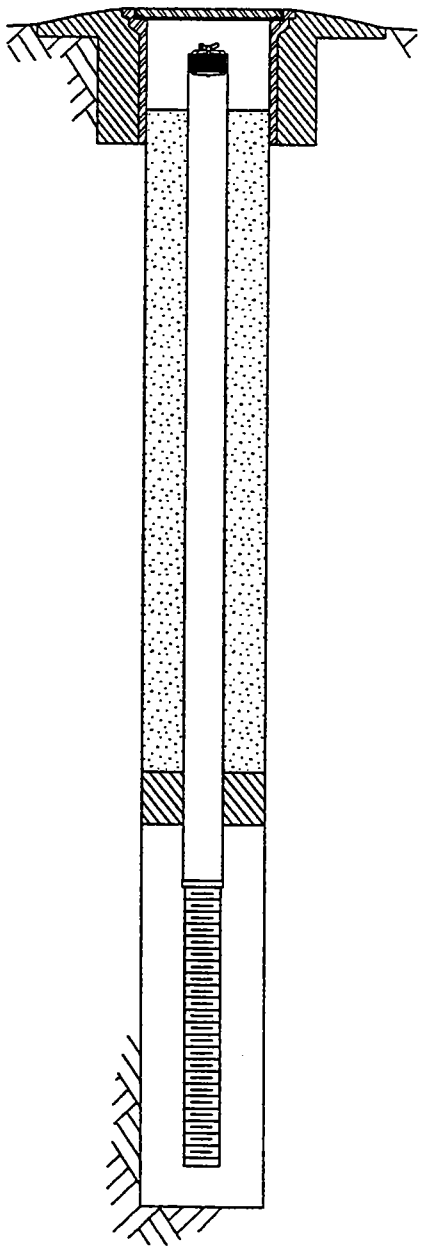
Well Number MW-1 Well Location See attached Date of Installation 6-6-94

B.M. Location and Elevation (± 0.01') Floor slab Building 1800, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 99.3

Top of riser pipe elevation (±0.01'w/o cap) 99.15



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 4.5

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 1.0'

Depth to bottom of seal 3.0'

Depth to top of screen 5.0'

Depth to bottom of screen 15'

Depth to bottom of boring 15'

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Hollow Auger X O.D. 10-inches

Remarks:

Completed by: DJD

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 1800

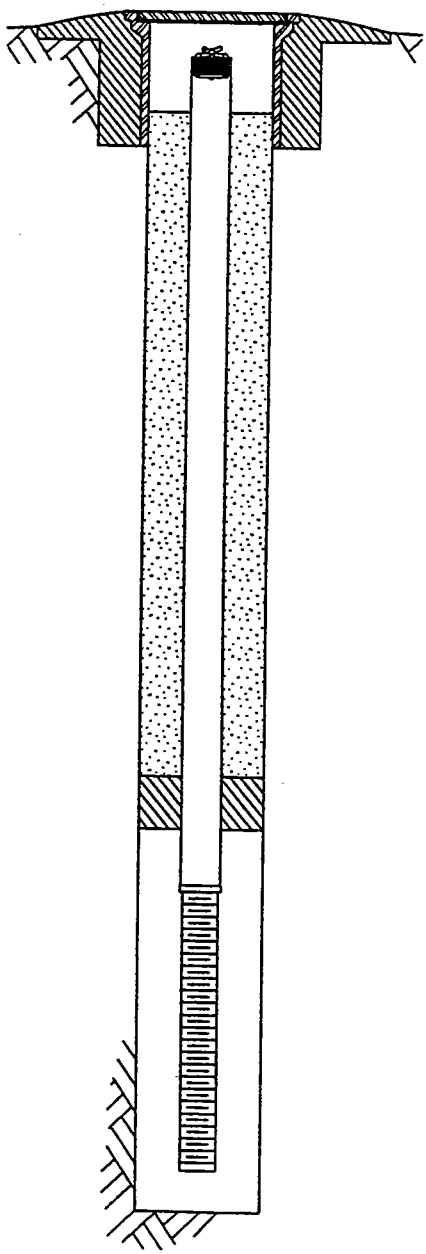
Well Number MW-2 Well Location See attached Date of Installation 6-6-94

B.M. Location and Elevation (± 0.01') Floor slab Building 1800, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 98.50

Top of riser pipe elevation (±0.01'w/o cap) 98.30



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 5

Sections used 2

Couplings 1

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 1.0'

Depth to bottom of seal 3.0'

Depth to top of screen 5.0'

Depth to bottom of screen 15'

Depth to bottom of boring 15'

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 1800

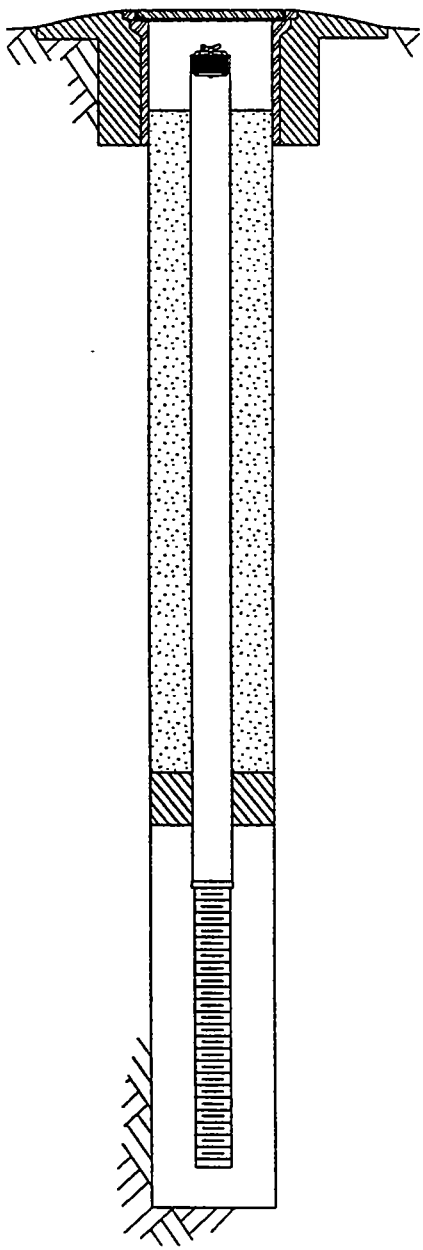
Well Number MW-3 Well Location See attached Date of Installation 6-6-94

B.M. Location and Elevation (± 0.01') Floor slab Building 1800, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 97.8

Top of riser pipe elevation (±0.01'w/o cap) 97.68



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 5.0'

Sections used 2

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 1.0

Depth to bottom of seal 2.0

Depth to top of screen 3.0

Depth to bottom of screen 15'

Depth to bottom of boring 15'

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN™ INTERTEC

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Monitoring Well Field Data Sheet

Project Number CMKX-93-0180 Location Building 1800

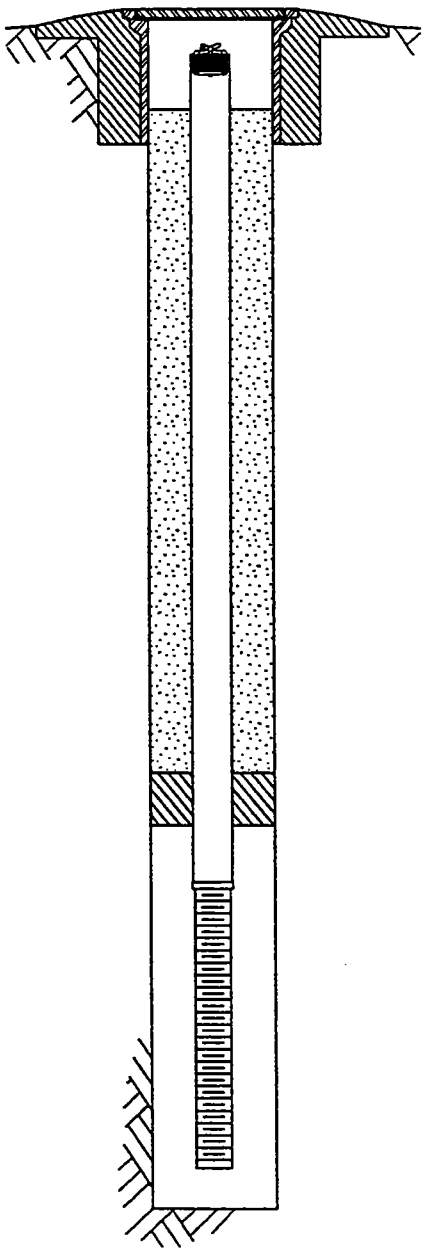
Well Number MW-4 Well Location See attached Date of Installation 6-6-94

B.M. Location and Elevation (± 0.01') Floor slab Building 1800, assumed 100.00

Geologist DJD

Ground surface elevation (±0.1') 97.8

Top of riser pipe elevation (±0.01'w/o cap) 97.58



Protective Vault:

Manufacturer

Model #

Diameter 6"

Hex wrench access Yes

Watertight Seal Yes

Neat Cement Grout Above Seal: 1.0

Riser Pipe:

Type PVC

Diameter 4"

Total Length 4.5'

Sections used 1

Couplings 0

Caps Yes X No

Seal Material Bentonite

Amount of material used (lb)

Filter Material Silica Sand

Amount of material used (lb)

Screen:

Type PVC

Slot Size .010

Length 10'

Diameter 4"

Plug/Point Plug

Depth to top of seal 1.0

Depth to bottom of seal 3.0

Depth to top of screen 4.5

Depth to bottom of screen 14.5

Depth to bottom of boring 14.5

Method of Advance:

HSA I.D.

Casing I.D.

Tricone O.D.

Power Auger X O.D. 10-inches

Remarks:

Completed by: DJD

BRAUN INTERTEC

f:\wpfiles\cmkx\93-0180\0180.P00

ATTACHMENT 11

BUILDING 2109 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 20, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project No. CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 2109, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or John Phillips at (612) 683-8737.

Sincerely,

for: John T. Phillips
Environmental Scientist

J. Michael Valentine

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises, Inc.

f:*wpfiles\cmkx\93-0180\0180.R03

Table of Contents

A. Background 1

B. Piping Removal 1

C. UST Excavation 1

D. Soil Observations 2

E. Soil Disposal 2

F. UST Disposal 2

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H. Soil Sampling and Laboratory Results 3

I. Conclusions 4

Appendices

A. ADEM Closure Report Form
B. Site Location
C. Site Plan with Sample Locations
D. Hazardous Waste Manifest and Certificate of Disposal
E. Laboratory Results

A. Background

The underground storage tank (UST) at BLDG 2109 is located north of the building in the asphalt access drive for the service bays. The Alabama Department of Environmental Management (ADEM) facility identification number is 11953-015-015815. The ADEM UST closure report form is included in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 1,000 gallons and was used to store waste oil.

B. Piping Removal

Product was placed directly into the tank using the fill pipe over the top of the tank therefore, no product piping or dispensers were associated with this tank.

C. UST Excavation

Prior to removal of the UST, approximately 75 gallons of used oil were removed from the tank. After the product was removed, the tank was inerted with nitrogen gas and cleaned after removal from the excavation. Soils around the tank were excavated and screened with the PID until the tank sides and ends were exposed and could be removed. The tank was steel, no holes were observed, and it appeared to be in fair condition. The tank and piping was removed on April 5, 1994. The excavation limits are illustrated in Figure 2, Appendix C.

The soils of the tank basin consisted of 1/2 foot of aggregate base overlying 8 feet of silty clay with gravel. Groundwater was not encountered in a test pit advanced 5 feet below the base of the excavation. After removal of the tank, the excavation measured approximately 15 feet long by 12 feet wide by 9 feet deep. A new fiberglass UST was installed in the excavation and backfilled with pea gravel.

D. Soil Observations

Soil samples retrieved from the side walls and base of the UST excavation were examined visually by an environmental geologist for staining and other apparent signs of contamination. In addition, the soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling. The PID was used to test fresh surfaces of soil collected from the sidewalls of the excavation and to perform headspace analyses.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, the a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. No headspace readings above 0 ppm were recorded emanating from the soil samples collected.

E. Soil Disposal

The excavated soils removed from the UST excavation were stockpiled and covered with polyethylene plastic. The stockpile was bermed with clean soils. Approximately 10 yards of soil was removed and thinspread at the Fort McClellan Landfill.

F. UST Disposal

After the UST was properly cleaned by J & D Enterprises, it was transported off-site for disposal by Shorty's Scrap Metal of Oxford, Alabama.

G. Sludge Disposal

No sludge was encountered during removal, however 75 gallons of used oil was drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

H. Soil Sampling and Laboratory Results

Soil samples were collected according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix B. One sample was collected from each sidewall and the base of UST excavation labeled "A". An additional five samples labeled "B" were collected from the same sampling points 2 feet further into the native soil. The "B" samples were preserved until analysis of the "A" samples were completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeds 100 ppm, the corresponding "B" samples were analyzed. An additional sample was collected from the stockpile for analysis.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analyses. The soil samples were analyzed for total petroleum hydrocarbons (TPH) and total lead.

The results of the "A" and stockpile soil analyses is summarized in Table 2, none of the samples collected from the excavation exceeded 100 ppm, therefore no "B" samples were analyzed. The laboratory reports and original chain of custody is attached in Appendix E.

Table 2
Soil Chemistry Data
"A" Samples & Stockpile

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
North Sidewall	9	*	7	94-0339-01
South Sidewall	60	*	7	94-0339-02
East Sidewall	9	*	7	94-0339-03
West Sidewall	70	*	7	94-0339-04
Bottom	45	*	9	94-0339-05
Stockpile	60	32	NA	94-0339-06

* = Not Tested

I. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum contaminated soils were encountered in the tank basin. The vertical and horizontal extent of the petroleum contaminated soils was not determined during the limited amount of excavation to remove the tank. Groundwater was not encountered during the excavation process.

The analysis of the soil samples collected from the sidewalls and the base of the excavation show a TPH concentration ranging from 9 ppm to 70 ppm. Groundwater was not encountered when a test pit was advanced 5 feet below the base of the excavation.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015-015815
Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 2109
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

Date of this Report: January 20, 1995
UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy

Contact Telephone No.: (205) 848-6155

Name of Contractor and/or Consultant used to close tanks: J & D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 4
Closure Date: 04/05/94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	4' x 6'				
Tank Capacity	1,000				
Tank Age	UN				
Date Tank Last Used	04/04/94				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	None				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES X NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO X If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
   (other _____)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO X
If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____.
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole): _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: ___ 0-6" Bituminous Asphalt, 6"-1' Aggregate Base, 1' -8' Silty Clayey Sand with Gravel, Brown, Moist

i. Was the excavation backfilled? YES _X_ NO ___ If yes, provide the date. 04/05/94
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____ _____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____ _____ _____
2. What was the measured thickness of free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

NO PRODUCT PIPING WAS ASSOCIATED WITH THIS TANK. PRODUCT WAS PLACED INTO TH TANK BY USING THE FILL PIPE OVER THE TOP OF THE TANK. NO PIPING TRENCH WAS EXCAVATED.

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
   YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
   1. Excavation extended 5 feet below base of trench _____
   2. Boring or Monitoring Well _____
   3. Topographic features _____
      (Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
   YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (other, describe _____
      _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene)
      (other _____
      _____)

f. Was there water in the piping trench? YES _____ NO _____
   1. One time discharge to sanitary sewer with local approval _____
      _____
   2. Hauled to facility capable of treating constituents of petroleum products in water
      _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO _____
   If yes,
   1. How was the free product handled? _____
      _____
   2. What was the measured thickness of the free product? _____
      _____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: ___
0-6" Bituminous Asphalt, 6"-1' Aggregate Base, 1' -8' Silty Clayey Sand with Gravel, Brown, Moist

i. Was the excavation backfilled? YES _X_ NO __ If yes, provide the date. 04/05/94
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____
_____
_____
2. What was the measured thickness of free product? _____
_____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____

g. Specify the inert solid material used to fill the tank(s). _____
_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

NO PRODUCT PIPING WAS ASSOCIATED WITH THIS TANK. PRODUCT WAS PLACED INTO THE TANK BY USING THE FILL PIPE OVER THE TOP OF THE TANK. NO PIPING TRENCH WAS EXCAVATED.

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
   YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
   1. Excavation extended 5 feet below base of trench _____
   2. Boring or Monitoring Well _____
   3. Topographic features _____
      (Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
   YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (other, describe _____
      _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene)
      (other _____
      _____)

f. Was there water in the piping trench? YES _____ NO _____
   1. One time discharge to sanitary sewer with local approval _____
      _____
   2. Hauled to facility capable of treating constituents of petroleum products in water
      _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO _____
   If yes,
   1. How was the free product handled? _____
      _____
   2. What was the measured thickness of the free product? _____
      _____

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 10_____ cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other Thinspread at Fort McClellan landfill
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
   Thin spread at Fort McClellan Landfill

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ___X___ NO _____ If no, describe how tank(s) were cleaned. _____
b. Provide an estimate of the volume of sludge removed from the tank. ___0___ gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: John Phillips
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8737

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: [illegible] for: Date: 1-21-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl
Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: J. Michael Valentine Date: 1-21-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____
Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015815

Date of this Report: _____

Incident No. (If applicable)
UST _____ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 2109

Location: Fort McClellan

Contact: Mr. Ray Murphy

Address: Fort McClellan, AL 36205

Contact Telephone No.: (205) 848-6155

Name of Consultant who performed calculations: John Phillips, Braun Intertec Corporation

Consultants Phone Number: (612) 683-8737

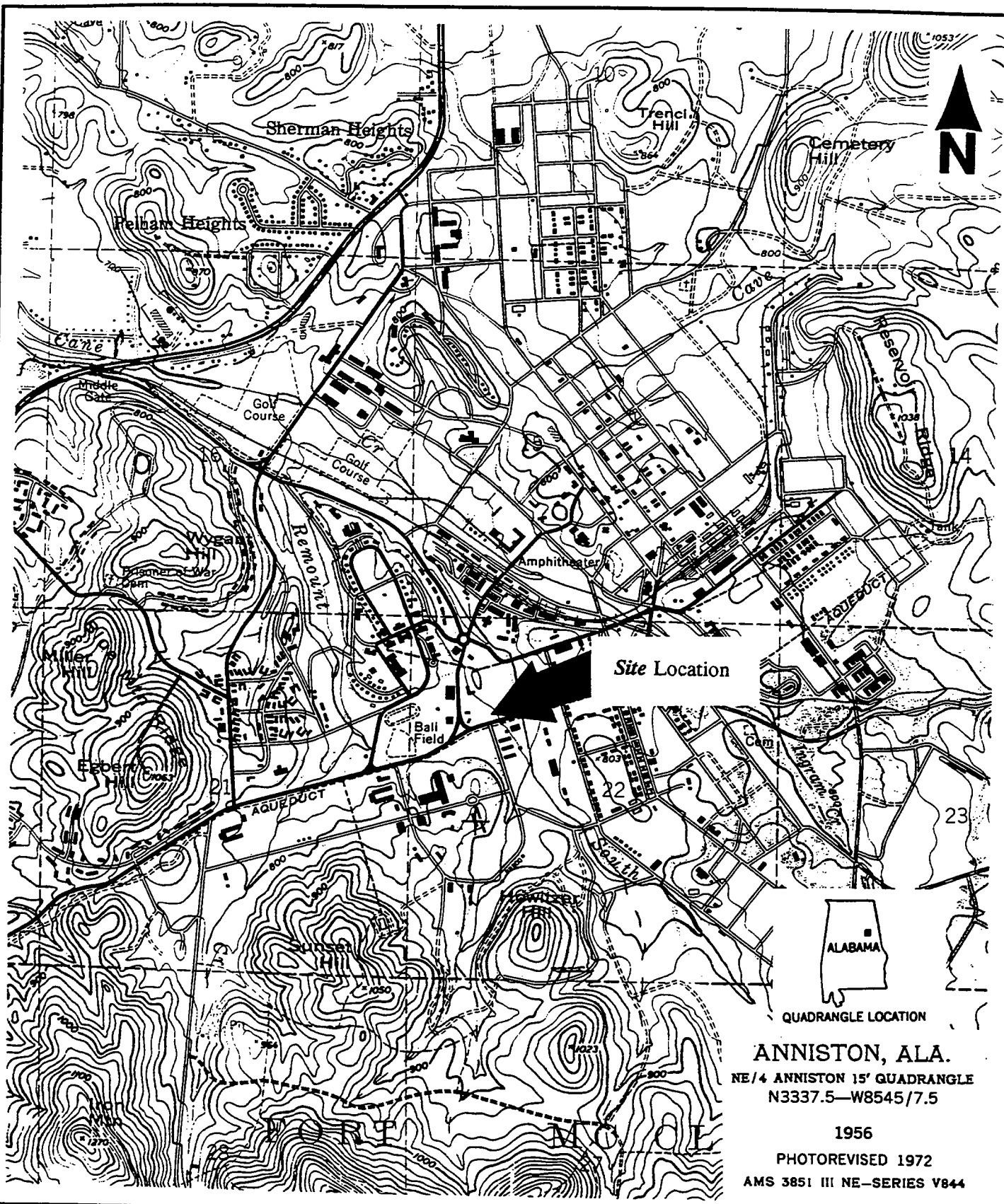
Sample 1	60	ppm	x	10	cyds	x	.002	=	1.20	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 8		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions
							TOTAL POTENTIAL EMISSIONS		1.20	lbs VOC emissions

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

Appendix B

Site Location



ANNISTON, ALA.
NE/4 ANNISTON 15' QUADRANGLE
N3337.5—W8545/7.5
1956
PHOTOREVISED 1972
AMS 3851 III NE—SERIES V844

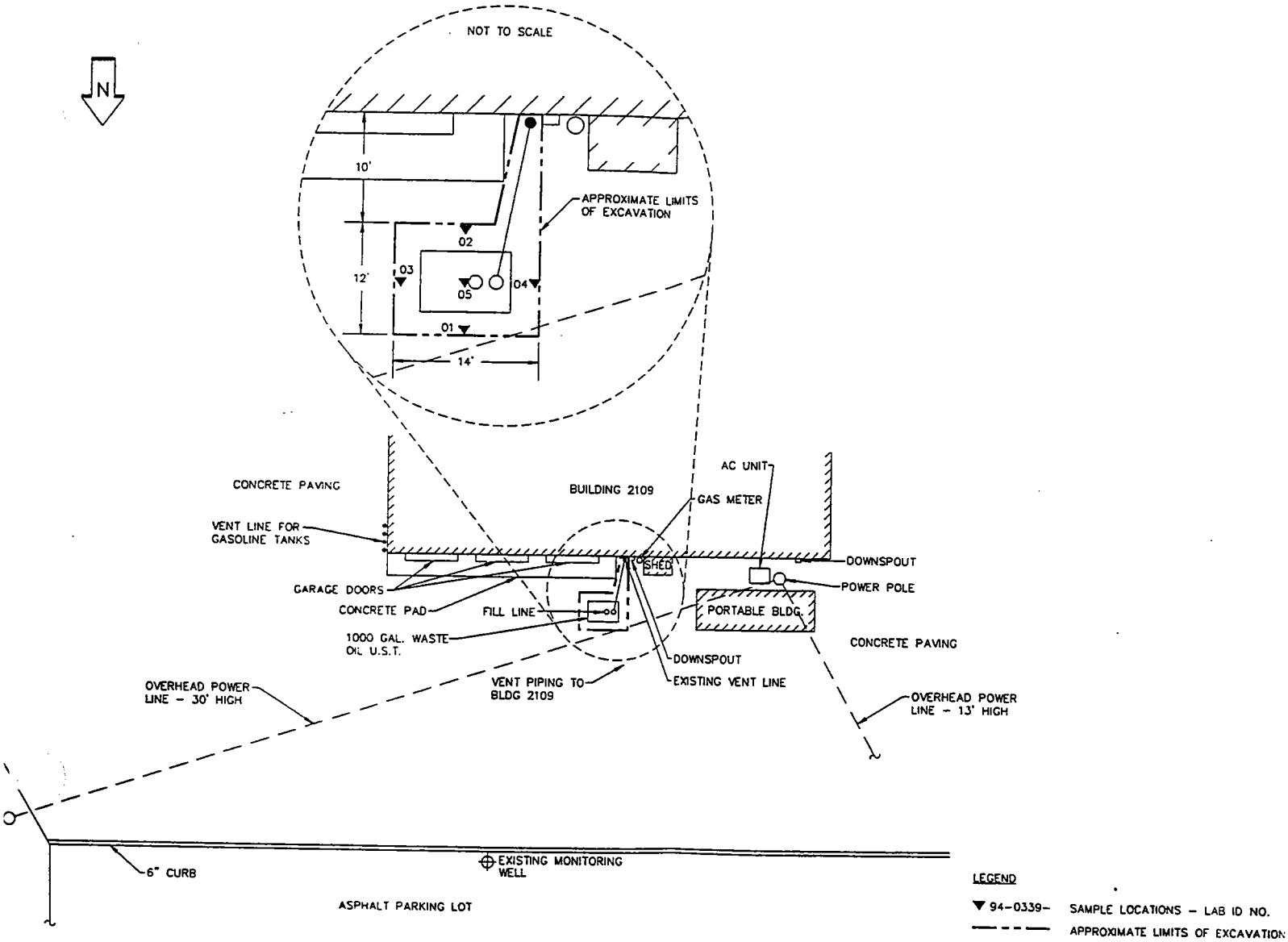
BRAUN INTERTEC

Site Location Map
Waste oil UST program
Building 2109
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations


NOT TO SCALE
N
10'
12'
14'
02
03
04
05
01
APPROXIMATE LIMITS OF EXCAVATION
CONCRETE PAVING
BUILDING 2109
AC UNIT
GAS METER
VENT LINE FOR GASOLINE TANKS
SHED
DOWNSPOUT
POWER POLE
GARAGE DOORS
CONCRETE PAD
FILL LINE
PORTABLE BLDG.
1000 GAL. WASTE OIL U.S.T.
CONCRETE PAVING
DOWNSPOUT
EXISTING VENT LINE
VENT PIPING TO BLDG 2109
OVERHEAD POWER LINE - 30' HIGH
OVERHEAD POWER LINE - 13' HIGH
6" CURB
EXISTING MONITORING WELL
ASPHALT PARKING LOT
LEGEND
94-0339- SAMPLE LOCATIONS - LAB ID NO.
APPROXIMATE LIMITS OF EXCAVATION

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE
(205) 492-8340
Fax (205) 492-8332
SALES TELEPHONE
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

HAZARDOUS WASTE MANIFEST
(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALR210020562
Manifest Document No.: 94001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FORT MCCLELLAN, SOMMERALL GATE, ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Fisher Industrial Service, Inc., 402 Webster Chapel Rd., Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. OIL SLUDGE, NON HAZARDOUS/NOT REGULATED FIS Profile #: 18901	40	DM	2200	G	N/A
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information — 24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406 — Purchase Order #: DAVE DORLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: NOLAN L. JAYE, JR. — Signature: Nolan L. Jaye — Month / Day / Year

TRANSPORTER
17. Transporter 1 Acknowledgment of Receipt of Materials — Printed/Typed Name: John W. Oliver — Signature: John W. Oliver — Month 06 Day 06 Year 94
18. Transporter 2 Acknowledgment of Receipt of Materials — Printed/Typed Name: David J. Doyle — Signature: — Month 06 Day 06 Year 94

FACILITY
19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: NOLAN L. JAYE, JR. — Signature: Nolan L. Jaye — Month / Day / Year

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

Appendix E

Laboratory Results

BRAUN℠
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

April 18, 1994

Project CMKX-93-0180
Report 08-94-0339

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on six (6) soil samples received on April 7, 1994, pursuant to your request.

Site: Fort McClellan

Location: Building 2109

Ref:

94-0339-01	North	Sidewall A
94-0339-02	South	Sidewall A
94-0339-03	East	Sidewall A
94-0339-04	West	Sidewall A
94-0339-05	Bottom	
94-0339-06	SP-1	

Analysis performed on April 15, 1994

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:
(Units: mg/Kg, ppm)

	Total Petroleum Hydrocarbons	Lead, (Pb)
01	9	*
02	60	*
03	9	*

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
04	70	*
05	45	*
06	60	32
Spike Recovery, %	104.7	103.51
Relative Percent Difference on Duplicate, %	< 0.01	1.22

* = not tested

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Asst. Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\pelkey04.18

BRAUN INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: BRAUN INTERTEC
Client Contact: JOHN T. PHILLIPS
Ref(s):
Site Location: FORT McCLELLAN Bldg 2109
P.O. # Request
Log In No. 94-0339 Project No. CMKL-93-0180 TASK D

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☒ Yes ☐ No
Fax Number: E-Mail
LEGAL CASE ☐ Yes ☒ No
Requested Due Date:
RUSH ☐ Yes ☒ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	TPH	Lead									LAB USE ONLY: REMARKS	Refrigerated	Preserved
1	4-5-93	0700	Bldg 2109 N. Sidewall A	✓				1								✓												
2	4-5-93	0702	Bldg 2109 S. Sidewall A	✓				1								✓												
3		0703	Bldg 2109 E. Sidewall A	✓				1								✓												
4		0704	Bldg 2109 W. Sidewall A	✓				1								✓												
5		0705	Bldg 2109 Bottom A	✓				1								✓												
6		0800	Bldg 2109 SP-1	✓				2								✓	✓											
7	4-5-94	0700	Bldg 2109 N. Sidewall B					1																		HOLD		
8		0702	Bldg 2109 S. Sidewall B					1																		HOLD		
9		0703	Bldg 2109 E. Sidewall B					1																		HOLD		
0		0704	Bldg 2109 W. Sidewall B					1																		HOLD		

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by: Thomas Hellquist	4-7-94 1600	Received by:	
Relinquished by:	4-8-94 9:35	Relinquished by:	
Received by:		Received by:	

White – Client Yellow – Company files Pink – Department files

BRAUNSM
INTERTEC

BRAUN INTERTEC NORTHWEST

5405 N. Lagoon Ave. Portland, OR 97217
(503) 289-1778 FAX: (503) 289-1918

Chain of Custody Record

Client Name: BRAUN INTERTEC
Client Contact: JOHN T. PHILLIPS
Ref(s):
Site Location: FORT McCLELLAN Bldg 2109
P.O. #
Log In No. Project No. CMKP-93-0180 TASK D

Provide Verbal Results? ☐ Yes ☐ No
Phone Number:
Provide Fax Results? ☐ Yes ☐ No
Fax Number:
LEGAL CASE ☐ Yes ☑ No
Requested Due Date: RUSH ☐ Yes ☑ No

SAMPLE I.D.	DATE	TIME	SAMPLE DESCRIPTION	MATRIX: Soil	Water	Metal	Other	Number of Containers	pH	Alloy I.D.	BOD	Oil and Grease	BTU	Sus. Solids	Ash	REMARKS	Refrigerated	Preserved
1	4-5-94	0705	Bldg 2109 BOTTOM B	✓				1								HOLD		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
0																		

Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by: Thomas Hallquist	4-7-94 / 1600 4-8-94 9:35	Received by:	
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Received by:		Received by:	

ATTACHMENT 12

BUILDING 3138 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 20, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project No. CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 3138, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or John Phillips at (612) 683-8737.

Sincerely,

John T. Phillips
Environmental Scientist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises, Inc.

f:*wpfiles\cmkx\93-0180\0180.R02

Table of Contents

A. Background 1

B. Piping Removal 1

C. UST Excavation 1

D. Soil Observations 2

E. Soil Disposal 2

F. UST Disposal 2

G. Sludge Disposal 3

H. Soil Sampling and Laboratory Results 3
- H.1. Soil Sample collection 3
- H.2. Analytical Analyses Results 3

I. Conclusions 5

Appendices

A. ADEM Closure Report Form
B. Site Location
C. Site Plan with Sample Locations
D. Hazardous Waste Manifest and Certificate of Disposal
E. Laboratory Results

A. Background

The underground storage tank (UST) at BLDG 3138 is located northeast of the building beyond the chainlink fence. The product piping ran from a sink inside of the building to the tank. The ADEM Closure Report Form is included in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

The UST capacity was approximately 2,000 gallons and was used to store used oil.

B. Piping Removal

Product was placed into a drain sink and transferred by underground PVC pipe to the UST. Two soil samples were collected for analysis at 7 and 17 feet from the building. The locations are illustrated in Figure 2, Appendix C. The piping was removed on May 18, 1994.

C. UST Excavation

Prior to removal of the UST the remaining product was barrelled, the tank was purged with fresh air and cleaned. Soils around the tank were excavated and screened with the PID until the tank sides and ends were exposed and could be removed. The tank was steel, no holes were observed, and it appeared to be in fair condition. The tank was removed on May 5, 1994. The excavation limits are illustrated in Figure 2, Appendix C.

The soils of the tank backfill consisted of silty sand, fine- to medium-grained, black, from the surface to 2 feet overlying poorly graded sand, fine- to medium-grained, brown, from 2 feet to 7 feet. The native soils consisted of silty sand, fine- to medium-grained, black, from the surface to 1 foot overlying silty clay with a trace of fine gravel, brown. No groundwater was encountered in a test pit advanced 5 feet below the base of the excavation.

After removal of the tank, the excavation measured approximately 18 feet long by 12 feet wide by 8 feet deep. The excavation was further enlarged for installation of the replacement UST.

D. Soil Observations

Soil samples retrieved from the side walls and base of the UST excavation were examined visually by an environmental geologist for staining and other apparent signs of contamination. In addition, the soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling. The PID was used to test fresh surfaces of soil collected from the sidewalls of the excavation and to perform headspace analyses.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. No PID readings above 0 ppm were recorded from the soil samples collected from the sidewalls and base of the UST basin.

E. Soil Disposal

Approximately 2 yards of soil were removed from the UST basin during excavation of the UST. A new fiberglass UST was installed in the excavation. Pea gravel was used as backfill up to 1 foot below the top of the new tank. The soils removed during the excavation of the old UST were used as topsoil cover over the new UST.

F. UST Disposal

After the UST was properly cleaned by J & D Enterprises, it was transported off-site for disposal by Shorty's Scrap Metal of Oxford, Alabama, according to the contract requirements.

G. Sludge Disposal

No sludge was encountered during removal; however, 100 gallons of used oil was drummed, transported and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

H. Soil Sampling and Laboratory Results

H.1. Soil Sample collection

Soil samples were collected according to contract specifications. The sample locations are illustrated in Figure 2 which is included in Appendix C. One sample was collect from each sidewall and the base of UST excavation labeled "A". An additional five samples labeled "B" were collected from the same sampling points 2 feet further into the native soil. The "B" samples were preserved until analysis of the "A" samples were completed. If the total petroleum hydrocarbons (TPH) of the "A" sample exceeded 100 ppm, the corresponding "B" samples were analyzed.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

H.2. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation and the soil stockpile are summarized in Table 1. Complete laboratory reports and original chain of custody is attached in Appendix E.

Table 1
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
North Sidewall "A"	5	13	4	94-0452-01
South Sidewall "A"	5	10	4	94-0452-02
East Sidewall "A"	5	12	4	94-0452-03
West Sidewall "A"	<5	14	4	94-0452-04
Base "A"	130	13	8	94-0452-05
Base "B"	35	9	11	94-0452-10
Pipe Trench, 7' "A"	5700	4.4	2	94-043-11
Pipe Trench, 7' "B"	15	11	4	94-043-12
Pipe Trench, 17' "A"	12300	14	2	94-0431-13
Pipe Trench, 17' "B"	5	13	4	94-0431-14

I. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum contaminated soils were encountered in the excavation base and in the piping trench. However, the levels of TPH contamination decreased significantly in soil samples collected further beneath the pipe trench. The vertical and horizontal extent of the petroleum contaminated soils was not determined during the limited amount of excavation to remove the tank and the piping. Water was not encountered 5 feet below the excavation.

The "A" Soil samples collected for analysis from the excavation base and the piping trench showed a TPH concentration of greater than 100 ppm. The corresponding "B" samples, collected 2 feet further into the soils these samples show a TPH concentration ranging from 5 to 15 ppm. Although the "A" soil samples analysis indicates petroleum contaminated soils above ADEM guidelines for TPH the "B" soil sample analysis indicates that within 2 feet these soils are below ADEM guideline for TPH of 100 ppm.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015840

Date of this Report: January 20, 1995

Incident No. (If applicable)
UST __ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 3138

Location: Ft. McClellan

Contact: Mr. Ray Murphy

Address: Ft. McClellan, Alabama

Contact Telephone No.: (205) 848-6155

Name of Contractor and/or Consultant used to close tanks: J & D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1

Number of tanks remaining at site: 3

Closure Date: 04/04/94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	5' x 13'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES X_____NO ___ If not, provide the depth from the ground surface to the groundwater table. _____ ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit X_____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO _X_____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe No odor observed _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____ NO X_____
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water __
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO X_____
If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X_____
If yes, please indicate which tank(s) by the Identification Number _____.
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: _____
0 - 1' Silty Sand, fine to medium grained, brown to black, moist
1' - 11' Silty Clayey Sand, fine to medium grained,with Gravel, brown, moist

i. Was the excavation backfilled? YES _X_ NO ____ If yes, provide the date. 04/30/94
DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

A new fiberglass UST was installed in the excavation. Pea gravel was used as backfill around the new tank up to 1 foot below the new tank.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES ___ NO ___ If no, provide the depth from the ground surface to the groundwater table _____ ft.
1. Boring or Monitor Well _____
2. Topographic features _____
(Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (Other, describe _____
_____)
2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene)
(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
1. How was free product handled? _____
_____
_____
2. What was the measured thickness of free product? _____
_____
_____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). _____

_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ____X____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES ___X____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
   1. Excavation extended 5 feet below base of trench X
   2. Boring or Monitoring Well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES X_____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (other, describe Mild _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____
   _____)

f. Was there water in the piping trench? YES _____ NO X_____
   1. One time discharge to sanitary sewer with local approval _____
   _____
   2. Hauled to facility capable of treating constituents of petroleum products in water
   _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO X_____
If yes,
   1. How was the free product handled? _____
   _____
   2. What was the measured thickness of the free product? _____
   _____

h. Were visible holes noted in the piping? YES _____ NO X_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
0-6" Bituminous Asphalt
6"-1' Aggregate Base
1'-3' Silty Sand, fine to medium grained, Trace of Fine Gravel, brown, moist

j. Was the piping trench backfilled? YES _____X_____ NO _____
If yes, provide the date 5-20-94 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

New fiberglass piping was placed into the trench for the new tank. The trench was backfilled with pea gravel.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

   _____

   _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sampl which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed _2_ cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
   No stockpile of soil was created. A new fiberglass UST was installed in the excavation. Pea gravel was used for backfill up to 1 foot below the top of the tank. The soils removed during the excavation process were used as topsoil over the excavated area.

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES _X_ NO _____ If no, describe how tank(s) were cleaned. _____
b. Provide an estimate of the volume of sludge removed from the tank. _0_ gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: John Phillips
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8737

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: for: Date: 1-21-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl
Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: J. Michael Valentine Date: 1-21-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: January 20, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building 3138

Location: Fort McClellan

Contact: Mr. Ray Murphy

Address: Fort McClellan, AL 36205

Contact Telephone No.: (205) 848- 6155

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8737

NO SOIL DISPOSAL AT THIS SITE

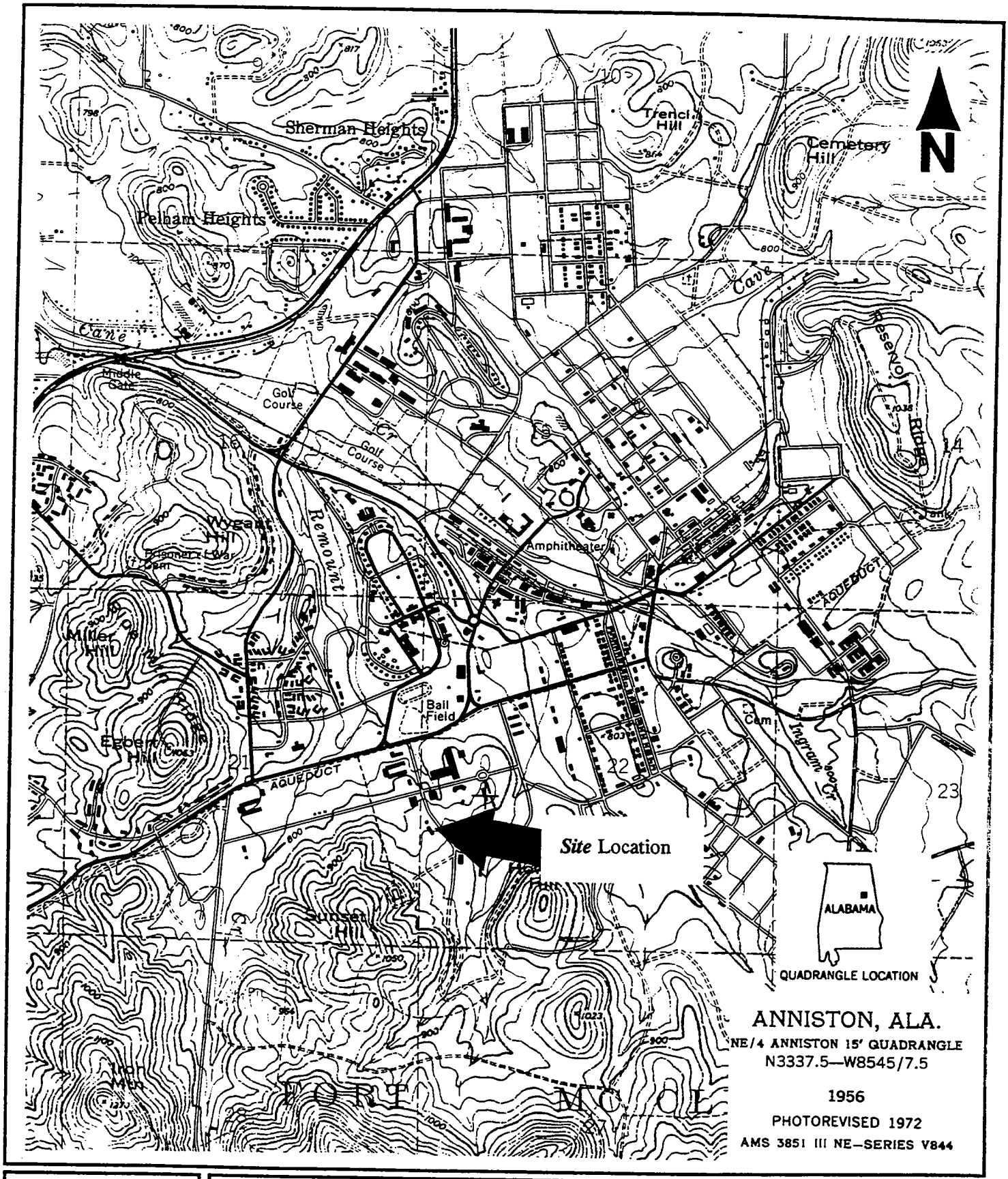
Sample 1	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 2	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 3	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 4	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 5	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 6	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 7	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 8	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 9	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 10	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 11	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 12	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 13	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 14	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 15	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 16	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 17	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 18	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 19	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 20	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
								TOTAL POTENTIAL EMISSIONS	_____ lbs VOC emissions

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

Appendix B

Site Location



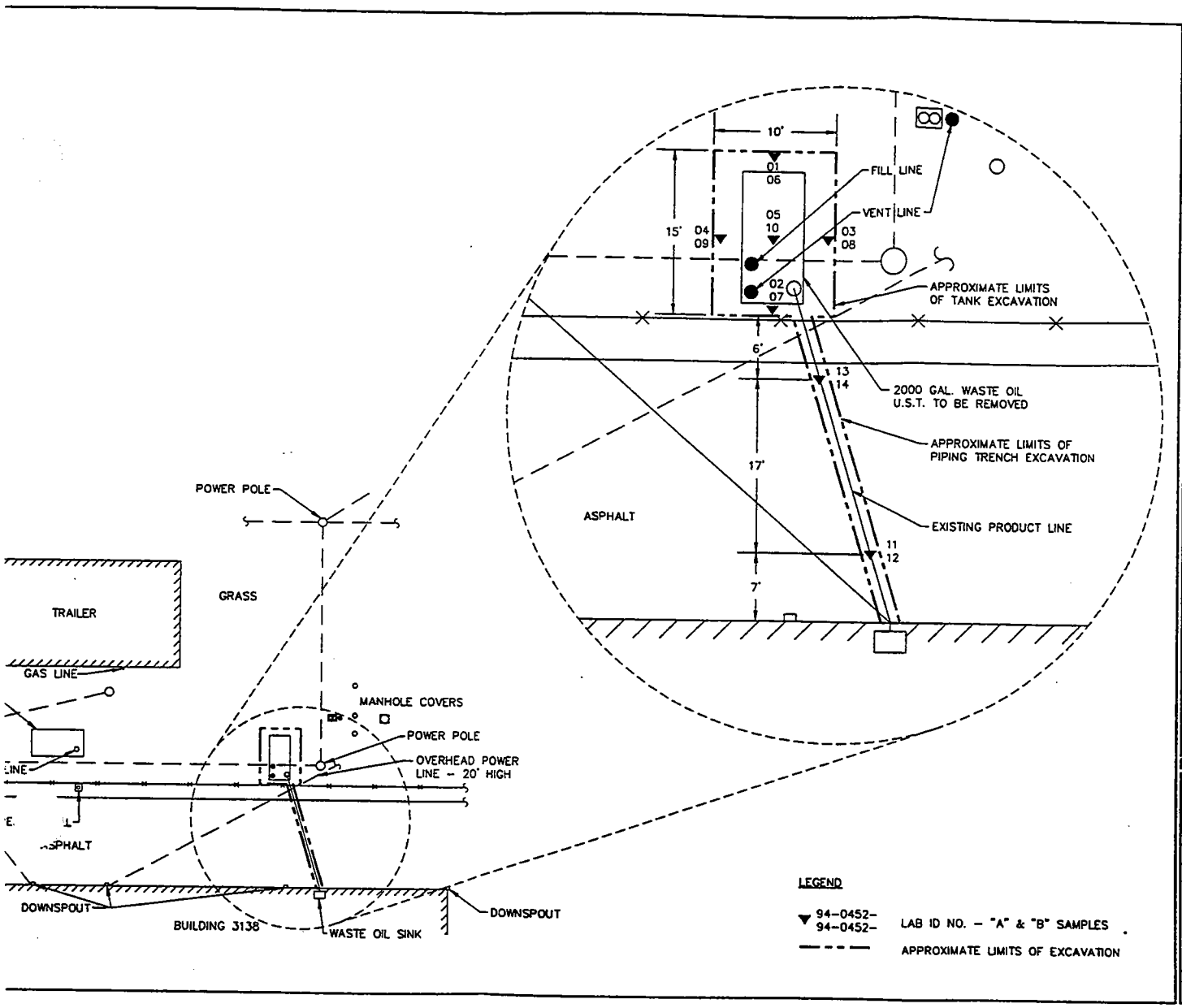
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 3138
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations



BRAUN INTERTEC

SITE MAP
WASTE OIL U.S.T. PROGRAM
BUILDING 3138
FORT McCLELLAN, ALABAMA

		DATE
INT		
DRAWN BY:	JAG	1-18-95
APP'D BY:	JTP	1-18-95
JOB No.	CMKX-93-0180	
DWG. No.	MK301800	SHEET OF
SCALE	NONE	

FIGURE NO. 1

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: PORT McCLELLAN, SOMMERALL GATE, ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Fisher Industrial Service, Inc., 402 Webster Chapel Rd., Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quanitity	14. Unit Wt/Vol	I. Waste No.
a. OIL SLUDGE, NON HAZARDOUS/NON REGULATED FIS Profile #: 18901	40	CM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above: Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above:

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406
Purchase Order #: DAVE DOBLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: Nolan L. Jaye Jr
Month Day Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: John W. Oliver
Month Day Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doble
Signature: David J Doble
Month Day Year: 06 06 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: NOLAN L. JAYE, JR. NJ
Signature: Nolan L. Jaye Jr NJ
Month Day Year

GENERATOR / TRANSPORTER / FACILITY

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Appendix E

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 27, 1994

Project CMKX-93-0180D
Report 08-94-0497

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on four (4) soil samples received on May 20, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref.:

94-0431-11	BLDG. 3138	Pipe Trench	7' "A"
94-0431-12	BLDG. 3138	Pipe Trench	7' "B"
94-0431-13	BLDG. 3138	Pipe Trench	17' "A"
94-0431-14	BLDG. 3138	Pipe Trench	17' "B"

Analysis performed on May 25, and 26, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:
(Units: mg/Kg, ppm)

	Total Petroleum Hydrocarbons	Lead, (Pb)
11	5700	4.4
12	15	11
13	12300	14
14	5	13
Spike Recovery, %	104.66	101.89
Relative Percent Difference on Duplicate,%	0.23	2.58

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

K:\800\system\800\misc\J&Nent07.18

BRAUN℠ INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page 2 of 2

Site Identification

Project #:

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) _____

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager:

Sampled by:

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	Bldg 3138 pipe trench 7' A	5-18														TPH + Lead
	pipe trench 7' B															Hold
	pipe trench 17' A															
	pipe trench 17' B															Hold

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5-19-94	12:30	Kellie J. Antchuson 5-20-94 10:20am				

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 27, 1994

Project CMKX-93-0180D
Report 08-94-0469

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on ten (10) soil samples received on May 12, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0452-01	BLDG. 3138	North Wall "A"	4'
94-0452-02	BLDG. 3138	South Wall "A"	4'
94-0452-03	BLDG. 3138	East Wall "A"	4'
94-0452-04	BLDG. 3138	West Wall "A"	4'
94-0452-05	BLDG. 3138	Base "A"	8'
94-0452-06	BLDG. 3138	North Wall "B"	4'
94-0452-07	BLDG. 3138	South Wall "B"	4'
94-0452-08	BLDG. 3138	East Wall "B"	4'
94-0452-09	BLDG. 3138	West Wall "B"	4'
94-0452-10	BLDG. 3138	Base "B"	11'

Analysis performed on May 25, and 26, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050/7420.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
01	5	13
02	5	10
03	5	12
04	<5	14
05	130	13
06	**	**
07	**	**
08	**	**
09	**	**
10	35	9
Spike Recovery, %	103.74	104.00
Relative Percent Difference on Duplicate, %	0.28	3.59

** = Testing not required

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

K:\800\system\800\misc\J&NDENt07.19

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page 1 of 2

Site Identification

FORT McCLELLAN
BLDG 3138
ANNISTON ALABAMA

Project #: CMKX-93-0180 TASK D

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) A

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: JOHN PHILLIPS

Sampled by: JOHN PHILLIPS

Comments:

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	Bldg 3138 "A" NORTH WALL 4'	5-4-94	—	A				1								TPH, Lead
	Bldg 3138 "A" SOUTH WALL 4'			A				1								
	Bldg 3138 "A" EAST WALL 4'			A				1								
	Bldg 3138 "A" WEST WALL 4'			A				1								
	Bldg 3138 "A" Base 8'			A				1								TPH, Lead
	Bldg 3138 "B" NORTH WALL 4'			A				1								HOLD
	Bldg 3138 "B" SOUTH WALL 4'			A				1								
	Bldg 3138 "B" EAST WALL 4'			A				1								
	Bldg 3138 "B" WEST WALL 4'			A				1								
	Bldg 3138 "B" BASE 11'			A				1								

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	5-9-94	20:00	Rollie E. Hutchison 5-12-94				

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

ATTACHMENT 13

BUILDING 3148 (BRAUN)

BRAUN℠
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 25, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 3148, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or John Phillips at (612) 683-8737.

Sincerely,

for John Phillips
Environmental Scientist

for Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises
f:*wpfiles\cmkx\93-0180\0180.R05

Table of Contents

A. Background 1

B. Piping Removal 1

C. In-Place UST Abandonment 1

D. Sludge Disposal 1

E. Soil Sampling and Laboratory Results 2

- E.1. Soil Sampling Procedures 2
- E.2. Classification 2
- E.3. Soil Boring Observations. 2
- E.4. Organic Vapor Screening 3
- E.5. Chemical Soil Sampling 3
- E.6. Analytical Analyses Results 3

F. Conclusions 4

Appendices

A. ADEM Closure Report Form
B: Site Location
C. Site Plan with Sample Locations
D. Hazardous Waste Manifest and Certificate of Disposal
E: Soil Boring Logs
F: Organic Vapor Field Data Sheets
G. Laboratory Results

A. Background

The Underground Storage Tank (UST) at BLDG 3148 is located south of the concrete ramps and west of the lubricant storage area. The UST capacity was approximately 2,000 gallons and was used to store waste oil. Because the UST was located adjacent to the spread footings of a truck maintenance ramp, in-place abandonment was chosen as the closure option. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

B. Piping Removal

Product was placed into a drain pan between the concrete ramps and gravity fed by aboveground PVC pipe to the UST. The piping was removed on May 5, 1994. The aboveground pipe measured approximately 10 long. One soil sample was collected for analyses beneath the aboveground piping. The location is illustrated in Figure 2, Appendix C.

C. In-Place UST Abandonment

Prior to closure, the remaining product was removed from the UST, the UST was purged with fresh air and cleaned. The tank was constructed of single wall steel. No holes were observed in the UST walls from the interior and it appeared to be in fair condition. The tank was filled with approximately 11 yards of concrete slurry on May 5, 1994.

D. Sludge Disposal

No sludge was encountered during removal, however 100 gallons of waste oil was drummed, transported and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

E. Soil Sampling and Laboratory Results

E.1. Soil Sampling Procedures

Three power auger borings (labeled 3148-N, 3148-E, and 3148-W) were performed on each accessible side of the UST using a truck-mounted core and auger drill. A forth boring on the south side of the tank was not possible. The UST was located near the south edge of a motor pool compound. A fence was located approximately 4 feet south of the UST. No access roads were located south of the fence. Trees, overhead power lines, and soft, wet soils also prohibited sample collection with a truck mounted drill rig. The three borings were extended to a depth near the assumed base of the UST. All down-hole equipment was steam cleaned prior to use, and clean augers were used for each borehole.

Power auger borings were advanced 2.5 foot intervals below land surface then removed by dead lifting. Split spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140 pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2 1/2-foot vertical intervals to the termination depth of the borings.

E.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

E.3. Soil Boring Observations.

The soils encountered in the soil borings completed near the UST basin consisted of 3 feet of silty sand fill with gravel and crushed asphalt; over 3 to 5 feet of silty clayey sand and clayey sand; over lean clay. The boring located beneath the aboveground product piping encountered sand fill with crushed asphalt to 2.5 feet. An oil stain was noted on the surface beneath the product piping.

Groundwater was encountered at 6 feet below land surface in borings 3148-N, 3148-E and 3148-W. Complete Soil Boring Logs are attached in Appendix E.

E.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

E.5. Chemical Soil Sampling

Soil samples were collected for chemical analysis from the depth of 7.5 feet below land surface in each of the three soil borings near the UST. The soil samples collected from the soil borings were analyzed for the presence of total petroleum hydrocarbons (THC) and total lead. Soil samples were also collected from beneath the aboveground product piping at 0.5 feet and 2.5 feet below land surface. The material located above the UST consisted of a concrete slab and asphalt. Therefore, no soil samples were collected from this material. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

E.6. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation, pipe trench and the soil stockpile are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix G.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
3148-N	<5	12	7.5	94-0431-13
3148-E	10	15	7.5	94-0431-14
3148-W	15	12	7.5	94-0506-03
Pipe trench "A"	9000	39	0.5	94-0506-01
Pipe trench "B"	520	11	2.5	94-0506-02

Soil samples collected from beneath the aboveground piping contained asphalt which may have increased the concentration of TPH found in the soil samples.

F. Conclusions

The 2000-gallon fuel oil UST located at building 3148 was abandoned in-place on May 5, 1994. Three soil borings were completed near the UST and soil samples were collected from a depth of 7.5 feet below land surface. TPH concentrations ranged from <5 ppm to 15 ppm in the soil samples collected and total lead concentrations ranged from 11 ppm to 15 ppm. A surface spill of waste oil was apparent beneath the product piping. Soil samples collected from beneath the aboveground piping contained asphalt which may have increased the concentration of TPH found in the soil samples. Groundwater was encountered in the soil borings completed near the UST at approximately 6 feet below land surface.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015840

Date of this Report: January 25, 1995

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 3148
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1 CIP

Number of tanks remaining at site: 1
Closure Date: 5-5-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	5' X 13'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES __NO ___ If not, provide the depth from the ground surface to the groundwater table. ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____ NO _____
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
If yes, please indicate which tank(s) by the Identification Number _____.
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: _____

_____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable.
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO __X__ If no, provide the depth from the ground surface to the groundwater table. __6__ ft.
   1. Boring or Monitor Well __3 soil borings near UST__
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO __X__ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. boring logs attached

g. Specify the inert solid material used to fill the tank(s). concrete slurry

h. Provide the date the tank(s) were filled. 5-5-94

i. Were the bore holes properly sealed with bentonite/soil?
Yes X No _____ If yes, provide date: 4/25/94

3. Product Piping Closure Removal

PIPING WAS ABOVEGROUND

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES X NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well Soil borings near UST
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES X-surface spill NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe Mild _____)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other Waste oil from surface spills _____)

f. Was there water in the piping trench? YES _____ NO X
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? Yes NO X-Aboveground piping
If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES X NO _____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes: Joints were not properly sealed

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
The piping run was aboveground, no piping trench was excavated.

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

      _____

      _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN ALL EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 0 cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
   No stockpile of soil was created.

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____
b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: John Phillips
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8737

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: for: John Phillips Date: 1-27-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: for Earl Windahl Date: 1-27-95

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment: UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: January 18, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Address: Fort McClellan, AL 36205

Facility Name: Building

Location: Fort McClellan

Contact: Mr. Ray Murphy/Lee Jaye

Address: Ft. McClellan, Alabama 36205

Contact Telephone No.: (205) 848-6155/(205)848-3539

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8737

NO STOCKPILE CREATED FOR THIS SITE

Sample 1	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 2	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 3	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 4	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 5	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 6	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 7	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 0	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 9	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 10	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 11	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 12	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 13	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 14	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 15	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 16	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 17	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 18	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 19	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions
Sample 20	_____	ppm	x	_____	cyds	x	.002	=	_____ lbs VOC emissions

TOTAL POTENTIAL EMISSIONS _____ lbs VOC emissions

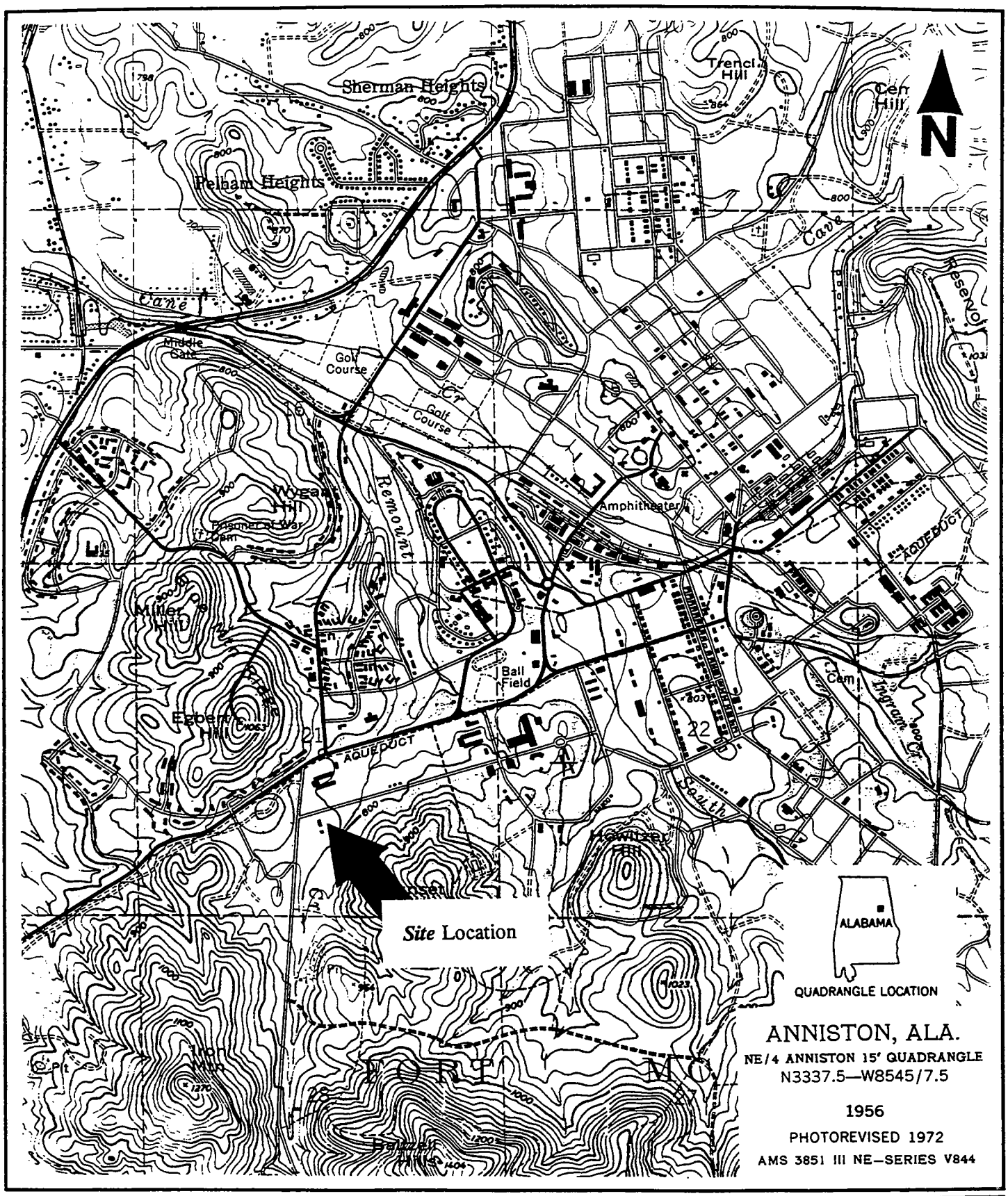
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

f:\wpfiles\cmxx\forms\ADEMUST

Appendix B

Site Location



ANNISTON, ALA.

NE/4 ANNISTON 15' QUADRANGLE

N3337.5—W8545/7.5

1956

PHOTOREVISED 1972

AMS 3851 III NE—SERIES V844

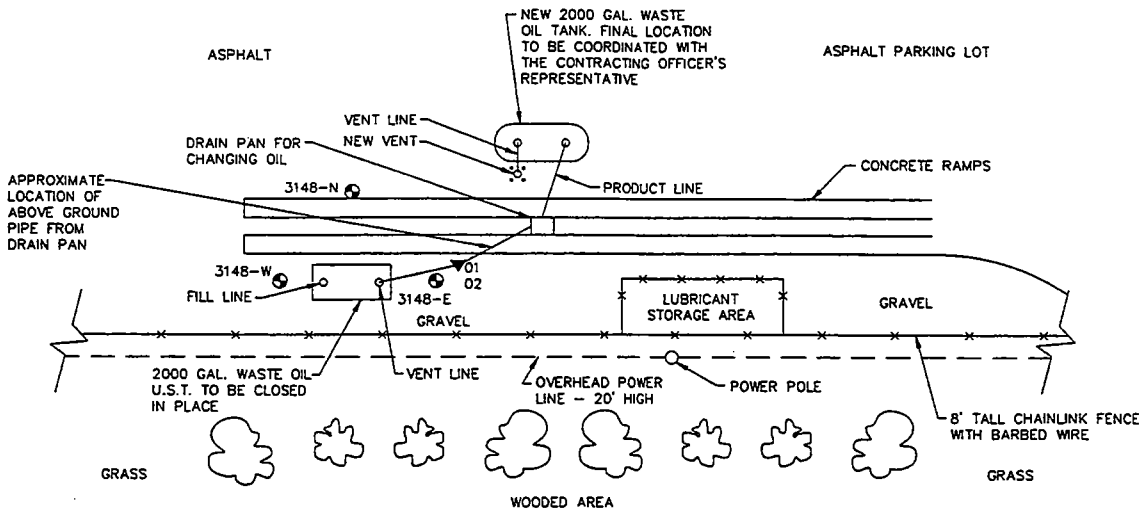
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 3148
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations



LEGEND

SOIL BORING LOCATION

94-0506-
94-0506- LAB ID NO. - "A" & "B" SAMPLES

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FORT MCCLELLAN, SOMMERALL GATE, ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Fisher Industrial Service, Inc., 402 Webster Chapel Rd., Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quanitity	14. Unit Wt/Vol	I. Waste No.
a. OIL SLUDGE, NON HAZARDOUS/NON REGULATED — FIS Profile #: 18901	40	CM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406
Purchase Order #: DAVE DOBLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR
Signature: Nolan L. Jaye
Month Day Year

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: John W. Oliver
Signature: John W. Oliver
Month Day Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doble
Signature: David J Doble
Month Day Year: 06 06 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: NOLAN L. JAYE, JR. NRJ
Signature: Nolan L. Jaye NRJ
Month Day Year

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8332
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Appendix E

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellen Ft. McClellen, Alabama	BORING: 3148-N LOCATION: See attached sketch. DATE: 4/25/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.8	0.0					
95.8	3.0		FILL: Silty Sand with Gravel, fine to coarse grained, with Bituminous fragments, brown, moist to waterbearing. -waterbearing at 2 feet.	15		
92.8	6.0	SC	CLAYEY SAND, fine to medium grained, brown, waterbearing, medium dense. (Loess) -waterbearing at 6 feet.	18		
90.8	8.0	CL	LEAN CLAY, brown, wet, hard. (Residual Clay)	33		
			END OF BORING Water not observed immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellen

Ft. McClellen, Alabama

BORING: 3148-W

LOCATION:
See attached sketch.

DATE: 4/25/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.0	0.0		FILL: Silty Sand with Gravel, fine to medium grained, with Bituminous fragments, brown, moist.	16		
96.0	3.0	SC	CLAYEY SAND, fine grained, brown, moist, medium dense. (Loess)	26		
			-waterbearing at 6 feet.	25		
91.0	8.0		END OF BORING Water down 6 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 3148-E LOCATION: See attached sketch. DATE: 5/18/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.8	0.0					
95.8	3.0		FILL: Poorly Graded Sand with Silt and Gravel, fine to medium grained, with Bituminous fragments, brown, moist.	15		Asssumed elevation of 100.0 feet established on the floor slab of bldg. 3139.
92.8	6.0	SC SM	SILTY CLAYEY SAND, fine to medium grained, brown, moist, medium dense. (Loess)	21		
			-waterbearing at 6 feet.			
90.8	8.0	CL	LEAN CLAY, brown, wet, hard. (Residual Clay)	35		
			END OF BORING Water down 6 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 3148-N LOCATION: See attached sketch. DATE: 4/25/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.8	0.0		FILL: Silty Sand with Gravel, fine to coarse grained, with Bituminous fragments, brown, moist to waterbearing. -waterbearing at 2 feet.	15		
95.8	3.0	SC	CLAYEY SAND, fine to medium grained, brown, waterbearing, medium dense. (Loess) -waterbearing at 6 feet.	18		
92.8	6.0	CL	LEAN CLAY, brown, wet, hard. (Residual Clay)	33		
90.8	8.0		END OF BORING Water not observed immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 3148-W

LOCATION:
See attached sketch.

DATE: 4/25/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.0	0.0		FILL: Silty Sand with Gravel, fine to medium grained, with Bituminous fragments, brown, moist.	16		
96.0	3.0	SC	CLAYEY SAND, fine grained, brown, moist, medium dense. (Loess)	26		
			-waterbearing at 6 feet.	25		
91.0	8.0		END OF BORING Water down 6 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

Appendix F

Organic Vapor Field Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 3148W *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0.5	5.2	
5		0	2.9	
7.5		0	4.8	

Organic Vapor Field Data Sheet

Boring Identification: 3148N *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0.4	5.7	
5		0	4.0	
7.5		0	5.5	

Organic Vapor Field Data Sheet

Boring Identification: 3148E *Project No.:* CMKX-93-0180 *Date:* 5-18-94

Weather Conditions: Clear, 90 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 5-18-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5.0		0	5.1	
7.5		0	2.3	

ATTACHMENT 14

BUILDING 3298 (BRAUN)

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 27, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 3298, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above-referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or John Phillips at (612) 683-8737.

Sincerely,

for: John Phillips
Environmental Scientist

Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J&D Enterprises

f:*wpfiles\cmkx\93-0180\0180.R11

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B. Site Location
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D. Hazardous Waste Manifest and Certificate of Disposal
E. Soil Boring Logs
F. Organic Field Vapor Data Sheets
G. Laboratory Results

A. Background

The underground storage tank (UST) at Building 3298 is located approximately 160 feet north of building 3298 between the two sets of concrete truck ramps. The UST is located adjacent to the spread footings of the truck ramps. Therefore, in-place abandonment was chosen as the closure method. The UST capacity was approximately 2,000 gallons and was used to store waste oil. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

B. Piping Removal

Waste oil was placed into a drain pan between the concrete ramps and gravity fed through aboveground PVC pipe to the UST. The total length of the product piping was approximately 5 feet and was removed on May 5, 1994. The location is illustrated in Figure 1, Appendix B.

C. UST Closure In Place

Prior to closure in place of the UST the remaining product was removed, the tank was purged with fresh air and cleaned. The UST was constructed of single wall steel. No holes were observed from the interior of the UST, and it appeared to be in fair condition. The tank was filled with concrete slurry on May 5, 1994.

D. Soil Disposal

Approximately 10 yards of soil were removed from the UST basin during excavation of the UST. Contaminated soils were transported to the base landfill for thin-spreading.

E. Sludge Disposal

No sludge was encountered during removal, however, 200 gallons of waste oil was drummed and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

F. Soil Sampling and Laboratory Results

F.1. Soil Sampling Procedures

Four power auger borings (labeled 3298-N, 3298-E, 3298-S, and 3298-W) were performed on each side of the UST using a truck-mounted core and auger drill. Borings were extended to a depth near the assumed base of the UST. Additionally, one boring was continued to 15.5 feet below land surface to determine if groundwater was present within 5 feet of the assumed bottom of the UST. All down-hole equipment was steam cleaned prior to use, and clean augers were used for each borehole.

Power auger borings 3298-E, 3298-S, and 3298-W were advanced 2.5-foot intervals below land surface then removed by dead lifting. Split-spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140 pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2.5-foot vertical intervals to the termination depth of the borings.

Due to overhead power lines, split-spoon samples collected from boring 3298-N were advanced hydraulically. No blow counts were recorded in this boring.

F.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

F.3. Soil Boring Observations

The soils encountered in the soil borings completed near the UST basin consisted of 2 to 5 feet of poorly graded sand fill overlying; silty sand and lean clay with sand over weathered shale and shale bedrock. Groundwater was not encountered in the soil borings. Complete Soil Boring Logs are attached in Appendix E.

F.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

F.5. Chemical Soil Sampling

Soil samples were collected for chemical analysis from the depth of 7.5 feet below land surface in each of the four soil borings. In addition, soil samples were collected from soil borings 3298-S at a depth of 5.0 feet where organic vapors were detected emanating from the soil samples. A soil sample was also collected from the stockpile of soil excavated from the top of the UST. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

F.2. Analytical Analyses Results

The analytical results of the soil samples collected from the soil borings and the soil stockpile are summarized in Table 1. Complete laboratory reports and original chain of custody is attached in Appendix G.

Table 1
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
3298-N	85	13	7.5	94-0431-01
3298-E	5	17	7.5	94-0431-02
3298-S	775	9.7	5.0	94-0431-03
3298-S	140	18	7.5	94-0431-04
3298-W	20	18	7.5	94-0431-05
Stockpile	2900	26	NA	94-0452-12

NA=Not applicable

G. Conclusions

A petroleum hydrocarbon release has been identified on the site. Petroleum-contaminated soils were encountered in soil borings completed near the UST basin and in the soils excavated from the top of the UST. The vertical and horizontal extent of the petroleum-contaminated soils was not determined during this assessment. Groundwater was not encountered in the soil borings completed near the tank basin.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015840

Date of this Report: January 27, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

Facility County: Calhoun
Facility Name: Building 3298
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6111/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1 CIP

Number of tanks remaining at site: 1
Closure Date: 5-5-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	6' X 11'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identification.
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES __NO ___ If not, provide the depth from the ground surface to the groundwater table. ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there water in the excavation? YES _____ NO _____
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
If yes, please indicate which tank(s) by the Identification Number _____.
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole):
_____
_____
_____
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: _____

_____

_____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable.
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES __X_____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
   1. Boring or Monitor Well No groundwater in soil boring to 15.5 feet
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES __X____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO __X____
If yes:
   1. How was free product handled? _____
   _____
   _____
   2. What was the measured thickness of free product? _____
   _____
   _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. Sand fill 2 to 5 feet over silty sand and lean clay. Shale bedrock at 7.5 to 15.5 feet.
_____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). Sand slurry
_____

h. Provide the date the tank(s) were filled. 5-5-94

i. Were the bore holes properly sealed with bentonite/soil?
Yes _____ No _____ If yes, provide date: _____

3. Product Piping Closure Removal
PIPING WAS ABOVEGROUND

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES X NO _____ If not, provide the depth from the ground surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well Soil borings
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES X NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe Mild)
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other Waste Oil)

f. Was there water in the piping trench? YES _____ NO X
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO X
If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO X_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
The piping run was aboveground, no piping trench was excavated.

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

      _____

      _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 10 ___ cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
   Fort McClellan Landfill

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ___X___ NO _____ If no, describe how tank(s) were cleaned. _____
b. Provide an estimate of the volume of sludge removed from the tank. _0_____ gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: John Phillips
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8737

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: for: John Phillips Date: 2-1-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl

Company: Braun Intertec Corporation
Telephone Number: (612) 683- 8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: _____ Date: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

GRWATER3
WP+ 1538
10/5/92

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: January 18, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

Facility County: Calhoun

Facility Name: Building 3298

Location: Fort McClellan

Address: Fort McClellan, AL 36205

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.: (205) 848-6155/(205) 848-3539

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8737

Sample 1	2900	ppm	x	10	cyds	x	.002	=	5.8	lbs VOC emissions
Sample 2		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 3		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 4		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 5		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 6		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 7		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 0		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 9		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 10		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 11		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 12		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 13		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 14		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 15		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 16		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 17		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 18		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 19		ppm	x		cyds	x	.002	=		lbs VOC emissions
Sample 20		ppm	x		cyds	x	.002	=		lbs VOC emissions
							TOTAL POTENTIAL EMISSIONS		5.8	lbs VOC emissions

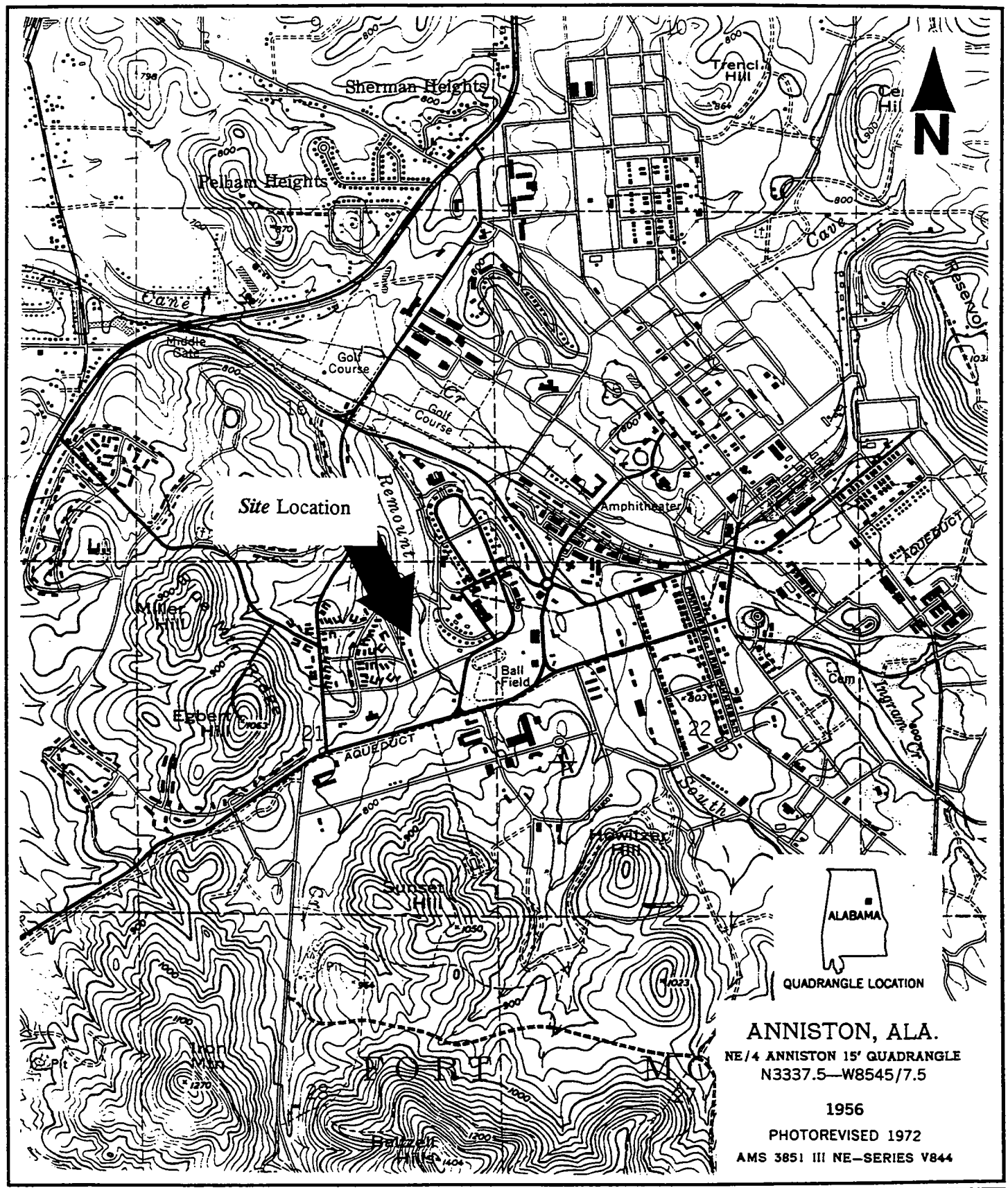
* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

f:\wpfiles\cmkx\93-0180\0180.R11

Appendix B

Site Location



ANNISTON, ALA.

NE/4 ANNISTON 15' QUADRANGLE

N3337.5—W8545/7.5

1956

PHOTOREVISED 1972

AMS 3851 III NE—SERIES V844

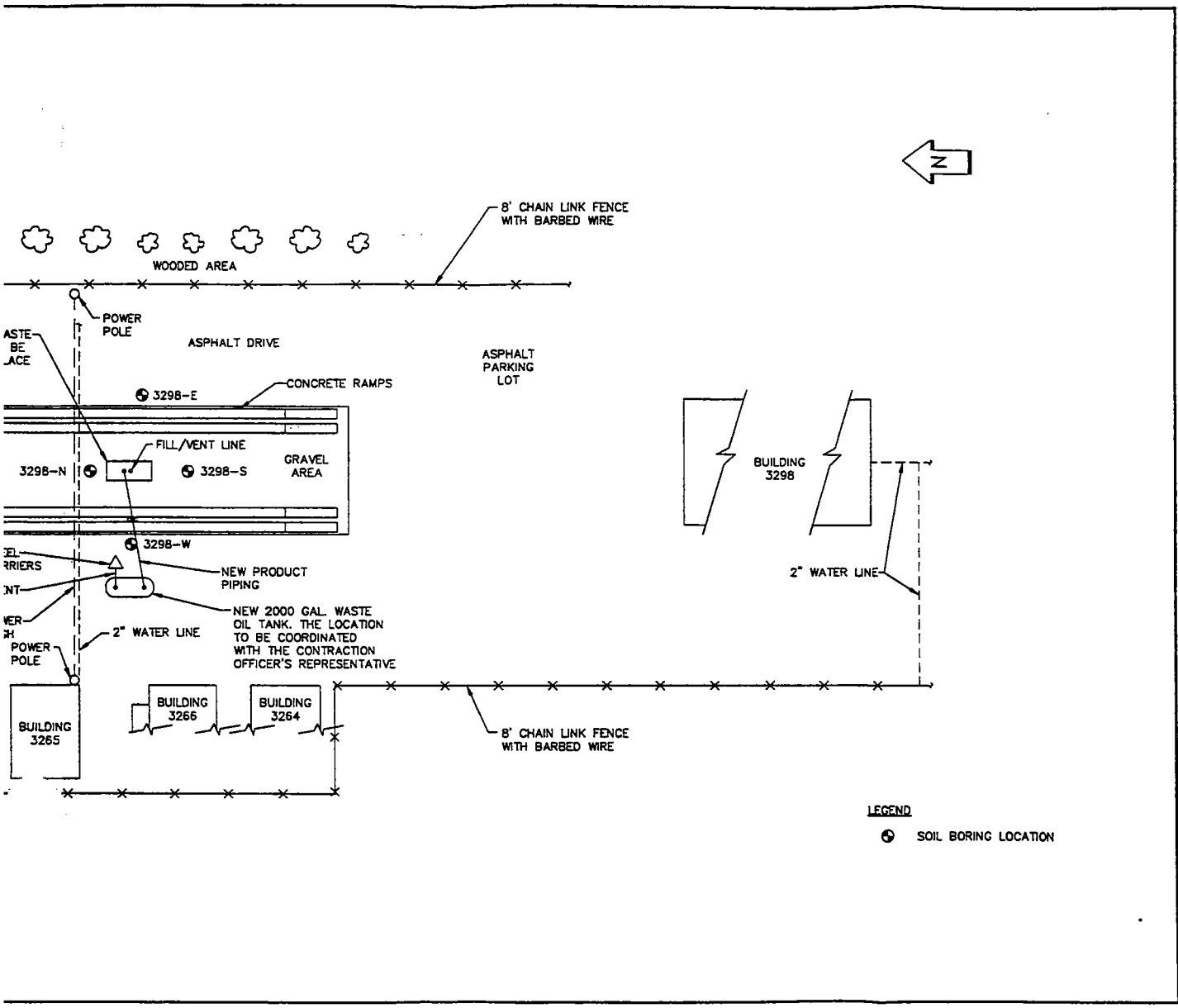
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 3298
Fort McClellan, Alabama

INT	DATE	SHEET
DRAWN BY: KLB	1-20-95	
APP'D BY:		OF
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations



BRAUN INTERTEC

SITE MAP
WASTE OIL U.S.T. PROGRAM
BUILDING 3298
FORT McCLELLAN, ALABAMA

INIT		DATE	
DRAWN BY:	JAG	1-18-95	
APP'D BY:	JTP	1-18-95	
JOB No.	CMKX-93-0180		
DWG. No.	MK30180A	SHEET	OF
SCALE	NONE		

FIGURE NO. 1

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

(AS REQUIRED BY THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT)

297

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

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALA210020562
Manifest Document No.: 99201
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: FORT MCCLELLAN, SOMMERALL GATE, ANNISTON, AL 36205-
4. Generator's Phone: (205) 848-6155

A. State Manifest Document Number: FIS 0026468
B. State Generator's ID:

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.
6. US EPA ID Number: ALD981020894
C. State Transporter's ID:
D. Transporter's Phone:

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Fisher Industrial Service, Inc., 402 Webster Chapel Rd., Glencoe, AL 35905
10. US EPA ID Number: ALD981020894
G. State Facility's ID: ALD981020894
H. Facility's Phone: 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. OIL SLUDGE, NON HAZARDOUS/NON REGULATED — FIS Profile #: 18901	40	DM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above: Transporter has E.R.G. Book.
State of Origin: AL

K. Handling Codes for Wastes Listed Above:

15. Special Handling Instructions and Additional Information
24 Hr. Emergency Response Name/Number: /
Work Order #: 005319/940406
Purchase Order #: DAVE DOBLE CD

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: NOLAN L. JAYE, JR.
Signature: [signature]
Month / Day / Year:

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name: JOHN W. OLIVER
Signature: John W. Oliver
Month / Day / Year: 06 06 94

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name: David J Doyle
Signature: [signature]
Month / Day / Year: 06 06 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: NOLAN L. JAYE, JR. NRD
Signature: [signature] NRD
Month / Day / Year:

GENERATOR
TRANSPORTER
FACILITY

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 10-91)

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHONE:
(205) 492-8340
Fax (205) 492-8932
SALES TELEPHONE:
(205) 492-3002
Fax (205) 492-0820

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id : ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s)
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste material identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-94

Appendix E

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 3298-E

LOCATION:
See attached sketch.

DATE: 4/25/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
96.8	0.0		FILL: Poorly Graded Sand with Silt, fine to coarse grained, with oil staining to 4.5 feet, brown, moist.	9		Asssumed elevation of 100.0 feet established on the floor slab of bldg. 3298.
91.8	5.0	SM	SILTY SAND, fine to medium grained, brown, moist, dense to very dense. (Loess)	32		
89.3	7.5		END OF BORING Auger refusal at 7.5 feet. Water not observed to 7.5 feet after withdrawal of auger. Boring then backfilled with cuttings.	50+		

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 3298-N LOCATION: See attached sketch. DATE: 4/21/94	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.3	0.0		FILL: Poorly Graded Sand with Silt and Gravel, grey, moist.			Split-spoon advanced hydraulically, no blows per foot were recorded.
94.3	4.0	CL	LEAN CLAY with GRAVEL, grey, wet. (Residual Clay)			
89.3	9.0		END OF BORING Water not observed to 9 feet after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 3298-S LOCATION: See attached sketch. DATE: 4/25/94 SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.4	0.0		FILL: Gravel with Sand, grey, wet.			
96.4	2.0	CL	LEAN CLAY, brown, wet, very stiff. (Residual Clay)	20		
93.4	5.0	CL	LEAN CLAY, grey, wet, soft. (Residual Clay)	3		
90.4	8.0		SHALE BEDROCK at 8 feet.	48		

END OF BORING

Water not observed to 8 feet immediately after withdrawal of auger.

Boring then backfilled with cuttings.

LOG OF BORING

PROJECT: CMKX-93-0180 WASTE OIL UST PROGRAM Ft. McClellan Ft. McClellan, Alabama	BORING: 3298-W LOCATION: See attached sketch. DATE: 4/21/94	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
97.7	0.0		FILL: Poorly Graded Sand with Gravel, grey, moist.	13		
93.7	4.0	CL	LEAN CLAY, grey, moist, very stiff. (Residual Clay)	26		
91.2	6.5	CL	LEAN CLAY, brown, moist, hard. (Residual Clay)	50+		
				50+		
				50+		
82.2	15.5		SHALE BEDROCK END OF BORING Water not observed to 15 feet after withdrawal of auger. Boring then backfilled with cuttings.			

Appendix F

Organic Field Vapor Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 3298N *Project No.:* CMKX-93-0180 *Date:* 4-21-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-21-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
5.0		0	3.5	
7.5		0	3.5	

cmkx\forms\blank\ovfds2.frm

Organic Vapor Field Data Sheet

Boring Identification: 3298W *Project No.:* CMKX-93-0180 *Date:* 4-21-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-21-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		6	23	
5		6.5	7.2	
7.5		3.2	5.7	
10		0	7	

Organic Vapor Field Data Sheet

Boring Identification: 3298S *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		4.2	21.7	
5		14.5	87.5	
7.5		5.7	8.5	

Organic Vapor Field Data Sheet

Boring Identification: 3298E *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		51	63	
5		70	5.3	Bag Broke
7.5		2.5	5	

Appendix G

Laboratory Results

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0452

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on one (1) soil sample received on May 6, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref: 94-0452-12 BLDG. 3298 SP-1

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
12	2900	26
Spike Recovery, %	97.97	106.44
Relative Percent Difference on Duplicate, % ..	0.39	2.08

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\j&ndcn07.21

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # _____

Page _____ of _____

Site Identification

FORT McCLELLAN
BLDG 3298
ANNISTON ALABAMA

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) A

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: JOHN PHILLIPS

Sampled by: JOHN PHILLIPS

Comments:

Project #: CMKX-93-0180 TASK D

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
	BLDG-3298 SP-1	5-2	—	A				2								TPH, lead

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[illegible]	5-4-94	0900	—	—			—

Relinquished by:	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:
—			—	Thomas Hallquist	5-6-94	12:10

BRAUN[SM]
INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

Engineers and Scientists Serving the Built and Natural Environments

May 13, 1994

Project CMKX-93-0180D
Report 08-94-0431

J & ND Enterprises
Mr. Marty Pelkey
5197 LaVaque Lake Road
Duluth, MN 55803

Dear Mr. Pelkey:

Re: Analysis performed on five (5) soil samples received on May 3, 1994, pursuant to your request.

Site: Fort McClellan
Aniston, Alabama

Ref:

94-0431-01	BLDG. 3298	North	
94-0431-02	BLDG. 3298	West	
94-0431-03	BLDG. 3298	South	5.0 feet
94-0431-04	BLDG. 3298	South	6.5 feet
94-0431-05	BLDG. 3298	East	

Analysis performed on May 9, and 10, 1994.

Method: Total Petroleum Hydrocarbons by EPA Method 418.1.
Lead by EPA Method 3050.

Analysis:

(Units: mg/Kg, ppm)	Total Petroleum Hydrocarbons	Lead, (Pb)
01	85	13
02	5	17
03	775	9.7
04	140	18
05	20	18
Spike Recovery, %	98.57	102.77
Relative Percent Difference on Duplicate, %	1.43	4.46

Sincerely,

Jason Dahl
Chemist

Thomas Hallquist
Supervisor, Chemistry

jd\th:ljh

k:\800\system\800\misc\j&nden07.20

BRAUN INTERTEC

Chain Of Custody - ECS

Log-In/Report # 94-0431

Page _____ of _____

Site Identification

Fort McClellan
Anniston, Alabama

a = soil d = liquid
b = water e = tube or filter
c = solid f = sludge
o = other (specify) _____

Evidence tape intact? (Check One) Yes ◯ No ◯ NA ◯

Project Manager: Dave Dell

Sampled by: D. Dell

Comments:

Project #: CMKX-93-0180D

Sample No. (Lab Use Only)	Sample Identification	Collection Date	Collection Time	Sample Matrix Code	VOA	Filtered Metals	Unfiltered Metals	General	Cyanide	Oil and Grease	Nutrients	Tubes	Whirl Pak	Other	See attached sheet:	Analysis/ Remarks
01	Bldg 3298 N	4-21		a												TPH lead
02	W															
03	South 5.0															
04	South 7.5															
05	East															

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
D. Dell	5-2-94						

Relinquished	Date:	Time:	Received by:	Received for laboratory by:	Date:	Time:

Form No. Chain 5/91

ATTACHMENT 15

BUILDING 4407 (CHARTER SOUTH)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: NOT REGISTERED

Date of this Report: 9/14/94

Incident No.(If applicable)
UST _ _-_ _-_

Facility County: CALHOUN
Facility Name: FT. McLELLON
Location: ANNISTON, AL
AMMUNITION OFFICE
Address: ~~CORP'S OF ENG.~~
~~POSTAL~~ 4407 18TH ST.

UST Owner: US. ARMY/
CORP OF ENGINEERS
Address: POSTAL LOCATOR'S OFFICE
FT. McLELLON, AL 36205
Contact: WADE DOSS

Contact Telephone No.:
205-848-3714

Name of Contractor and/or Consultant used to close tanks: AUTO PUMP/
CHARTER SOUTH
Name of Laboratory used: STILLBROOK 205 788-1750

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE HEATING OIL TANK

Number of tanks remaining at site: NONE
Closure Date: 9/7/94

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size					
Tank Capacity	1,000 GAL				
Tank Age	15-20 YRS				
Date Tank Last Used	9/94'				
Substance Stored	DIESEL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

✓a. Attach site maps showing the general location of the facility.

✓b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions,

2. All soil sample locations and depths using an appropriate method of identification,

3. Location of areas of visible contamination,

4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ✓ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit: NO H_2O TO 10'
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES ✓ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe _____ DIESEL SMELL)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO ✓
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO ✓
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ✓ NO _____
If yes, please indicate which tank(s) by the Identification Number NO I.D. FOUND. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

PIN HOLES LOCATED ON BOTH ENDS OF TANK AT THE BOTTOM. PITTING ON BOTTOM 1/3 OF TANK.

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-10' LIGHT RED CLAY

i. Was the excavation backfilled? YES _____ NO ✓ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal n/a

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
   YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
   Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
      (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
   YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
   If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
   YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

PIPING LESS THAN 10'

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ✓ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ✓ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ✓
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ✓ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ✓
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ✓ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ✓
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: PIPING OVER TANK PIT.

j. Was the piping trench backfilled? YES _____ NO ✓
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal n/A

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) n/A

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

✓a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container, 4 oz JARS PROVIDED BY LAB.
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

✓b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 45 cubic yds.

✓b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
-PLACED ON 6 MIL POLY & COVERED WITH POLY

d. Indicate method of soil disposal used or to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5' feet from the base pit.
   2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
WAITING FOR APPROVAL FROM LAND DIVISION FOR DISPOSAL AT LANDFILL

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
RECEIPT gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. RECEIPT

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: JEFF S. McLEOD
Company: CHARTER SOUTH INC.
Telephone Number: 205 941-1173

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: [signature] Date: 9/14/94

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: [signature] Date: 9/14/94

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: [signature] Date 11/15/94

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

FOR OFFICE USE ONLY

TO: Air Division

FROM: UST Compliance Section

M E M O R A N D U M

January 28, 1991

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

Facility I.D. No.: NOT REGISTERED

Date of this Report: 9/14/94

Facility County: CALHOUN

UST Owner: U.S. ARMY

Facility Name: FT. McCLELLON

UST Owner: CORPS OF ENGINEER

Location: ANNISTON AL
AMMUNITION OFFICE

Owner Address: POSTAL LOCATOR'S OFFICE
FT. McCLELLON, ALABAMA 36205

Address: 4407 18th ST.

Contact: WADE DOSS

Contact Telephone No.: 848-3714

Name of Consultant who performed calculations: JEFF S. McLEOD

Consultants Phone Number: 205 941-1173

	a	ppm x	b	cyds x .002 =	c	lbs VOC emissions
Sample 1	2480	ppm x	20	cyds x .002 =	99.20	lbs VOC emissions
Sample 2	347	ppm x	20	cyds x .002 =	13.88	lbs VOC emissions
Sample 3	1380	ppm x	5	cyds x .002 =	13.80	lbs VOC emissions
Sample 4		ppm x		cyds x .002 =		lbs VOC emissions
Sample 5		ppm x		cyds x .002 =		lbs VOC emissions
Sample 6		ppm x		cyds x .002 =		lbs VOC emissions
Sample 7		ppm x		cyds x .002 =		lbs VOC emissions
Sample 8		ppm x		cyds x .002 =		lbs VOC emissions
Sample 9		ppm x		cyds x .002 =		lbs VOC emissions
Sample 10		ppm x		cyds x .002 =		lbs VOC emissions
Sample 11		ppm x		cyds x .002 =		lbs VOC emissions
Sample 12		ppm x		cyds x .002 =		lbs VOC emissions
Sample 13		ppm x		cyds x .002 =		lbs VOC emissions
Sample 14		ppm x		cyds x .002 =		lbs VOC emissions
Sample 15		ppm x		cyds x .002 =		lbs VOC emissions
Sample 16		ppm x		cyds x .002 =		lbs VOC emissions
Sample 17		ppm x		cyds x .002 =		lbs VOC emissions
Sample 18		ppm x		cyds x .002 =		lbs VOC emissions
Sample 19		ppm x		cyds x .002 =		lbs VOC emissions
Sample 20		ppm x		cyds x .002 =		lbs VOC emissions
TOTAL POTENTIAL EMMISSIONS					126.88	lbs VOC emissions

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

STILLBROOK
Environmental Testing Laboratory, Inc.
305 Crawford Street
Fairfield, AL 35064
) 788-1750

Lab Invoice #: 4431

Client: Mr. Jeff McLeod
Charter South, Inc.
215 Distribution Drive
Birmingham, AL 35209

Date: September 9, 1994

Project Name: Fort M
Project Location: N/A
Sample Matrix: Soil
Sampled By: Jeff McLeod
Lab Analyst: JTB
Test Method: "Methods for Chemical Analysis of Water & Wastes", EPA-600/3-83 Method 418.1

Project Number: N/A
P.O Number: N/A
Date Collected: September 7, 1994
Analysis Date: September 8, 1994

TOTAL PETROLEUM HYDROCARBONS

Lab I.D.	Field I.D.	TPH, mg/kg
26105	F-1A	577
26106	F-2A	8
26107	F-3A	1380
26108	F-4A	13
26109	F-5A	13
26110	F-1B	138
26112	F-3B	BDL

Detection Limit = 1 mg/kg
BDL=Below Detection Limit

Respectfully submitted,

John T. Brooks
President

ADEM Laboratory Certification I.D.# 40710

STILLBROOK

Environmental Testing Laboratory, Inc.
305 Crawford Street
'rfield, AL 35064
) 788-1750

Lab Invoice #: 4431

Client: Mr. Jeff McLeod
Charter,South, Inc.
215 Distribution Drive
Birmingham, AL 35209

Date: September 9, 1

Project Name: Fort M
Project Location: N/A
Sample Matrix: Soil
Sampled By: Jeff McLeod
Lab Analyst: JTB
Test Method: "Methods for Chemical Analysis of Water & Wastes", EPA-600/3-83 Method 418.1

Project Number: N/A
P.O Number: N/A
Date Collected: September 7, 1994
Analysis Date: September 8, 1994

QUALITY CONTROL DATA

ERA TPH Reference Control Lot #91024-1

Assayed: 1076 mg/kg

Range: 642-1340 mg/kg

Lab Blank: 9-8-94 = Below Detection Limit
Lab Duplicate: 9-8-94 = 3.7% RPD
Lab Spike: 9-8-94 = 97% Recovery

Respectfully submitted,

John T. Brooks
President

ADEM Laboratory Certification I.D.# 40710

CHAIN OF CUSTODY

LAB INVOICE # 4431

Environmental Testing Laboratory, Inc.

CLIENT: CHARTER SOUTH INC.

Date Results Needed:

Send Invoice to:

Special Instructions:

Phone Results to: _____ at _____ - _____

FAX Results to: _____ at _____ - _____

Contact: JEFF MCLEOD Phone: 941-1173

SAMPLE IDENTIFICATION

PROJECT NAME: FORT M.

PROJECT LOC:

PROJECT #:

P.O. #:

SAMPLER: JEFF MCLEOD

SAMPLE DATE: 9/8/94

PARAMETERS

LAB I.D.	FIELD I.D.	MATRIX	DATE	TIME	# BTL	TPH
26105	F-1A	SOIL	9/7	-		✓
26106	F-2A		9/7/94			✓
26107	F-3A					✓
26108	F-4A					✓
26109	F-5A					✓
	(TEST B SAMPLES IF A > 100PPM)					
26110	F-1B	SOIL				
26111	F-2B					
26112	F-3B					
26113	F-4B					
26114	F-5B					

Indicate Preservative by Letter:

(A) Metals use HNO3 Nitric Acid

(B) BTEX use HCL Hydrochloric Acid + 0.008% Sodium Thiosulfate

(C) Semi-Vol Organics or Coliforms/Fecal Strep use 0.008% Sodium Thiosulfate.

(D) H2SO4 Sulfuric Acid

(E) Sulfide use ZnOH3 Zinc Acetate

(F) CN use NaOH Sodium Hydroxide & – if needed – OOH2 Ascorbic Acid

Indicate Sample Bottle Type: (G) Glass (P) Plastic (VOC) VOC Vial

Sample Preservative & Container

Special Note:

RELINQUISHED BY	DATE/TIME	RECEIVED BY
SIGNATURE: [signature]	Date: 9/8/94	SIGNATURE: [signature]
PRINT NAME: JEFF S. MCLEOD	Time(24hr) 8:10	PRINT NAME:

RELINQUISHED BY	DATE/TIME	RECEIVED BY
SIGNATURE:	Date:	SIGNATURE:
PRINT NAME:	Time(24hr)	PRINT NAME:

305 Crawford Street Fairfield, AL 35064 Phone: 205-788-1750 FAX: 205-788-1747

STILLBROOK

Environmental Testing Laboratory, Inc.
305 Crawford Street
Field, AL 35064
788-1750

Lab Invoice #: 4432

Client: Mr. Jeff McLeod
Charter South, Inc.
215 Distribution Drive
Birmingham, AL 35209

Date: September 9, 199

Project Name: Fort M
Project Location: N/A
Sample Matrix: Soil
Sampled By: Jeff McLeod
Lab Analyst: JTB
Test Method: "Methods for Chemical Analysis of Water & Wastes", EPA-600/3-83 Method 418.1

Project Number: N/A
P.O Number: N/A

Date Collected: September 7, 1994
Analysis Date: September 8, 1994

TOTAL PETROLEUM HYDROCARBONS

Lab I.D.	Field I.D.	TPH, mg/kg
26115	F-6	2480
26116	F-7	347

EXCAVATED FILL

Detection Limit = 1 mg/kg

Respectfully submitted,

John T. Brooks
President

ADEM Laboratory Certification I.D.# 40710

STILLBROOK

Environmental Testing Laboratory, Inc.
305 Crawford Street
Field, AL 35064
788-1750

Lab Invoice #: 4432

Client: Mr. Jeff McLeod
Charter South, Inc.
215 Distribution Drive
Birmingham, AL 35209

Date: September 9, 1994

Project Name: Fort M
Project Location: N/A
Sample Matrix: Soil
Sampled By: Jeff McLeod
Lab Analyst: JTB
Test Method: "Methods for Chemical Analysis of Water & Wastes", EPA-600/3-83 Method 418.1

Project Number: N/A
P.O Number: N/A

Date Collected: September 7, 1994
Analysis Date: September 8, 1994

QUALITY CONTROL DATA

ERA TPH Reference Control Lot #91024-1

Assayed: 1076 mg/kg

Range: 642-1340 mg/kg

Lab Blank: 9-8-94 = Below Detection Limit
Lab Duplicate: 9-8-94 = 3.7% RPD
Lab Spike: 9-8-94 = 94% Recovery

Respectfully submitted,

John T. Brooks
President

ADEM Laboratory Certification I.D.# 40710

Environmental Testing Laboratory, Inc.

CLIENT: Charter South

Date Results Needed:

Send Invoice to:

Special Instructions:

Phone Results to: _____ at _____ - _____

FAX Results to: _____ at _____ - _____

Contact: JEFF McLEOD Phone: 941-1173

SAMPLE IDENTIFICATION

PROJECT NAME: FORT M.

PROJECT LOC:

PROJECT #:

P.O. #:

SAMPLER: JEFF McLEOD

SAMPLE DATE: 9/7/94

LAB I.D.	FIELD I.D.	MATRIX	DATE	TIME	# BTL	PARAMETERS: TPH
26115	F-6	SOIL				✓
26116	F-7	SOIL				✓

Indicate Preservative by Letter:

(A) Metals use HNO3 Nitric Acid

(B) BTEX use HCL Hydrochloric Acid + 0.008% Sodium Thiosulfate

(C) Semi-Vol Organics or Coliforms/Fecal Strep use 0.008% Sodium Thiosulfate.

(D) H2SO4 Sulfuric Acid

(E) Sulfide use ZnOH3 Zinc Acetate

(F) CN use NaOH Sodium Hydroxide &–if needed–OOH2 Ascorbic Acid

Indicate Sample Bottle Type: (G) Glass (P) Plastic (VOC) VOC Vial

Sample Preservative & Container

Special Note:

RELINQUISHED BY	DATE/TIME	RECEIVED BY
SIGNATURE: [signature]	Date: 9/8/94	SIGNATURE: [signature]
PRINT NAME: JEFF S. McLEOD	Time(24hr)	PRINT NAME:

RELINQUISHED BY	DATE/TIME	RECEIVED BY
SIGNATURE:	Date:	SIGNATURE:
PRINT NAME:	Time(24hr)	PRINT NAME:

305 Crawford Street Fairfield, AL 35064 Phone: 205-788-1750 FAX: 205-788-1747

STILLBROOK
Environmental Testing Laboratory, Inc.
305 Crawford Street
Fairfield, AL 35064
) 788-1750

Lab Invoice #: 4450

Client: Mr. Jeff McLeod
Charter South, Inc.
215 Distribution Drive
Birmingham, AL 35209

Date: September 12, 1994

Project Name: Fort McLellon
Project Location: N/A
Sample Matrix: Soil
Sampled By: Jeff McLeod
Lab Analyst: JWB
Test Method: "Methods for Chemical Analysis of Water & Wastes", EPA-600/3-83 Method 418.1

Project Number: N/A
P.O Number: N/A
Date Collected: September 9, 1994
Analysis Date: September 12, 1994

TOTAL PETROLEUM HYDROCARBONS

Lab I.D.	Field I.D.	TPH, mg/kg
26171	F1C	14

Detection Limit = 1 mg/kg

Respectfully submitted,

John T. Brooks
President

ADEM Laboratory Certification I.D.# 40710

STILLBROOK Environmental Testing Laboratory, Inc.

CHAIN OF CUSTODY

LAB INVOICE # 4450

CLIENT: Chapter Sound Inc.

Date Results Needed:

Send Invoice to:

Special Instructions:

Phone Results to: _____ at _____ - _____

FAX Results to: _____ at _____ - _____

Contact: Jeff McLeod Phone: 941-1123

SAMPLE IDENTIFICATION

PROJECT NAME: Ft. McLellan

PROJECT LOC:

PROJECT #:

P.O. #:

SAMPLER: Jeff McLeod

SAMPLE DATE: 9/9/94

LAB I.D.	FIELD I.D.	MATRIX	DATE	TIME	# BTL	PARAMETERS: TPH
20174	F-1C	Soil				

Indicate Preservative by Letter:

(A) Metals use HNO3 Nitric Acid

(B) BTEX use HCL Hydrochloric Acid + 0.008% Sodium Thiosulfate

(C) Semi-Vol Organics or Coliforms/Fecal Strep use 0.008% Sodium Thiosulfate.

(D) H2SO4 Sulfuric Acid

(E) Sulfide use ZnOH3 Zinc Acetate

(F) CN use NaOH Sodium Hydroxide & -if needed- OOH2 Ascorbic Acid

Indicate Sample Bottle Type: (G) Glass (P) Plastic (VOC) VOC Vial

Sample Preservative & Container

Special Note:

RELINQUISHED BY	DATE/TIME	*RECEIVED BY*
SIGNATURE: [signature]	Date: 9/12/94	SIGNATURE: Ava Salter
PRINT NAME: Jeff McLeod	Time(24hr) 8:26	PRINT NAME:
RELINQUISHED BY	DATE/TIME	*RECEIVED BY*
SIGNATURE:	Date:	SIGNATURE:
PRINT NAME:	Time(24hr)	PRINT NAME:

305 Crawford Street Fairfield, AL 35064 Phone: 205-788-1750 FAX: 205-788-1747

CERTIFICATE OF PROPER DISPOSAL

SOUTHERN TANK SALVAGE

A SUBSIDIARY OF

RAYCO, INC.

2385 Gunn Road

MONTGOMERY, ALABAMA 36117

(205) 272-5524

Bldg 4407

Date 9-8 1994

Equipment Description PETROLEUM STORAGE TANKS No. 1 Size 1-1,000

Transferred to RAYCO INC Transferred from PRECISION TANK TESTERS (AMMO STORAGE FAC,FT McCLELLAN)

How Shipped ~~RAYCO INC~~ DELIVERED Freight Charges $50.00

Remarks RAYCO INC HEREBY CERTIFIES THAT THE TANKS HAVE BEEN PROPERLY DISPOSED OF IN ACCORDANCE WITH API 1604 AND ADEMS GUIDELINES. THE TANKS CONTAINED NO SLUDGE. THE TANKS HAVE BEEN CUT UP FOR SCRAP AND DEPOSITED AT MONTGOMERY IRON AND METAL JUNK YARD.

THE FOREGOING IS TRUE TO THE BEST OF MY KNOWLEDGE.

RAY THIBEAULT PRESIDENT RAYCO INC.

Ray Thibeault

Received by DON MIMS D.M. Transferred by TED

Date 9-8-94 Date 9-8-94

PS

CSI Environmental Services

215 Distribution Drive
Birmingham, AL 35209
205-941-1173
Fax: 205-942-4188

U.S.T. CLOSURE ENVIRONMENTAL

ASSESSMENT REPORT

Please find enclosed a copy of the underground storage tank environmental assessment report for your facility. Please follow the directions listed below for proper reporting procedures as required by A.D.E.M.

1. Review this report for your facility, then sign and date page 8 (signature of tank owner).

2. Make a copy of this report to retain for your records.

3. Send a signed copy of this closure report to the following:

   A.D.E.M. Groundwater Division
   1751 Cong. W.L. Dickinson Drive
   Montgomery, Alabama 36130

   Attn: Kirk Chandler

Thank you for the opportunity to be of service. If you have any questions, please contact me at (205) 941-1173.

Sincerly,

Jeff S. McLeod
Geologist

JSM/mch

Charter South, Inc.

GENERAL CONTRACTORS

GEORGIA
1 General Arts Road
Conyers, GA 30207
404-918-8123
Fax: 404-918-9556

CORPORATE OFFICE:
215 Distribution Drive
Birmingham, Al 35209
205-941-1173
Fax: 205-942-4188

• LIGHT COMMERCIAL
• TRUCK FUEL CENTERS
• TANK INSTALLATIONS
• PRE-ENGINEERED STEEL BUILDINGS
• CONVENIENCE FOOD STORES

September 14, 1994

Mr. Wade Doss
U.S. Army
Corps of Engineers
Postal Locators Office
Ft. McCellon, Ala. 36205

Re: Closure Report
Ammunition Office
Heating Oil Tank

Dear Mr. Doss,

C.S.I. Environmental was called upon to perform a closure assessment at the site referenced. Upon removal of the 1,000 gallon tank, several pin holes were noted in the bottom 1/3 of tank. Some visual contamination was also noted in the base of tank pit directly below the U.S.T. Soil samples taken from the pit showed high T.P.H. values on the east wall and in base of the pit. These areas were over excavated approximately 2' and re-analyzed using "B" samples. The pit base "B" sample showed a level of 138 P.P.M. T.P.H.'s were still in these soils. A.D.E.M. has a set limit of 100 P.P.M. above which soils are considered contaminated. The base was over excavated an additional 1' and resampled. This sample returned with a T.P.H. value of 14 P.P.M.

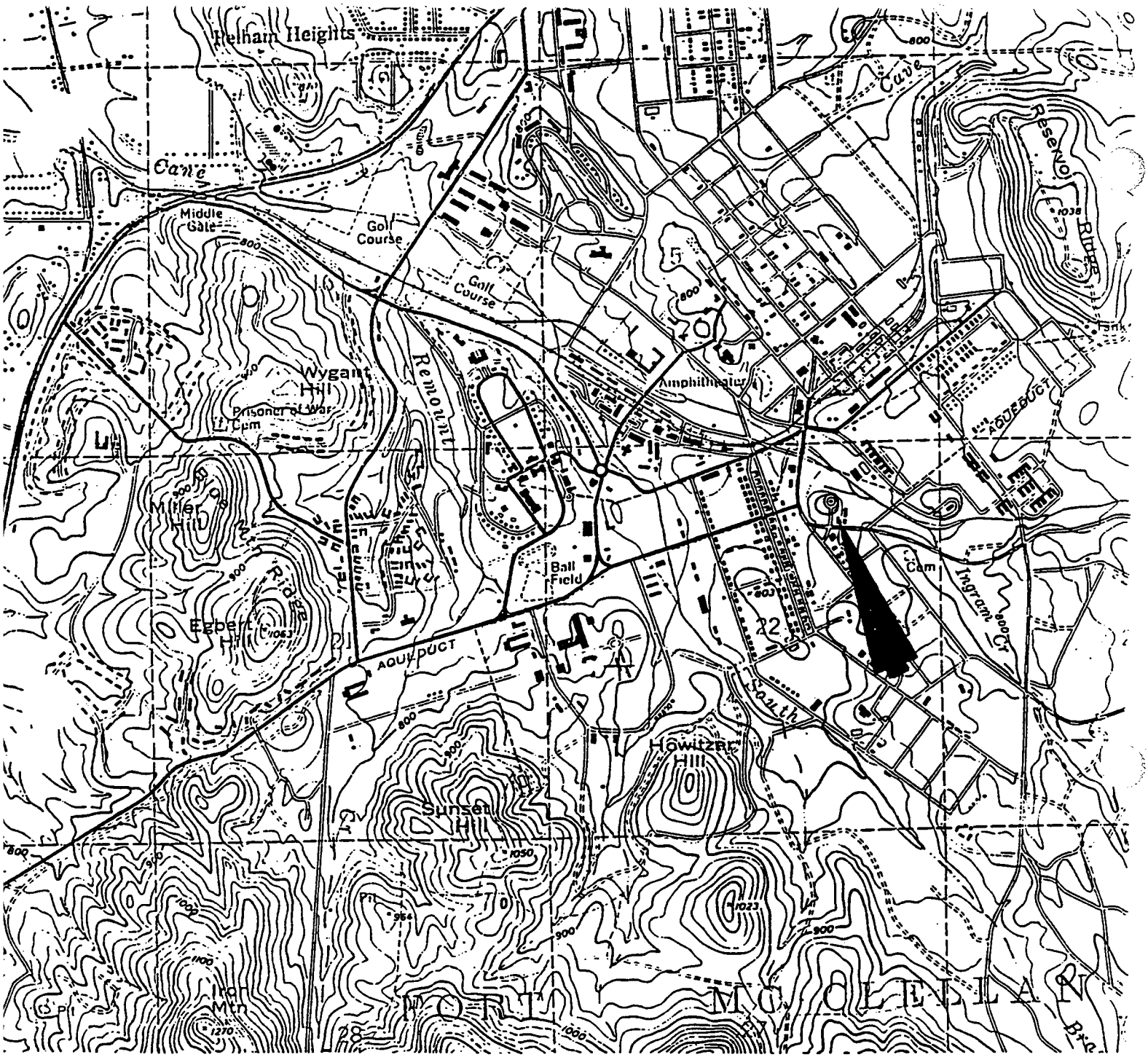
The excavated soils remain on site on poly to eliminate contamination of clean soils. An application for disposal of these soils has been filed with A.D.E.M.

The tank pit now shows T.P.H. levels are all below 100 P.P.M. and no ground water within 5' of the base of the pit. Also the clay nature of the pit walls and base presents an almost impermeable barrier to Hydrocarbon Migration.

Upon A.D.E.M. approval, this site should receive permanent closure status with no additional action required at this time.

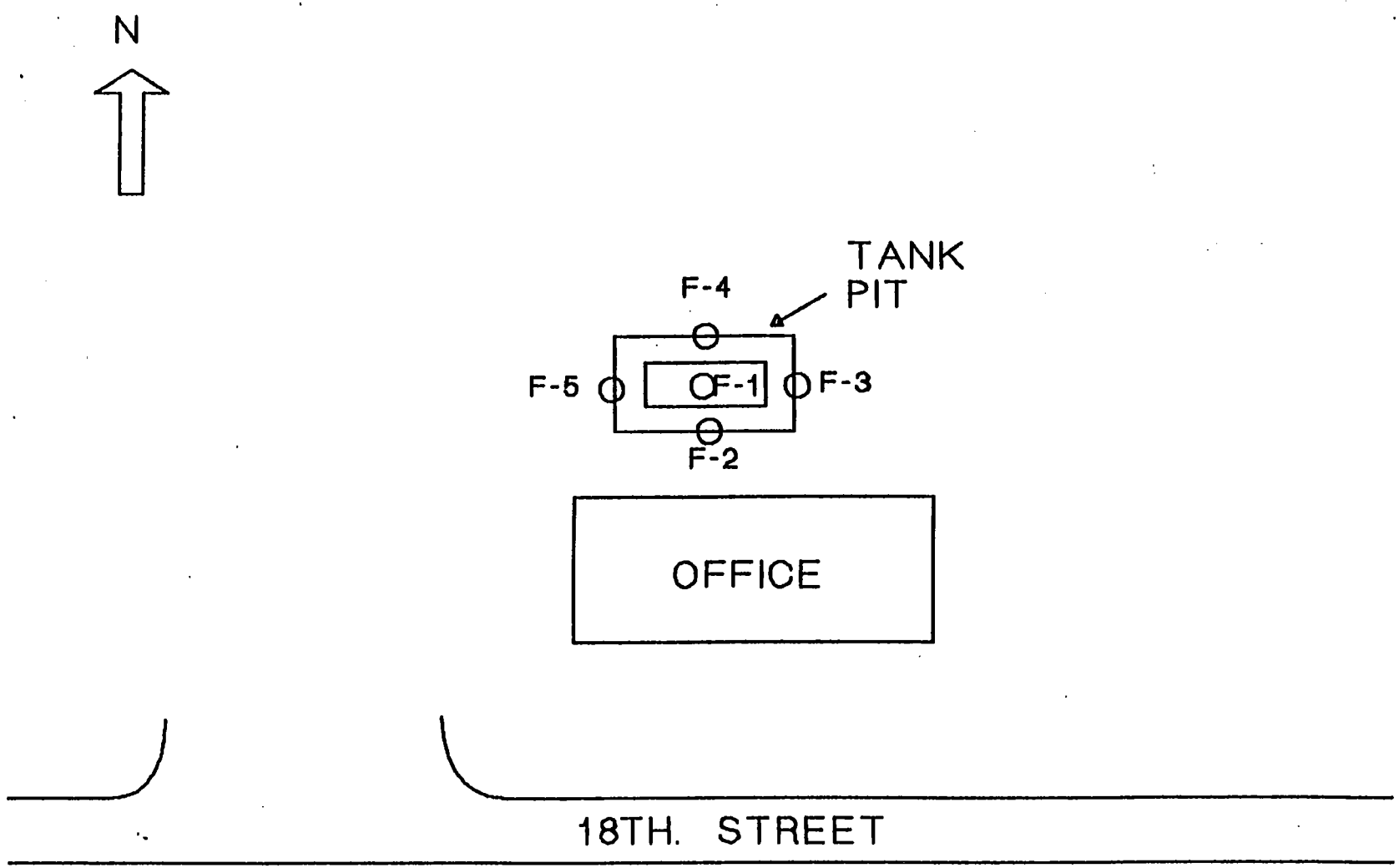
Sincerely,

Jeff S. McLeod
Geologist

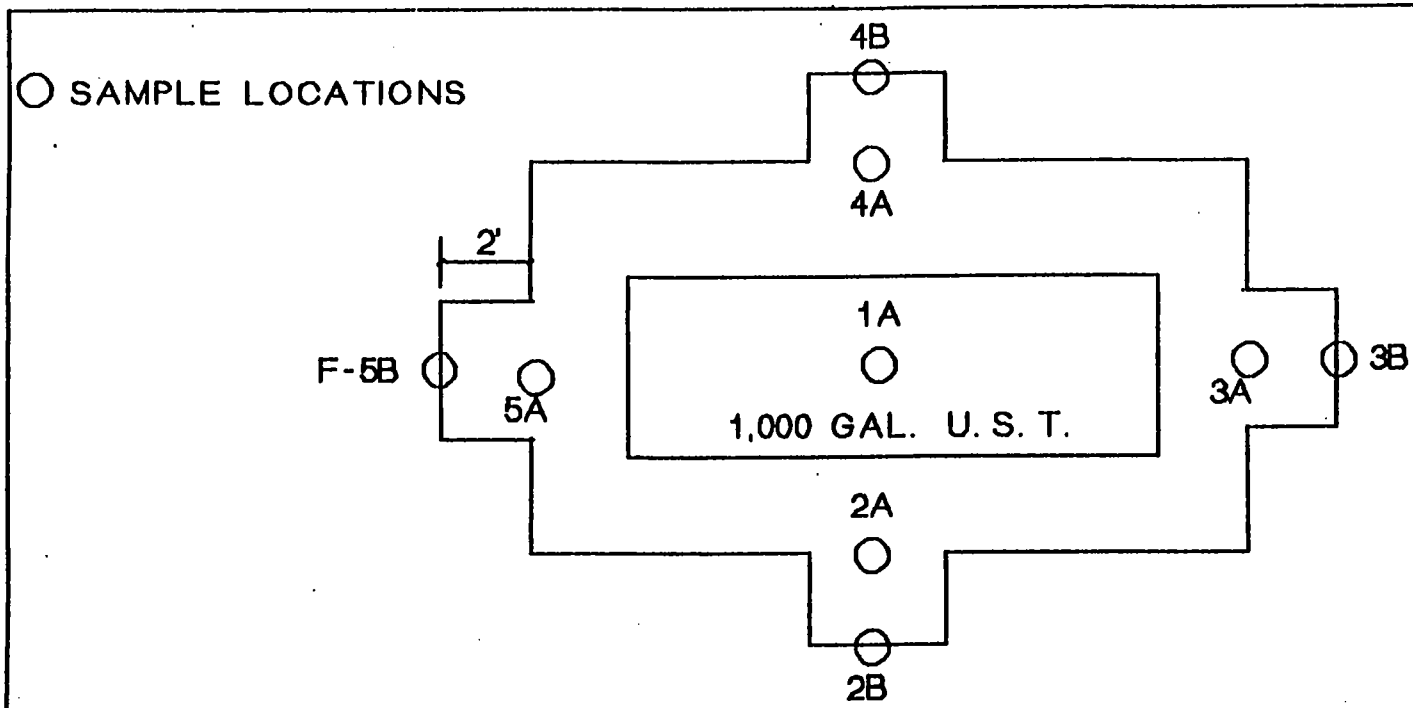


FT. MCCLELLAN

U.S.G.S. QUADRANGLE MAP
ANNISTON, AL

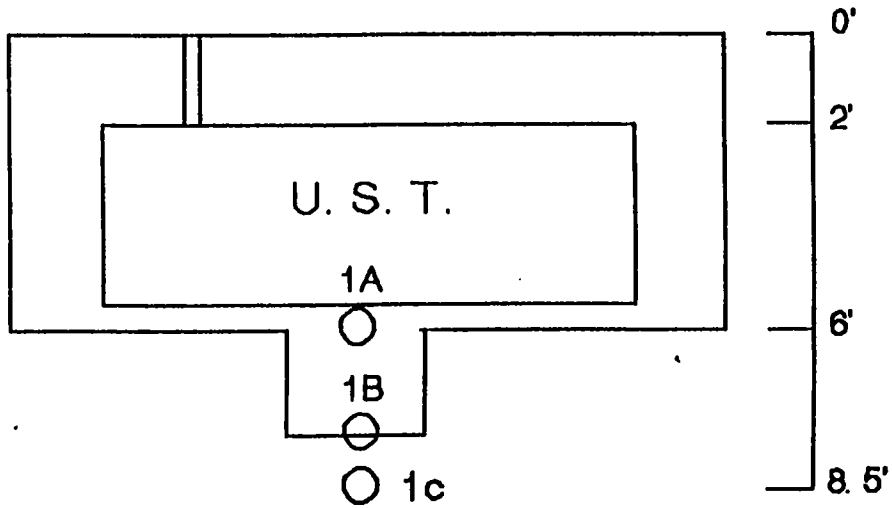


CHARTER SOUTH, INC.
SITE PLAN
FT. MCLELLON
N. T. S.



PLAN VIEW

SAMPLES TAKEN FROM LOWER 1/3 OF TANK PIT WALLS.



CROSS SECTION

N. T. S.

ATTACHMENT 16

BUILDING 128 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-128 (NON-REGULATED TANK)

Date of this Report: 5-17-96

Incident No.(If applicable) UST _ _ _ _ _ _

UST Owner: U.S. DEPT. OF DEFENSE

Facility County: CALHOUN

Facility Name: FORT MCCLELLAN

Location: BLDG 128

Address: FORT MCCLELLAN
ANNISTON ALABAMA 36205-5000

Contact: MS. CANDY DZECIK

Address: FORT MCCLELLAN
ANNISTON ALABAMA 36205-5000

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING INC

Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER, INC.

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: Ø

Closure Date: 4-17-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4"x24'				
Tank Capacity	1000				
Tank Age	UNKNOWN				
Date Tank Last Used	4-96				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO X If not, provide the depth from the ground surface to the groundwater table. Approx 12 ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES X NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe MILD)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other HEATING OIL)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES X NO _____
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

ONE HOLE ON FIL END OF TANK, ON BOTTOM

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-10 FT BGS — REDDISH YELLOW SILTY CLAY

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 4-25-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____ _____
   2. What was the measured thickness of the free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___ (IN ADJACENT TANK ?-)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2 Ft BGS → REDDISH YELLOW SILTY CLAY

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 5-1-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLING NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVISED BY ADEM. THE CLOSURE PROTOCOL IS PROVIDED AS ATTACHMENT A. ALL CONTAMINATED SOIL WAS EXCAVATED AND STOCKPILE. THE STOCKPILE WAS SAMPLED AND ANALYTICAL RESULTS ARE ATTACHED.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 16 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

CONTAMINATED SOIL IS STOCKPILED ON 30 MIL PLASTIC SHEETING AND COVERED W/ 10 MIL PLASTIC. STOCKPILE IS BERMED

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

INVOICES / RECEIPTS WILL BE PROVIDED WHEN STOCKPILE IS TRANSPORTED FOR TREATMENT

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
30 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GALLON DRUMS. INVOICES WILL BE PROVIDED UPON PROJECT COMPLETION.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: DK Reeves
Company: THETA ENGINEERING, INC.
Telephone Number: (423) 482-0056

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: DK R Date: 5-15-96

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R Date: 5-15-96

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

FOR ADEM USE:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 153B
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x .002 =	c	lbs VOC emissions
Sample 1	854	ppm x	8	cyds x .002 =	13.7	lbs VOC emissions
Sample 2	57	ppm x	8	cyds x .002 =	.9	lbs VOC emissions
Sample 3		ppm x		cyds x .002 =		lbs VOC emissions
Sample 4		ppm x		cyds x .002 =		lbs VOC emissions
Sample 5		ppm x		cyds x .002 =		lbs VOC emissions
Sample 6		ppm x		cyds x .002 =		lbs VOC emissions
Sample 7		ppm x		cyds x .002 =		lbs VOC emissions
Sample 8		ppm x		cyds x .002 =		lbs VOC emissions
Sample 9		ppm x		cyds x .002 =		lbs VOC emissions
Sample 10		ppm x		cyds x .002 =		lbs VOC emissions
Sample 11		ppm x		cyds x .002 =		lbs VOC emissions
Sample 12		ppm x		cyds x .002 =		lbs VOC emissior
Sample 13		ppm x		cyds x .002 =		lbs VOC emissions
Sample 14		ppm x		cyds x .002 =		lbs VOC emissions
Sample 15		ppm x		cyds x .002 =		lbs VOC emissions
Sample 16		ppm x		cyds x .002 =		lbs VOC emissions
Sample 17		ppm x		cyds x .002 =		lbs VOC emissions
Sample 18		ppm x		cyds x .002 =		lbs VOC emissions
Sample 19		ppm x		cyds x .002 =		lbs VOC emissions
Sample 20		ppm x		cyds x .002 =		lbs VOC emissions
Sample 21		ppm x		cyds x .002 =		lbs VOC emissions
Sample 22		ppm x		cyds x .002 =		lbs VOC emissions
Sample 23		ppm x		cyds x .002 =		lbs VOC emissions
Sample 24		ppm x		cyds x .002 =		lbs VOC emissions
Sample 25		ppm x		cyds x .002 =		lbs VOC emissions

TOTAL POTENTIAL EMMISSIONS 14.6 lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 05/01/96 08:23

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-128-CON**	Date Collected:	04/22/96
Lab ID Number:	9602205	Date Received:	04/29/96
File Number:	960819	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	04/30/96

Compound Name	Result	Units	MDL	Notes
TPH	824	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 05/01/96 08:23

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-128-STK**	Date Collected:	04/23/96
Lab ID Number:	9602206	Date Received:	04/29/96
File Number:	960819	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	04/30/96

Compound Name	Result	Units	MDL	Notes
TPH	57	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

01 1

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: FORT McCLELLAN

SAMPLER'S SIGNATURE DK R (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-128-COM	4-22-96	0900	BLDG 128	S	1	BTEX BY 8020, TPH BY 418.1
002	~~SS-128-DR~~ SS-128-STK	4-23-96	1500	BLDG 128	S	1	TPH BY 418.1
003	TRIP BLANK	-	-	-	W	3	BTX BY 8020
				TOTAL NO. OF CONTAINERS—		5	

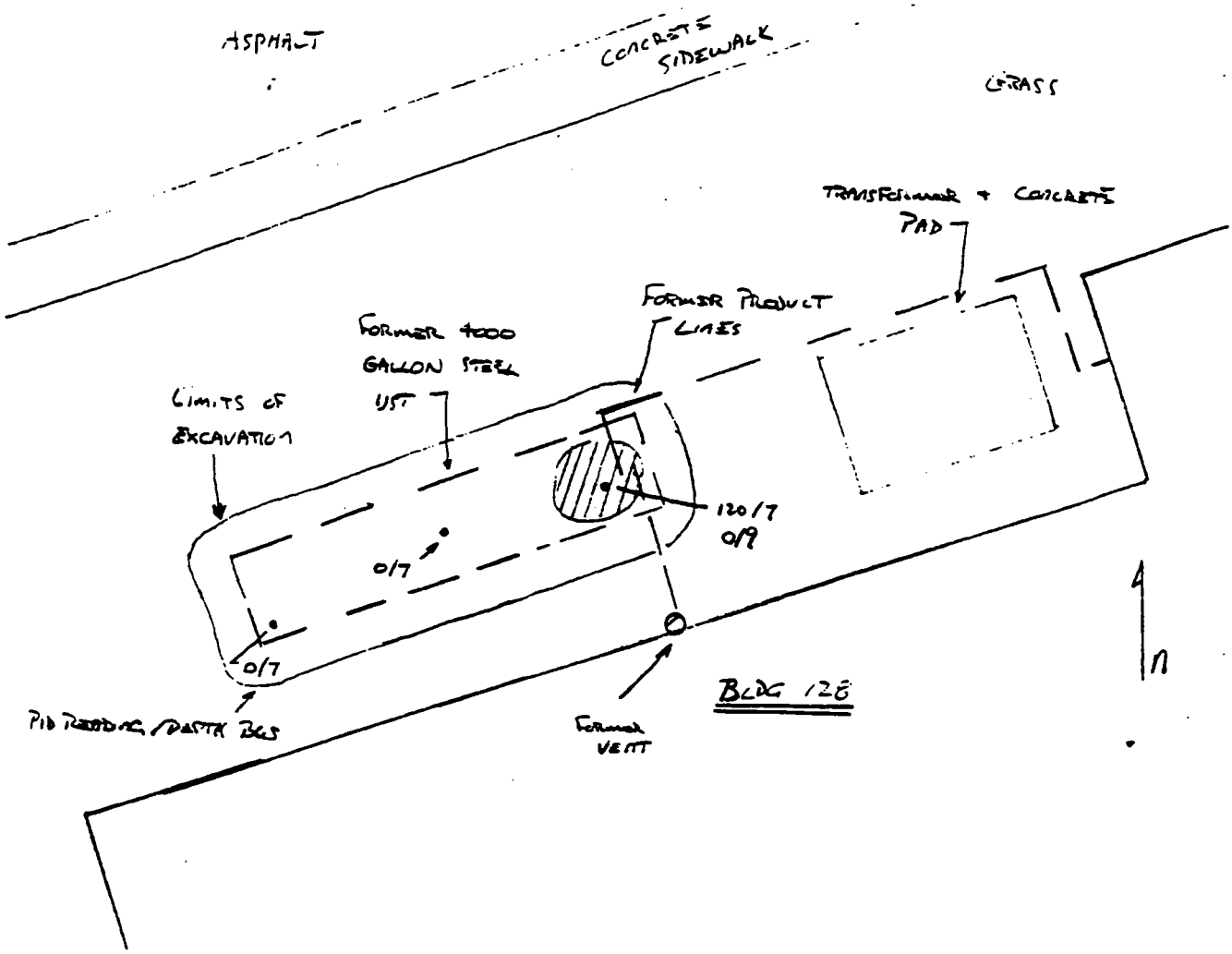
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DKR (sign)	4-26-96 1415	2 _____ (sign)
RELINQUISHED BY:	**DATE/TIME**	**RECEIVED BY:**
2 _____ (sign)	_____	3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
FED-EX	DKR	(sign) SRG	4/29/96 10:45 A

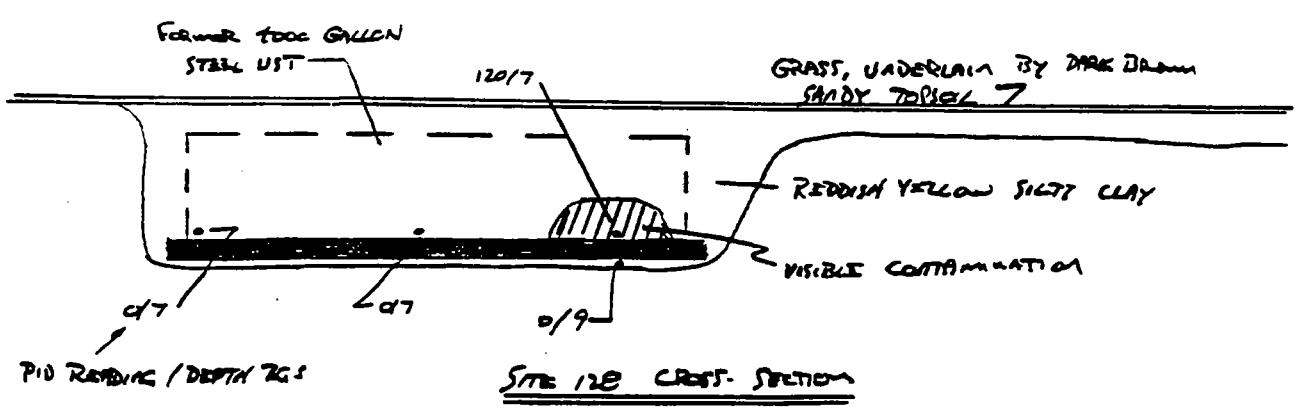
CONDITION OF SEAL UPON RECEIPT:	COOLER OPENED BY:	DATE/TIME
GENERAL CONDITION OF COOLER: DCC	(sign) SRG	4/29/96 10:45 A

WHITE — Receiving Laboratory Copy YELLOW — Shipper's Copy PINK — MEC Laboratory Copy GOLDENROD — MEC Office Copy NO: 1

DRAWN BY: D. REEVES DATE: 5/12/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/[illegible]	SITE LOCATION MAP Site 128 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



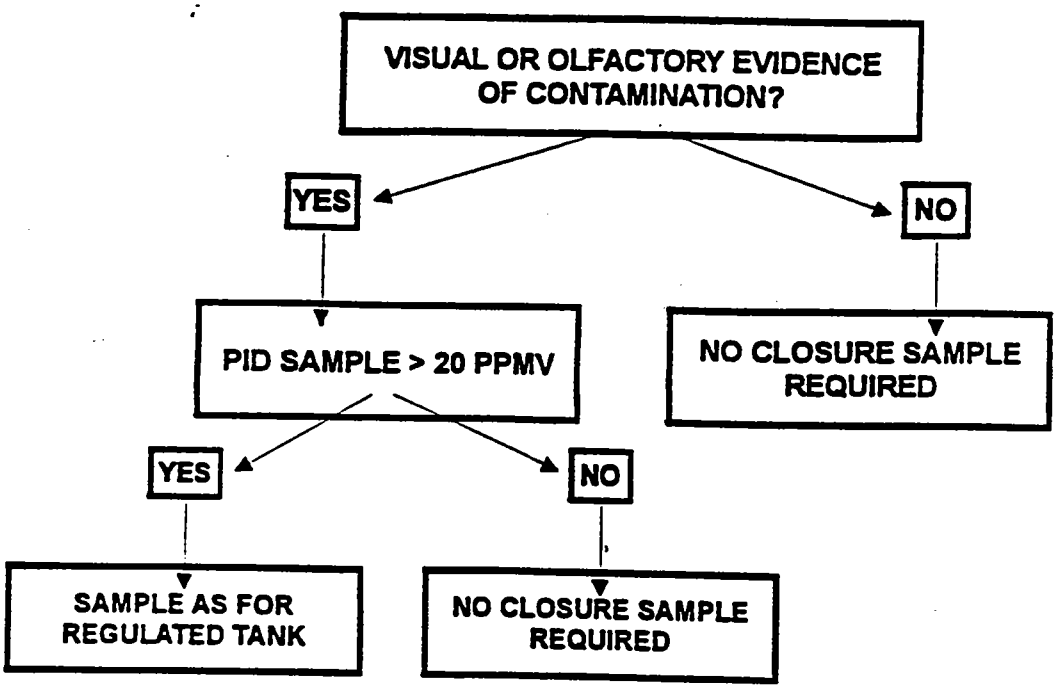
VERTICAL + HORIZONTAL
SCALE 1"=10'



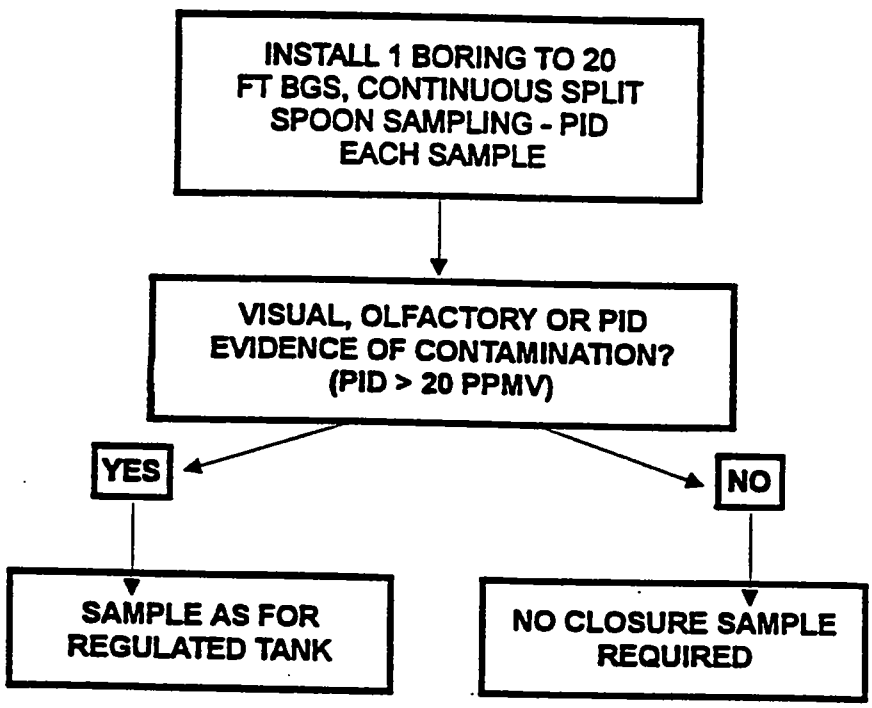
SITE 128 CROSS-SECTION

DRAWN BY: D. REEVES DATE: 5/12/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0000	SITE PLAN Site 128 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

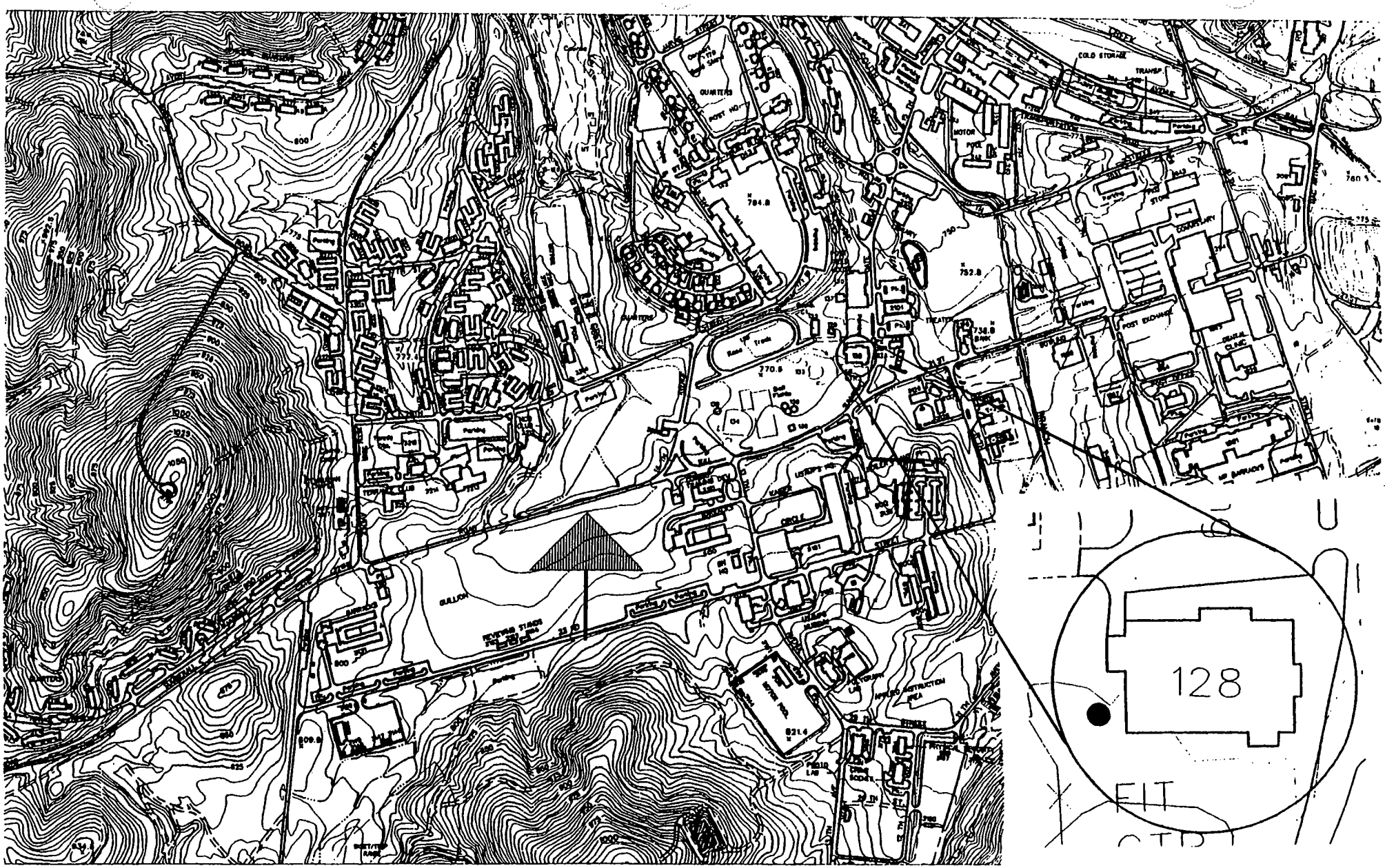
TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING


COLD STORAGE
TRANSP.
QUARTERS
POST HQ
MOTOR POOL
784.8
752.8
770.5
738.8
POST EXCHANGE
DENTAL CLINIC
GULLION
REVIEWING STANDS
MOTOR POOL
821.4
128
FIT

ATTACHMENT 17

BUILDING 130 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-130 (NON-REGULATED TANK)

Date of this Report: 5-17-96

Incident No.(If applicable) UST _ _ _ _ _ _

UST Owner: U.S. DEPT. of DEFENSE

Facility County: CALHOUN

Facility Name: FORT MCCLELLAN

Location: BLDG 130

Address: FORT MCCLELLAN ANNISTON, ALABAMA 36205-5000

Contact: MS. CANDY SEECK

Address: FORT MCCLELLAN ANNISTON, ALABAMA 36205-5000

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE

Closure Date: 4-11-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	54" x 15'				
Tank Capacity	2500 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	4-96				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO X If not, provide the depth from the ground surface to the groundwater table. 10 ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-2.5 ft BGS - REDDISH YELLOW CLAY SOME SILT; 2.5 - 3 ft BGS OLIVE BROWN SILT SOME CLAY; 3 - 7 ft BGS - REDDISH YELLOW CLAY SOME SILT; 7 FT - CARBONATE BEDROCK

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 4-22-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____)
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

g. Specify the inert solid material used to fill the tank(s). _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ____X____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ____X____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ____X____
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ____X____ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ____X____
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO ____X____ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ____X____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2 Ft BGS REDDISH YELLOW CLAY, SAND SILT

j. Was the piping trench backfilled? YES ____X____ NO _____
If yes, provide the date 4-22-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) Groundwater Sampling Not Required

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM, AND IS SUMMARIZED HERE AS ATTACHMENT A. IN VISUAL, OLFACTORY OR PID EVIDENCE WAS OBSERVED AND NO SAMPLES WERE COLLECTED.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 36.5 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

NO EVIDENCE OF CONTAMINATION WAS OBSERVED. SOIL WAS RETURNED TO THE EXCAVATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

NA

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
30 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GAL DRUMS. INVOICES WILL BE PROVIDED UPON DISPOSAL

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No Samples Were Collected
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R _____ Date: 5-17-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

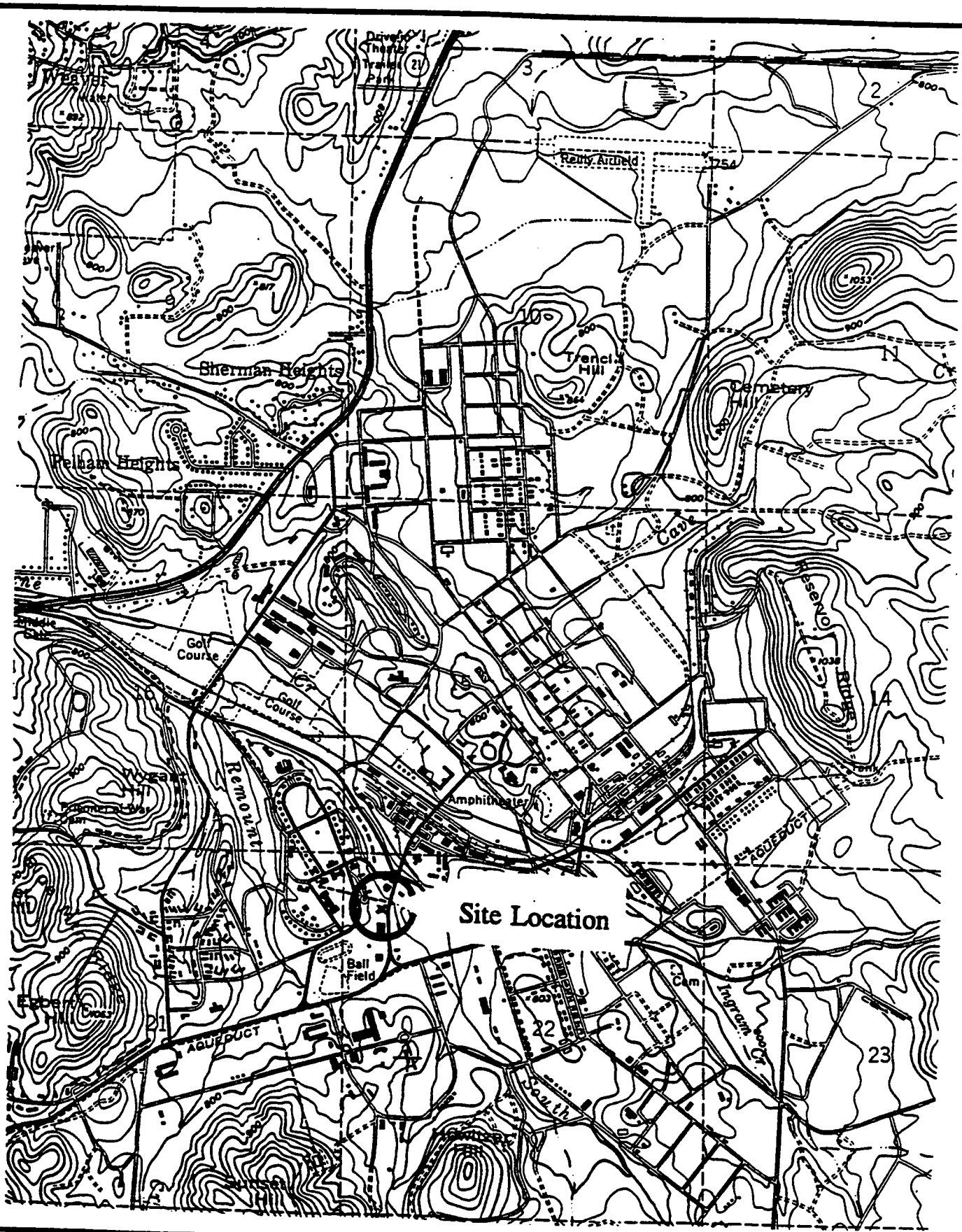
For ADEM Use:

Reviewed by:_____ Date:_____

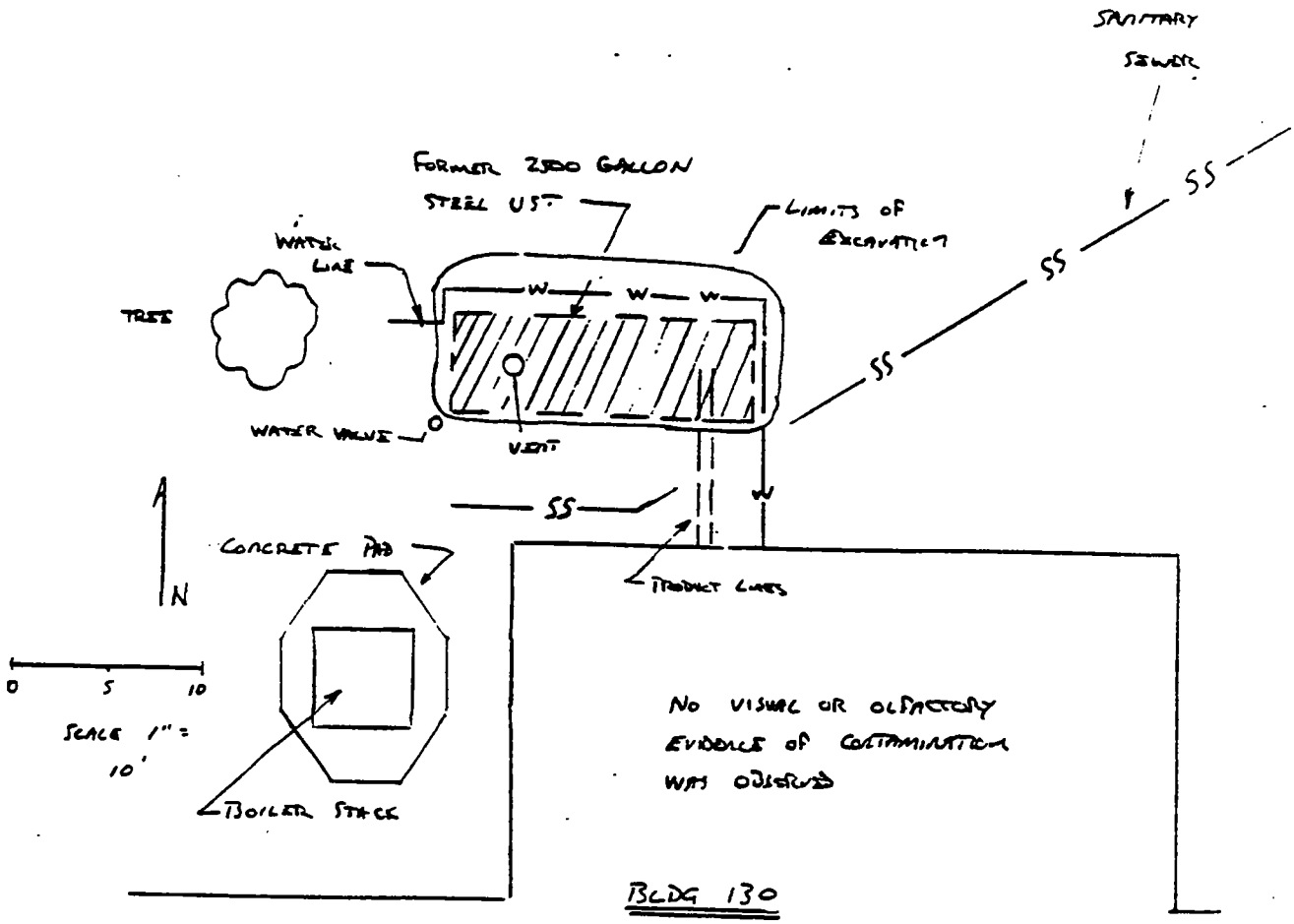
Comments:_____

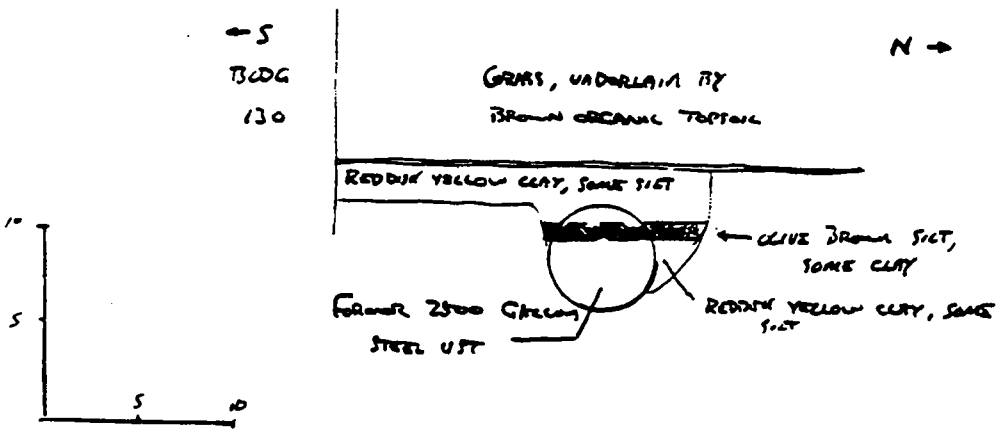
GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)



DRAWN BY: D. REEVES DATE: 5/14/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE LOCATION MAP Site 130 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



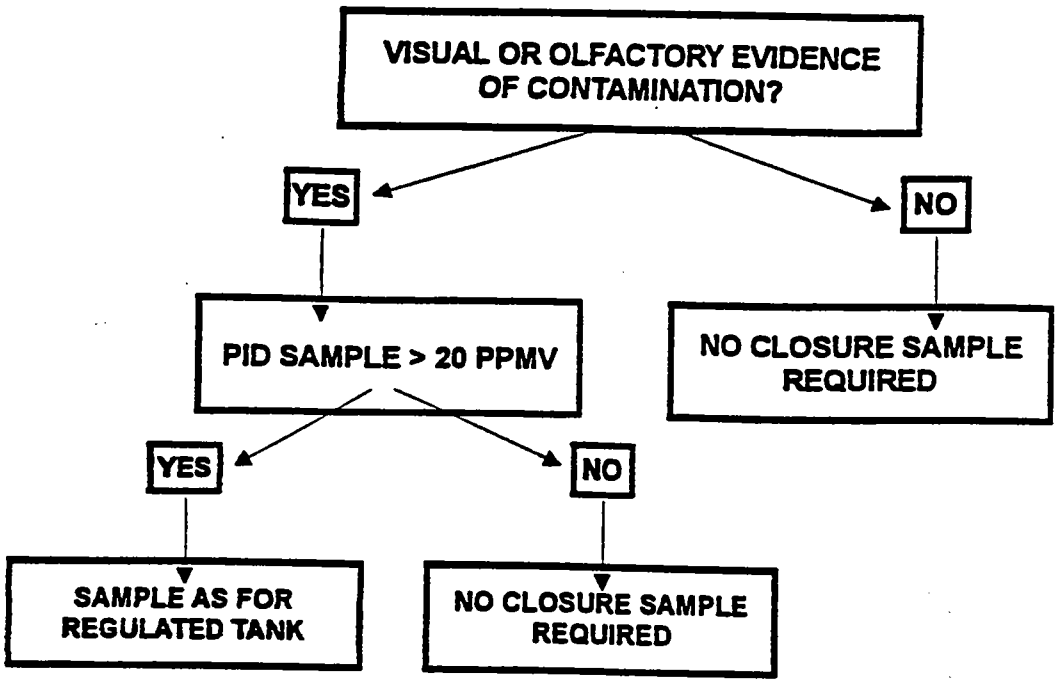


VERTICAL AND HORIZONTAL SCALE 1" = 10'

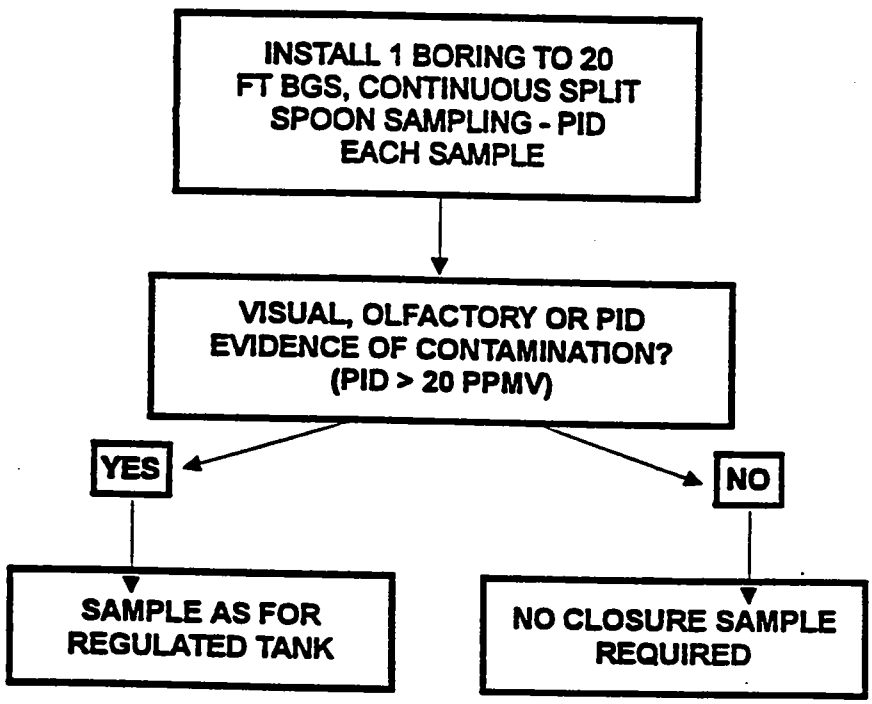
TANK PIT AND PIPING TRENCH PROFILE

DRAWN BY: D. REEVES DATE: 5/14/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-0884	SITE PLAN Site 130 FORT McCLELLAN, ALABAMA

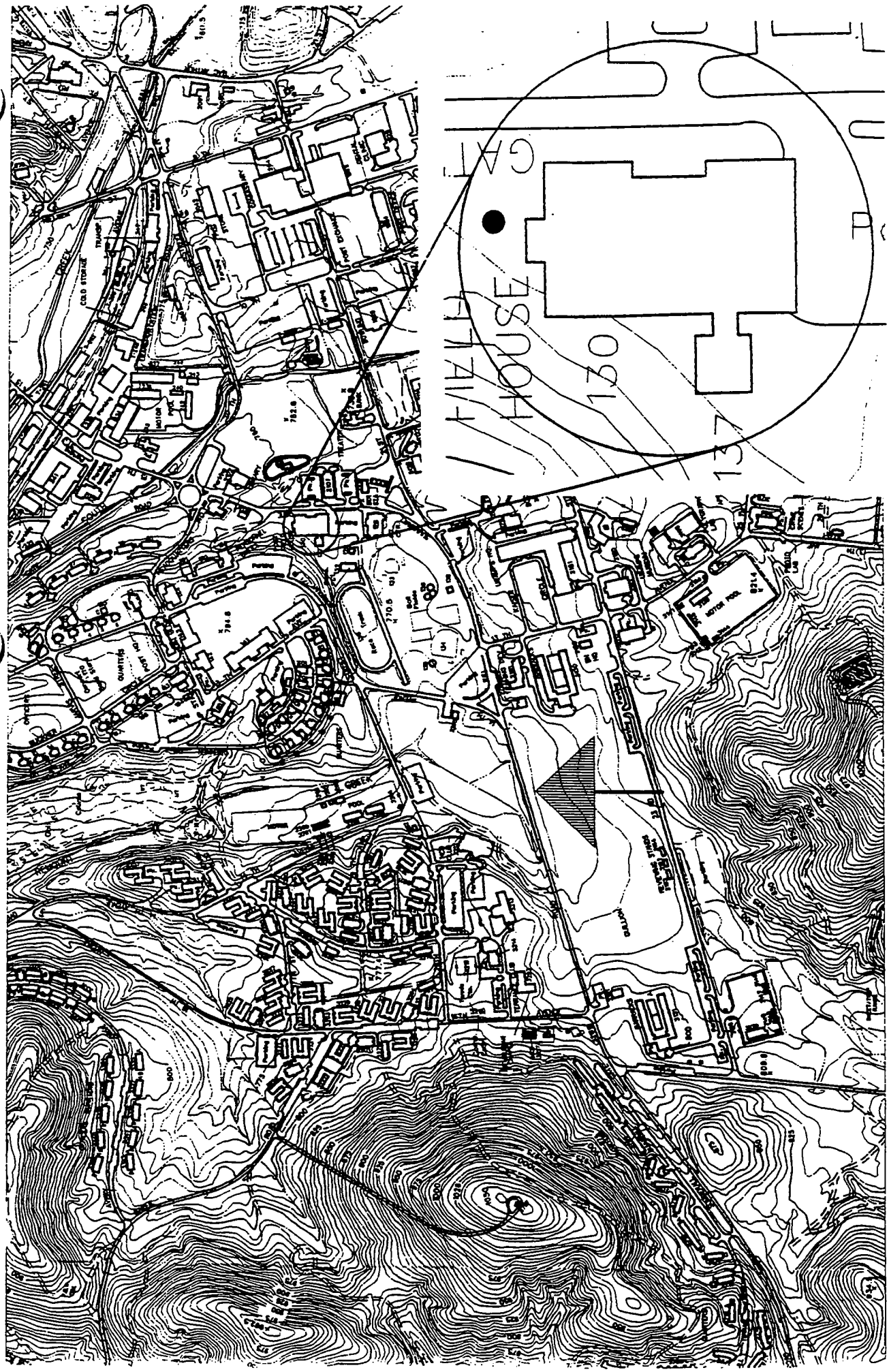
TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING



53

ATTACHMENT 18

BUILDING 141 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-141
(NON REGULATED TANK)
Incident No.(If applicable)
UST _-_-_-_-_
Facility County: CALHOUN
Facility Name: FORT McCLELLAN
Location: BUILDING 141

Address: FORT McCLELLAN
ANNISTON ALABAMA 36205-5000

Date of this Report: 9-5-96

UST Owner: U.S. DEPT of DEFENSE

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.:
(205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.
Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: One

Number of tanks remaining at site: Ø
Closure Date: 8-[illegible]-[illegible]

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4" x 15'10"				
Tank Capacity	2500 gal				
Tank Age	Unknown				
Date Tank Last Used	Unknown				
Substance Stored	Heating Oil				
Type of Product Piping (pressurized/suction)	Suction				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[x]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES X NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit Yes
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-6" CONCRETE PAD ; 6"-5' YELLOW SAND ; 5'-11' BGS REDDISH BROWN TO BROWN SILTY CLAY

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 8-20-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-6" CONCRETE PAD; 6" → YELLOW SAND

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab,
   10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM AND IS PROVIDED IN ATTACHMENT # 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 80 * cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

NO EVIDENCE OF PETROLEUM CONTAMINATION WAS OBSERVED. SOIL WAS TRANSPORTED TO THE FORT MCCLELLAN CONSTRUCTION LANDFILL FOR DISPOSAL.

* INCLUDES SOIL VOLUMES EXCAVATED FOR NEW TANK INSTALLATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

_____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
10 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ON SITE PENDING PROJECT COMPLETION. INVOICE/RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____
Company: No SAMPLES WERE COLLECTED
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. R[illegible] Date: 9-5-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

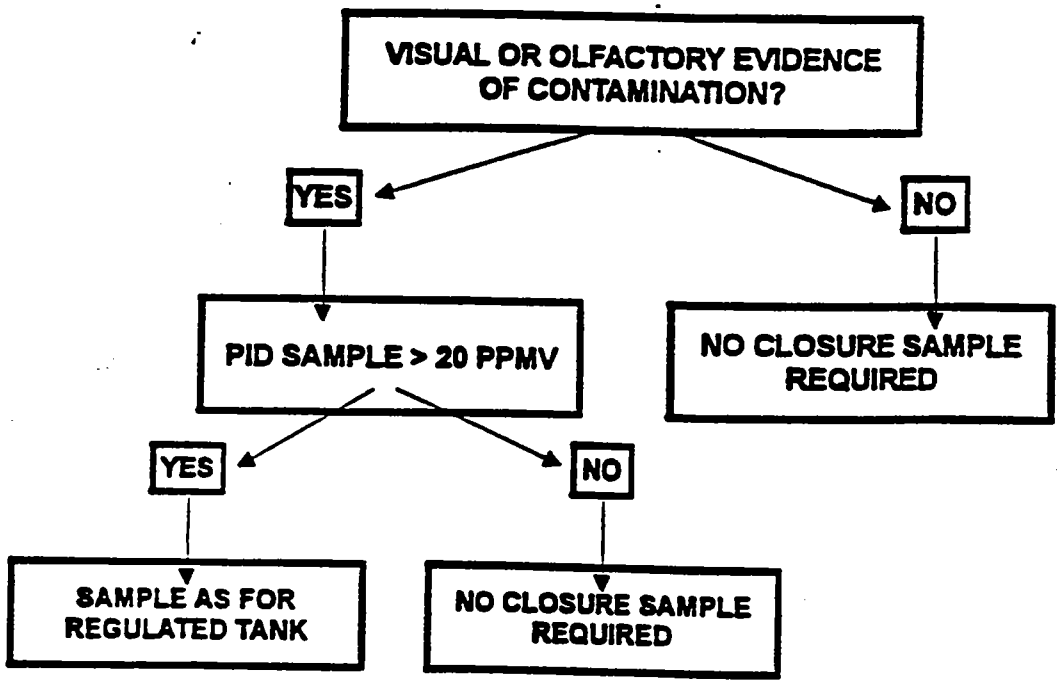
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

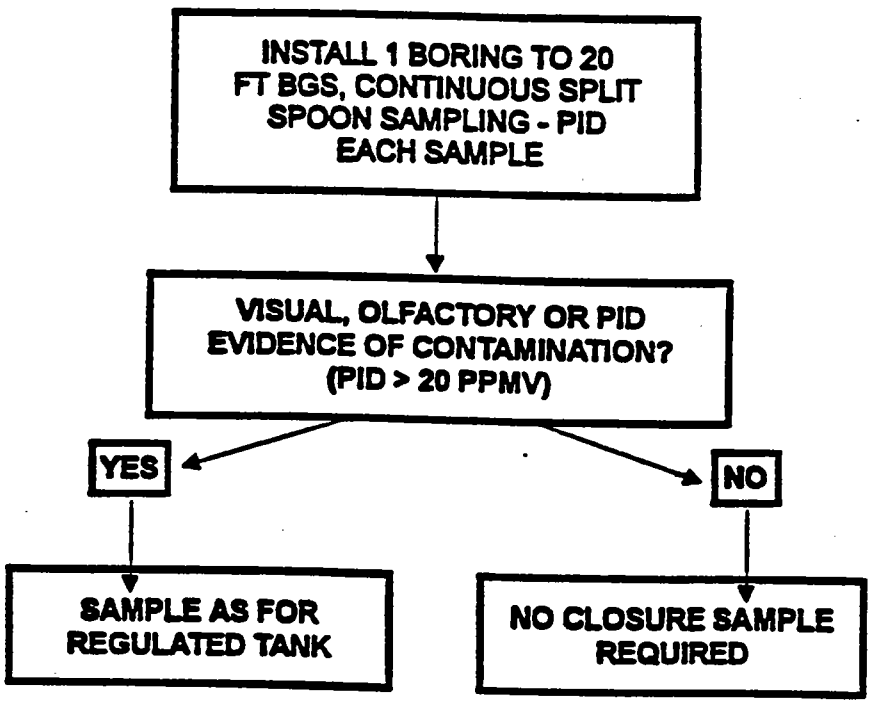
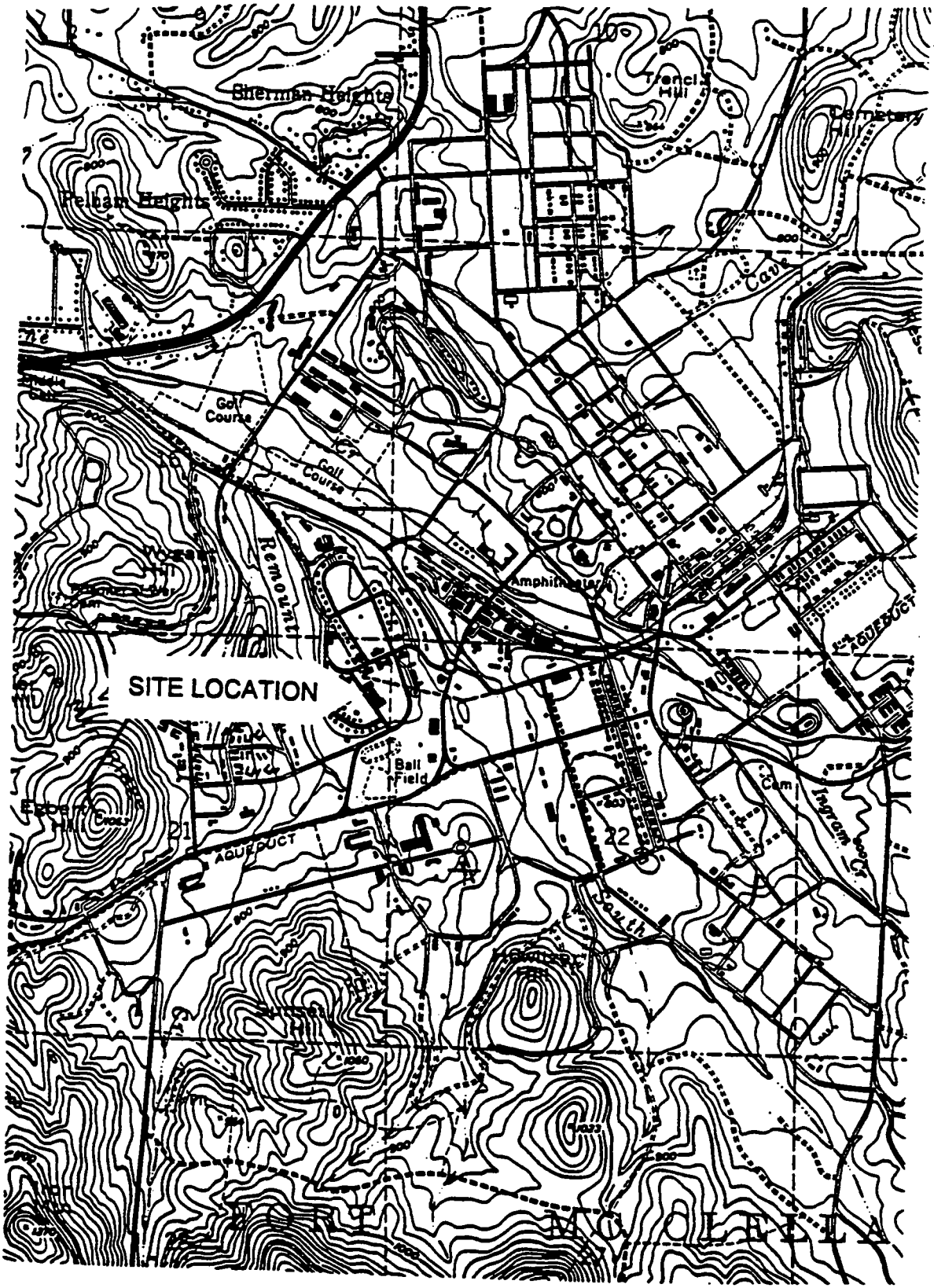


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



DRAWN BY:	D. REEVES
DATE:	__/__/__
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG ENV0000	REV 0

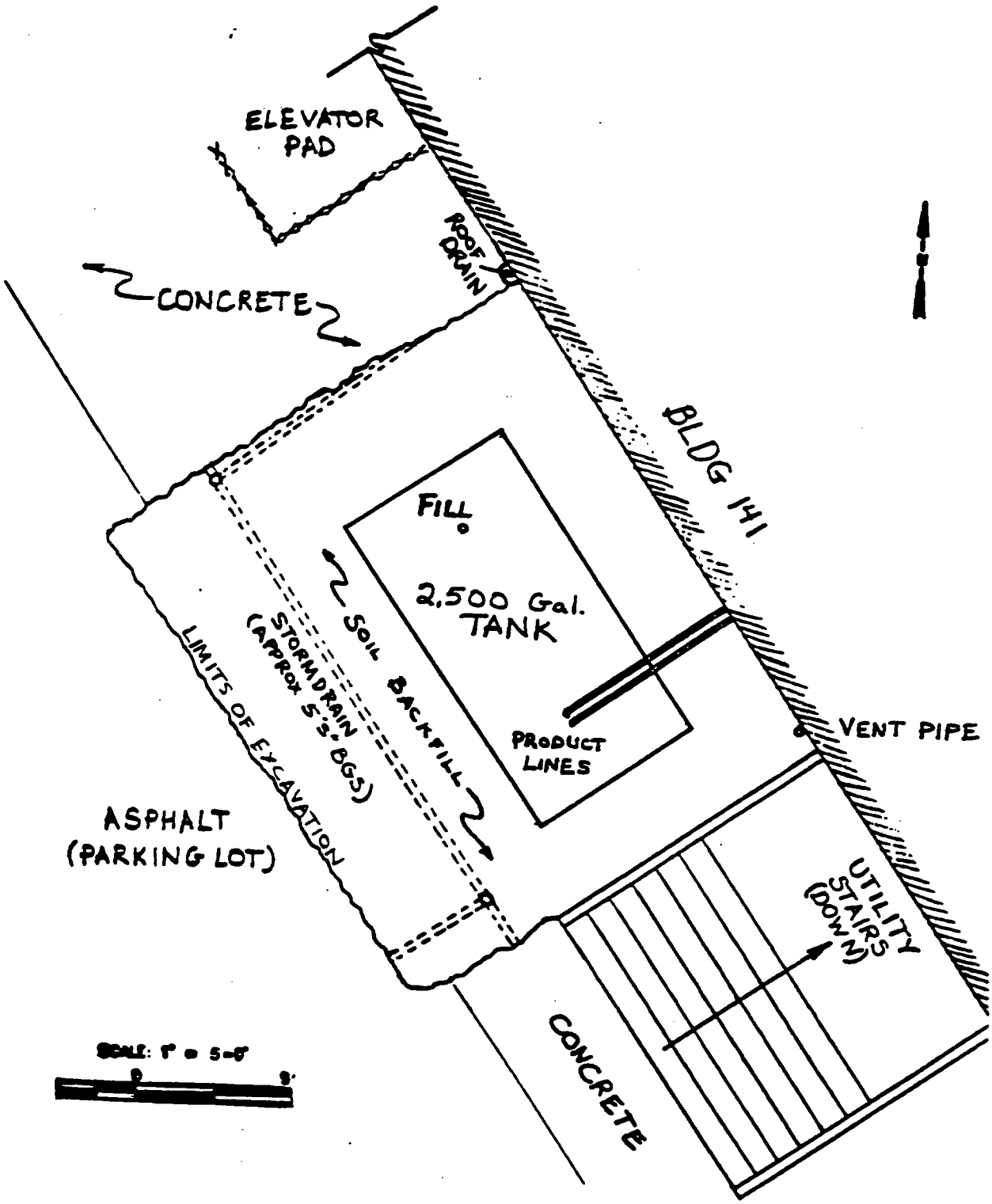
THETA ENGINEERING, INC.

SITE LOCATION MAP

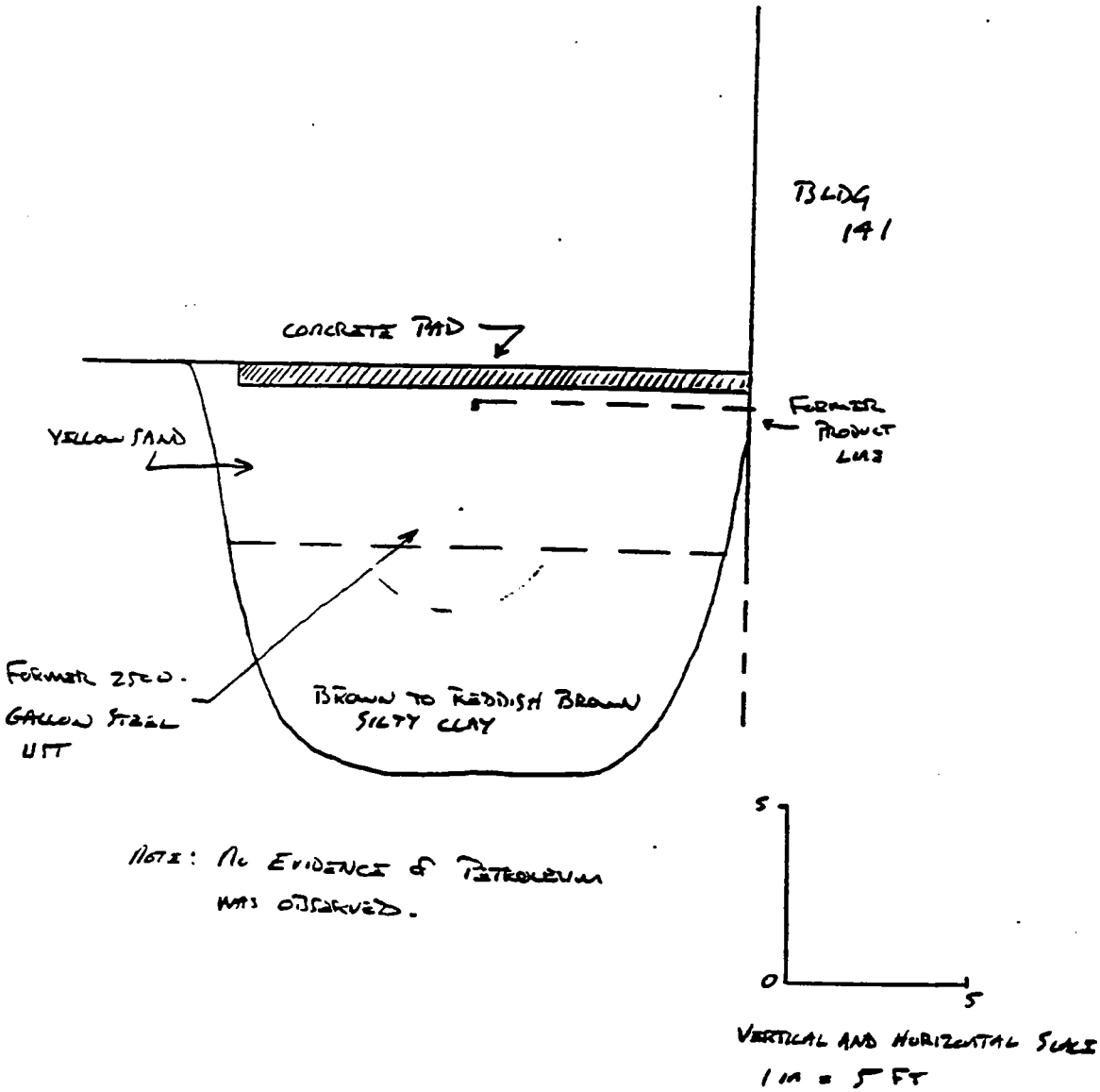
SITE 141

FORT McCLELLAN, ALABAMA

PLAN VIEW

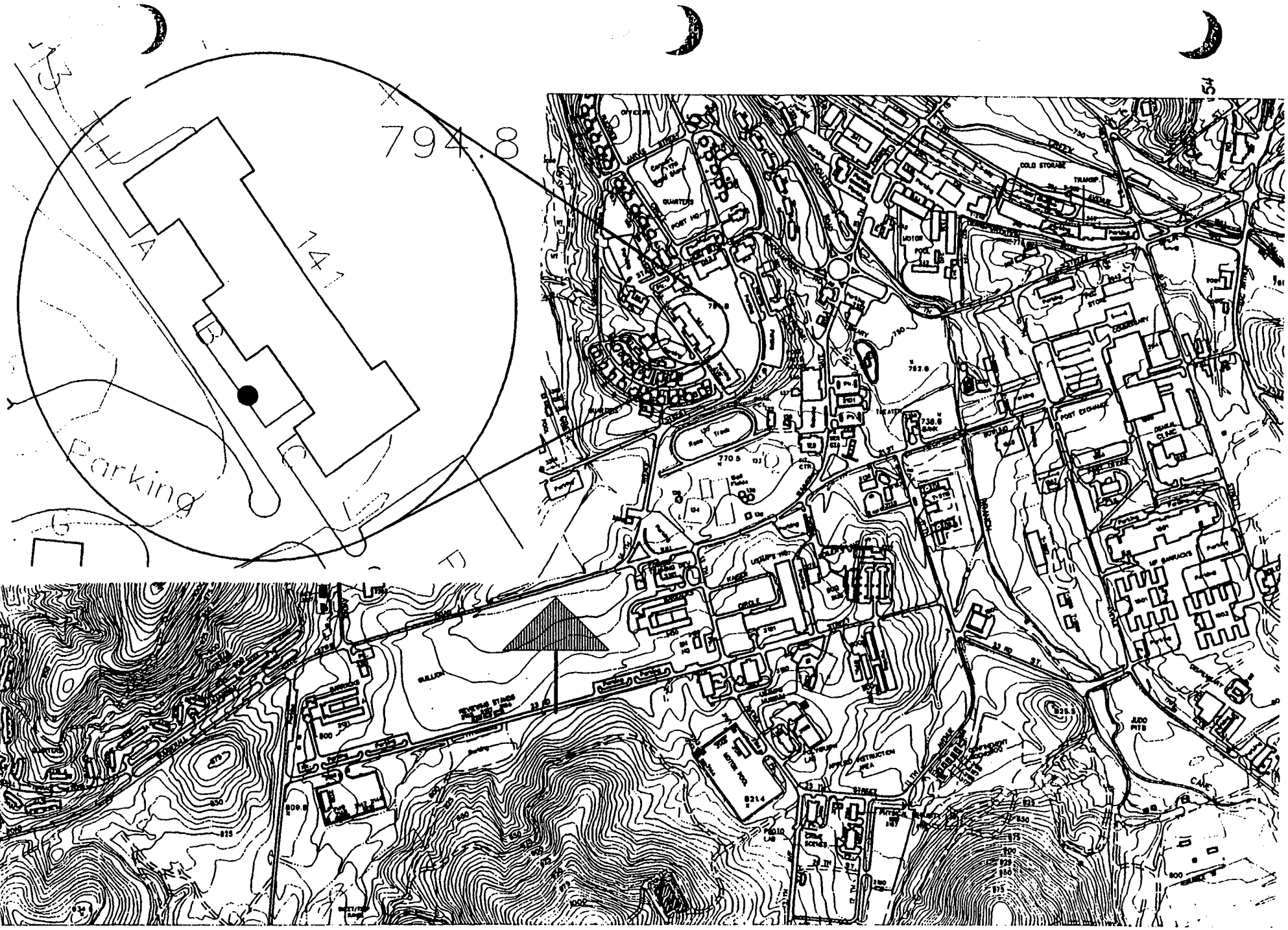


DRAWN BY: D. REEVES CHECKED BY: D. REEVES J. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC.	SITE PLAN SITE 141 FORT McCLELLAN, ALABAMA



TANK PIT AND PIPING TRENCH PROFILE

DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-0004	SITE PLAN SITE 141 FORT McCLELLAN, ALABAMA


794.8
141
Parking
COLD STORAGE
TRANSP.
QUARTERS
POST HQ
MOTOR POOL
POST EXCHANGE
GULLION
REVIEWING STANDS
MOTOR POOL
JUDO PITS
CANE

ATTACHMENT 19

BUILDING 143 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-143
(NON REGULATED TANK)
Incident No.(If applicable)
UST _-_-_-_-_
Facility County: CALHOUN
Facility Name: FORT McCLELLAN
Location: BUILDING 143

Address: FORT McCLELLAN
ANNISTON ALABAMA 36205-5000

Date of this Report: 9-6-96

UST Owner: U.S. DEPT of DEFENSE

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.:
(205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.
Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: one

Number of tanks remaining at site: Ø
Closure Date: 8-21-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	8'x15'.5"				
Tank Capacity	1000 gal				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES x NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit yes
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-12" DARK BROWN SANDY TOPSOIL 12"-TOTAL DEPTH MOTTLED REDDISH ORANGE TO BROWN CLAY, LITTLE TO SOME SAND, TRACE GRAVEL, TRACE COBBLES

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 9-2-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___Y___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___Y___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES_____ NO___Y___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: Entire Piping Trench Excavated. See Soil Description in Section 1.4.

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

5. Was a monitoring well used: YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM AND IS PROVIDED IN ATTACHMENT # 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 212 * cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

NO EVIDENCE OF PETROLEUM CONTAMINATION WAS OBSERVED. SOIL WAS DISPOSED AT FT. MCCLELLAN CONSTRUCTION LANDFILL

* INCLUDES SOIL VOLUME EXCAVATED FOR NEW TANK INSTALLATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

SOIL WAS DISPOSED IN THE FT. MACLEOLAN CONSTRUCTION LANDFILL

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
50 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ON SITE PENDING PROJECT COMPLETION. INVOICE/RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No SAMPLES WERE COLLECTED
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R _____ Date: 9-6-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

<u>API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.</u>

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

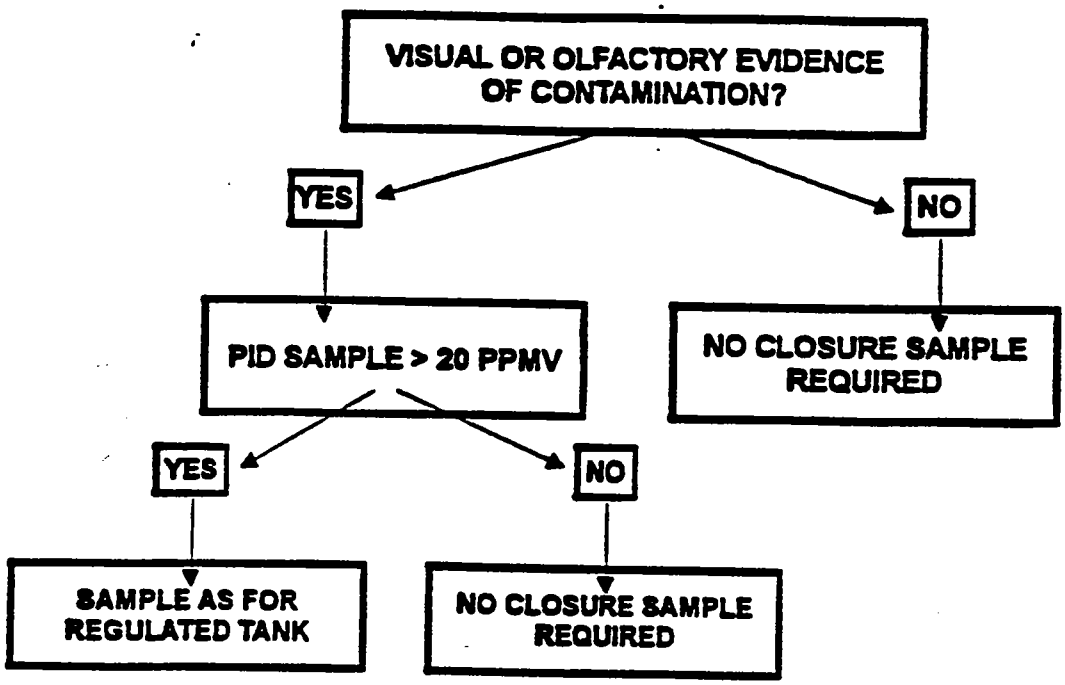
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

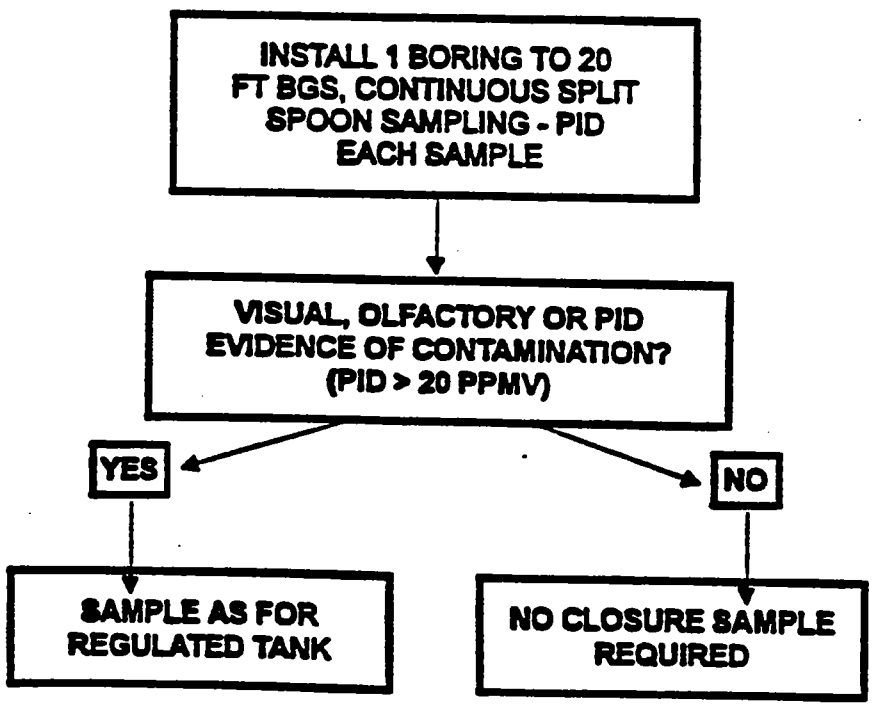
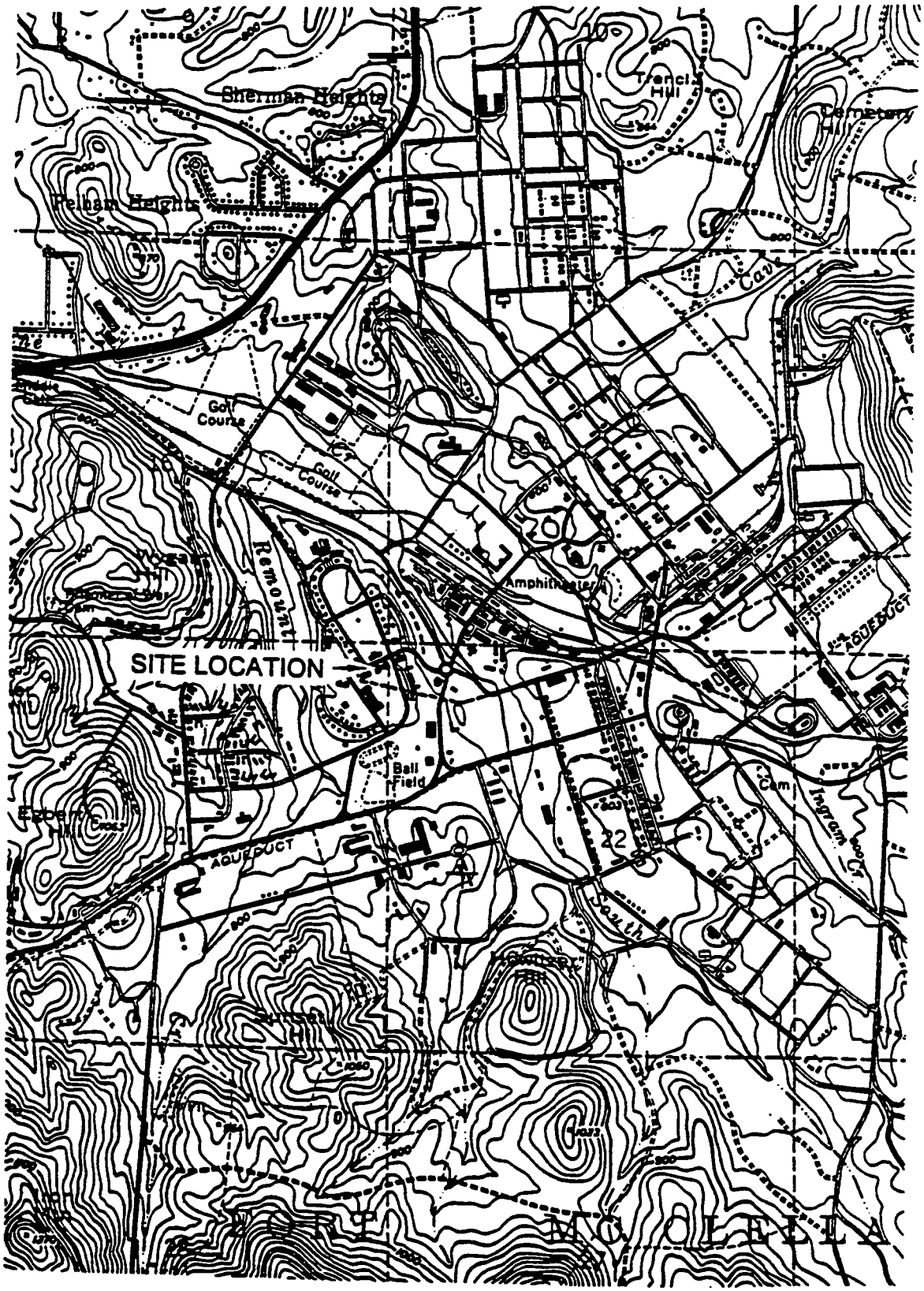


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



DRAWN BY:	D. REEVES
DATE:	__/__/__
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG ENV0000	REV 0

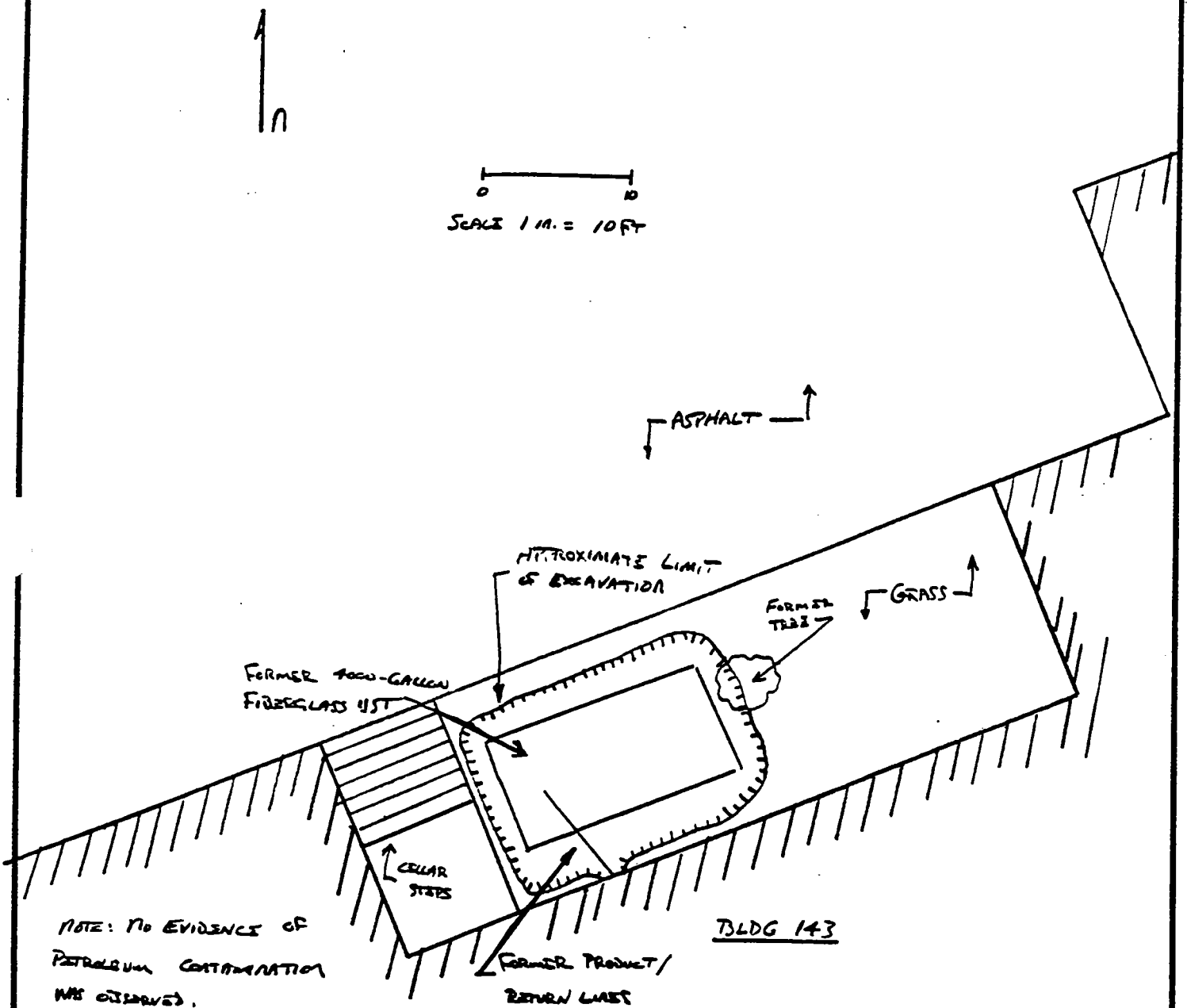
THETA ENGINEERING, INC.

SITE LOCATION MAP

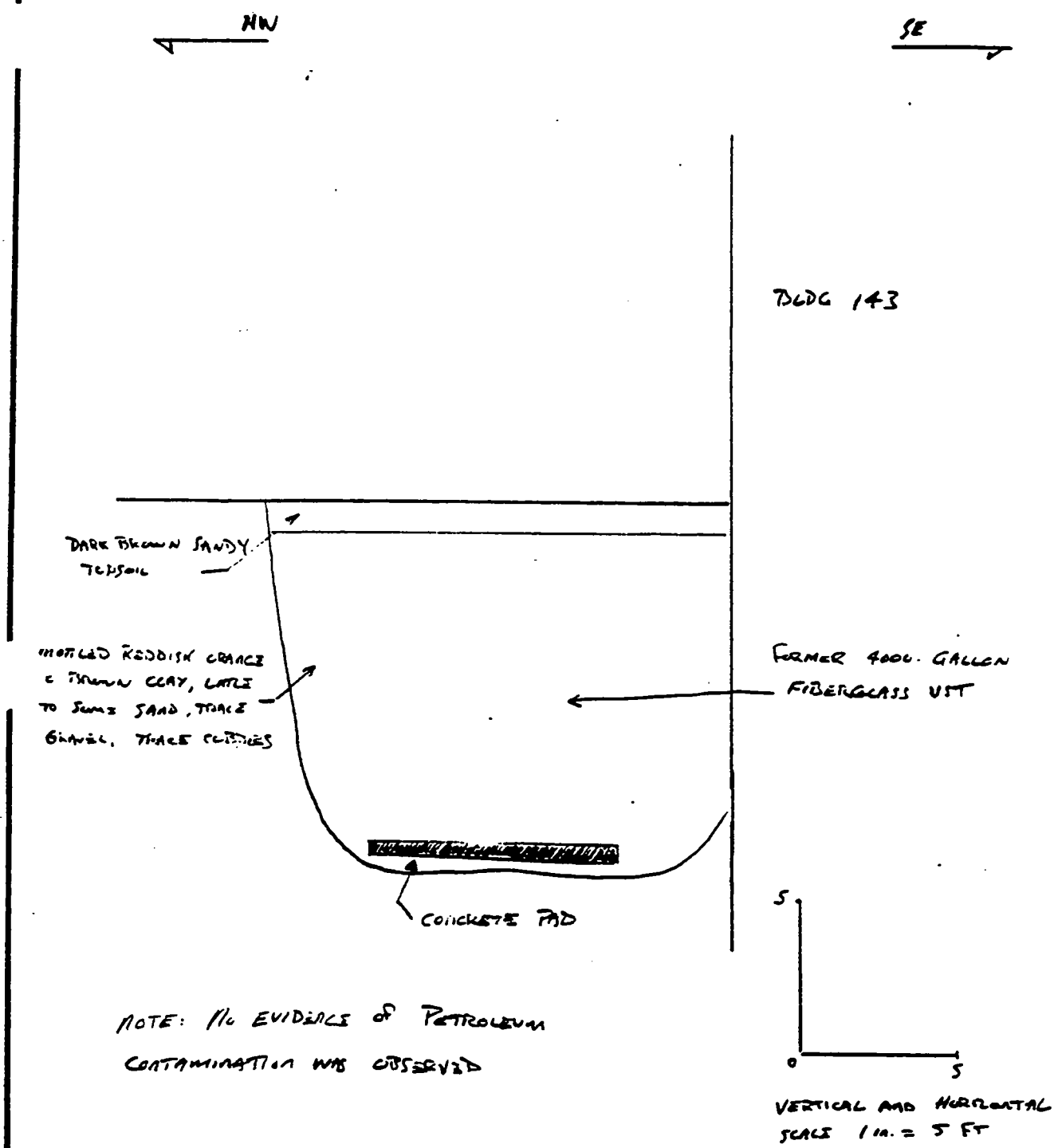
SITE 143

FORT McCLELLAN, ALABAMA

ADMIN BLDG
143



DRAWN BY: D. REEVES DATE: 9/6/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-0884	SITE PLAN SITE 143 FORT McCLELLAN, ALABAMA



NOTE: No EVIDENCE OF PETROLEUM CONTAMINATION WAS OBSERVED

TANK PIT PROFILE

WN BY: D. REEVES E: 9/6/96 ECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-0286	SITE PLAN SITE 143 FORT McCLELLAN, ALABAMA

ATTACHMENT 20

BUILDING B44 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-B44
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: ALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG B44

Address: FORT MCCLELLAN
ANNISTON ALABAMA 36205-5000

Date of this Report: --1-96

UST Owner: U.S. DEPT. OF DEFENSE

Address: FORT MCCLELLAN
ANNISTON ALABAMA 36205-5000
Contact: MS. SANDY SEFCIK

Contact Telephone No.: (205)
848-7318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NO SAMPLES WERE COLLECTED

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE
Closure Date: 3-14-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	4'x 10'8"				
Tank Capacity	1000 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES UNKNOWN NO UNKNOWN If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-1 FT BGS - SANDY CLAY : 1-1.5 FT BGS COAL FRAGMENTS AND DUST : 1.5 - 7 FT BGS YELLOWISH RED SANDY CLAY

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 3-14-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of tne tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench (IN ADJACENT TANK PIT)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2 FT BGS - YELLOWISH RED SANDY CLAY

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 3-14-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) * GROUNDWATER SAMPLING NOT REQUIRED *

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: No EVIDENCE OF CONTAMINATION WAS OBSERVED. No SAMPLES WERE COLLECTED. SEE ATTACHMENT 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 35.4 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
No EVIDENCE OF CONTAMINATION WAS OBSERVED. EXCAVATED SOIL WAS USED TO BACKFILL THE TANK PIT.

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

NA

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
15 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED AT CENTRAL STOCKPILE AREA. FINAL DESTINATION AND INVOICES / RECEIPTS WILL BE PROVIDED UPON PROJECT COMPLETION

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____
Company: NO SAMPLES WERE COLLECTED
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. R _____ Date: 4-1-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

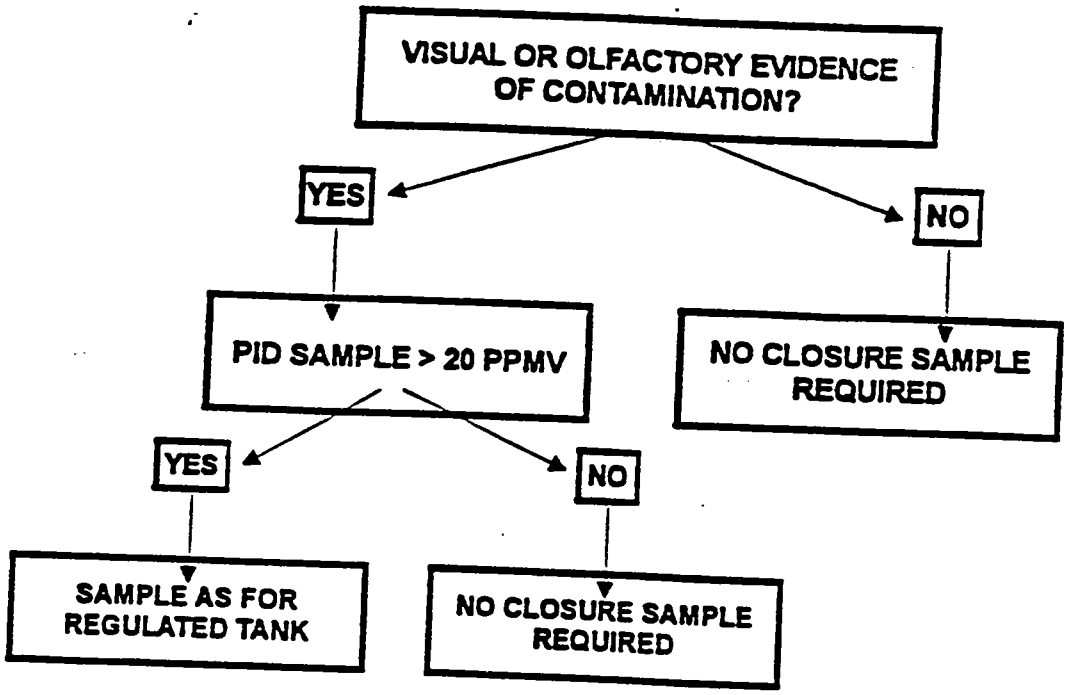
Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

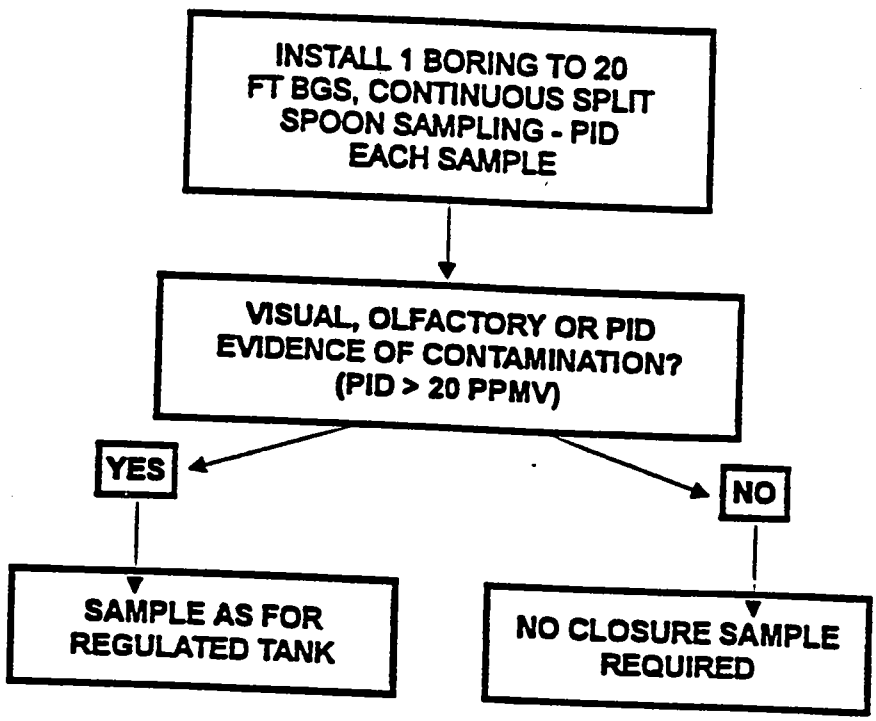
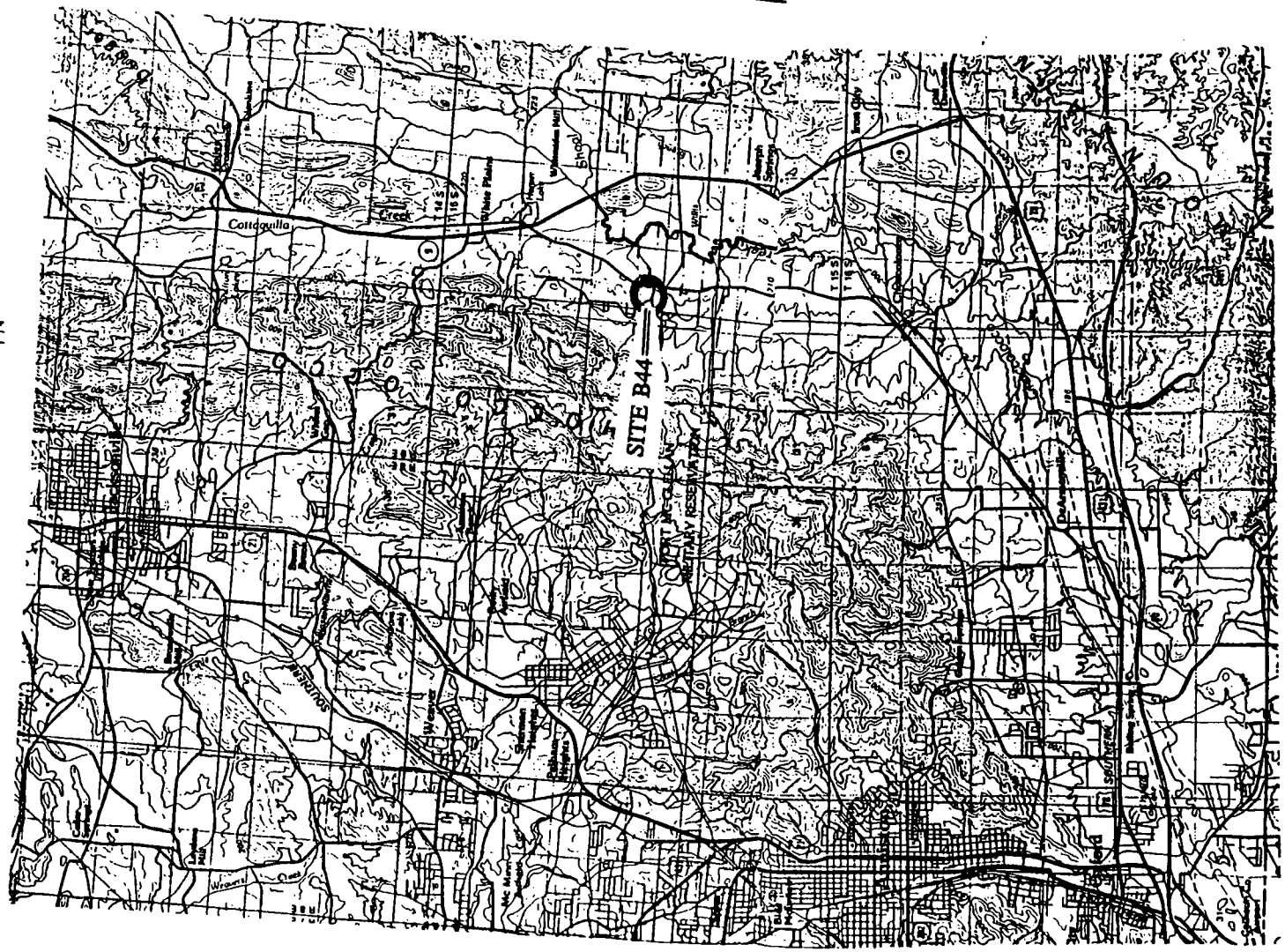


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.



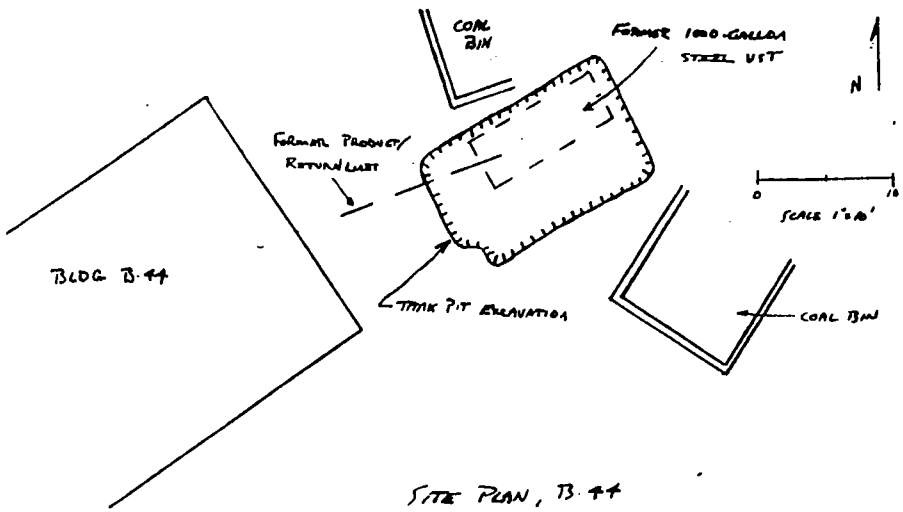
DRAWN BY:	D. REEVES
DATE:	4/1/96
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG	ENV0000
REV	0

ENGINEERING, INC.
101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0258

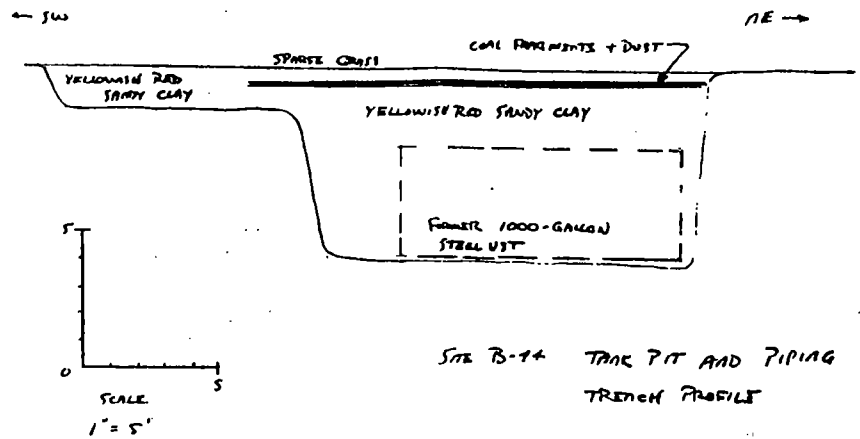
SITE LOCATION MAP

SITE B44

FORT McCLELLAN, ALABAMA



SITE PLAN, B-44



SITE B-44 TANK PIT AND PIPING TRENCH PROFILE

NOTE: ① No EVIDENCE OF CONTAMINATION WAS OBSERVED
② PRODUCT LINES PREVIOUSLY REMOVED FROM BLDG

DRAWN BY: D. REEVES DATE: 4/1/96 CHECKED BY: D. REEVES PROJ. NO.: 0001-001	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0066	SITE PLAN SITE B44 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

ATTACHMENT 21

BUILDING 294 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-294
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: CALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG 294

Address: FORT MCCLELLAN
ANNISTON, ALABAMA 36205-5000

Date of this Report: 7-22-96

UST Owner: U.S. DEPT. OF DEFENSE

Address: FORT MCCLELLAN
ANNISTON ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.:
(205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.
Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER, INC

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: ZERO
Closure Date:

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	8' x 22'				
Tank Capacity	8000 gal				
Tank Age	unknown				
Date Tank Last Used	5-31-96				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ✓ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit YES
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES ✓ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO ✓
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO ✓
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ✓ NO _____
If yes, please indicate which tank(s) by the Identification Number TANK 1. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):
ONE HOLE IN TOP OF TANK ALONG END CAP. APPROXIMATELY 1 FOOT IN LENGTH ON WEST END OF TANK

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 3-4" BGS BROWN ORGANIC TOP SOIL
4"-15' BROWNISH RED CLAY and SHALE

i. Was the excavation backfilled? YES ✓ NO _____ If yes, provide the date. 6-13-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____ _____
   2. What was the measured thickness of the free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES _____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO _____ If yes;
1. The odor strength was (mild)(strong)(other, describe _____
_____)
2. The odor indicates what type of product? (gasoline)(diesel) (waiste oil)(kerosene)(other _____
_____)

f. Was there water in the piping trench? YES _____ NO _____
1. One time discharge to sanitary sewer with local approval _____
_____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO _____ If yes,
1. How was the free product handled?_____
_____
2. What was the measured thickness of the free product? _____
_____

h. Were visible holes noted in the piping? YES_____ NO_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____
_____
_____
_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: _____
_____
_____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES ✓ NO _____

d. Was the piping capped? YES ✓ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES ✓ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? NO BORE HOLES WERE DRILLED
   YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____
   If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil?
   YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLING IS NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 492 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
SOIL EXHIBITING EVIDENCE OF PETROLEUM CONTAMINATION WAS SEGREGATED FROM NON-CONTAMINATED SOIL. CONTAMINATED SOIL IS STOCKPILED ON 30 MIL PLASTIC SHEETING, AND COVERED WITH 10 MIL PLASTIC SHEETING PENDING TREATMENT BY THERMAL VOLATILIZATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

SOIL DISPOSAL IS PENDING

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
60 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINED IN 55 GAL. DRUMS. INVOICES WILL BE PROVIDED UPON DISPOSAL

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: ANNE MARIE TURPIN
Company: THETA ENGINEERING
Telephone Number: (423) 482-0056

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: Anne Marie Turpin Date: 7-22-96

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: Patrick Miller Date: 7-24-96

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

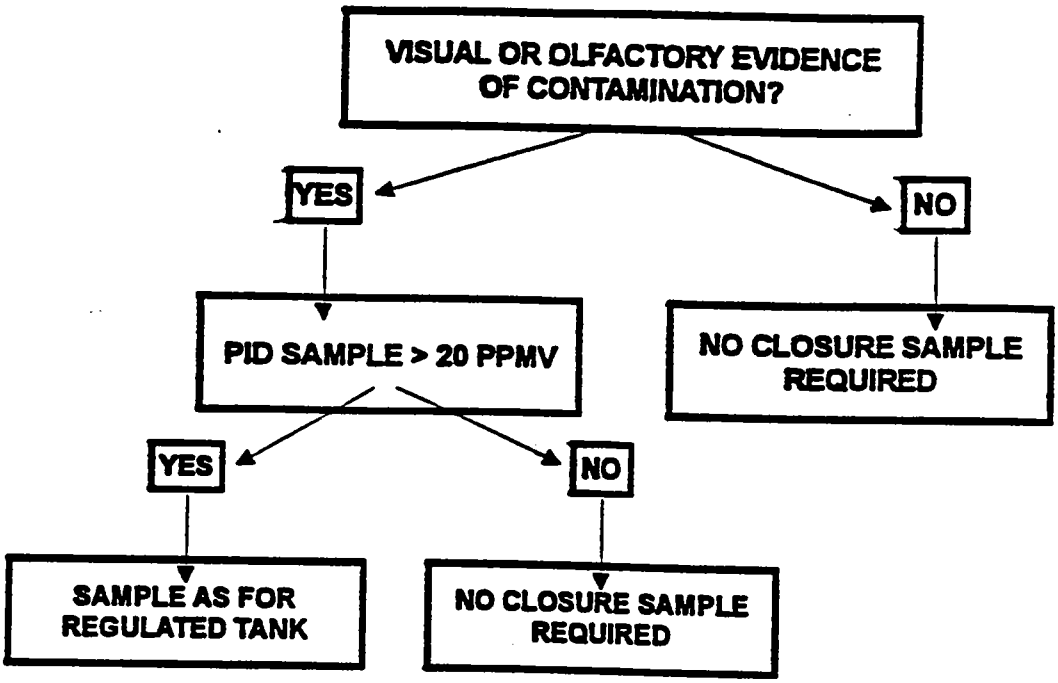
Reviewed by:_____ Date:_____

Comments:_____

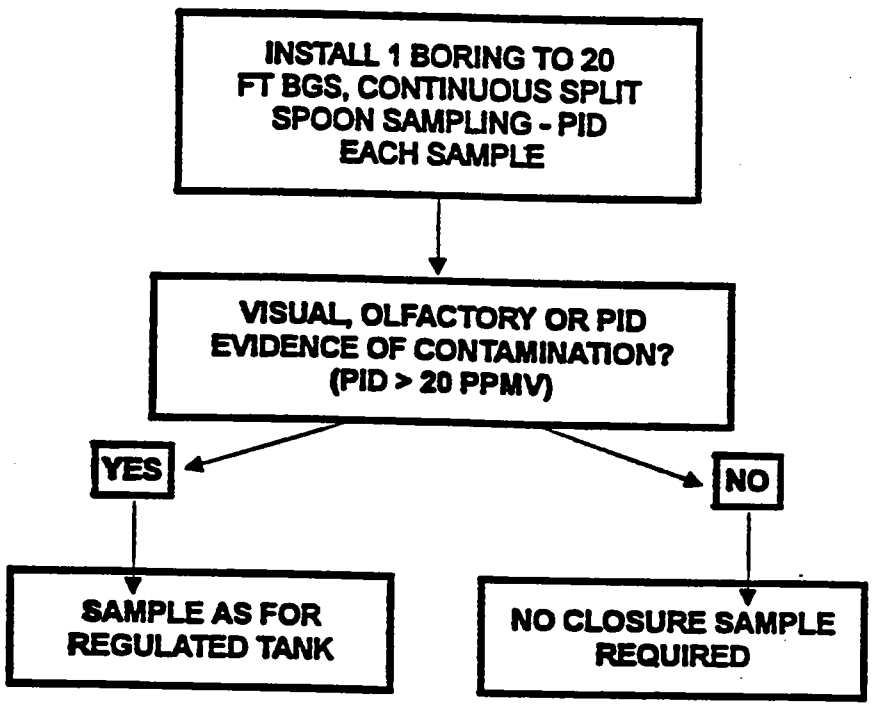
GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING

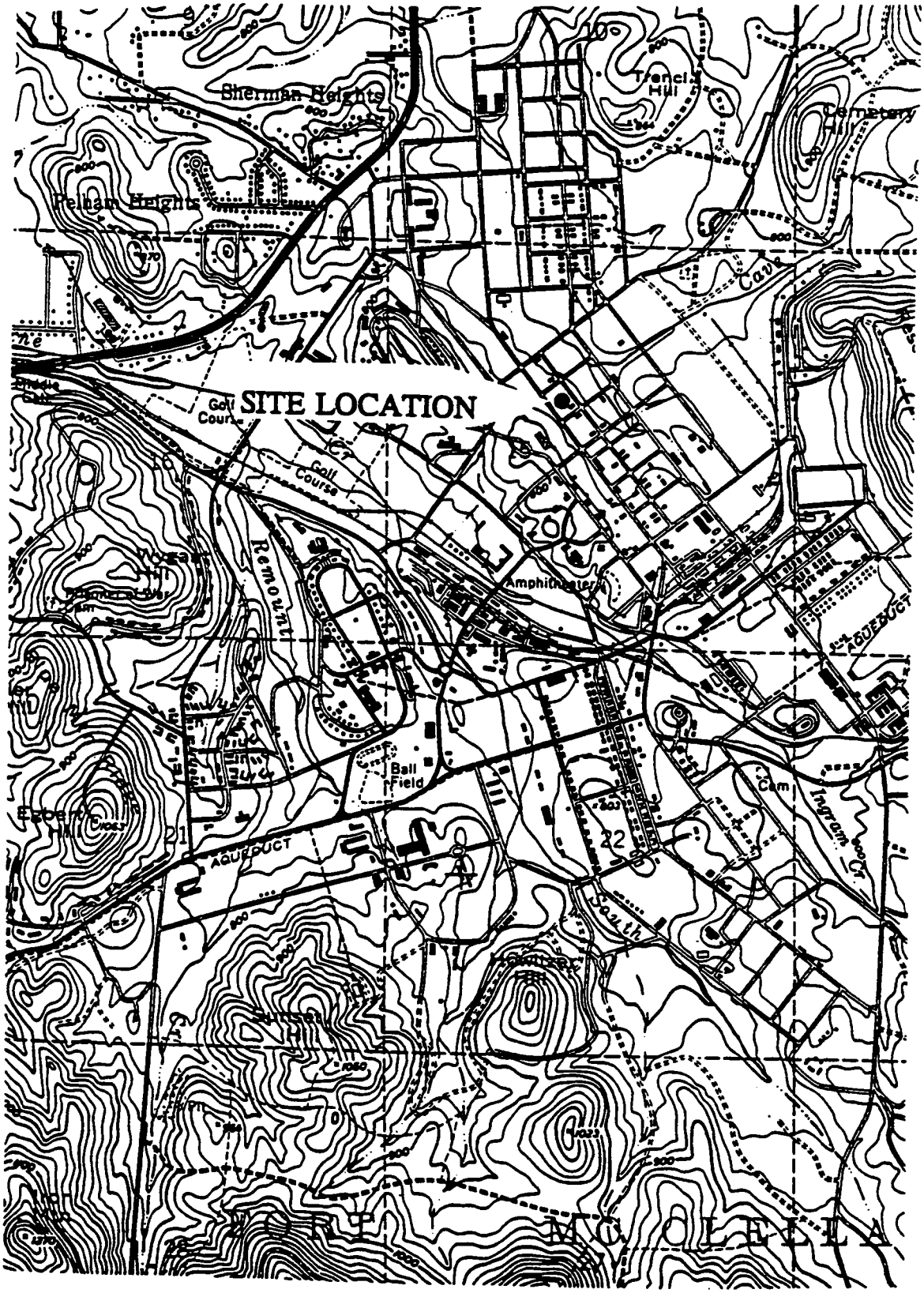
TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x	.002 =	c	lbs VOC emissions
Sample 1	528	ppm x	492	cyds x	.002 =	519.6	lbs VOC emissions
Sample 2		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 3		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 4		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 5		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 6		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 7		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 8		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 9		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 10		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 11		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 12		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 13		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 14		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 15		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 16		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 17		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 18		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 19		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 20		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 21		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 22		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 23		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 24		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 25		ppm x		cyds x	.002 =		lbs VOC emissions

TOTAL POTENTIAL EMMISSIONS _____ lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.



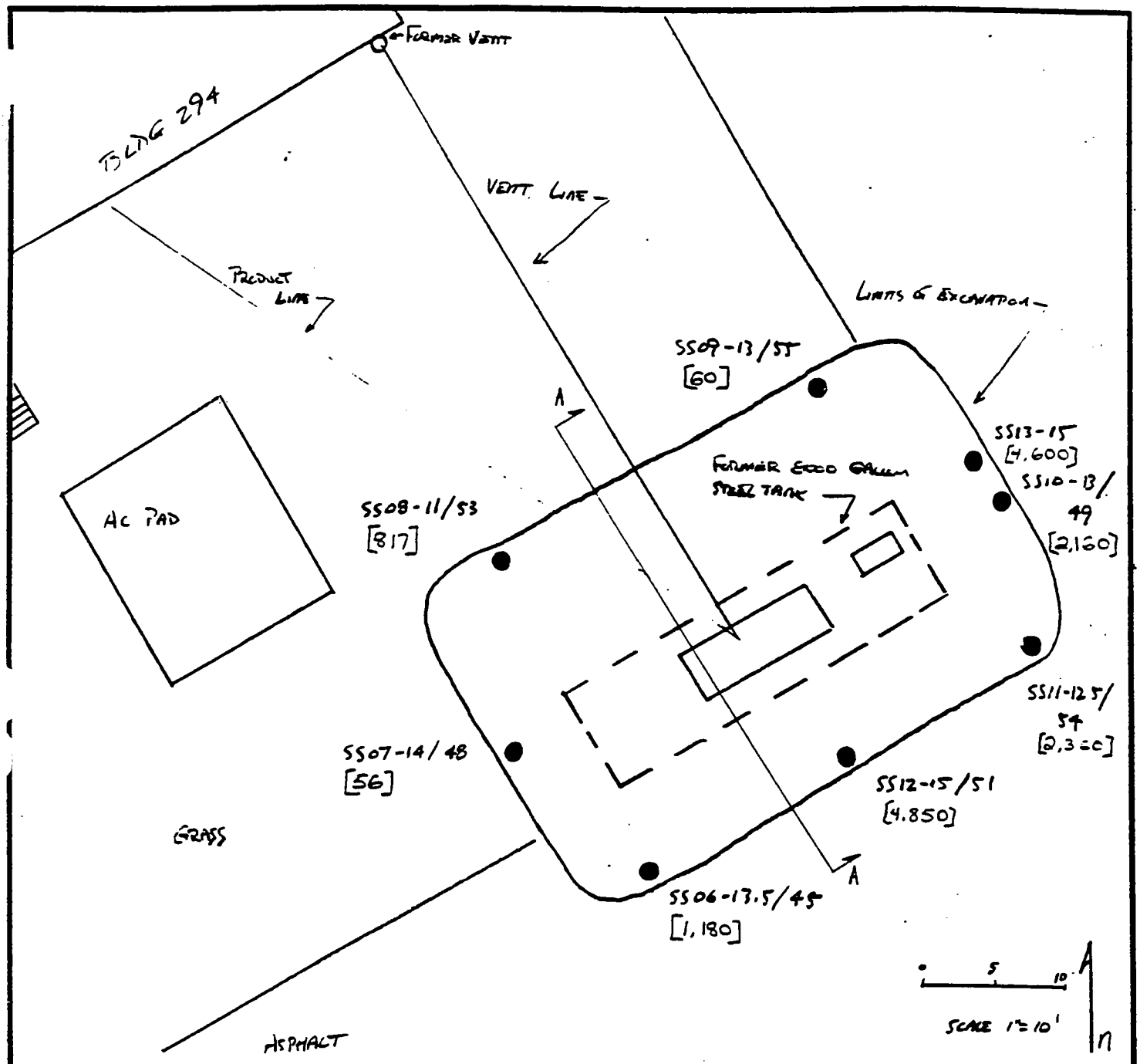
DRAWN BY:	D. REEVES
DATE:	6/24/96
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG ENV0000	REV 0

THETA ENGINEERING, INC.

SITE LOCATION MAP

SITE 294

FORT McCLELLAN, ALABAMA

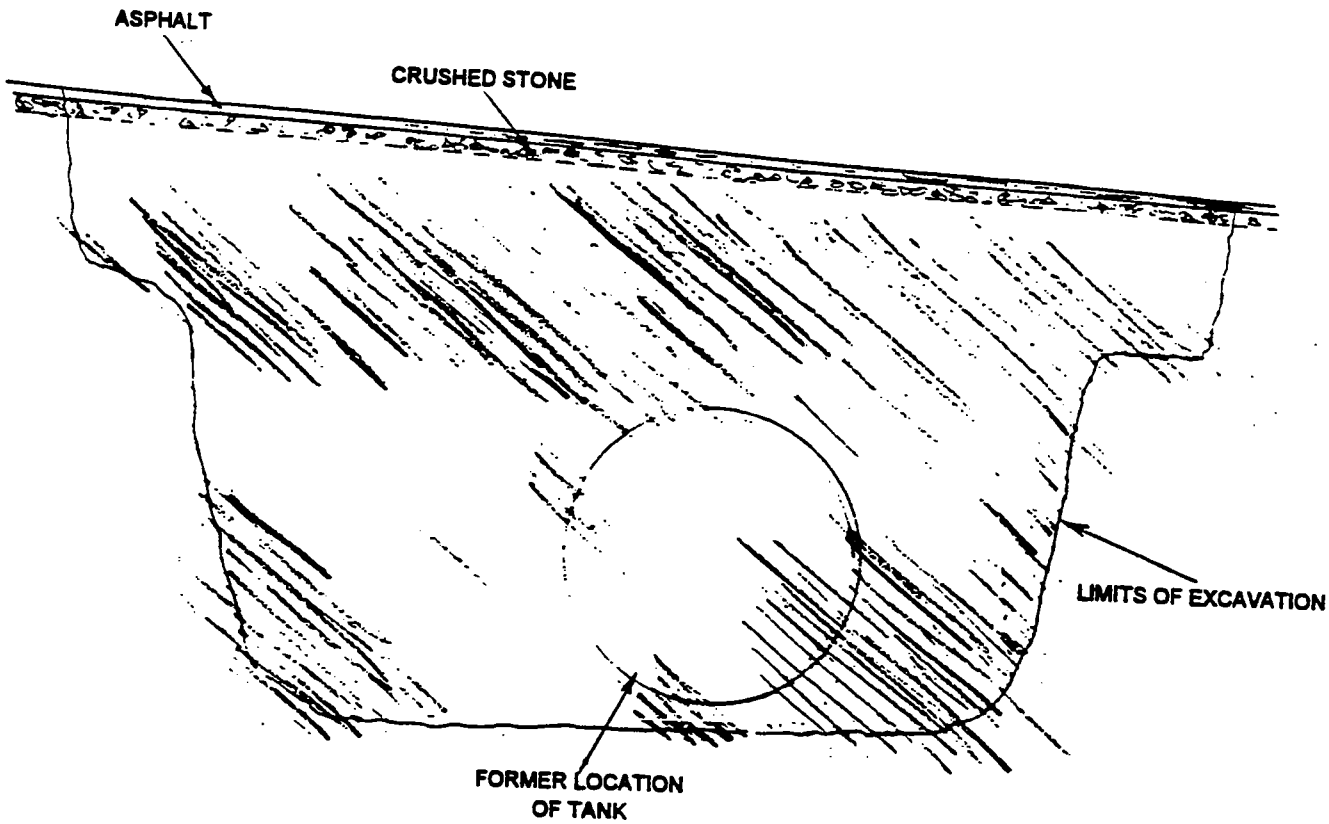


● S506-13.5/45
[1,180]

SOIL SAMPLE LOCATION AND NUMBER – DEPTH (FT BGS) / PID READING (ppmv)
[LAB RESULTS (ppm)]

DRAWN BY: D. REEVES DATE: 6/24/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE PLAN
DWG ENV0000 REV 0	901 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-8884	SITE 294 FORT McCLELLAN, ALABAMA

TANK PIT CROSS-SECTION (A-A)



SCALE 1"=5'

0 5' 10 FT.

RESIDUAL CONTAMINATION IN PIT WALL AND FLOOR AT CONCLUSION OF EXCAVATION

DRAWN BY: D. REEVES DATE: __/__/__ CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC.	TANK PIT CROSS-SECTION (A-A) SITE 294 FORT McCLELLAN, ALABAMA

SUMMARY OF SOIL ANALYSES

Report Date: June 14, 1996 **Report Number:** 914-044-009B

Client Name: Theta Technologies, Inc.
101 East Tennessee Avenue
Oak Ridge, Tennessee

Project Name: Fort McClellan
Project No: 8001-001

Sample Number	Sample Date	Results (ppm)		Practical Quantitation Limit (ppm)	
		BTEX	*TPH-IR*	*BTEX*[1]	*TPH-IR*
Stockpile	06-03-96	ND	528	1.00	20
SS06	06-05-96	NA	1,180	—	20
SS07	06-05-96	NA	56	—	20
SS08	06-05-96	NA	817	—	20
SS09	06-05-96	NA	60	—	20
SS10	06-05-96	NA	2,160	—	20
SS11	06-05-96	NA	2,360	—	20
SS12	06-05-96	NA	4,850	—	20
SS13	06-05-96	NA	4,600	—	20

Notes:
1. Practical Quantitation Limit (PQL) for benzene, ethyl benzene and toluene was 0.020 ppm. PQL for xylenes was 0.40 ppm.
2. Quality assurance/quality control data contained in Memphis Environmental Center, Inc. report number R-961172.

BTEX = Benzene, Toluene, Ethyl Benzene, and Xylenes by Method SW846-8020
TPH-IR = Total Petroleum Hydrocarbons by Method 418.1
ppm = parts per million
ND = Non-Detected
NA = Not Analyzed

MEMPHIS ENVIRONMENTAL CENTER, INC.

ENVIRONMENTAL ANALYTICAL LABORATORY
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Client Contact: Dave Schmidt
Project: Theta - Fort McClellan
Sample(s) Type: Soil

Report Date: 06/13/96
Report No: R-961172

All sample results reported on an "as-received" basis unless otherwise indicated.

Quality Assurance Summary:

Type of Analysis	Method	Holding Time	Surrogate Recoveries	Matrix Spike Recoveries	Blanks	Overall Summary
BTEX	SW-846 8020	A	N-1	N-2	A	A (See N-1 and N-2)
TPH	SW-846 9071A/ EPA 418.1	A	NA	N-3	A	A (See N-3)

N-1: The recovery was unacceptable due to matrix interferences.

N-2: This sample was analyzed as part of a larger set which included matrix spikes that had acceptable recoveries.

N-3: The recoveries were unacceptable due to matrix interferences.

A = Requirements by method were met
NA = Not applicable

Keith Hoover
QA Officer

Laura B Labock
Technical Manager

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

~~PROJECT NO:~~

PROJECT NAME: THETA

PROJECT NO. 8001-001

SAMPLER'S SIGNATURE Anne Marie Turpin (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS06	6-5-96	1537	13.5' BGS 294	S	1	TPH
002	SS07	6-5-96	1543	14' BGS 294	S	1	
003	SS08	6-5-96	1549	11' BGS 294	S	1	
004	SS09	6-5-96	1600	13' BGS 294	S	1	
005	SS10	6-5-96	1534	13' BGS 294	S	1	
006	SS11	6-5-96	1530	12.5' BGS 294	S	1	
007	SS12	6-5-96	1557	15' BGS 294	S	1	
008	SS13	6-5-96	1605	15' BGS 294	S	1	
009	Stockpile	6-3-96	1303	~~12' BGS~~ AMT 294	S	1	TPH + BTEX
				AMT		9	
				TOTAL NO. OF CONTAINERS —		8	

SAMPLE BOTTLES:
8 oz glass preserved with ice

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 Anne Marie Turpin (sign)	6-7-96 1608	2 _____ (sign)
2 _____ (sign)	_____	3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
Fed Ex	Anne Turpin	(sign) _____	_____

CONDITION OF SEAL UPON RECEIPT:	COOLER OPENED BY:	DATE/TIME
GENERAL CONDITION OF COOLER:	(sign) _____	_____

WHITE — Receiving Laboratory Copy YELLOW — Shipper's Copy PINK — MEC Laboratory Copy GOLDENROD — MEC Office Copy NO: 1

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 06/13/96 08:58

VOLATILE AROMATICS
Method: SW-846 8020

Description: THETA - FORT MCCLELLAN
Client Sample ID: STOCKPILE
Lab ID Number: 9603106
File Number: 961172
Charge Number: 914420000

Matrix: SOIL
Date Collected: 06/03/96
Date Received: 06/11/96
Date Extracted: 06/11/96
Date Analyzed: 06/12/96

Compound Name	Result	Units	PQL	Notes
BTEX, Total	ND	mg/kg	-	
Benzene	ND	mg/kg	0.20	
Ethylbenzene	ND	mg/kg	0.20	
Toluene	ND	mg/kg	0.20	
Xylenes (total)	ND	mg/kg	0.40	

Surrogate Recovery Data

Surrogate Compound	Amount Added	% Recovery	Acceptable Recovery	Notes
BFB (surrogate)	2.00	154	18.5-125	B

B: Recovery unacceptable due to matrix interference.

PQL = Practical Quantitation Limit
ND = Below Practical Quantitation Limit

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Printed: 06/13/96 08:58

QA/QC REPORT

Blank Analytical Results
VOLATILE AROMATICS

Description: THETA - FORT MCCLELLAN
Client Sample ID: BLANK
Lab ID Number: 4742360
File Number: 961172
Charge Number: 914420000

Matrix: SOIL
Date Extracted: 06/10/96
Date Analyzed: 06/10/96

Compound Name	Result	Units	PQL	Notes
BTEX, Total	ND	mg/kg	-	
Benzene	ND	mg/kg	0.20	
Ethylbenzene	ND	mg/kg	0.20	
Toluene	ND	mg/kg	0.20	
Xylenes (total)	ND	mg/kg	0.40	

Surrogate Recovery Data

Surrogate Compound	Amount Added	% Recovery	Acceptable Recovery	Notes
BFB (surrogate)	2.00	85.4	18.5-125	

PQL = Practical Quantitation Limit
ND = Below Practical Quantitation Limit

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QA/QC REPORT

Blank Spike Data
VOLATILE AROMATICS

Description: THETA - FORT MCCLELLAN
Client Sample ID: BLANK SPIKE
Lab ID Number: 4742360
QA/QC Batch Number: B012786

Matrix: SOIL
Date Extracted: 06/10/96
Date Analyzed: 06/10/96
Dup Date Analyzed:

Compound	Amount of Spike Added	Blank Spike % Recovery	Blank Spike Duplicate % Recovery	Acceptable % Recovery Limits	Spike Notes	Dup Notes
Benzene	0.800	-	-	39-150	*	
Ethylbenzene	0.800	-	-	32-160	*	
Toluene	0.800	-	-	46-148	*	
Xylenes (total)	2.40	-	-	39-125	*	

Surrogate Recovery Data

Surrogate Compound	Amount Added	Surrogate % Recovery	Duplicate % Recovery	Acceptable % Recovery	Surr. Notes	Dup Notes
BFB (surrogate)	2.00	-	-	18.5-125	*	

*: Recovery unavailable.

PQL = Practical Quantitation Limit
ND = Below Practical Quantitation Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS06**	Date Collected:	06/05/96
Lab ID Number:	9603098	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	1180	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS07**	Date Collected:	06/05/96
Lab ID Number:	9603099	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	56	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS08**	Date Collected:	06/05/96
Lab ID Number:	9603100	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	817	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS09**	Date Collected:	06/05/96
Lab ID Number:	9603101	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	60	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS10**	Date Collected:	06/05/96
Lab ID Number:	9603102	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	2160	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS11**	Date Collected:	06/05/96
Lab ID Number:	9603103	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	2360	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS12**	Date Collected:	06/05/96
Lab ID Number:	9603104	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	4850	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS13**	Date Collected:	06/05/96
Lab ID Number:	9603105	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	4600	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**STOCKPILE**	Date Collected:	06/03/96
Lab ID Number:	9603106	Date Received:	06/11/96
File Number:	961172	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	528	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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QA/QC REPORT

Blank Analytical Results
TPH-IR

Description: THETA - FORT MCCLELLAN
Client Sample ID: BLANK
Lab ID Number: 4742414
File Number: 961172
Charge Number: 914420000

Matrix: SOIL
Date Extracted: -
Date Analyzed: 06/12/96

Compound Name	Result	Units	MDL	Notes
TPH	ND	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

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Printed: 06/12/96 14:19

QA/QC REPORT

Matrix Spike Data
TPH-IR

Description: THETA - FORT MCCLELLAN
Client Sample ID: SS06
Lab ID Number: 9603098
File Number: 961172
Charge Number: 914420000

Matrix: SOIL
Date Extracted: -
Date Analyzed: 06/12/96
Dup Date Analyzed: 06/12/96

Compound	Amount of Spike Added	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	Acceptable % Recovery Limits	Spike Notes	Dup Notes
TPH	250	265	311	36.6-131	B	B

B: Recovery unacceptable due to matrix interference.

MDL = Method Detection Limit
ND = Below Method Detection Limit

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Printed: 06/12/96 14:19

QA/QC REPORT

Blank Spike Data
TPH-IR

Description: THETA - FORT MCCLELLAN
Client Sample ID: **BLANK SPIKE**
Lab ID Number: 4742414
QA/QC Batch Number: B012842

Matrix: SOIL
Date Extracted: -
Date Analyzed: 06/12/96
Dup Date Analyzed:

Compound	Amount of Spike Added	Blank Spike % Recovery	Blank Spike Duplicate % Recovery	Acceptable % Recovery Limits	Spike Notes	Dup Notes
TPH	250	86.5	-	36.6-131		

MDL = Method Detection Limit
ND = Below Method Detection Limit

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ATTACHMENT 22

BUILDING 303 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-303

Date of this Report: 6-24-96

Incident No.(If applicable)
UST _ _-_ _-_ _

UST Owner: U.S. DEPT. of DEFENSE

Facility County: CALHOUN Co.
Facility Name: FORT MCCLELLAN
Location: BLDG 303

Address: FORT MCCLELLAN, ANNISTON, ALABAMA

Contact: MS. CANDY SEFCIK

Address: ANNISTON, ALABAMA 36205-5000

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE
Closure Date: 4-29-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4" x 18'				
Tank Capacity	3000				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO X If not, provide the depth from the ground surface to the groundwater table. APPROX 6 ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit X
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe MILD)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES X NO _____
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval X
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-0.5 FT BGS DARK BROWN SANDY TOPSOIL 0.5-5 FT BGS, REDDISH YELLOW SILTY CLAY 5-7 FT BGS YELLOWISH BROWN WEATHERED TOPSOIL

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 5-8-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____ _____
   2. What was the measured thickness of the free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES _____ NO ___X___ If not, provide the depth from the ground surface to the groundwater table depth: Approx 6 ft BGS

1. Excavation extended 5 feet below base of trench (in adjacent tank pit)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-0.5 ft BGS - Dark Brown Sandy Topsoil
0.5 - 2 ft BGS - Reddish Yellow Silty Clay

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 5-23-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLING NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water), NOTE: THIS TANK WAS NOT REGULATED BY ADEM
5. Type of sample container, THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVISED
6. Method of preservation, BY ADEM. THE CLOSURE PROTOCOL IS PROVIDED IN
7. Date and time sample was relinquished, ATTACHMENT A. SOIL SAMPLE NO.
8. Person relinquishing sample, SS-303-CON WAS COLLECTED TO
9. Date and time sample was received by lab, CHARACTERIZE THE CONTAMINATED SOIL
10. Person receiving sample at lab. STOCKPILE.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 156 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL EXHIBITING OLFACTORY EVIDENCE OF PETROLEUM CONTAMINATION WAS STOCKPILED ON 40 MIL PLASTIC SHEETING (24 CY). SOIL NOT EXHIBITING EVIDENCE OF CONTAMINATION WAS TRANSPORTED TO THE BASE BORROW PIT.

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

INVOICES WILL BE PROVIDED UPON DISPOSAL

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
50 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GALLON DRUMS. INVOICES WILL BE PROVIDED UPON DISPOSAL.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: D.K. REEVES
Company: THETA ENGINEERING, INC.
Telephone Number: (423) 482-0056

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: DK R Date: 6-24-96

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R Date: 6-24-96

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

<u>API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.</u>

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x .002 =	c	lbs VOC emissions
Sample 1	179	ppm x	24	cyds x .002 =	8.6	lbs VOC emissions
Sample 2		ppm x		cyds x .002 =		lbs VOC emissions
Sample 3		ppm x		cyds x .002 =		lbs VOC emissions
Sample 4		ppm x		cyds x .002 =		lbs VOC emissions
Sample 5		ppm x		cyds x .002 =		lbs VOC emissions
Sample 6		ppm x		cyds x .002 =		lbs VOC emissions
Sample 7		ppm x		cyds x .002 =		lbs VOC emissions
Sample 8		ppm x		cyds x .002 =		lbs VOC emissions
Sample 9		ppm x		cyds x .002 =		lbs VOC emissions
Sample 10		ppm x		cyds x .002 =		lbs VOC emissions
Sample 11		ppm x		cyds x .002 =		lbs VOC emissions
Sample 12		ppm x		cyds x .002 =		lbs VOC emission
Sample 13		ppm x		cyds x .002 =		lbs VOC emission
Sample 14		ppm x		cyds x .002 =		lbs VOC emissions
Sample 15		ppm x		cyds x .002 =		lbs VOC emissions
Sample 16		ppm x		cyds x .002 =		lbs VOC emissions
Sample 17		ppm x		cyds x .002 =		lbs VOC emissions
Sample 18		ppm x		cyds x .002 =		lbs VOC emissions
Sample 19		ppm x		cyds x .002 =		lbs VOC emissions
Sample 20		ppm x		cyds x .002 =		lbs VOC emissions
Sample 21		ppm x		cyds x .002 =		lbs VOC emissions
Sample 22		ppm x		cyds x .002 =		lbs VOC emissions
Sample 23		ppm x		cyds x .002 =		lbs VOC emissions
Sample 24		ppm x		cyds x .002 =		lbs VOC emissions
Sample 25		ppm x		cyds x .002 =		lbs VOC emissions

TOTAL POTENTIAL EMMISSIONS 8.6 lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: FORT McCLELLAN UST PROGRAM

SAMPLER'S SIGNATURE DK R (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-303-CON	5-4-2-96	1600	STOCKPILE @ 303	S	1	TPH BY 418.1, BTEX BY 8020 — STANDARD TURNAROUND
				TOTAL NO. OF CONTAINERS —		1	

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DK R (sign)	5-6-96 1600	2 _____ (sign)
RELINQUISHED BY: 2 _____ (sign)	DATE/TIME _____	RECEIVED BY: 3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
		(sign) SRE	5/7/96 11:30 A

CONDITION OF SEAL UPON RECEIPT:	COOLER OPENED BY:	DATE/TIME
GENERAL CONDITION OF COOLER:	(sign) SRE	5/7/96 11:30 A

WHITE — Receiving Laboratory Copy YELLOW — Shipper's Copy PINK — MEC Laboratory Copy GOLDENROD — MEC Office Copy NO: 1

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 05/10/96 10:20

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-303-CON**	Date Collected:	04/29/96
Lab ID Number:	9602363	Date Received:	05/07/96
File Number:	960883	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	05/07/96

Compound Name	Result	Units	MDL	Notes
TPH	179	mg/Kg, dry	20	

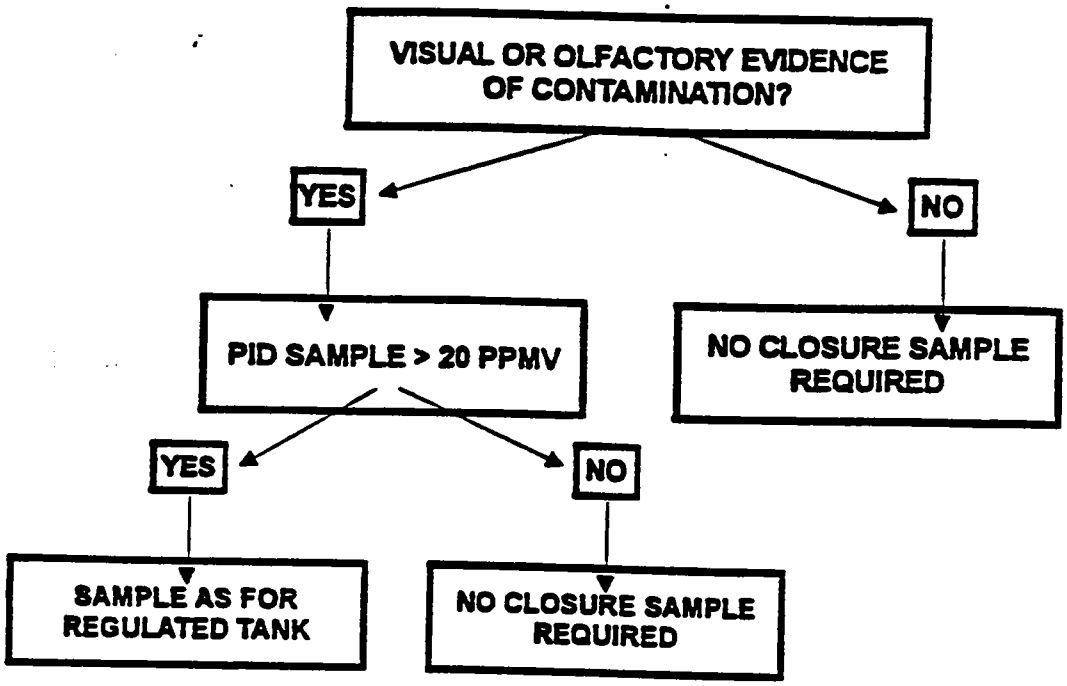
MDL = Method Detection Limit
ND = Below Method Detection Limit

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

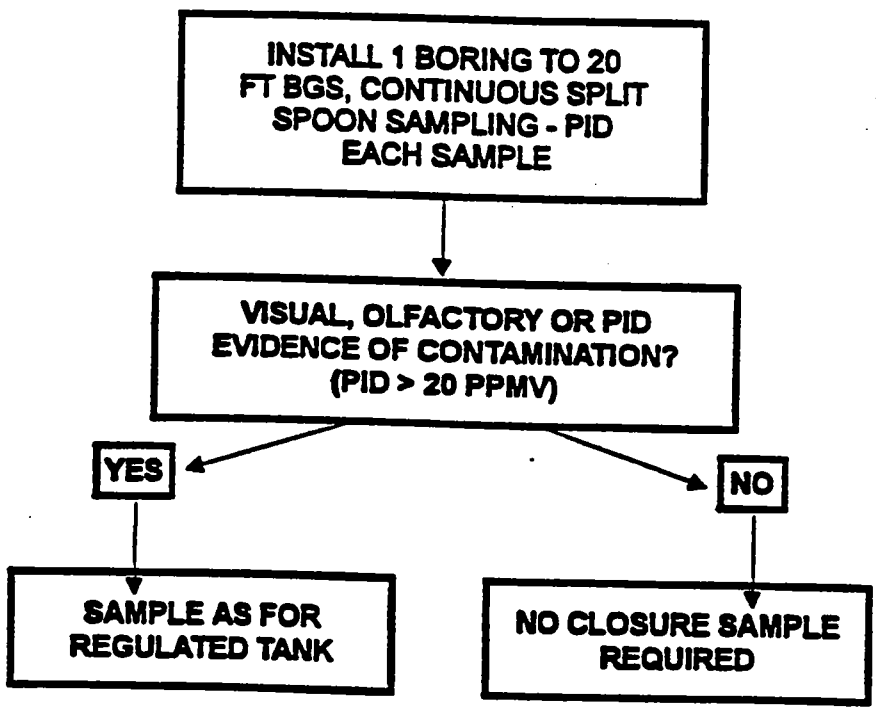
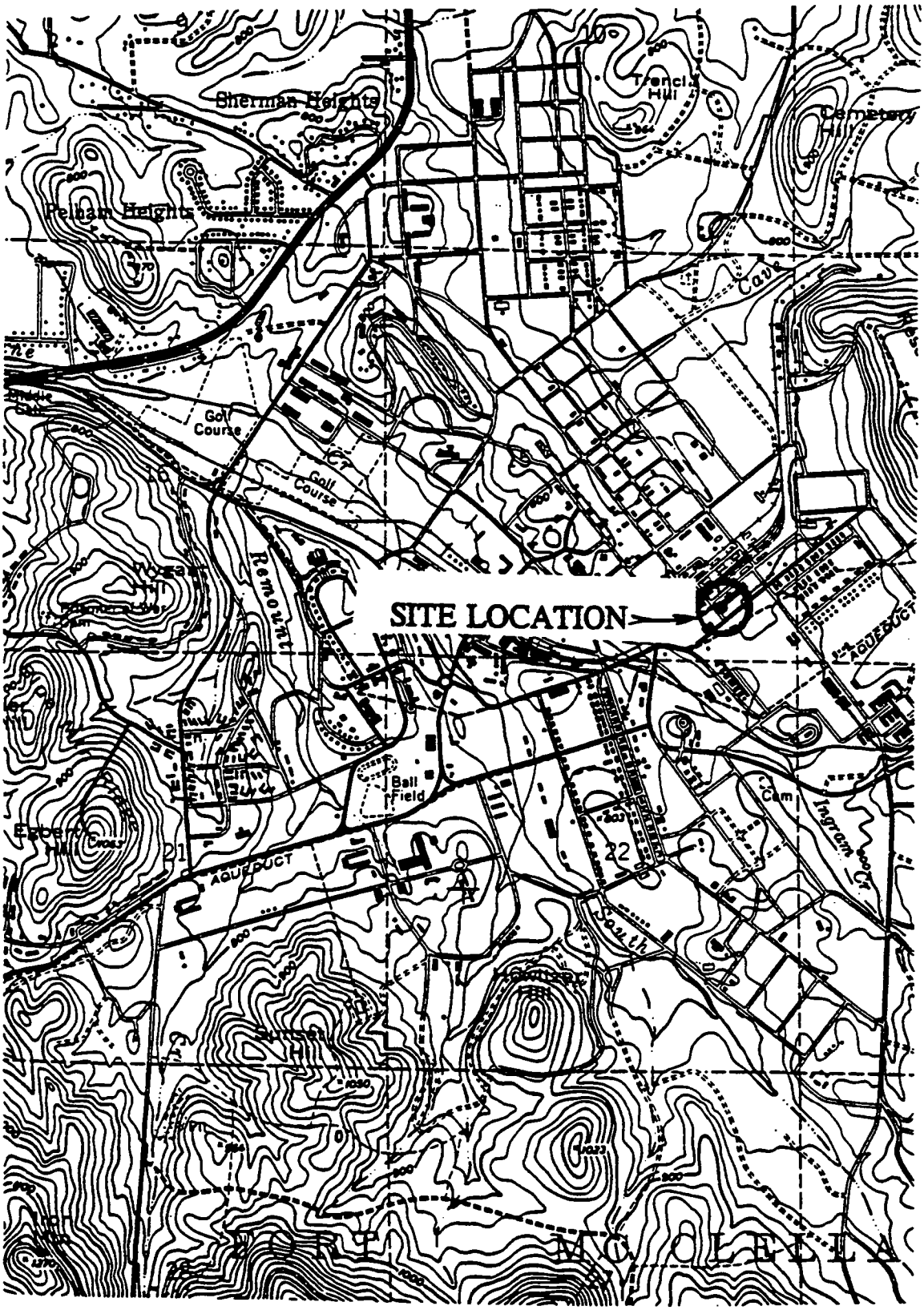


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



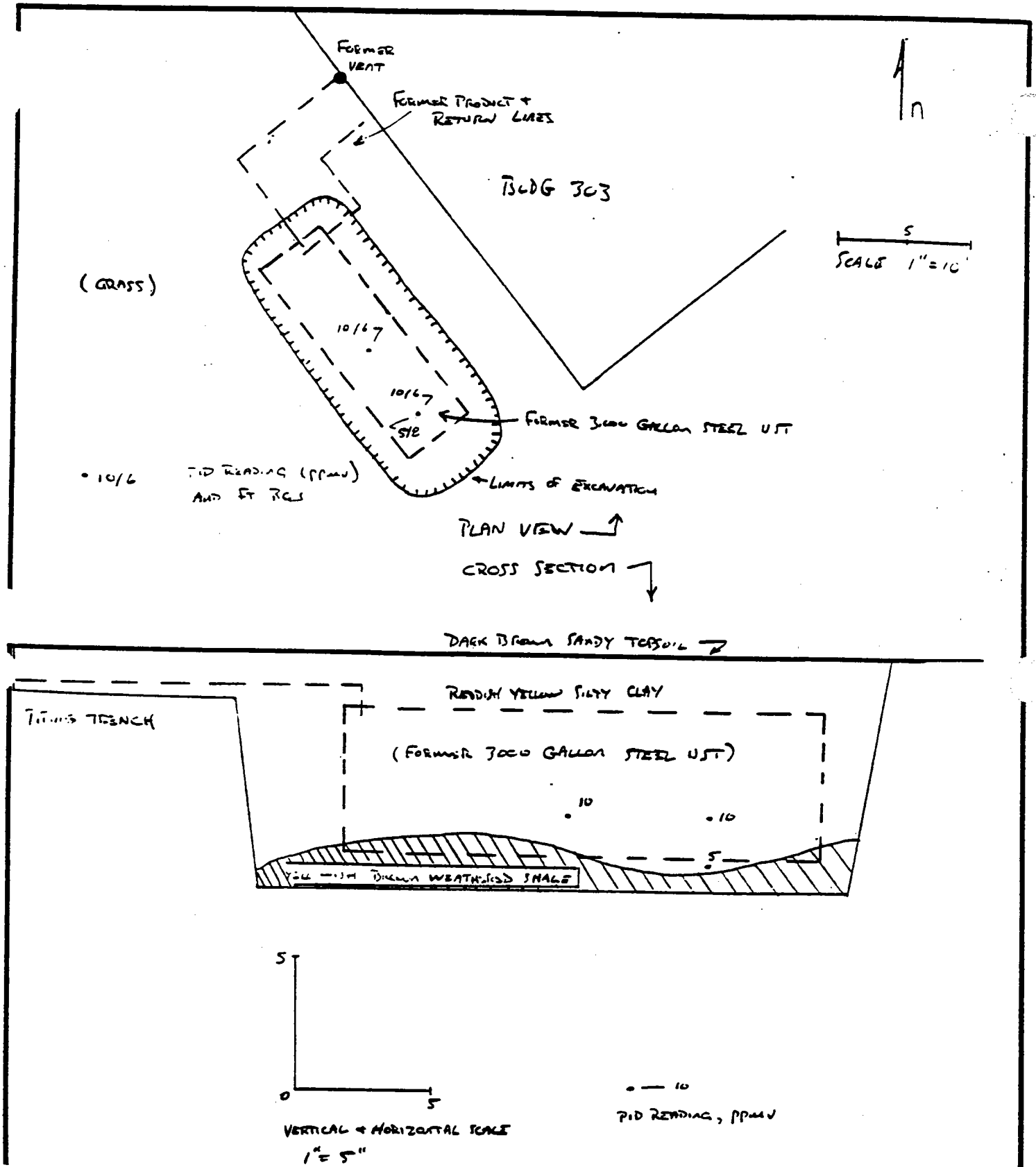
DRAWN BY:	D. REEVES
DATE:	6/10/96
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG	ENV0000
REV	0

THETA ENGINEERING, INC.

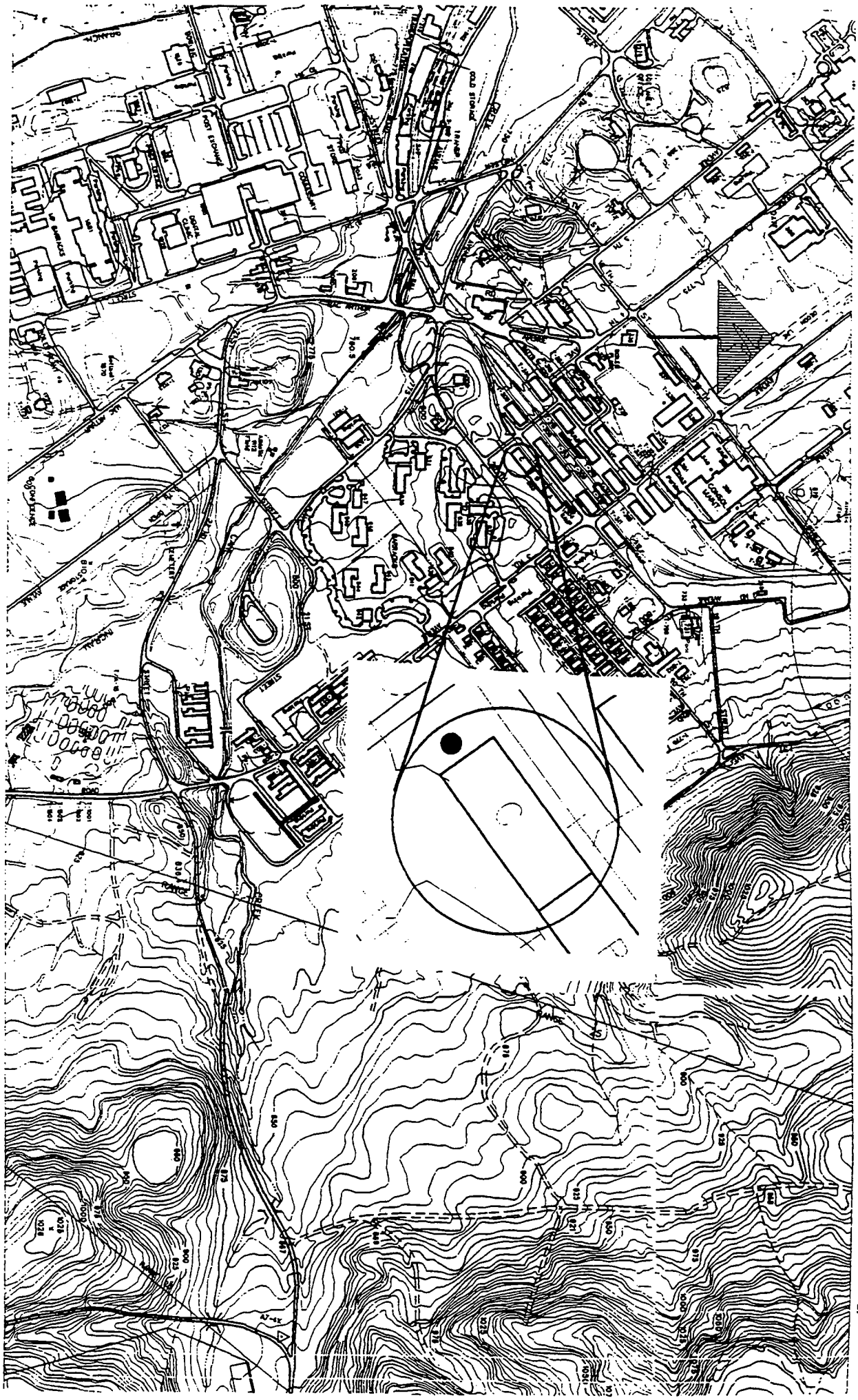
SITE LOCATION MAP

SITE 303

FORT McCLELLAN, ALABAMA



DRAWN BY: D. REEVES DATE: 6/10/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-0884	SITE PLAN SITE 303 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



ATTACHMENT 23

BUILDING 338 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-338
(NON REGULATED TANK)
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: CALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG 338

Address: FORT MCCLELLAN ANNISTON ALABAMA 36205-5000

Date of this Report: 4-2-96

UST Owner: U.S. DEPT. OF DEFENSE

Address: FORT MCCLELLAN ANNISTON ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER, INC.

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE
Closure Date: 3-5-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4" x 15'1"				
Tank Capacity	2500 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO ___X___ If not, provide the depth from the ground surface to the groundwater table. ___8___ ft. Method used to determine water table depth:

1. Excavation extended ~~5~~ 2 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES ___X___ NO _____ If yes;
1. The odor strength was (mild)(strong)(other, describe ___MILD___)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES ___X___ NO _____
If yes, how was it handled?
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) EXCAVATION BACKFILLED BEFORE SIGNIFICANT ACCUMULATION

f. Was free product found in the excavation? YES _____ NO ___X___
If yes;
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ___X___
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0- 0.3 FT BGS - DARK BROWN SANDY TOPSOIL
0.3- 8 FT BGS - MOTTLED REDDISH YELLOW + YELLOW SILTY CLAY

i. Was the excavation backfilled? YES ___X___ NO _____ If yes, provide the date. ___3-21-96___ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X (IN ADJACENT TANK PIT
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0 - 0.3 FT BGS - DARK BROWN SANDY TOPSOIL 0.3 - 2 FT BGS REDDISH YELLOW SILTY CLAY

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 3-5-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) * GROUNDWATER SAMPLE NOT REQUIRED - NOT REQUIRED THIS *

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: ALL SOIL EXHIBITING EVIDENCE OF CONTAMINATION WAS EXCAVATED AND STOCKPILED. ONE SOIL SAMPLE WAS COLLECTED OF THE STOCKPILED SOIL. NO CLOSURE SAMPLES WERE COLLECTED BECAUSE ALL CONTAMINATED SOIL WAS EXCAVATED. SEE ATTACH. 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 35.4 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL NOT EXHIBITING EVIDENCE OF CONTAMINATION WAS USED TO BACKFILL THE EXCAVATION. CONTAMINATED SOIL WAS STOCKPILED ON 30 MIL PLASTIC SHEETING COVERED W/ 10 MIL PLASTIC SHEETING (APPROX 7.5 CY).

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit. → 31.9 cy
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization (3.5 cy)
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
SOIL IS STOCKPILED AT A CENTRAL LOCATION. DESTINATION INVOICES AND RECEIPTS WILL BE PROVIDED AT PROJECT COMPLETION.

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
25 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. DESTINATION AND RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples:_____
Company:_____
Telephone Number:_____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R Date: 4-2-96

Signature of Alabama Registered Professional Engineer:
_____ Date:_____

Alabama P.E. Registration No.:_____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner:_____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

4:7

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: THETA / FT MCCLELLAN, ALA.

SAMPLER'S SIGNATURE D.R. (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-338-GW-A	3-5-96	1700	BLDG. 338	X		BTX, 418.1 - STANDARD TURNAROUND

TOTAL NO. OF CONTAINERS — 1

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DR (sign)	3-5-96 1700	2 _____ (sign)
RELINQUISHED BY:	**DATE/TIME**	**RECEIVED BY:**
2 _____ (sign)	_____	3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
FEDERAL EXPRESS	DR	(sign) [illegible]	3/8/96 10:0A

CONDITION OF SEAL UPON RECEIPT:	COOLER OPENED BY:	DATE/TIME
GENERAL CONDITION OF COOLER: [illegible]	(sign) [illegible]	3/8/96 10:00A

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 03/11/96 09:36

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-338-CON**	Date Collected:	03/05/96
Lab ID Number:	9601079	Date Received:	03/08/96
File Number:	960417	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	03/11/96

Compound Name	Result	Units	MDL	Notes
TPH	128	mg/Kg, dry	10	

MDL = Method Detection Limit
ND = Below Method Detection Limit

TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x	.002 =	c	lbs VOC emissions
Sample 1	128	ppm x	3.5	cyds x	.002 =	0.9	lbs VOC emissions
Sample 2		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 3		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 4		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 5		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 6		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 7		ppm x		cyds x	.002 =		lbs VOC emissions
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Sample 10		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 11		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 12		ppm x		cyds x	.002 =		lbs VOC emissi
Sample 13		ppm x		cyds x	.002 =		lbs VOC emissio
Sample 14		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 15		ppm x		cyds x	.002 =		lbs VOC emissions
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Sample 18		ppm x		cyds x	.002 =		lbs VOC emissions
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Sample 21		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 22		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 23		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 24		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 25		ppm x		cyds x	.002 =		lbs VOC emissions

TOTAL POTENTIAL EMMISSIONS 0.9 lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please att additional pages as necessary.

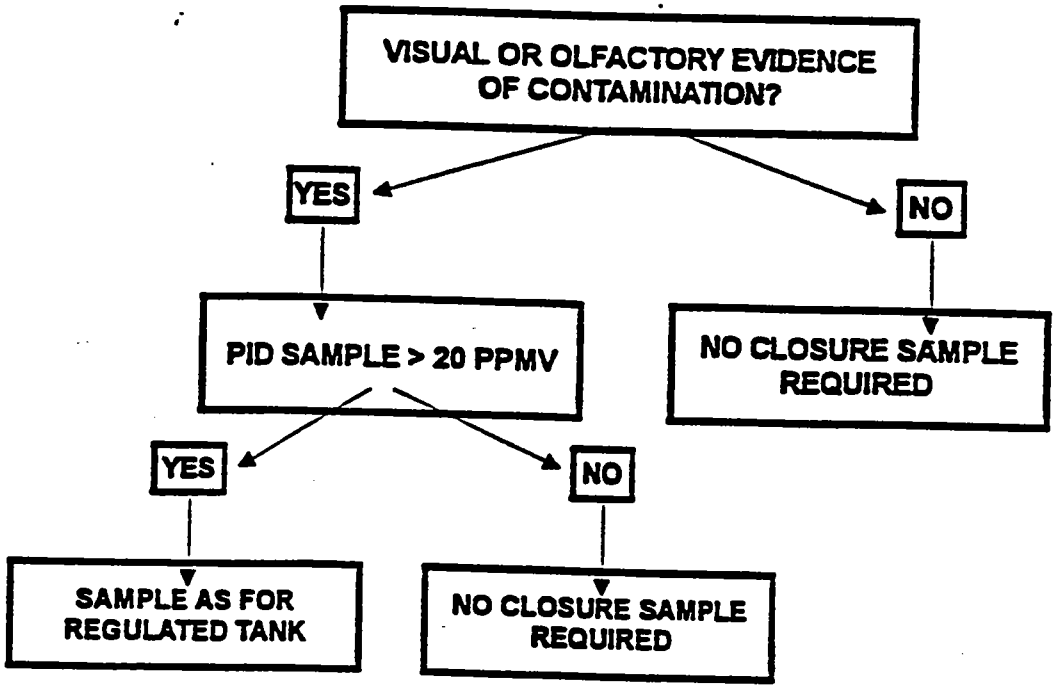
This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

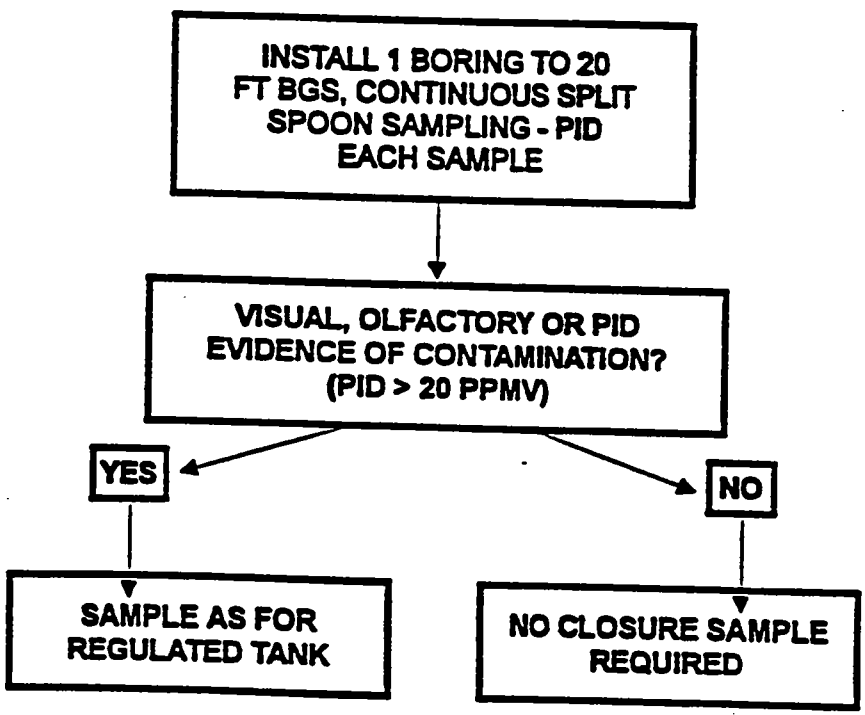
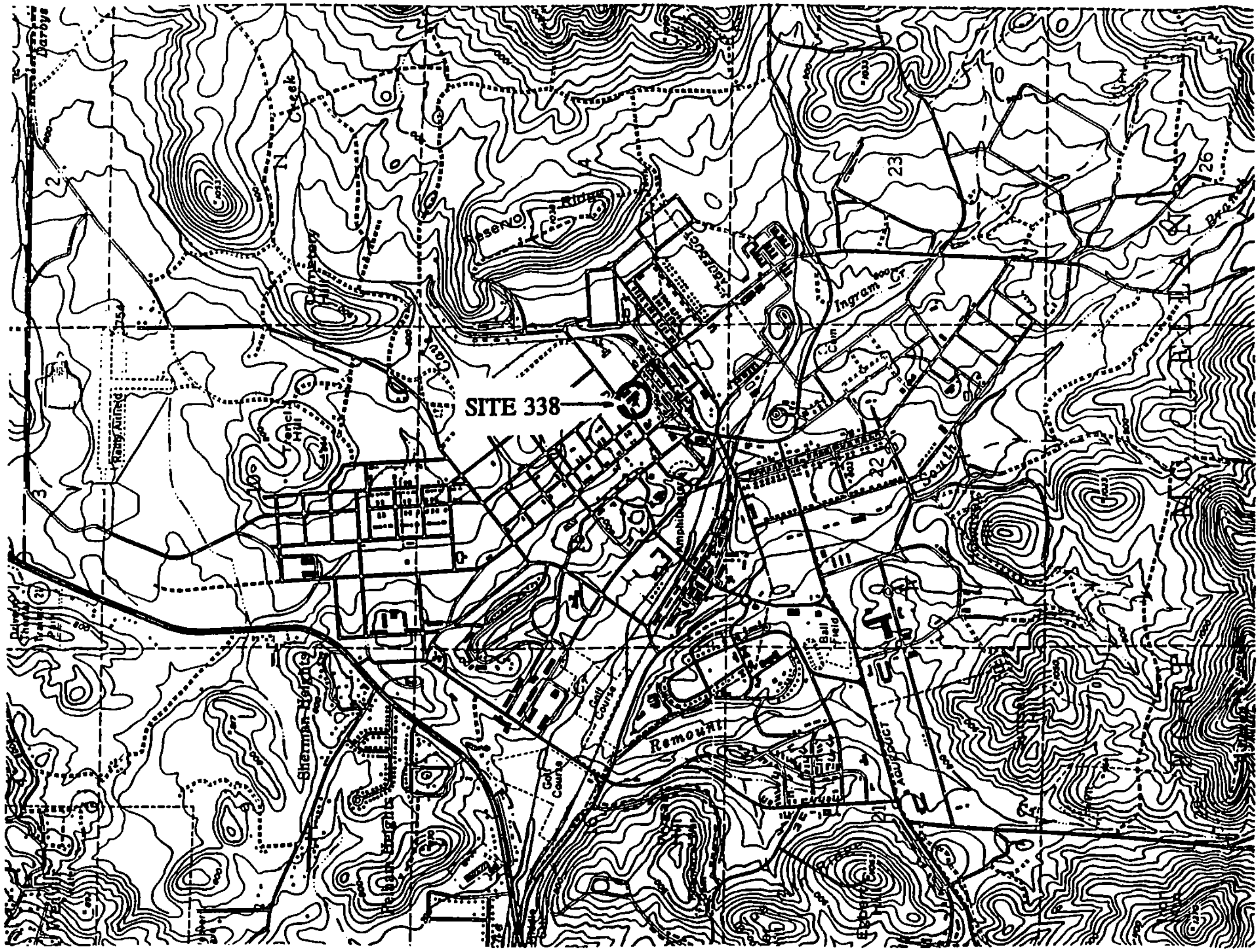
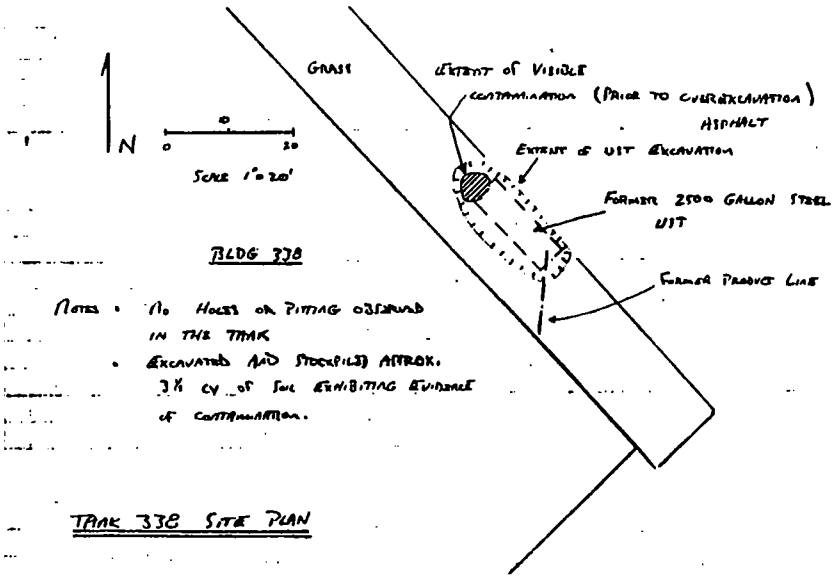


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING

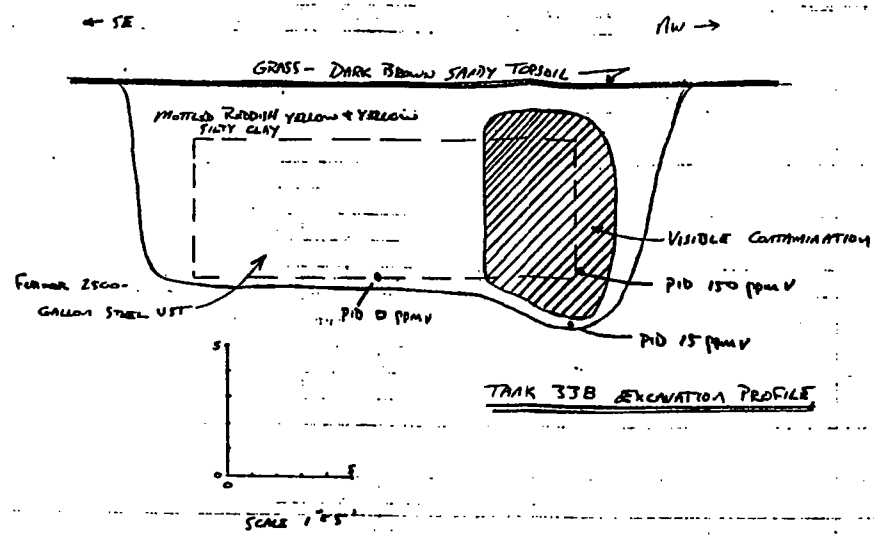


DRAWN BY: D. REEVES DATE: 4/1/96 CHECKED BY: D. REEVES PROJ. NO.: 8001 - 001	THETA ENGINEERING, INC.	SITE LOCATION MAP
		SITE 338
DWG ENV0000 REV 0	101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/481-0058	FORT McCLELLAN, ALABAMA



NOTES:
- NO HOLES OR PITTING OBSERVED IN THE TANK
- EXCAVATED AND STOCKPILED APPROX. 3½ CY OF SOIL EXHIBITING EVIDENCE OF CONTAMINATION.

TANK 338 SITE PLAN



TANK 338 EXCAVATION PROFILE

DRAWN BY: D. REEVES DATE: 4/2/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THERMA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0066	SITE PLAN SITE 338 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

ATTACHMENT 24

BUILDING 796 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-796
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: CALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG 796

Address: FORT MCCLELLAN, ANNISTON
ALABAMA 36205-5000

Date of this Report: 3-29-96

UST Owner: U.S. DEPT OF DEFENSE

Address: FORT MCCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.
Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER, INC.

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: 1

Number of tanks remaining at site: Ø
Closure Date: FEB 13, 1996

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	4.0' x 10.0' L				
Tank Capacity	1000-GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features ___X___
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES ___X___ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe _____ MILD)
2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO ___X___ If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO ___X___ If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ___X___ If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0 - 0.3 FT BGS - DARK BROWN SANDY TOPSOIL - 0.3 - 7.75 FT BGS MOTTLE RED AND REDDISH YELLOW SILTY CLAY; 7.75 - 8.0 DARK GRAY WEATHERED SHALE

i. Was the excavation backfilled? YES ___X___ NO _____ If yes, provide the date. 2-27-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____
   _____
   2. What was the measured thickness of the free product? _____
   _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). _____
_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal * PRODUCT PIPING PREVIOUSLY REMOVED *

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES _____ NO UNKNOWN

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES X NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench (IN ADJACENT TANK PIT)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO UNKNOWN If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO UNKNOWN
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES UNKNOWN
NO _____ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO UNKNOWN
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: _____
NO PIPING TRENCH WAS OBSERVED

j. Was the piping trench backfilled? YES X NO _____
If yes, provide the date UNKNOWN DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) * NOT REQUIRED *

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: ALL SOIL EXHIBITING EVIDENCE OF CONTAMINATION WAS EXCAVATED AND STOCKPILED. ONE SOIL STOCKPILE SAMPLE WAS COLLECTED FOR WASTE DISPOSAL PURPOSE. NO CLOSURE SAMPLES WERE COLLECTED. SEE ATTACHMENT 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 211 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL EXHIBITING EVIDENCE OF PETROLEUM CONTAMINATION WAS SEGREGATED FROM NON-CONTAMINATED SOIL, STOCKPILED ON 30 MIL PLASTIC SHEETING AND COVERED WITH 10 MIL PLASTIC SHEETING PENDING TREATMENT / DISPOSAL.

d. Indicate method of soil disposal used or to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
   2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

SOIL DISPOSAL IS PENDING

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
10 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. INVOICES / RECEIPTS WILL BE PROVIDED AT THAT TIME

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: NON-REGULATED TANK - NO CLOSURE SAMPLES WERE COLLECTED
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R_____ Date: 3-29-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x .002 =	c	lbs VOC emissions
Sample 1	193	ppm x	21.1	cyds x .002 =	8.1	lbs VOC emissions
Sample 2		ppm x		cyds x .002 =		lbs VOC emissions
Sample 3		ppm x		cyds x .002 =		lbs VOC emissions
Sample 4		ppm x		cyds x .002 =		lbs VOC emissions
Sample 5		ppm x		cyds x .002 =		lbs VOC emissions
Sample 6		ppm x		cyds x .002 =		lbs VOC emissions
Sample 7		ppm x		cyds x .002 =		lbs VOC emissions
Sample 8		ppm x		cyds x .002 =		lbs VOC emissions
Sample 9		ppm x		cyds x .002 =		lbs VOC emissions
Sample 10		ppm x		cyds x .002 =		lbs VOC emissions
Sample 11		ppm x		cyds x .002 =		lbs VOC emissions
Sample 12		ppm x		cyds x .002 =		lbs VOC emissior
Sample 13		ppm x		cyds x .002 =		lbs VOC emissio
Sample 14		ppm x		cyds x .002 =		lbs VOC emissions
Sample 15		ppm x		cyds x .002 =		lbs VOC emissions
Sample 16		ppm x		cyds x .002 =		lbs VOC emissions
Sample 17		ppm x		cyds x .002 =		lbs VOC emissions
Sample 18		ppm x		cyds x .002 =		lbs VOC emissions
Sample 19		ppm x		cyds x .002 =		lbs VOC emissions
Sample 20		ppm x		cyds x .002 =		lbs VOC emissions
Sample 21		ppm x		cyds x .002 =		lbs VOC emissions
Sample 22		ppm x		cyds x .002 =		lbs VOC emissions
Sample 23		ppm x		cyds x .002 =		lbs VOC emissions
Sample 24		ppm x		cyds x .002 =		lbs VOC emissions
Sample 25		ppm x		cyds x .002 =		lbs VOC emissions

TOTAL POTENTIAL EMMISSIONS 8.1 lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

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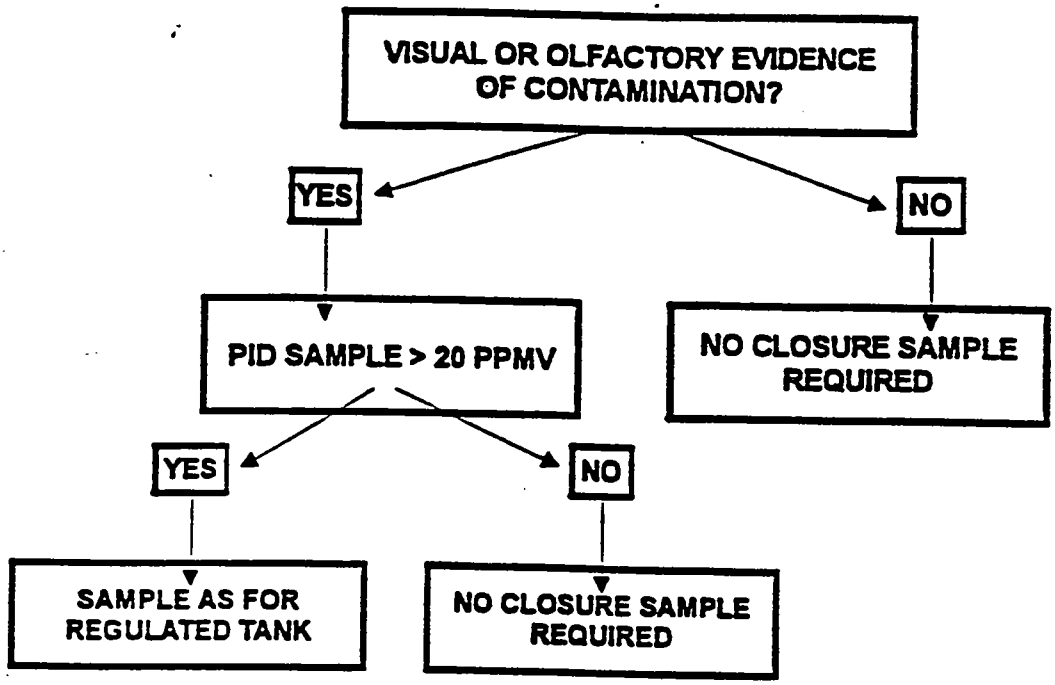


CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

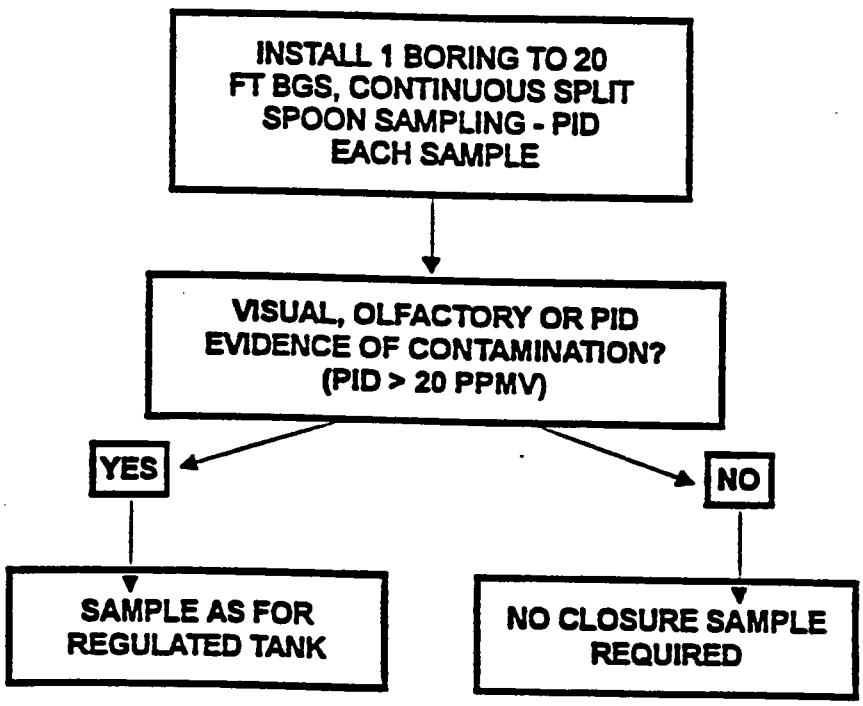


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING

960265

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100. Memphis. TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: FORT MCCLELLAN

SAMPLER'S SIGNATURE DK R (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-796-UNC	2-13-96	1525	BLDG 796	S	1	1 CLEAR GLASS
002	SS-1201-UNC	2-13-96	1620	BLDG 1201	S	1	1 CLEAR GLASS
003	SS-1202-UNC	2-13-96	1640	BLDG 1202	S	1	1 CLEAR GLASS
				TOTAL NO. OF CONTAINERS—		3	

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DK R (sign)	2-14-96 1700	2 _____ (sign)
RELINQUISHED BY: 2 _____ (sign)	DATE/TIME _____	RECEIVED BY: 3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
FED-EX		(sign) SREston	2/15/96 9:20 A
CONDITION OF SEAL UPON RECEIPT: N/A		COOLER OPENED BY:	DATE/TIME
GENERAL CONDITION OF COOLER: ON ICE		(sign) SREston	2/15/96 9:20 A

WHITE — Receiving Laboratory Copy YELLOW — Shipper's Copy PINK — MEC Laboratory Copy GOLDENROD — MEC Office Copy NO: 1

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

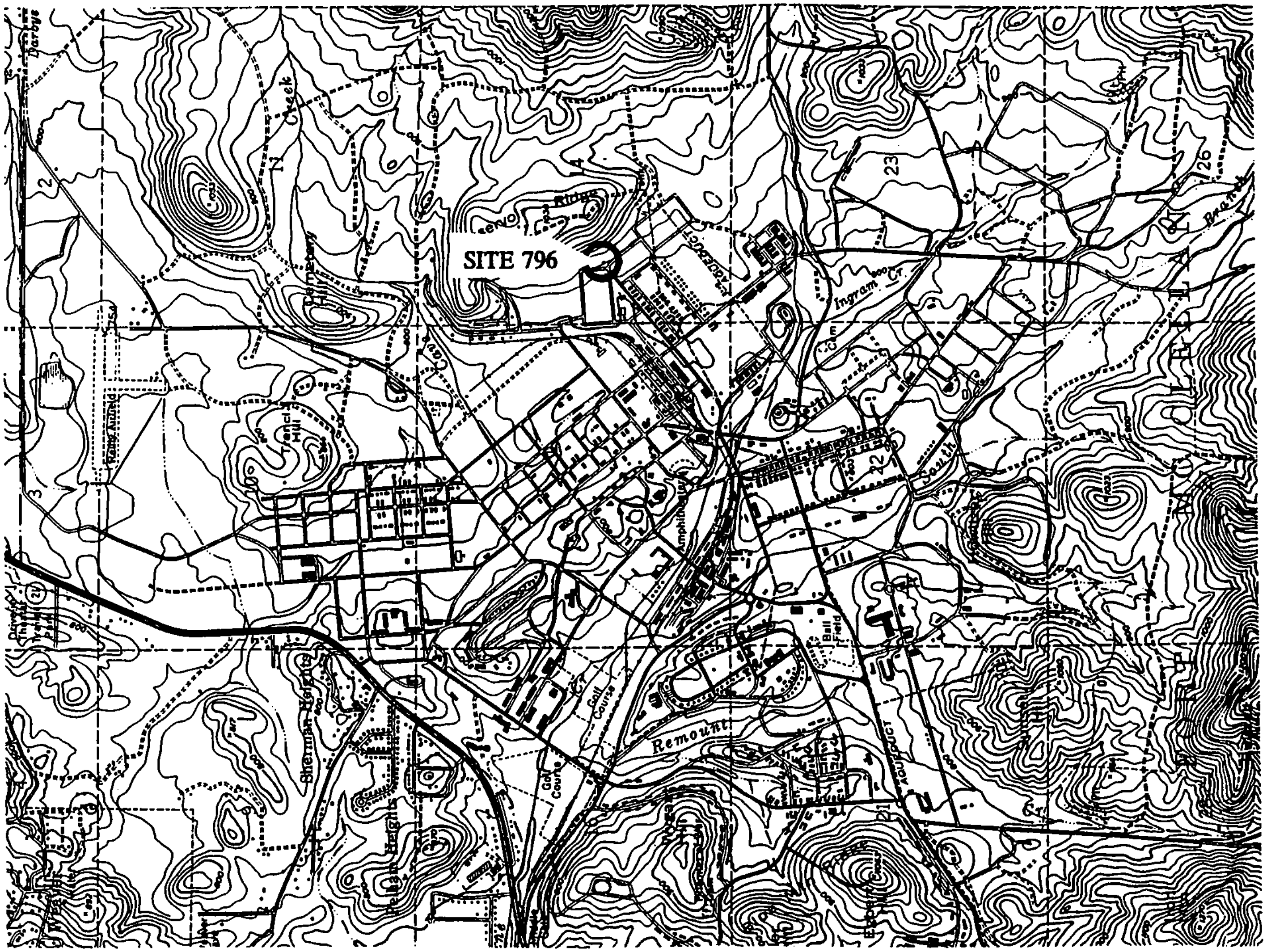
Printed: 02/19/96 11:21

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-796-VAC**	Date Collected:	02/13/96
Lab ID Number:	9600600	Date Received:	02/15/96
File Number:	960265	Date Extracted:	-
Charge Number:	683030000	Date Analyzed:	02/19/96

Compound Name	Result	Units	MDL	Notes
TPH	193	mg/Kg, dry	10	

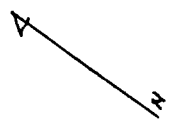
MDL = Method Detection Limit
ND = Below Method Detection Limit



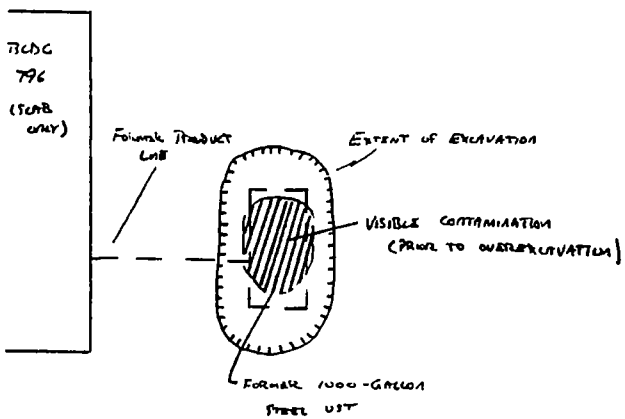
N

DRAWN BY: D. REEVES DATE: __/__/__ CHECKED BY: D. REEVES PROJ. NO.: ______	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830	SITE LOCATION MAP SITE 796 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

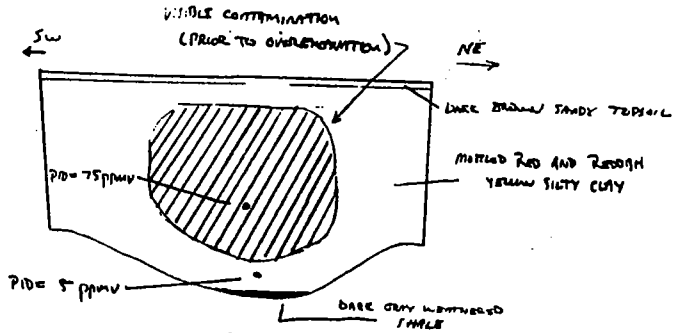
SITE PLAN
TANK 796



SCALE 1" = 10'



- ALL SOIL EXHIBITING VISUAL, OLFACTORY OR PID EVIDENCE OF CONTAMINATION WAS EXCAVATED AND STOCKPILED (APPROX. 21 CY)
- PRODUCT LINE PREVIOUSLY REMOVED



TANK 796
TANK EXCAVATION PROFILE

SCALE 1" = 5'

DRAWN BY: [illegible] DATE: CHECKED BY: [illegible] PROJ. NO.:	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37831 • 423/483-6000	SITE PLAN SITE 796 FORT McCLELLAN, ALABAMA
DWG [illegible] REV 0		

ATTACHMENT 25

BUILDING 1201 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-1201
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: CALHOUN
Facility Name: FORT McCLELLAN
Location: BUILDING 1201

Address: FORT McCLELLAN
ANNISTON ALABAMA 36205-5000

Date of this Report: 3-29-96

UST Owner: U.S. DEPT OF DEFENSE

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS. CANDY FEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.
Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER, INC.

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: Ø
Closure Date: FEBRUARY 12, 1996

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5.4'x6.2'L				
Tank Capacity	1000 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ✓ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit YES
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES X NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe MILD)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other HEATING OIL)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-8 FT BGS - RED SILTY CLAY

i. Was the excavation backfilled? YES X NO 4-16-96 If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal NOTE: PIPING WAS PREVIOUSLY REMOVED

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? NA
YES _____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench? No Piping Trench was observed.
YES _____ NO _____ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES ___NA___ NO ___NA___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES ___NA___ NO ___NA___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES_____ NO_____
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____
NA — Piping Previously Removed

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: _____
No Piping Trench was observed

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.
No Piping Trench was observed

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLING NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK IS NOT REGULATED BY ADEM. THE TANK REMOVAL PROTOCOL UTILIZED WAS REVIEWED BY ADEM AND IS SUMMARIZED IN ATTACHMENT A.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 26.4 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
SOIL EXHIBITING EVIDENCE OF PETROLEUM CONTAMINATION WAS SEGREGATED FROM NON-CONTAMINATED SOIL. CONTAMINATED SOIL IS STOCKPILED ON 30 MIL PLASTIC SHEETING AND COVERED WITH 10 MIL PLASTIC SHEETING PENDING TREATMENT BY THERMAL TREATMENT

d. Indicate method of soil disposal used or to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5' feet from the base pit.
   2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

SOIL DISPOSAL IS PENDING

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
10 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. INVOICE / RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: D.K. Reisner
Company: THETA ENGINEERING, INC.
Telephone Number: (423) 482-0056

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: D.K. R Date: 3-23-95

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R Date: 3-23-95

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 02/28/96 16:19

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description: THETA - FORT MCCLELLAN
Client Sample ID: SS-1201-PF-8
Lab ID Number: 9600852
File Number: 960344
Charge Number: 914420000

Matrix: SOIL
Date Collected: 02/26/96
Date Received: 02/27/96
Date Extracted: -
Date Analyzed: 02/28/96

Compound Name	Result	Units	MDL	Notes
TPH	1110	mg/Kg, dry	10	

MDL = Method Detection Limit
ND = Below Method Detection Limit

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 02/28/96 16:19

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-1201-WW-5**	Date Collected:	02/26/96
Lab ID Number:	9600853	Date Received:	02/27/96
File Number:	960344	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	02/28/96

Compound Name	Result	Units	MDL	Notes
TPH	13000	mg/Kg, dry	10	

MDL = Method Detection Limit
ND = Below Method Detection Limit

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 02/28/96 16:19

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description: THETA - FORT MCCLELLAN
Client Sample ID: SS-1201-EW-5
Lab ID Number: 9600854
File Number: 960344
Charge Number: 914420000

Matrix: SOIL
Date Collected: 02/26/96
Date Received: 02/27/96
Date Extracted: -
Date Analyzed: 02/28/96

Compound Name	Result	Units	MDL	Notes
TPH	20	mg/Kg, dry	10	

MDL = Method Detection Limit
ND = Below Method Detection Limit

3/4

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO.(Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: FORT MCCLELLAN

SAMPLER'S SIGNATURE DKR (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-1201-PF-8	2-26-96	1345	PIT FLOOR 8 FT BGS	S	1	24 HR TURNAROUND, 418.1 TPH
002	SS-1201-NW-5	2-26-96	1348	WEST WALL 5 FT BGS	S	1	24 HR TURNAROUND, 418.1 TPH
003	SS-1201-EW-5	2-26-96	1350	EAST WALL 5 FT BGS	S	1	24 HR TURNAROUND, 418.1 TPH
004	SS-BGR-12	2-26-96	1140	PIT FLOOR, 12 FT BGS	S	1	24 HR TURNAROUND, 418.1 TPH
005	TRIP BLANK	—	—		W	2	BTX BY 8020, STD TURNAROUND
						6	

TOTAL NO. OF CONTAINERS — 6

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DKR (sign)	2-26-96 1700	2 _____ (sign)
RELINQUISHED BY:	**DATE/TIME**	**RECEIVED BY:**
2 _____ (sign)	_____	3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
		(sign) SRE	2/27/96 12:45 P

CONDITION OF SEAL UPON RECEIPT:	COOLER OPENED BY:	DATE/TIME
GENERAL CONDITION OF COOLER: ice	(sign) SRE	2/27/96 12:45 P

WHITE — Receiving Laboratory Copy YELLOW — Shipper's Copy PINK — MEC Laboratory Copy GOLDENROD — MEC Office Copy NO: 1

960265

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: FORT MCCLELLAN

SAMPLER'S SIGNATURE DK R (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-796-UNC	2-13-96	1525	BLDG 796	S	1	1 CLEAR GLASS
002	SS-1201-UNC	2-13-96	1620	BLDG 1201	S	1	1 CLEAR GLASS
003	SS-1202-UNC	2-13-96	1640	BLDG 1202	S	1	1 CLEAR GLASS

TOTAL NO. OF CONTAINERS — 3

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DK R (sign)	2-14-96 1700	2 _____ (sign)
RELINQUISHED BY:	**DATE/TIME**	**RECEIVED BY:**
2 _____ (sign)	_____	3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
FED-EX		(sign) SREston	2/15/96 9:20 A

CONDITION OF SEAL UPON RECEIPT: N/A

GENERAL CONDITION OF COOLER: ON ICE

COOLER OPENED BY: (sign) SREston

DATE/TIME 2/15/96 9:20 A

WHITE — Receiving Laboratory Copy YELLOW — Shipper's Copy PINK — MEC Laboratory Copy GOLDENROD — MEC Office Copy NO. 1

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 02/19/96 11:21

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-1201-VAC**	Date Collected:	02/13/96
Lab ID Number:	9600601	Date Received:	02/15/96
File Number:	960265	Date Extracted:	-
Charge Number:	683030000	Date Analyzed:	02/19/96

Compound Name	Result	Units	MDL	Notes
TPH	250	mg/Kg, dry	10	

MDL = Method Detection Limit
ND = Below Method Detection Limit

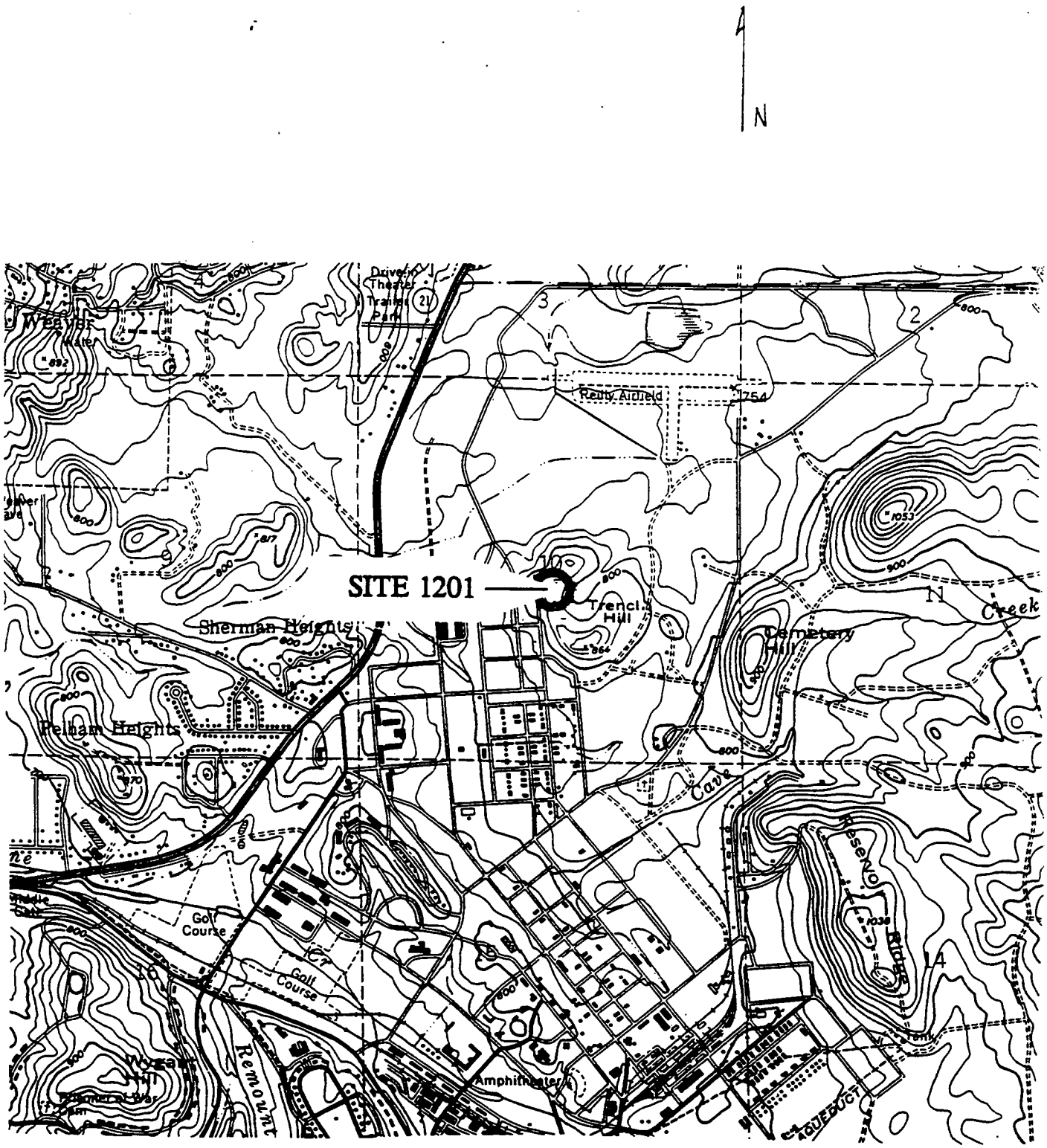
TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x	.002 =	c	lbs VOC emissions
Sample 1	250	ppm x	26.4	cyds x	.002 =	13.2	lbs VOC emissions
Sample 2		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 3		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 4		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 5		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 6		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 7		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 8		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 9		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 10		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 11		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 12		ppm x		cyds x	.002 =		lbs VOC emissio
Sample 13		ppm x		cyds x	.002 =		lbs VOC emissio
Sample 14		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 15		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 16		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 17		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 18		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 19		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 20		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 21		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 22		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 23		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 24		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 25		ppm x		cyds x	.002 =		lbs VOC emissions

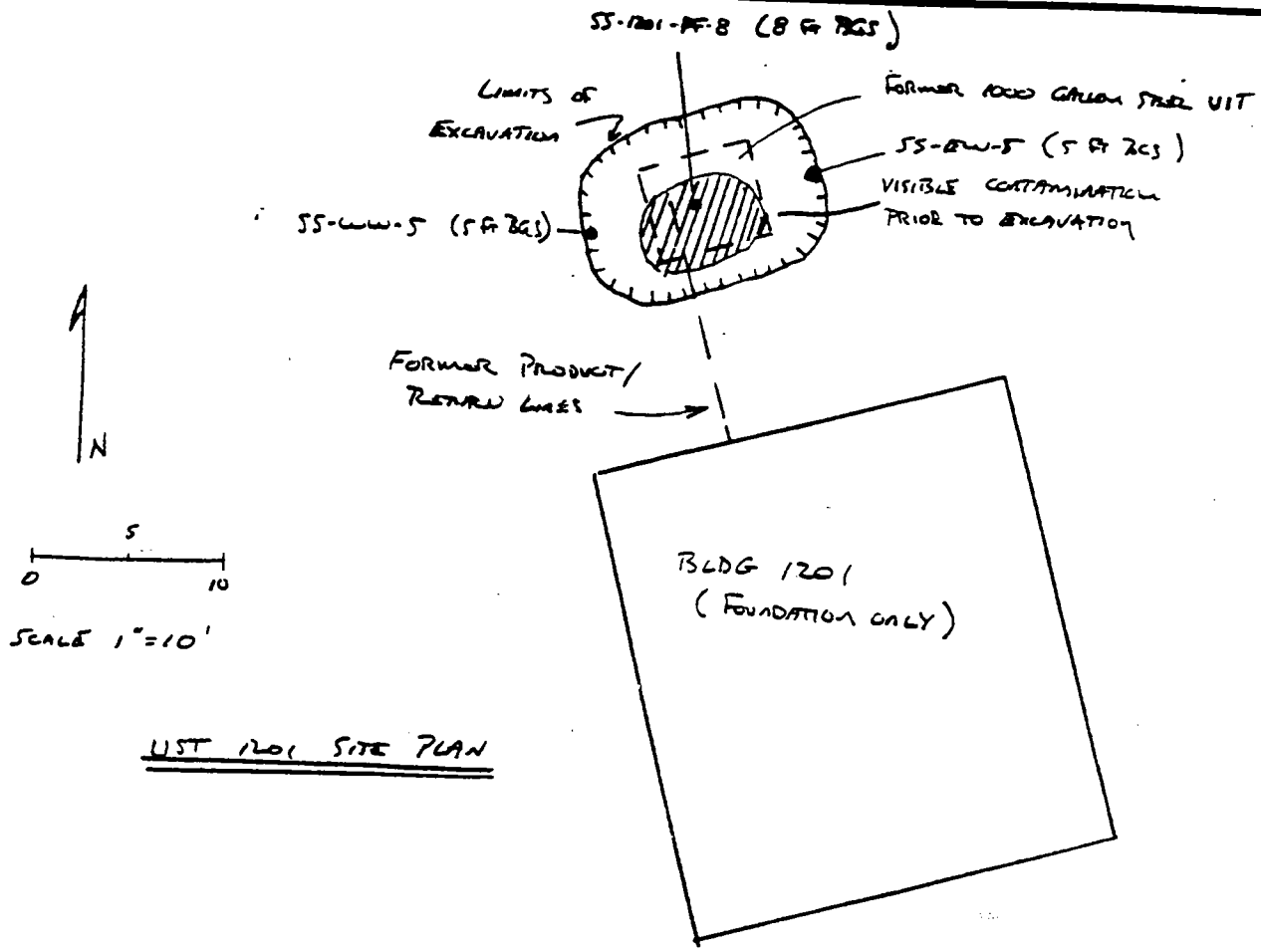
TOTAL POTENTIAL EMMISSIONS 13.2 lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.

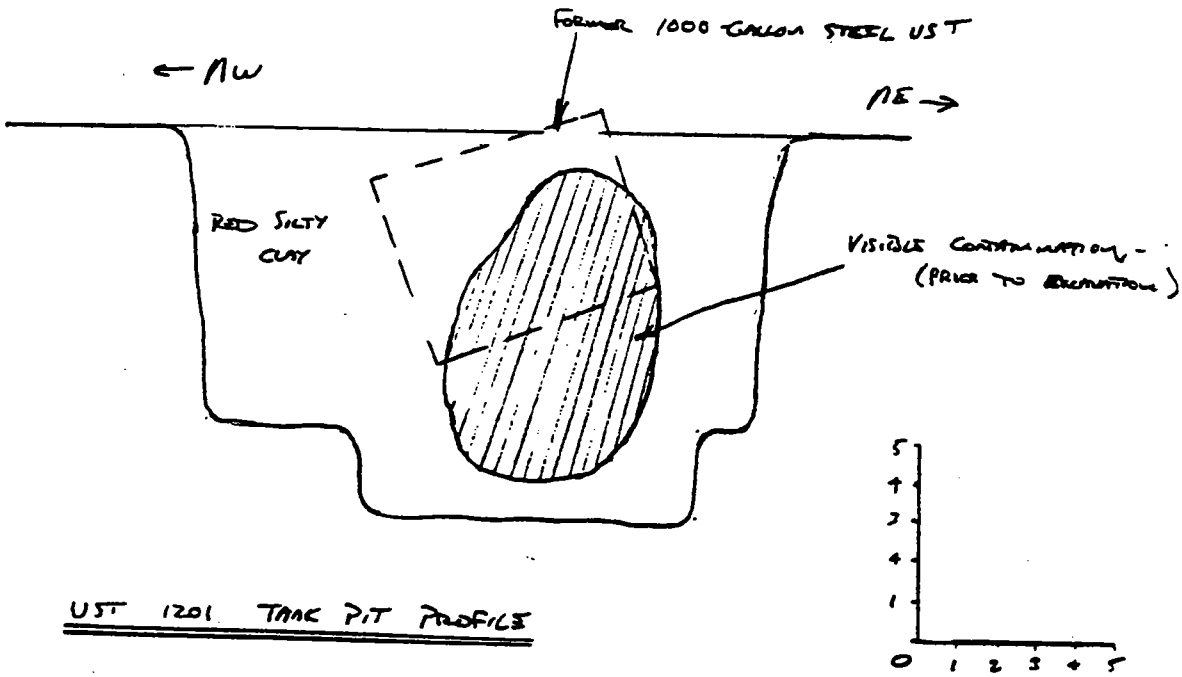
This form must be completed and submitted with the ADEM UST Closure Assessment Report form.



DRAWN BY: D. REEVES DATE: 4/2/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE LOCATION MAP
DWG ENV0000 REV 0	101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-8884	SITE 1201
		FORT McCLELLAN, ALABAMA



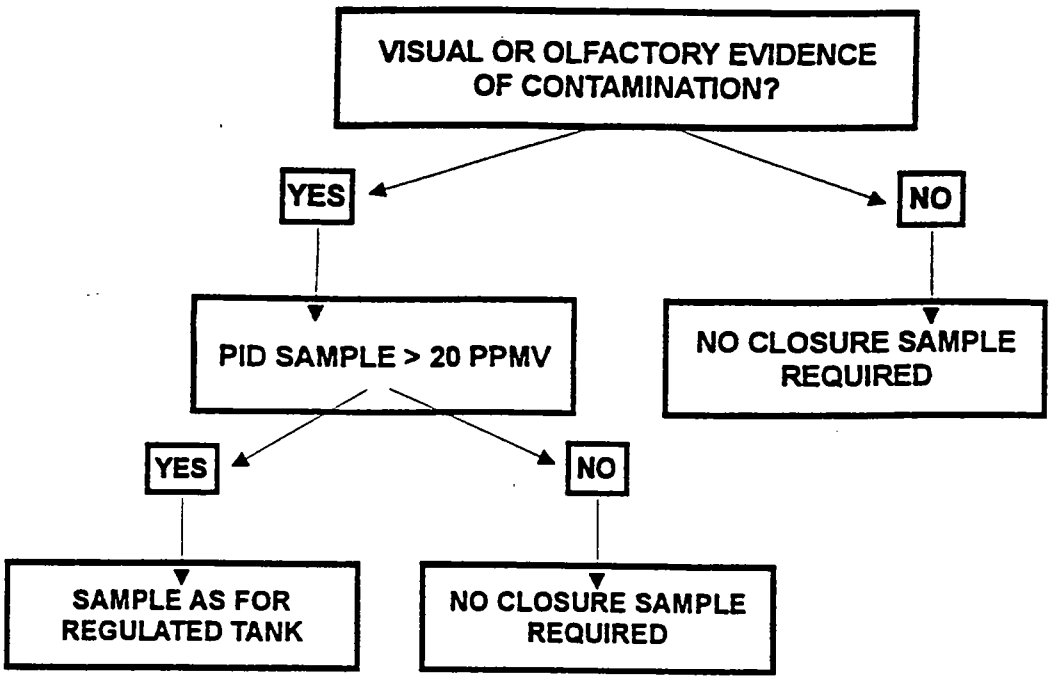
UST 1201 SITE PLAN



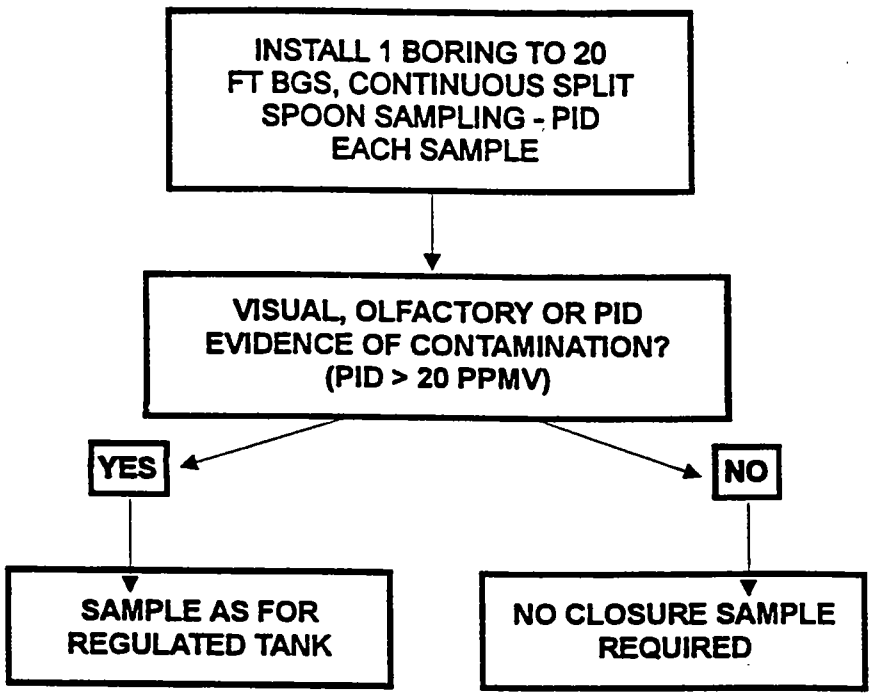
UST 1201 TANK PIT PROFILE

DRAWN BY: D. REEVES DATE: 3/29/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0886	SITE PLAN SITE 1201 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING

ATTACHMENT 26

BUILDING 1202 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 193-015-1202
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _ _ _ _ _ _
Facility County: CALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG 1202

Address: FORT MCCLELLAN,
ANNISTON ALABAMA 36205-5000

Date of this Report: 3-29-96

UST Owner: U.S. DEPT. OF DEFENSE

Address: FORT MCCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS CANDY SEFICK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER, INC.

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: 1

Number of tanks remaining at site: Ø
Closure Date: FEB 12, 1996

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5.4'*6.2'				
Tank Capacity	1000 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features ___X___
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES ___X___ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe _____ MILD)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other HEATING OIL)

e. Was there water in the excavation? YES _____ NO ___X___
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO ___X___
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ___X___
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0- 9 FT BGS YELLOWISH RED SILTY CLAY

i. Was the excavation backfilled? YES ___X___ NO _____ If yes, provide the date. 2-26-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____ _____
   2. What was the measured thickness of the free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal * NOTE: PRODUCT PIPING PREVIOUSLY REMOVED *

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? UNKNOWN: PRODUCT PIPING PREVIOUSLY REMOVED
YES _____ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitor Well _____
3. Topographic features ___X___
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench? UNKNOWN
YES _____ NO _____ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___UNKNOWN___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES ___UNKNOWN___
NO _____ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES_____ NO___UNKNOWN___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: ___NO PIPING TRENCH WAS OBSERVED___

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date ___UNKNOWN___ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data NON-REGULATED TANK - NO CLOSURE SAMPLE WAS COLLECTED. ONE SAMPLE OF CONTAMINATED SOIL WAS COLLECTED FOR DISPOSAL CHARACTERIZATION. SEE ATTACHMENT 1.

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 23.7 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
SOIL EXHIBITING EVIDENCE OF PETROLEUM CONTAMINATION WAS SEGREGATED FROM NON-CONTAMINATED SOIL, STOCKPILED ON 20-MIL PLASTIC SHEETING AND COVERED WITH 10-MIL PLASTIC SHEETING PENDING TREATMENT.

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

SOIL DISPOSAL IS PENDING

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
10 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. INVOICE / RECEIPTS WILL BE PROVIDED AT THAT TIME

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: NON-REGULATED TANK.
Company: NO SAMPLES COLLECTED
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R _____ Date: 3-29-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

<u>API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.</u>

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

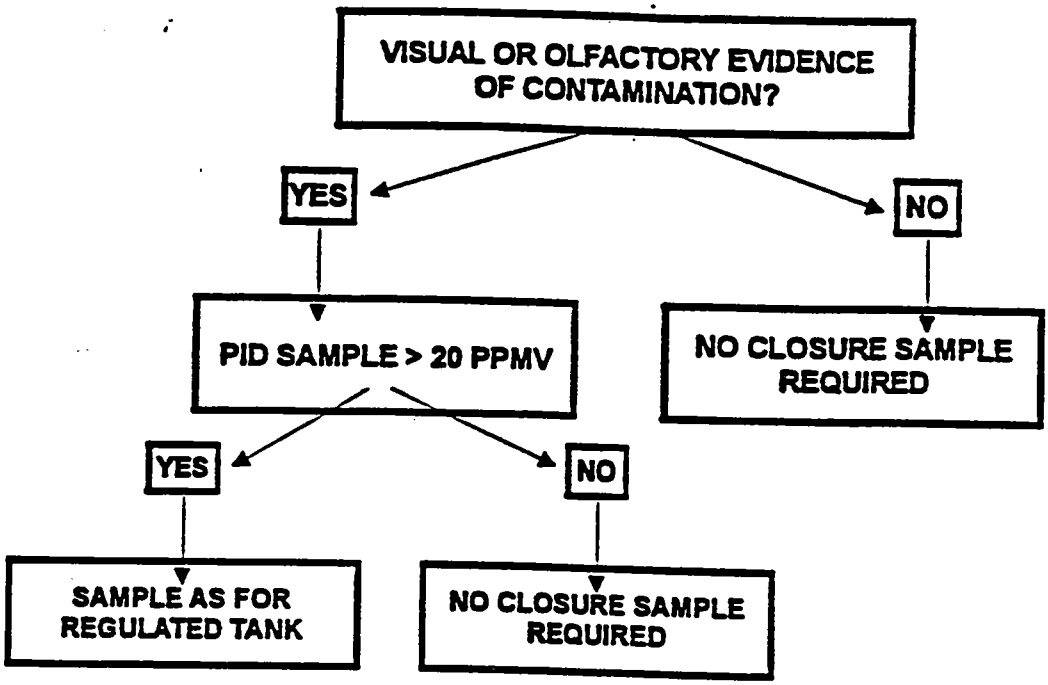
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

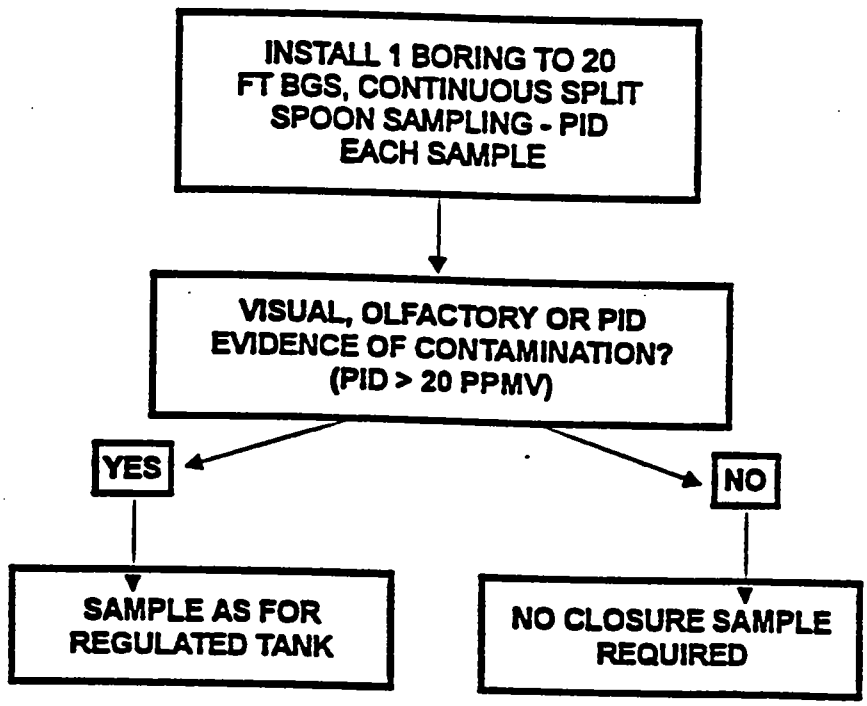


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING

960265

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: FORT MCCLELLAN

SAMPLER'S SIGNATURE DK R (sign)

SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-796-UNC	2-13-96	1525	BLDG 796	S	1	1 CLEAR GLASS
002	SS-1201-UNC	2-13-96	1620	BLDG 1201	S	1	1 CLEAR GLASS
003	SS-1202-UNC	2-13-96	1640	BLDG 1202	S	1	1 CLEAR GLASS
				TOTAL NO. OF CONTAINERS—		3	

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DK R (sign)	2-14-96 1700	2 _____ (sign)
RELINQUISHED BY: 2 _____ (sign)	DATE/TIME _____	RECEIVED BY: 3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
FED-EX		(sign) SREdson	2/15/96 9:20 A
CONDITION OF SEAL UPON RECEIPT: N/A		COOLER OPENED BY:	DATE/TIME
GENERAL CONDITION OF COOLER: ON Ice		(sign) SREdson	2/15/96 9:20 A

WHITE - Return to Laboratory Copy YELLOW - Shipper's Copy PINK - MEC Laboratory Copy GOLDENROD - MEC Office Copy

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 02/19/96 11:21

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-1202-VAC**	Date Collected:	02/13/96
Lab ID Number:	9600602	Date Received:	02/15/96
File Number:	960265	Date Extracted:	-
Charge Number:	683030000	Date Analyzed:	02/19/96

Compound Name	Result	Units	MDL	Notes
TPH	1056	mg/Kg, dry	10	

MDL = Method Detection Limit
ND = Below Method Detection Limit

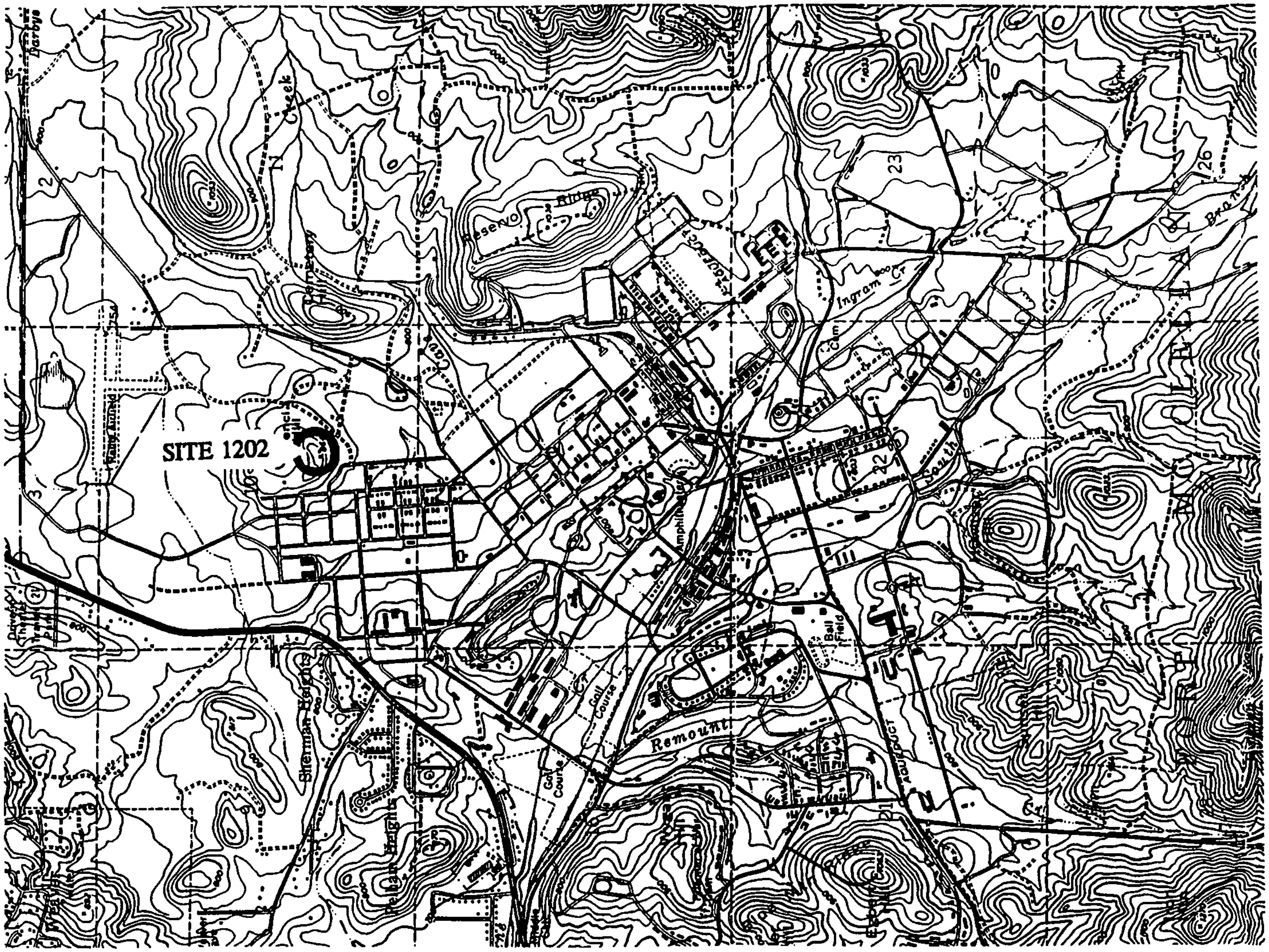
TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x	.002 =	c	lbs VOC emissions
Sample 1	1056	ppm x	23.7	cyds x	.002 =	50.0	lbs VOC emissions
Sample 2		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 3		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 4		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 5		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 6		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 7		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 8		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 9		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 10		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 11		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 12		ppm x		cyds x	.002 =		lbs VOC emissic
Sample 13		ppm x		cyds x	.002 =		lbs VOC emissic
Sample 14		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 15		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 16		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 17		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 18		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 19		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 20		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 21		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 22		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 23		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 24		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 25		ppm x		cyds x	.002 =		lbs VOC emissions

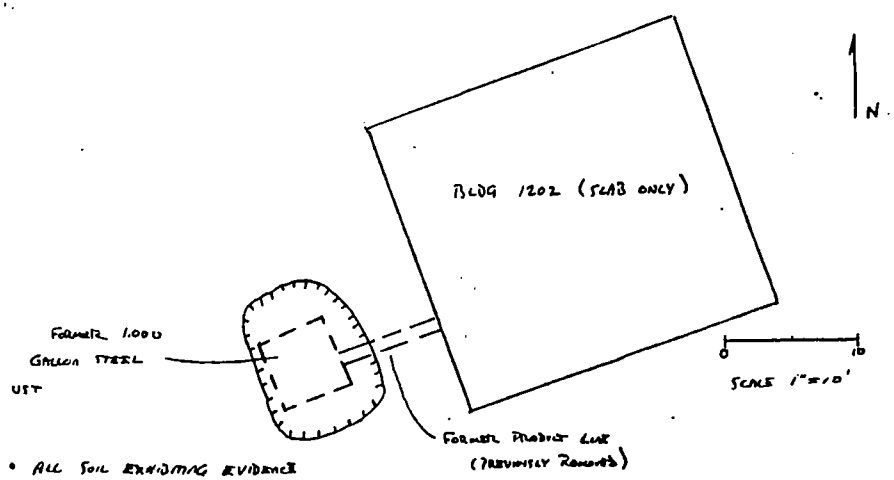
TOTAL POTENTIAL EMMISSIONS 50.0 lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please atta additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

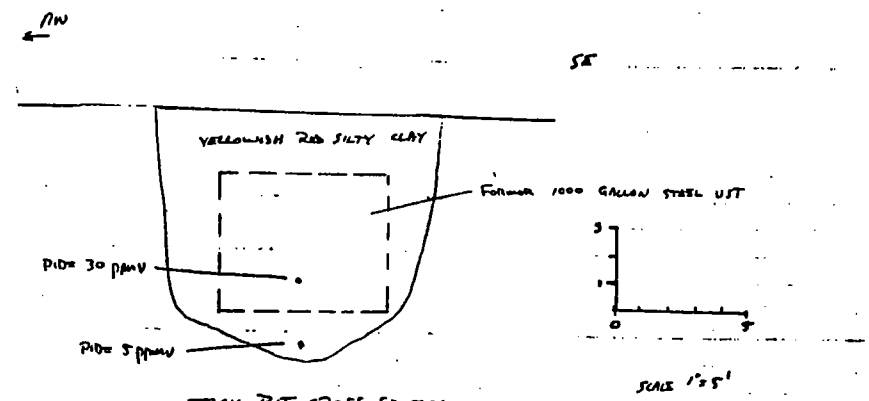


DRAWN BY: D. REEVES DATE: __/__/__ CHECKED BY: D. REEVES PROJ. NO.: ____-____	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0058	SITE LOCATION MAP SITE 1202 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



- ALL SOIL EXHIBITING EVIDENCE OF CONTAMINATION WAS EXCAVATED AND STOCKPILED (23.7 CY)
- NO CLOSURE SAMPLES WERE COLLECTED

TANK 1202 SITE PLAN



TANK PIT CROSS-SECTION
SITE 1202

NOTE: NO VISIBLE CONTAMINATION WAS OBSERVED.

DRAWN BY: D. GRAVES DATE: 3/29/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-501	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0066	SITE PLAN SITE 1202 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

ATTACHMENT 27

BUILDING 1271 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-1271A
UN-REGISTERED TANK

Incident No.(If applicable)
UST _ _ _ _ _ _

Facility County: CALHOUN

Facility Name: FORT McCLELLAN

Location: BUILDING 1271

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000

Date of this Report: 3-20-96

UST Owner: U.S. DEPT. OF DEFENSE

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000

Contact: MS. CANDY SEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING INC.

Name of Laboratory used: MEMPHIS ENVIRONMENTAL, INC.

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: _____

Closure Date: 2-28-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5.4' x 15.5'				
Tank Capacity	2500				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO No _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth: WATER WAS OBSERVED FLOWING INTO THE EXCAVATION

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES ✓ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe _____ MILD)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other HEATING OIL)

e. Was there water in the excavation? YES ✓ NO _____ If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) THE EXCAVATION HAS NOT BEEN DEWATERED

f. Was free product found in the excavation? YES _____ NO ✓ If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ✓ If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-0.2 FT BGS: DARK BROWN SANDY TOPSOIL 0.2-0.5 FT BGS REDDISH YELLOW SILTY CLAY 0.5 - 1.0 RED SILTY CLAY 1.0 - 9 FT BGS OLIVE BROWN SILTY CLAY SEE TANK PIT PROFILE FOR DETAILS

i. Was the excavation backfilled? YES _____ NO ✓ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____ _____
   2. What was the measured thickness of the free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ✓ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES _____ NO ✓ If not, provide the depth from the ground surface to the groundwater table depth: WATER WAS OBSERVED FLOWING INTO THE TANK PIT

1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ✓ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ✓
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ✓ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ✓
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0- 0.2 FT BGS DARK BROWN SANDY TOPSOIL 0.2- 1 FT BGS MIXED GRAVEL AND REDDISH YELLOW SILTY CLAY

j. Was the piping trench backfilled? YES ✓ NO _____
If yes, provide the date 2-28-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO ✓
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 36.6 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL EXHIBITING EVIDENCE OF PETROLEUM CONTAMINATION WAS SEGREGATED FROM NON-CONTAMINATED SOIL. NON-CONTAMINATED SOIL IS STOCKPILED ON 20 MIL PLASTIC SHEETING AND COVERED WITH 10 MIL PLASTIC SHEETING PENDING TREATMENT BY THERMAL TREATMENT.

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

SOIL DISPOSAL IS PENDING

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
20 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. INVOICE / RECEIPTS WILL BE PROVIDED AT THAT TIME

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: D.K. Reeves
Company: THETA ENGINEERING, INC.
Telephone Number: (423) 482-0056

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: D.K. R[illegible] Date: 3-15-96

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. R[illegible] Date: 3-15-96

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a	ppm x	b	cyds x	.002 =	c	lbs VOC emissions
Sample 1	2780	ppm x	10.9	cyds x	.002 =	61	lbs VOC emissions
Sample 2		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 3		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 4		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 5		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 6		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 7		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 8		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 9		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 10		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 11		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 12		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 13		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 14		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 15		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 16		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 17		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 18		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 19		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 20		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 21		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 22		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 23		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 24		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 25		ppm x		cyds x	.002 =		lbs VOC emissions

TOTAL POTENTIAL EMMISSIONS _____ lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-1271B
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _ _ _ _ _ _
Facility County: CALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG 1271B

Address: FORT MCCLELLAN, ANNISTON ALABAMA 36205-5000

Date of this Report: 5-17-96

UST Owner: U.S. DEPT of DEFENSE

Address: FORT MCCLELLAN, ANNISTON ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE
Closure Date: MARCH 12 1996

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4" x 18				
Tank Capacity	3000 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	3-96				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe _____ _____)
2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO _____ If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO _____ If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____ If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: _____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO X If no, provide the depth from the ground surface to the groundwater table. APPROX 5 ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well X
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO X If yes;
   1. The odor strength was (mild)(strong)(other, describe _____)
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO X
If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. INTERMIXED SANDY SILT, SILTY CLAY AND SAND. SEE BORING LOG FOR DETAILS

g. Specify the inert solid material used to fill the tank(s). FLOWABLE FILL

h. Provide the date the tank(s) were filled. 3-12-96

i. Were the bore holes properly sealed with bentonite/soil?
YES X NO _____ If yes, provide the date: 3-1-96

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES _____ NO ___X___ If not, provide the depth from the ground surface to the groundwater table depth: Approx 5 ft BGS

1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitor Well ___X___
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: Brown Sandy Topsoil, Grades to Greenish Gray Sandy Silt. See Boring Log for Details

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 3-12-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLING NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK IS NOT REGULATED BY ADEM. THE CLOSURE PROTOCOL EMPLOYED WAS REVIEWED BY ADEM AND IS SUMMARIZED IN ATTACHMENT A. NO EVIDENCE OF CONTAMINATION WAS OBSERVED AND NO SAMPLES WERE COLLECTED

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. _____ cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL EXCAVATED TO PROVIDE ACCESS TO THE TANK AND PIPING WAS RETURNED TO THE EXCAVATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✗ NO _____
If no, describe how tank(s) were cleaned._____

_____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
30 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GALLON DRUMS. INVOICES WILL BE PROVIDED UPON DISPOSAL

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No Samples were collected
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. R_____ Date: 5-17-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

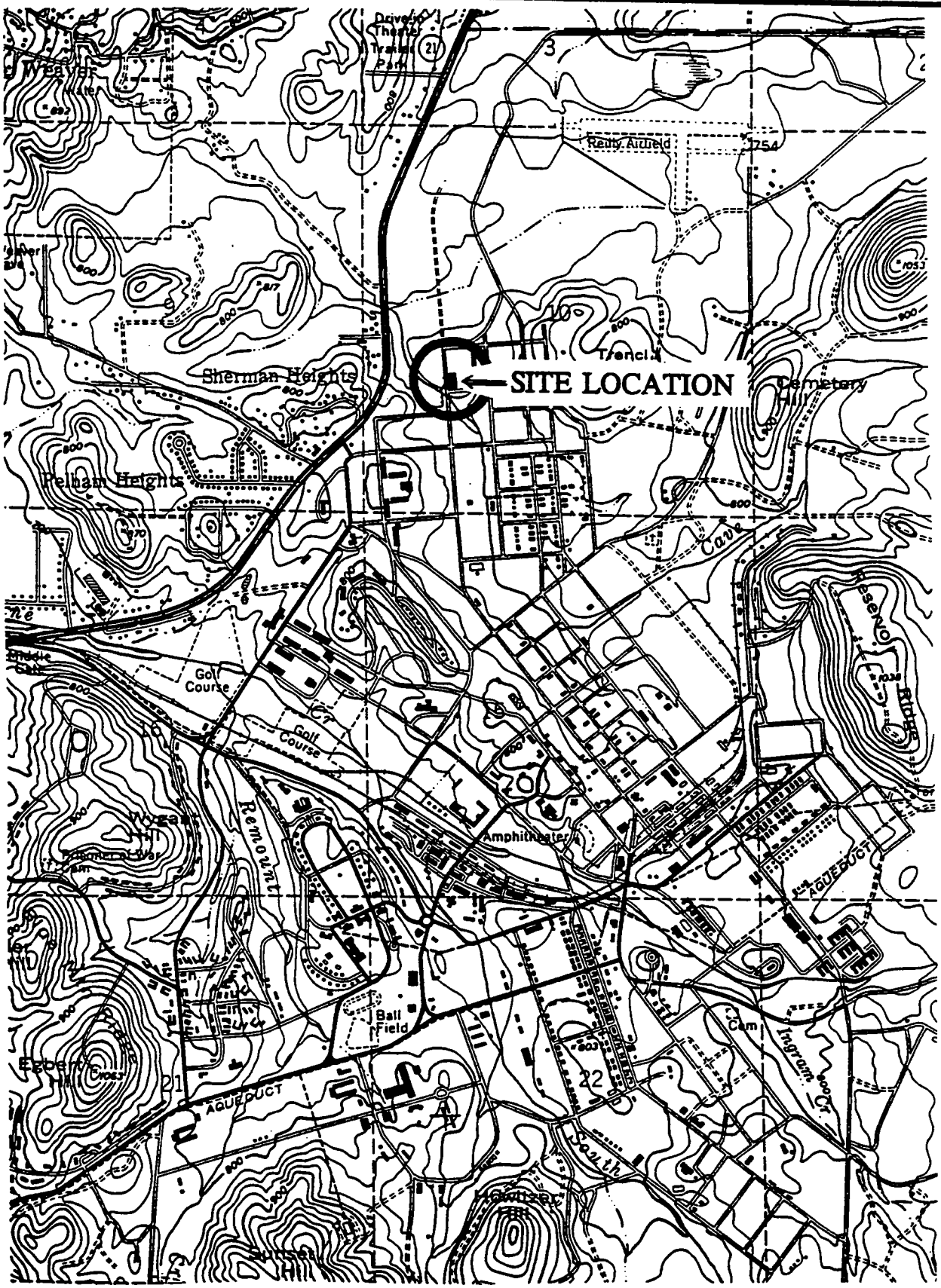
Attachment UST Closure Guidelines
(Remove from closure letter)

BORING NO. SB-1965 SURF. ELEV. approx. 780 W. DEPTH not encountered	**Theta Engineering, Inc.** **Subsurface Log**	DATE: 03/01/96 STARTED: 1105 FINISHED: 1200 SHEET: 1 of 1

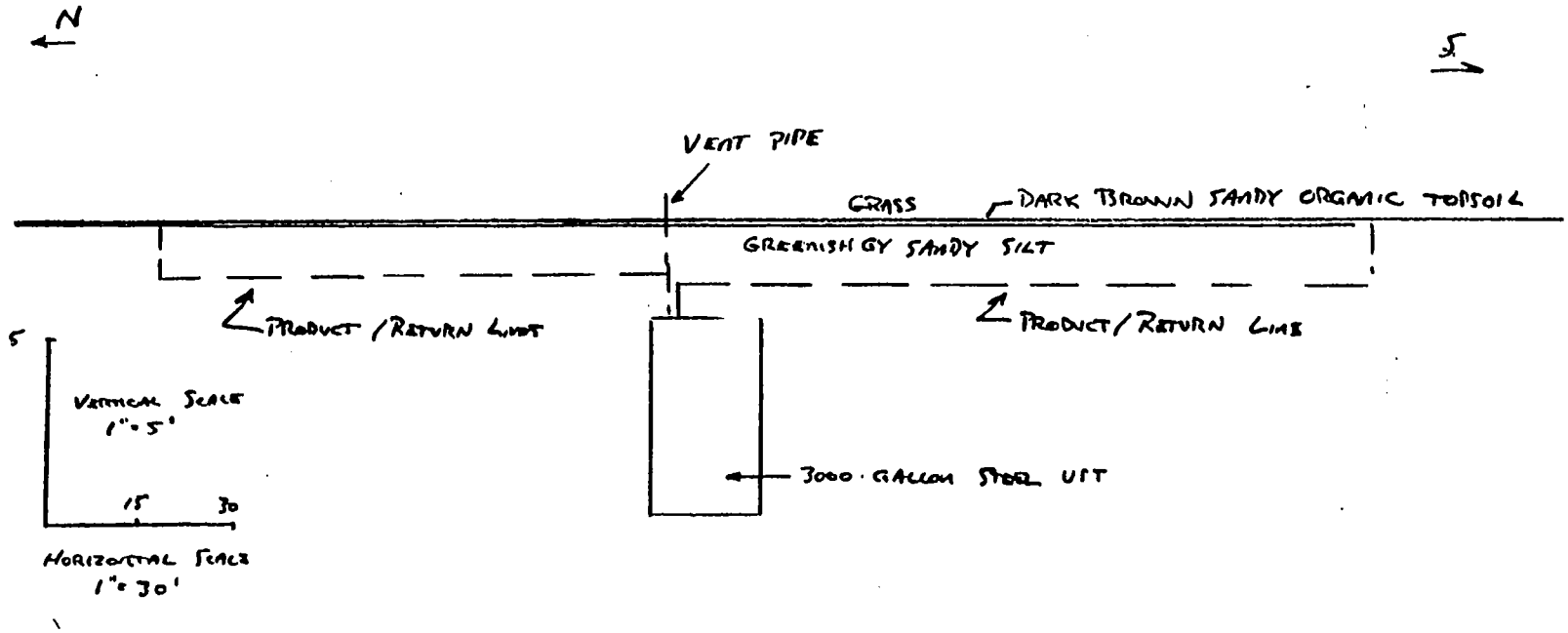
Project: 8001-001 **Location:** Fort McClellan, Alabama, Bldg. 1965

DEPTH FT	SAMPLES	SAMPLE NO	0 to 6	6 to 12	12 to 18	N	% RECOVERY	Soil or Rock Classification	Notes and PID Reading (parts per million vapor)
0								Concrete	
		1					100	Yellowish brown to brownish yellow SAND, some Silt (moist)	PID = 0
		2					100		PID = 0
5		3					75		PID = 0
		4					75		PID = 0
		5					75		PID = 0
		6					100	Mottled brownish yellow to red CLAY, some Silt (moist)	PID = 0
		7					100		PID = 0
15		8					100		PID = 0
		9					100		PID = 0
		10					100		PID = 15
20									
								Boring terminated at 20 ft BGS	
25									Note: No visible or olfactory evidence of contamination was observed
30									

METHOD OF INVESTIGATION: 2 1/2" I.D. Hollow Stem Auger, continuous split spoon sampling
CLASSIFICATION: Visual by Geologist
R = Refusal



DRAWN BY: D. REEVES DATE: 5/14/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0004	SITE PLAN Site 1271B FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



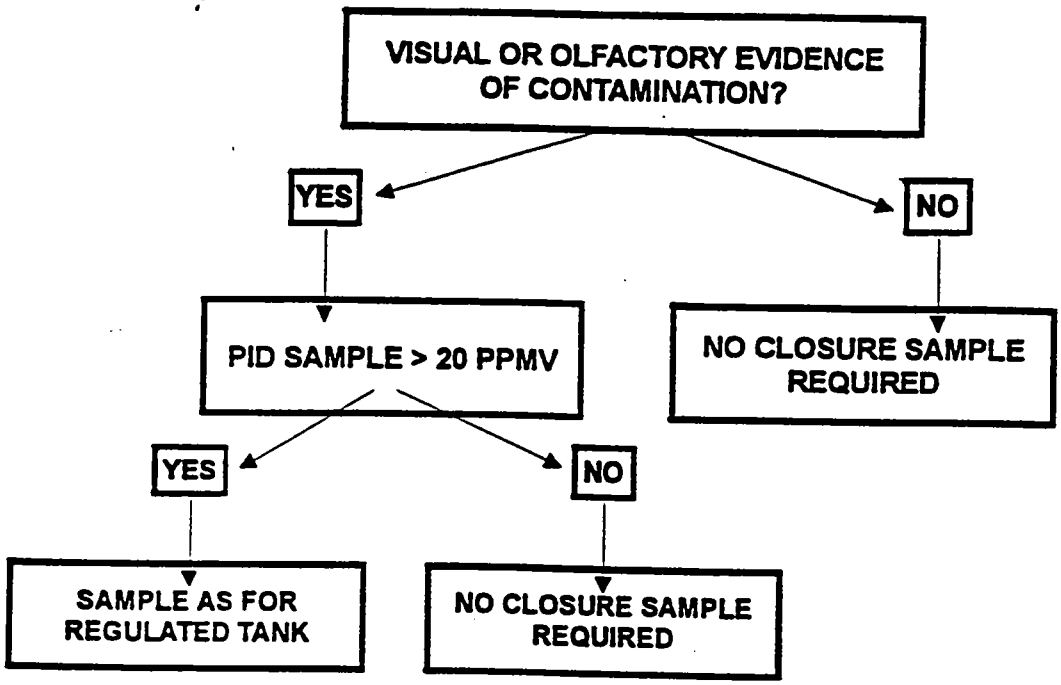
PIPING TRENCH PROFILE

DRAWN BY: D. REEVES
DATE: 5/14/96
CHECKED BY: D. REEVES
PROJ. NO.: 8001-001
DWG ENV0000 REV 0

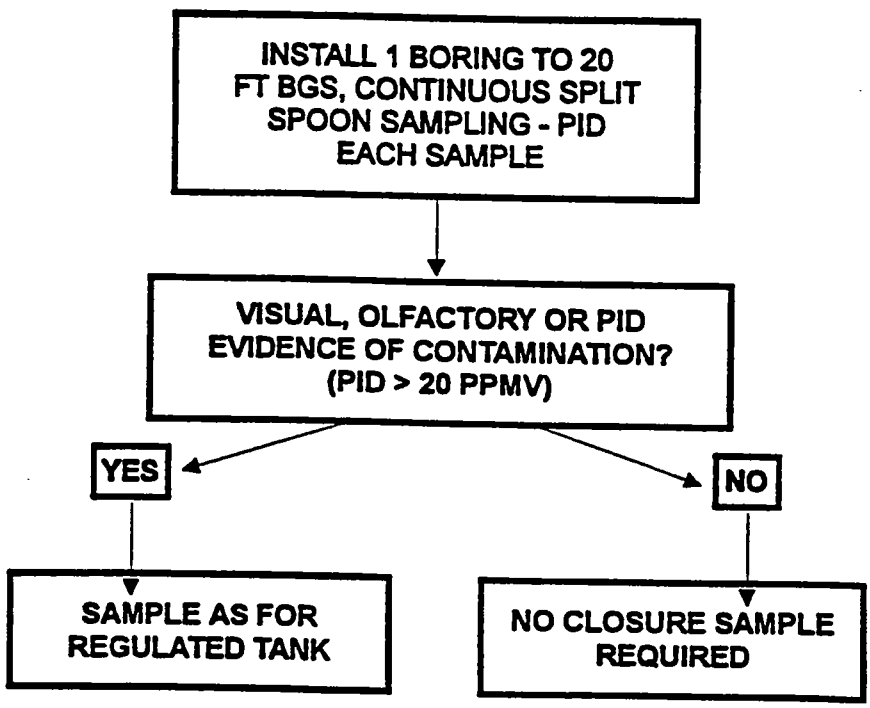
THETA ENGINEERING, INC.
101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0004

SITE PLAN
Site 1271B
FORT McCLELLAN, ALABAMA

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING

ATTACHMENT 28

BUILDING 1928 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-0-5-1928 (NON REGULATED TANK)

Date of this Report: 9-5-96

Incident No.(If applicable)
UST _ _-_ _-_ _

UST Owner: [illegible]

Facility County: CALHOUN

Facility Name: FORT McCLELLAN

Location: BUILDING 1928

Address: [illegible]

Address: FORT McCLELLAN
[illegible]

Contact: [illegible]

Contact Telephone No.: [illegible] 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: one

Number of tanks remaining at site: ø

Closure Date: 7-23-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4" x 11' L				
Tank Capacity	1000 gal				
Tank Age	[illegible]				
Date Tank Last Used	[illegible]				
Substance Stored	[illegible]				
Type of Product Piping (pressurized/suction)	Suction				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES X NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit yes
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO ✓ If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-2" ASPHALT, 2-8" REDDISH YELLOW TO BUFF SAND, SOME GRAVEL; 8"-20" REDDISH YELLOW SILT, LITTLE GRAVEL, LITTLE SAND; 20"-11'6" (APPROX) YELLOWISH BROWN TO BROWN SILTY CLAY, SOME COBBLES, SOME BOULDERS

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___yes___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES_____ NO___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: REDDISH YELLOW SILT, LITTLE SAND, LITTLE GRAVEL

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

Monitoring well used: YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab,
   10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM AND IS PROVIDED IN ATTACHMENT # 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 116 * cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

NO EVIDENCE OF CONTAMINATION WAS OBSERVED. SOIL WAS TRANSPORTED TO THE FORT MACLELLAN CONSTRUCTION LANDFILL

* INCLUDES SOIL VOLUME EXCAVATED FOR NEW TANK INSTALLATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

NO EVIDENCE OF CONTAMINATION WAS OBSERVED THE SOIL WAS DISPOSED OF IN THE FORT McCLELLAN LANDFILL

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
10 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ON SITE PENDING PROJECT COMPLETION. INVOICE/RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____
Company: No SAMPLES WERE COLLECTED
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. [illegible] Date: 9-5-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

<u>API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.</u>

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

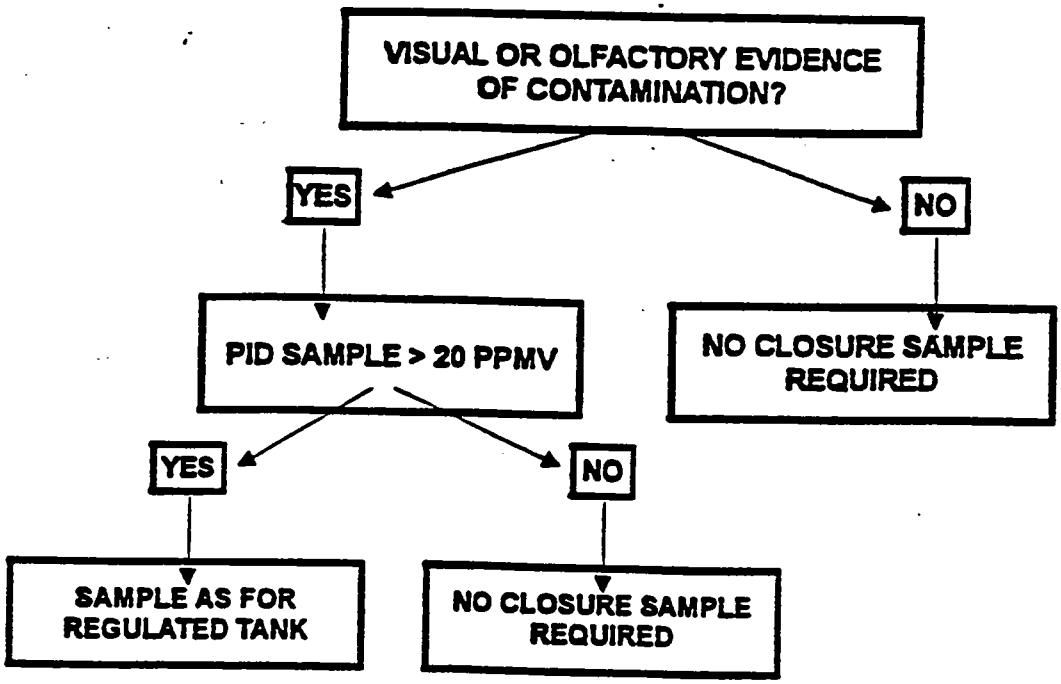
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

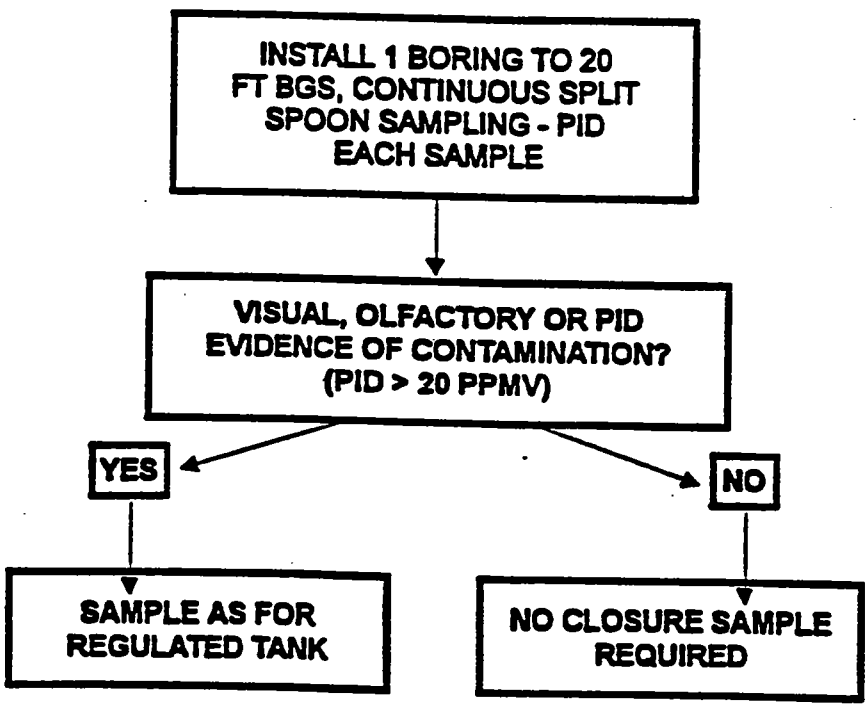
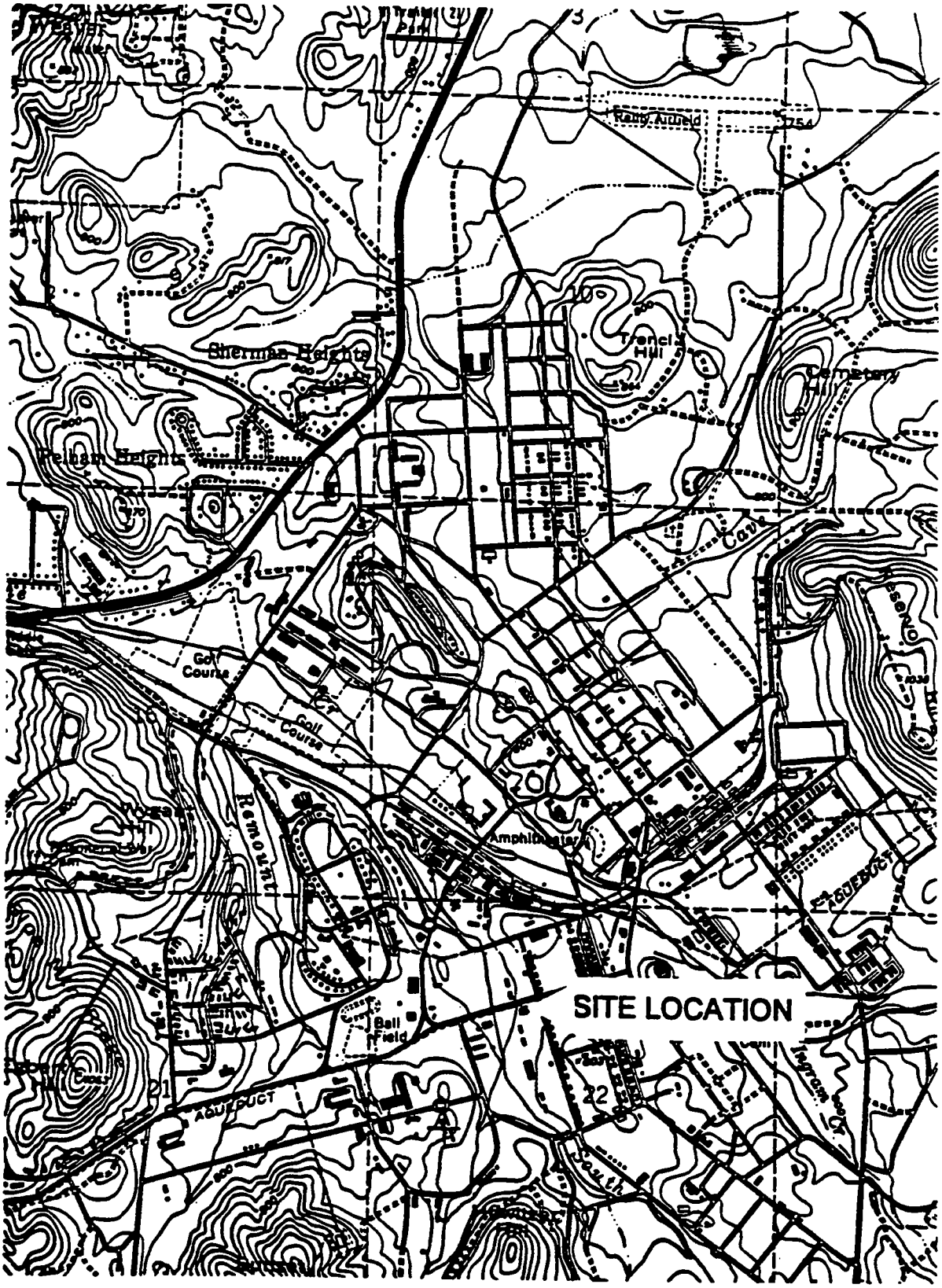
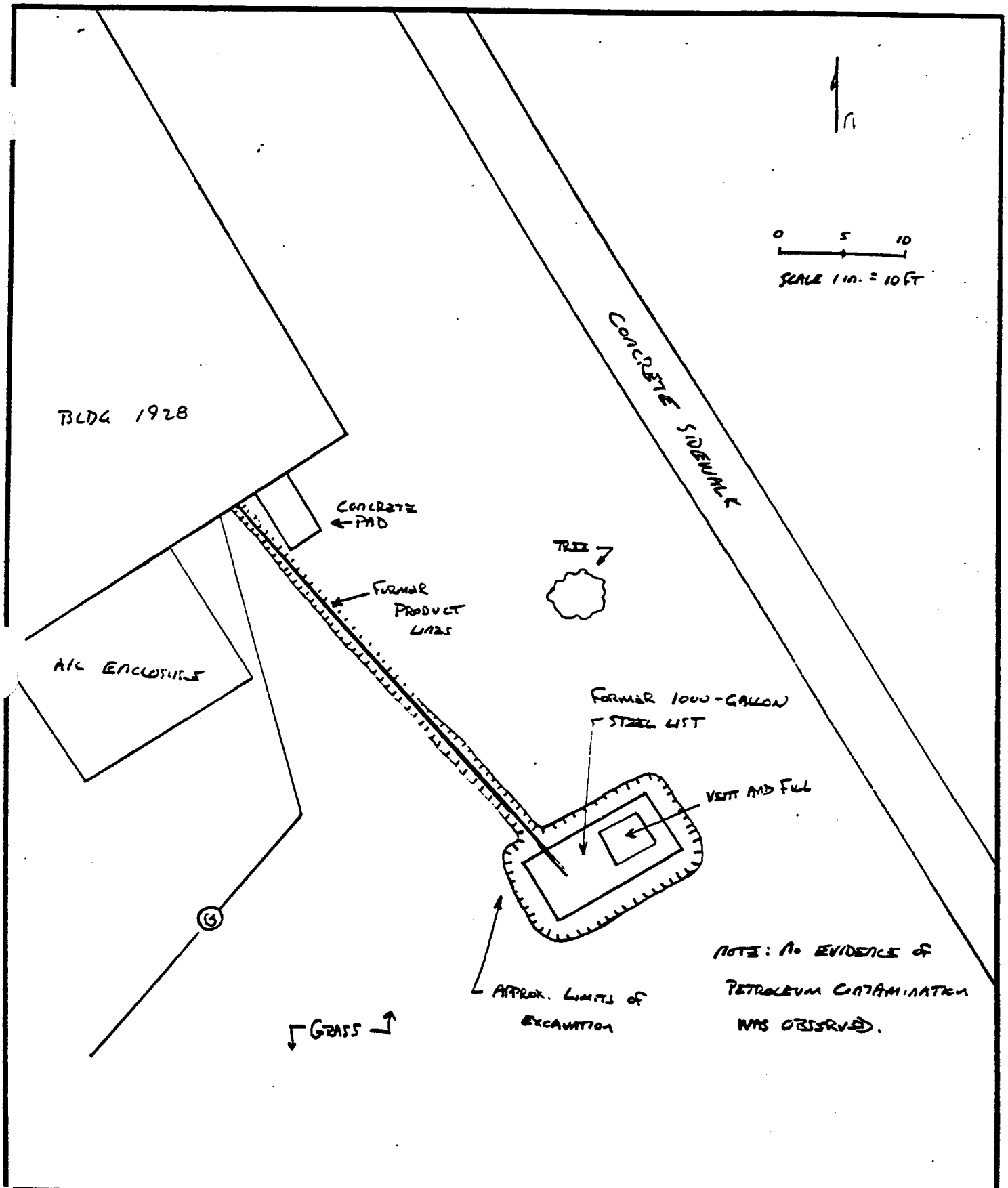


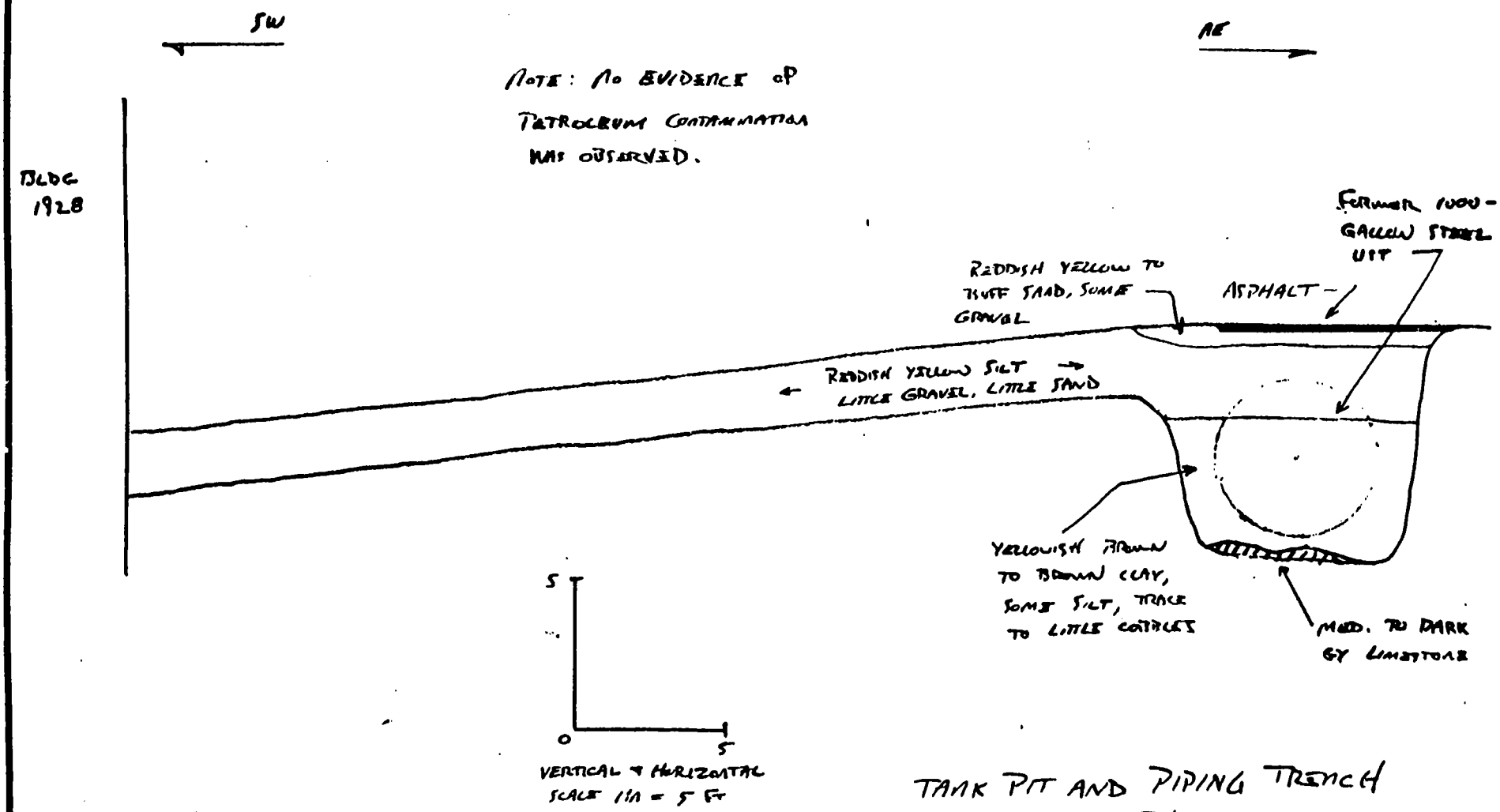
Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



DRAWN BY: D. REEVES DATE: __/__/__ CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE LOCATION MAP SITE 1928 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



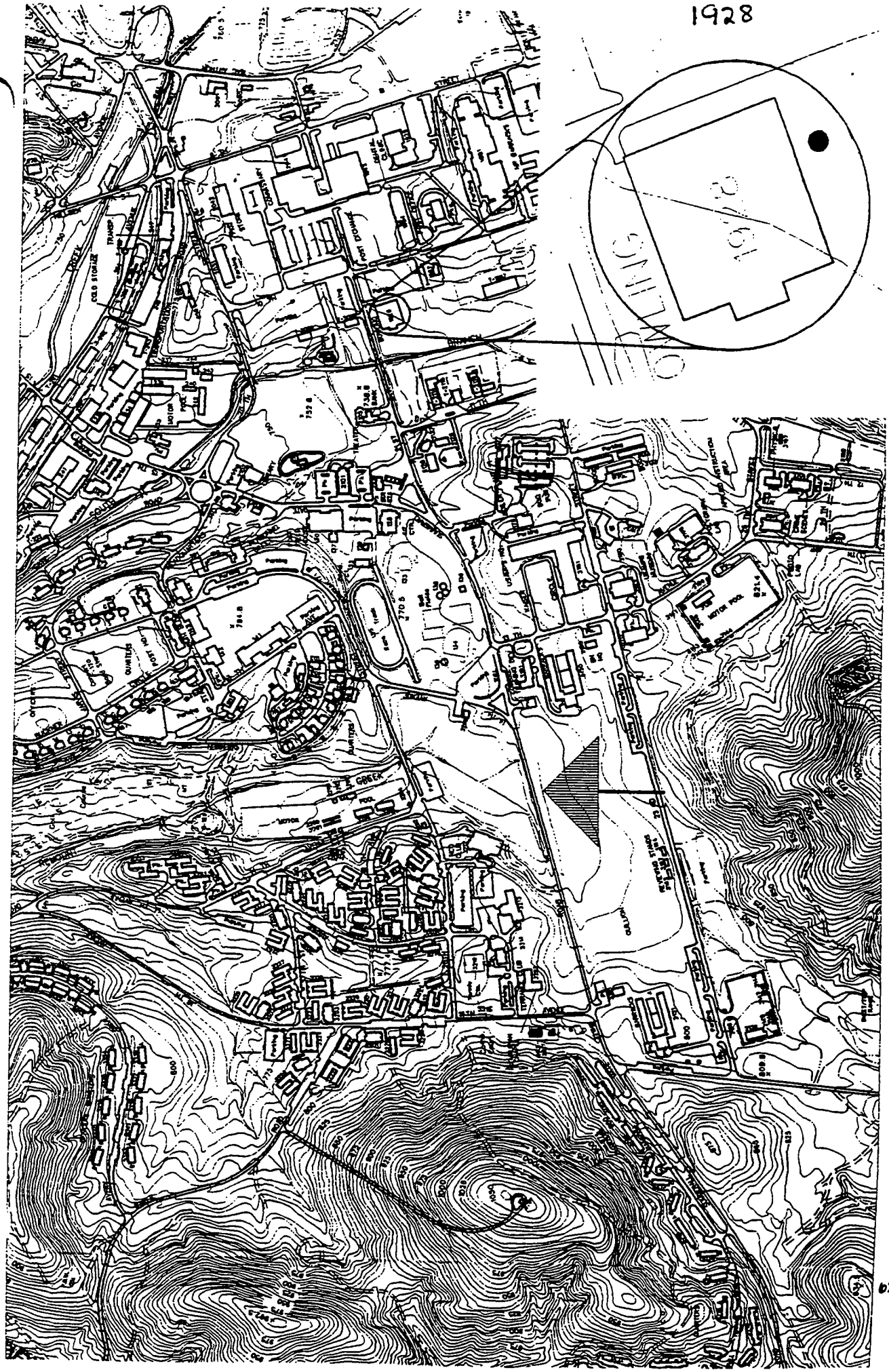
DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE PLAN SITE 1928 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



TANK PIT AND PIPING TRENCH PROFILE

DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0080	SITE PLAN SITE 1928 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

1928


COLD STORAGE
TRANSP.
MOTOR POOL
QUARTERS
POST EXCHANGE
GREEK
MOTOR POOL
REVIEWING STANDS

62

ATTACHMENT 29

BUILDING 1929 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-1929
(NON REGULATED TANK)

Date of this Report: 9-5-96

Incident No.(If applicable)
UST _-_-_-_-_

UST Owner: U.S. DEPT of DEFENSE

Facility County: CALHOUN
Facility Name: FORT McCLELLAN
Location: BUILDING 1929

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000

Contact Telephone No.:
(205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: one

Number of tanks remaining at site: Ø

Closure Date: 8-22-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	[illegible]				
Tank Capacity	1500 gal				
Tank Age	[illegible]				
Date Tank Last Used	[illegible]				
Substance Stored	[illegible]				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit Yes
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO ___X___ If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO ___X___
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO ___X___
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ___X___
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-4" BGS REDDISH BROWN SILTY CLAY TOPSOIL; 4"- 3½' BGS, MOTTLED REDDISH YELLOW TO ORANGE CLAY AND SILT SOME SAND, TRACE COBBLES TRACE CONCRETE BLOCKS (FILL MAT'L) 3½ FT → TOTAL DEPTH MED. TO DK GRAY SHALE.

i. Has the excavation backfilled? YES ___X___ NO _____ If yes, provide the date. 8-24-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____ _____
   2. What was the measured thickness of the free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-4' BGS REDDISH BROWN SILTY SAND; 4'-2' BGS MOTTLED REDDISH YELLOW TO ORANGE CLAY AND SILT, SOME SAND, TRACE COBBLES, TRACE CONCRETE BLOCK (FILL)

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 9-4-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

D. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM AND IS PROVIDED IN ATTACHMENT 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 131 * cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

NO EVIDENCE OF CONTAMINATION WAS OBSERVED. SOIL WAS DISPOSED IN THE FORT MCCLELLAN CONSTRUCTION LANDFILL

* 131 CY INCLUDES THE SOIL VOLUME EXCAVATED TO INSTALL THE REPLACEMENT TANK

d. Indicate method of soil disposal used or to be used:

(X) Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.

2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.

(3) Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")

4. Incineration

5. Thermal volatilization

6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

SOIL WAS DISPOSED IN THE FORT MCCLELLAN CONSTRUCTION LANDFILL

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
10 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ON SITE PENDING PROJECT COMPLETION. INVOICE/RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No EVIDENCE of CONTAMINATION
Company: WAS OBSERVED AND NO SAMPLES WERE COLLECTED
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: No SAMPLES WERE COLLECTED Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. [illegible] Date: 9-4-91

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

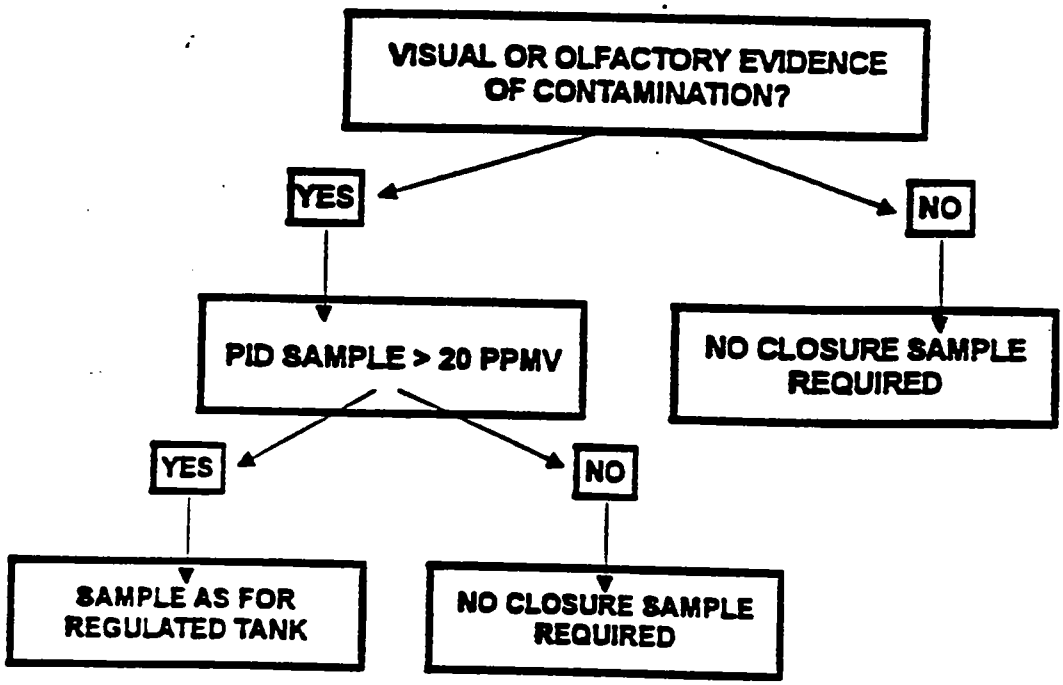
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

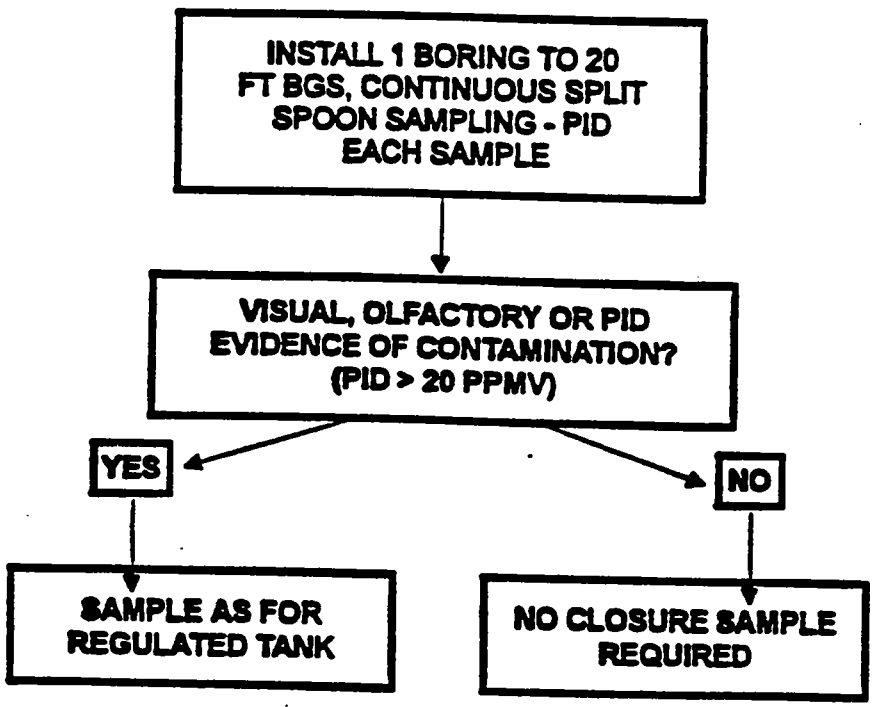
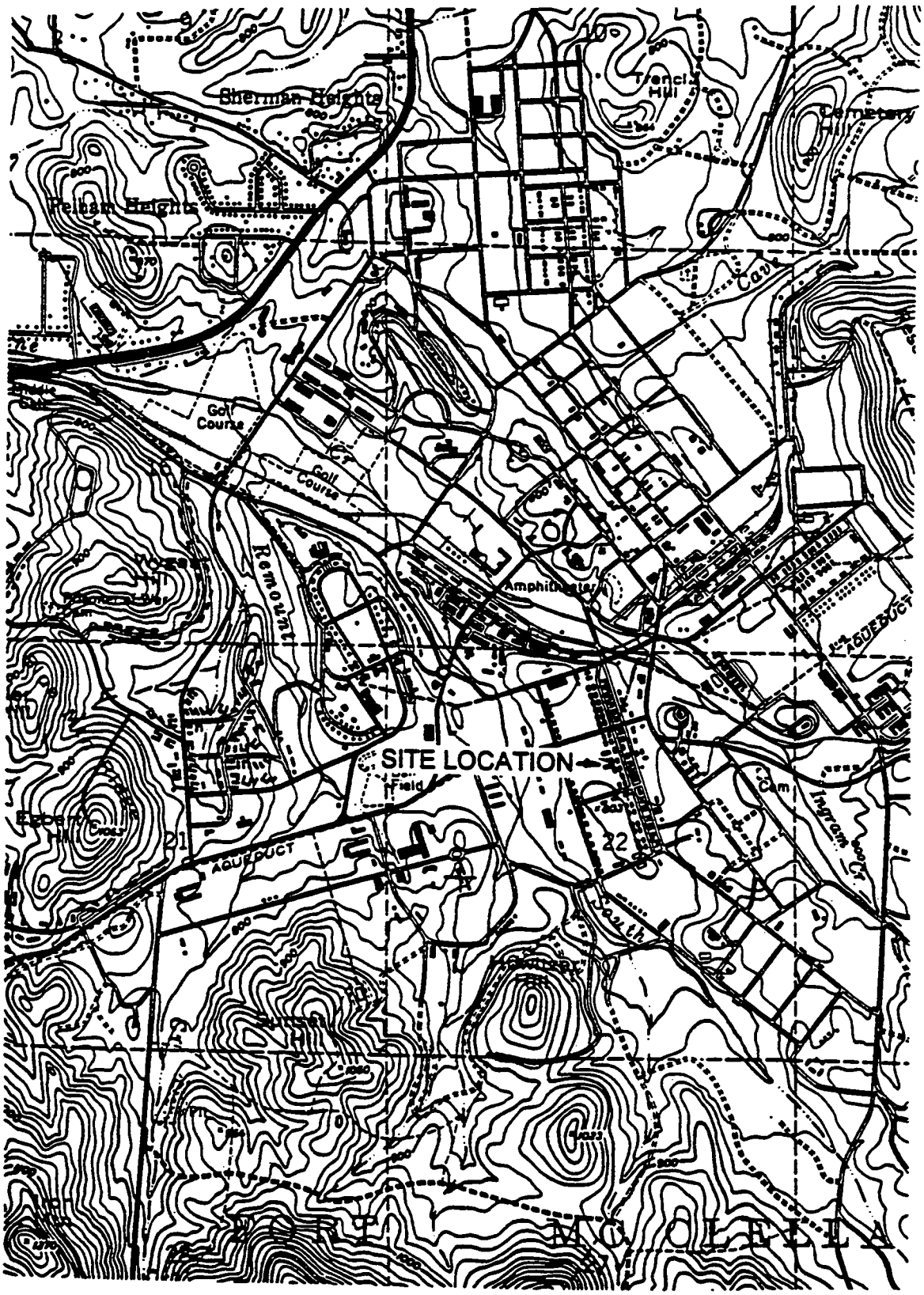
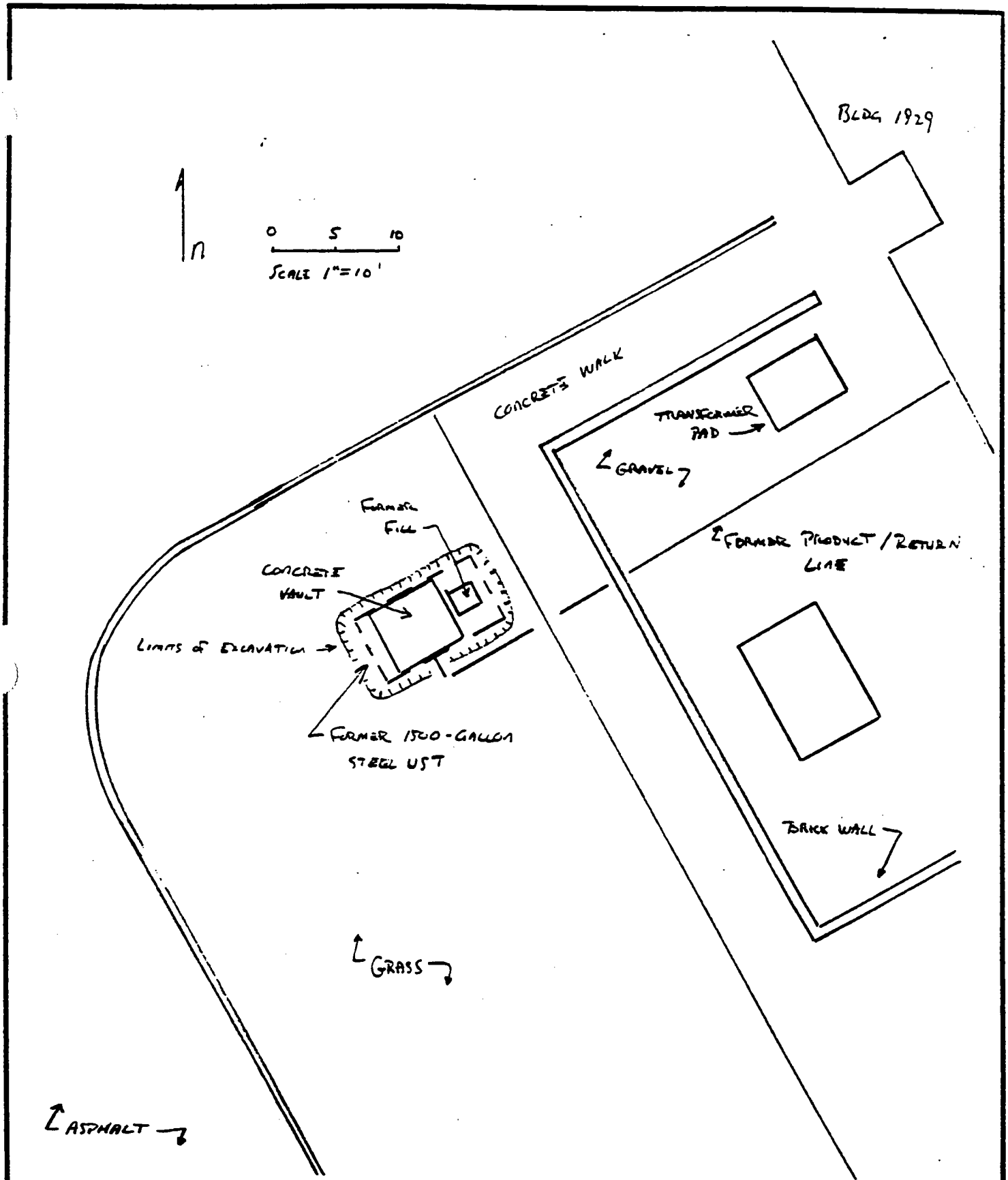


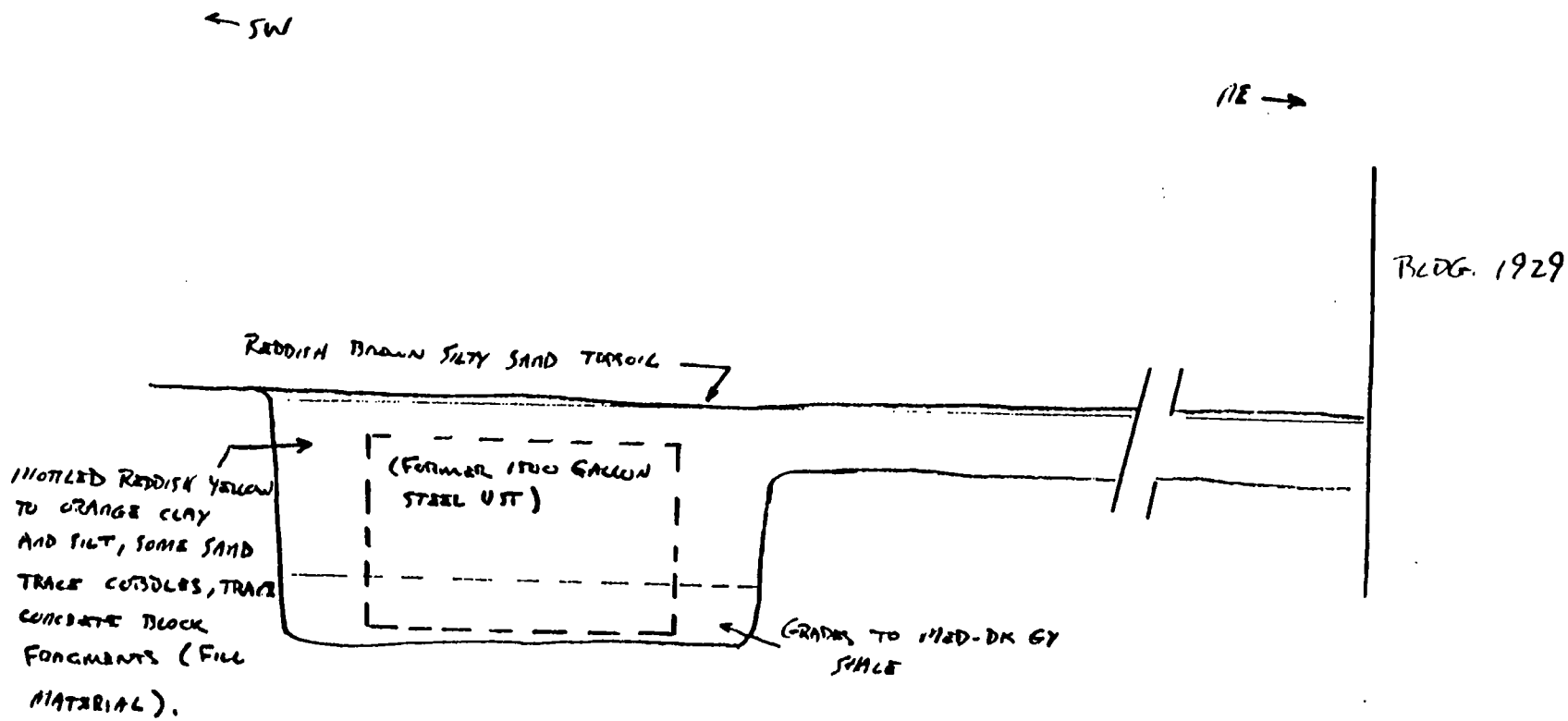
Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE LOCATION MAP SITE 1929 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



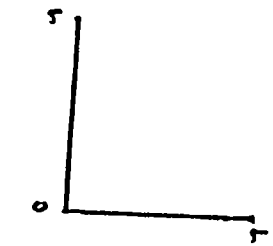
DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE PLAN SITE 1929 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



TANK PIT AND PIPING TRENCH

PROFILES

NOTE: NO EVIDENCE OF PETROLEUM CONTAMINATION WAS OBSERVED



VERTICAL AND HORIZONTAL SCALE 1" = 5'

DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0060	SITE PLAN SITE 1929 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

COLD STORAGE
TRANSP
AVENUE
QUARTERS
POST HQ
MOTOR POOL
STORE
COMMISSARY
POST EXCHANGE
TREATED
BANK
CREEK
GALLOW
BARRACKS
REVERAND STINES
MOTOR POOL
DRIVE SCHOOL
PROFO LAB
INSTRUCTION AREA
LIBRARY
LIBRARY JUNIOR
BRANCH
STREET
PARKING
794.8
752.8
770.8
738.8
821.4
809.8
1000
1028
900
875
850
825
800
775
750
725
700
675
650
600

ATTACHMENT 30

BUILDING 1965 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-1965
NON-REGULATED TANK
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: CALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG 1965

Address: FORT MCCLELLAN, ANNISTON ALABAMA 36205-5000

Date of this Report: 5-17 96

UST Owner: U.S. DEPT of DEFENSE

Address: FORT MCCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE CIP

Number of tanks remaining at site: ~~NONE~~ ONE

Closure Date: 3-12-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4" x 8'				
Tank Capacity	3000 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	2-96				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO _____ If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO _____ If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____ If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: _____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES ___X___ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well ___X___
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO ___X___ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____)
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO ___X___
If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. 0-5 ft YELLOWISH BROWN TO BROWNISH YELLOW SAND 5-20 ft BGS - BROWNISH YELLOW TO RED CLAY, SOME SILT

g. Specify the inert solid material used to fill the tank(s). FLOWABLE FILL

h. Provide the date the tank(s) were filled. 3-12-96

i. Were the bore holes properly sealed with bentonite/soil?
YES ___X___ NO _____ If yes, provide the date: 3-1-96

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitor Well ___X___
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2 ft BGS YELLOWISH BROWN TO BROWNISH YELLOW SAND SOME SILT

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 7-12-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER WAS NOT SAMPLED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK IS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED FOR THIS TANK WAS REVIEWED BY ADEM, AND IS PROVIDED IN ATTACHMENT A

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. _____ cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL EXCAVED TO PROVIDE TANK ACCESS AND TO REMOVE PIPING WAS RETURNED TO THE EXCAVATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ___X___ NO _____
If no, describe how tank(s) were cleaned. _____

_____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
___30___ gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GALLON DRUMS PENDING PROJECT COMPLETION. INVOICES WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: D.K. Reeves
Company: THETA ENGINEERING INC.
Telephone Number: (423) 482-0056

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: DK R Date: 3-29-96

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R Date: 3-29-96

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

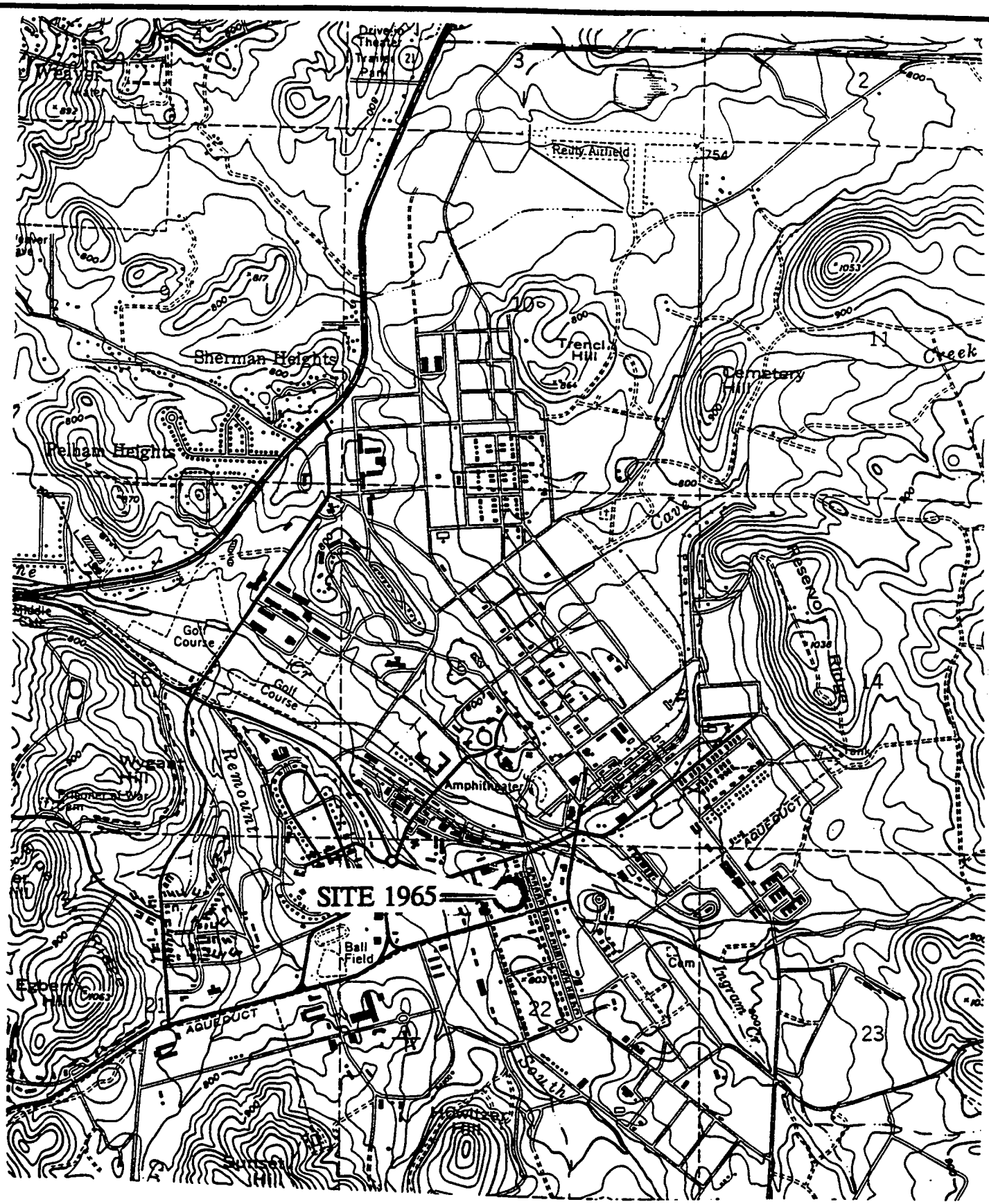
For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)



DRAWN BY:	D. REEVES
DATE:	4/2/96
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG ENV0000	REV 0

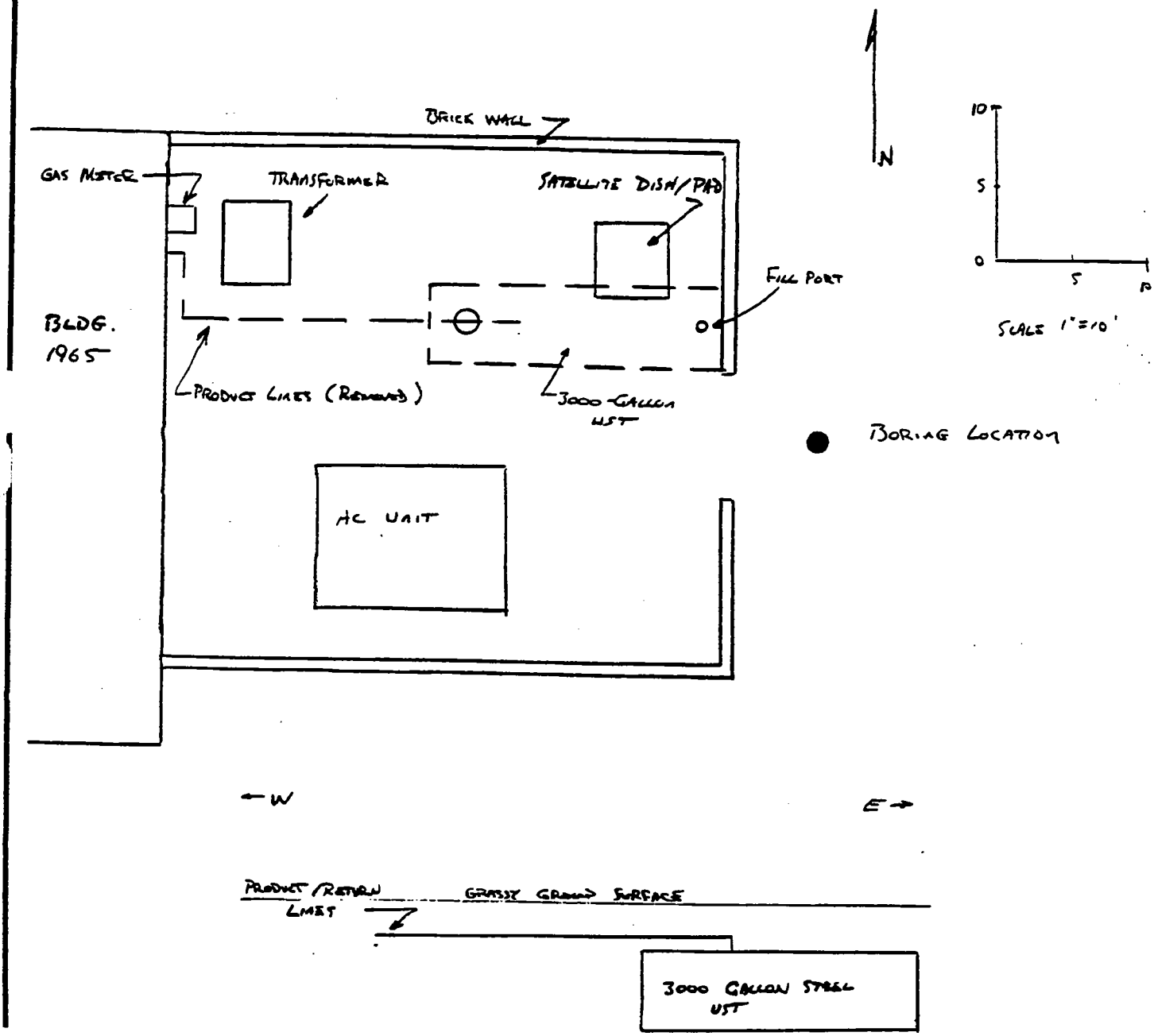
THETA ENGINEERING, INC.

101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0404

SITE LOCATION MAP

SITE 1965

FORT McCLELLAN, ALABAMA



DRAWN BY: D. REEVES DATE: 4/2/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0884	SITE PLAN SITE 1965 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

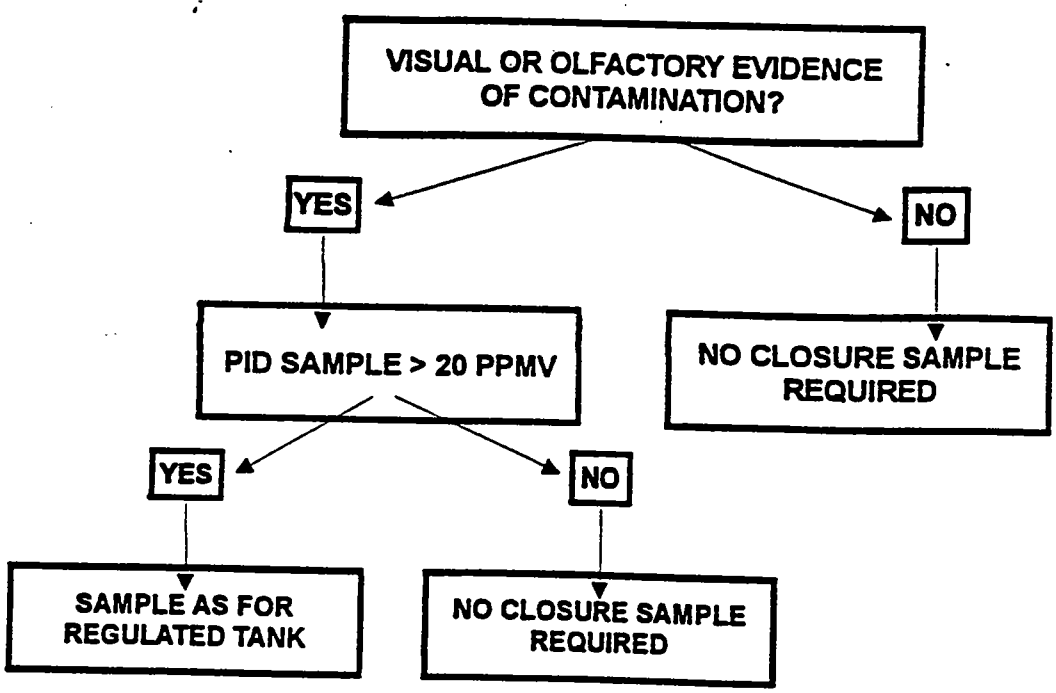
BORING NO. SB-1271B SURF. ELEV. approx. 755 T. DEPTH 4 ft BGS	**Theta Engineering, Inc.** **Subsurface Log**	DATE: 03/01/96 STARTED: 0830 FINISHED: 0940 SHEET: 1 of 1

Project: 8001-001 **Location:** Fort McClellan, Alabama, Bldg. 1271A

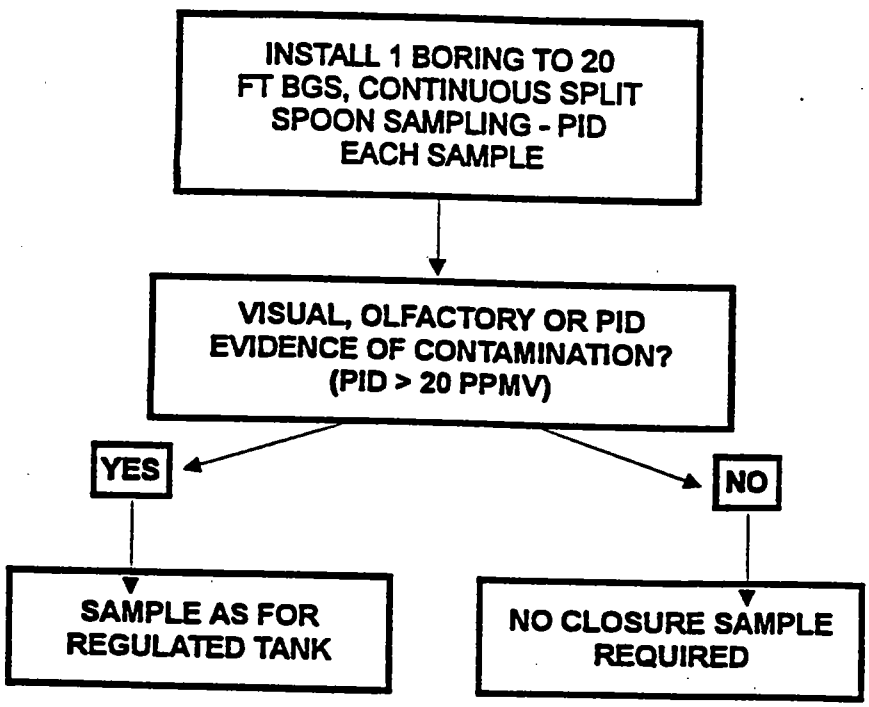
DEPTH FT	SAMPLES	SAMPLE NO	0 to 6	6 to 12	12 to 18	N	% RECOVERY	Soil or Rock Classification	Notes and PID Reading (parts per million vapor)
0								Topsoil	
		1					100	Greenish gray sandy SILT (moist)	PID = 0
		2					100	Strong brown silty CLAY, some Sand (moist)	PID = 0
5		3					75	Strong brown to mottled gray and yellowish red SAND, Some Silt (wet)	PID = 0
		4					75		PID = 0
		5					75		PID = 0
		6					0	No Recovery	
		7					75	Gray SAND, trace silt (wet)	PID = 0
15		8					75	Dark gy SILT, some Clay, little fine sand (wet)	PID = 0
		9					0		
		10					75	Dark gy Clay, some Silt (wet)	PID = 0
20								Dark gy carboniferous shale. Refusal @ 19 ft BGS	
25									Note: No visible or PID evidence of contamination was observed
30									

METHOD OF INVESTIGATION: 2 1/2" I.D. Hollow Stem Auger, continuous split spoon sampling
CLASSIFICATION: Visual by Geologist
R = Refusal

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

1751 Cong. W. L. Dickinson Drive
Montgomery, AL
36130
(205) 271-7700
FAX 271-7950
270-5612

Field Offices:

110 Vulcan Road
Birmingham, AL
35209
(205) 942-6168
FAX 941-1603

P.O. Box 953
Decatur, AL
35602
(205) 353-1713
FAX 340-9359

1 Perimeter Road
AL
36
(205) 450-3400
FAX 479-2593

Guy Hunt
Governor

March 11, 1993

Mr. Robert J. Abernathy
Director of Engineering and Housing
Department of the Army
Fort McCLellan, Alabama 36205-5000

Dear Mr. Abernathy:

RE: REVIEW OF SOIL SAMPLING REPORT
Bldg. 1997, Ft McClellan, Calhoun County, Alabama
Facility I. D. No. NOT REGISTERED

The Department has reviewed the soil sampling report submitted for the above-referenced site (received February 22, 1993). As a result of this review, permission is granted to compact this soil and and proceed with paving this area for a parking lot.

Please be advised that a closure report for the removed UST must be submitted within 45 days of initiation of closure per ADEM Administrative Code R. 335-6-15-.38(1). If this action has been completed, the Department will respond to the closure report. If this action has not been completed, please submit this report as soon as possible.

If you have any questions, please contact me at 205/270-5653 between the hours of 1 p. m. and 5 p. m.

Sincerely,

Brian K. Hutchison
Hydrogeologist
Groundwater Branch
Water Division

BKH/pm

ADEM

ALABAMA DEPARTMENT OF ENVIRONMENTAL I

1. PAP 26 Aug 93
2. EMD
Good work!
Steve

Leigh Pegues, Director

Mailing Address:
PO BOX 301463
MONTGOMERY AL
36130-1463

Physical Address:
1751 Cong. W. L.
Dickinson Drive
Montgomery, AL
36109-2608

(205) 271-7700
FAX 271-7950
270-5612

Field Offices:

110 Vulcan Road
Birmingham, AL
[illegible]9-4702
[illegible]42-6168
[illegible]-1603

400 Well Street
P.O. Box 953
Decatur, AL
35602-0953
(205) 353-1713
FAX 340-9359

2204 Perimeter Road
Mobile, AL
36615-1131
(205) 450-3400
FAX 479-2593

August 25, 1993

Mr. Robert J. Abernathy
Director of Engineering and Housing
Department of the Army
Fort McClellan, Alabama 36205-5000

Dear Mr. Abernathy:

RE: NO FURTHER ACTION
Bldg 1997, Fort McClellan, Calhoun County, Alabama
Facility I. D. No. NOT REGISTERED

The Department has reviewed the results of the closure assessment for the above-referenced site. As a result of this review, it has been determined that no further investigative or corrective actions as required under ADEM Admin. Code R. 335-6-15.26-.29 will be required for this site at this time.

Please use a complete reference line in all future correspondence, including Facility Identification Number, name, address, and Incident Number (UST - -), where applicable. Sites that are not registered will not have an Identification Number and should be labeled (NOT REGISTERED). Because our filing system is dependent on the use of the Facility Identification Number, we may have to return correspondence and reports that do not provide this information.

If there are any questions, please contact Brian Hutchison at 205/270-5653 between the hours of 1 p.m. and 5 p.m.

Sincerely,

Dorothy S. Malaier

Dorothy S. Malaier, Chief
UST Corrective Action Unit
Groundwater Branch
Water Division

DSM/BKH/pm

Printed on Recycled Paper

ATTACHMENT 31

BUILDING T-1997
(HALE ENVIRONMENTAL COMPANY, INC.)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: NOT REGISTERED

Date of this Report: 1-14-92

Facility County: Calhoun

UST Owner: U.S. Army Directorate of Engineering and Housing

Facility Name: Building T-1997

Address: Bldg. 215, 15th Street
Fort McClellan, AL 36205-5000

Location: Ft. McClellan, Alabama

Contact: Nolan Jave

Address: Building T-1997
Ft. McClellan, Alabama

Contact Telephone No.: (205)848-3539

Name of Contractor and/or Consulting Engineer used to close tanks: Hale Building Company, Inc.

Name of Laboratory used: Law Environmental National Laboratories, Pensacola, Florida

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: One
Closure Date: 12-3-92

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	84" x 18'				
Tank Capacity	5000 gal.				
Tank Age	Unknown				
Substance Stored	Diesel and Mineral Spirits				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach a site map showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:
      1. All appropriate excavation dimensions,
      2. All soil sample locations using an appropriate method of identification,
      3. Location of areas of visible contamination,
      4. Former location of tank(s), including depth, with tank Identification Number.

   c. Is the groundwater more than 5 feet below the bottom of the excavation? YES X*
      NO _____ If not, provide the depth from the ground surface to the groundwater table.
      _____ ft.

* Based on elevation of unnamed stream approximately 1000 feet northeast of site.

d. Was there a notable product odor found in the excavation?
YES _____ NO __X__

e. Was there water in the excavation? YES _____ NO __X__
If yes, how was it handled? _____

f. Was free product found in the excavation? YES _____ NO __X__
If yes, how was it handled? _____

g. Were visible holes noted in the tank(s)? YES _____ NO __X__
If yes, please indicate which tank(s) by the Identification Number _____,
Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 ft. diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Fine-sandy clay

i. Was the excavation backfilled? YES __X*__ NO _____ If yes, provide the date.
12-3-92

2. Tank Closure Without Removal Not Applicable

a. Attach a site map showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken.

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft.

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____

* Tank pit was temporarily backfilled with soil on site to prevent rain water from entering the excavation while waiting for the analytical results.

e. Was there free product found in the bore holes: YES _____ NO _____
If yes, how was it handled? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes, or provide a boring log. _____

g. Specify the inert solid material used to fill the tank(s). _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed? YES _____ NO _____
If yes, provide the date. _____

3. Product Line Closure

a. The product lines were partially * _____ REMOVED _____ CAPPED.
If the product line was longer than 10 feet, attach plan and section views of the excavation or lines and include the following:
1. Length and depth of excavation or piping,
2. All soil sample locations and depths,
3. Location of areas of visible contamination.

b. Was there a notable product odor found in the excavation or bore holes? YES _____
NO _____ Not Applicable

C. Were visible holes noted in the lines? YES _____ NO X
If yes, please indicate the location and provide a general description as to the size and number of holes. _____

4. Groundwater Sampling (If required by attached closure guidelines) Not Applicable

a. Indicate the following on the plan and sectional views required by Section 1.a or 2.a above:
1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring Wells are not required, but may be desirable in certain situations.)
2. The most probable direction of groundwater flow. State basis for determining direction _____

* Product line was at least partially removed by pulling with backhoe; total length and location of product line is unknown.

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a typical detail of the wells.

5. Laboratory Data

a. Attach a chain-of-custody record for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Person taking sample,
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the required laboratory data which includes at least the following:
1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.a. or 2.a. above,
2. The sample analysis results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

6. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

a. If tank was closed by removal, provide an estimate of the volume of soil removed.
40 cubic yds.

b. Indicate method of soil disposal to be used:
1. Return to the excavation pit.
2. Spread in a thin layer on site.
3. Disposal in a landfill.

c. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
Soil is currently stockpiled at the site.

7. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X* NO _____
If no, describe how tank(s) were cleaned. _____

* Tank cleaning was performed by Video Industrial Services.

b. Provide an estimate of the volume of sludge removed from the tank.
Unknown _____ gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. _____
Stored on site in 55 gallon drums _____

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, AL 36130
(205) 271-7995 or (205) 271-7830.

Incomplete forms will be returned for correction.

Name of Engineer or Geologist Completing Form: R. Benjamin Noble
Company: Law Engineering, Inc.
Telephone Number: (205)733-7600

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true to the best of my belief and knowledge.

Signature of Geologist or Engineer: R. Benjamin Noble Date: 1-15-93

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 those individuals immediately responsible for obtaining the information is true, accurate, and complete.

Signature of Tank Owner: _____ Date 3-17-93

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

VELMA LIBRARY
WP + 1133
(02/08/90)
(revised 1-30-91)

Attachment UST Closure Guidelines
(Remove from closure letter)

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

1751 Cong. W. L.
Dickinson Drive
Montgomery, AL
36130
(205) 271-7700
FAX 271-7950
270-5612

Field Offices:

110 Vulcan Road
Birmingham, AL
35209
(205) 942-6168
FAX 941-1603

P.O. Box 953
Decatur, AL
35602
(205) 353-1713
FAX 340-9359

1 Perimeter Road
, AL
36
(205) 450-3400
FAX 479-2593

Guy Hunt
Governor

March 11, 1993

Mr. Robert J. Abernathy
Director of Engineering and Housing
Department of the Army
Fort McCLellan, Alabama 36205-5000

Dear Mr. Abernathy:

RE: REVIEW OF SOIL SAMPLING REPORT
Bldg. 1997, Ft McClellan, Calhoun County, Alabama
Facility I. D. No. NOT REGISTERED

The Department has reviewed the soil sampling report submitted for the above-referenced site (received February 22, 1993). As a result of this review, permission is granted to compact this soil and and proceed with paving this area for a parking lot.

Please be advised that a closure report for the removed UST must be submitted within 45 days of initiation of closure per ADEM Administrative Code R. 335-6-15-.38(1). If this action has been completed, the Department will respond to the closure report. If this action has not been completed, please submit this report as soon as possible.

If you have any questions, please contact me at 205/270-5653 between the hours of 1 p. m. and 5 p. m.

Sincerely,

Brian K. Hutchison
Hydrogeologist
Groundwater Branch
Water Division

BKH/pm

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL I

1. PRP 26 Aug 93
2. EMD
Good work!
Steve

Leigh Pegues, Director

Mailing Address:
PO BOX 301463
MONTGOMERY AL
36130-1463

Physical Address:
1751 Cong. W. L.
Dickinson Drive
Montgomery, AL
36109-2608

(205) 271-7700
FAX 271-7950
270-5612

Field Offices:

110 Vulcan Road
Birmingham, AL
[illegible]9-4702
[illegible]42-6168
F[illegible]-1603

400 Well Street
P.O. Box 953
Decatur, AL
35602-0953
(205) 353-1713
FAX 340-9359

2204 Perimeter Road
Mobile, AL
36615-1131
(205) 450-3400
FAX 479-2593

August 25, 1993

Mr. Robert J. Abernathy
Director of Engineering and Housing
Department of the Army
Fort McClellan, Alabama 36205-5000

Dear Mr. Abernathy:

RE: NO FURTHER ACTION
Bldg 1997, Fort McClellan, Calhoun County, Alabama
Facility I. D. No. NOT REGISTERED

The Department has reviewed the results of the closure assessment for the above-referenced site. As a result of this review, it has been determined that no further investigative or corrective actions as required under ADEM Admin. Code R. 335-6-15.26-.29 will be required for this site at this time.

Please use a complete reference line in all future correspondence, including Facility Identification Number, name, address, and Incident Number (UST - -), where applicable. Sites that are not registered will not have an Identification Number and should be labeled (NOT REGISTERED). Because our filing system is dependent on the use of the Facility Identification Number, we may have to return correspondence and reports that do not provide this information.

If there are any questions, please contact Brian Hutchison at 205/270-5653 between the hours of 1 p.m. and 5 p.m.

Sincerely,

Dorothy S. Malaier

Dorothy S. Malaier, Chief
UST Corrective Action Unit
Groundwater Branch
Water Division

DSM/BKH/pm

Printed on Recycled Paper

ATTACHMENT 32

BUILDING 3131 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11853-015-3131
NON REGULATED TANK
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: CALHOUN CO.
Facility Name: FORT MCCLELLAN
Location: BLDG 3131

Address: FORT MCCLELLAN, ANNISTON
ALABAMA 36205-5000

Date of this Report: 6-24-96

UST Owner: U.S DEPT OF DEFENSE

Address: FORT MCCLELLAN
ANNISTON, ALABAMA
Contact: MS. CANDY SEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING
Name of Laboratory used:

NON-REGULATED TANK - NO EVIDENCE OF CONTAMINATION - NO SAMPLES COLLECTED

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE
Closure Date: 3-21-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	10'4" x 37'9"				
Tank Capacity	20,000 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[✓]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO ✓ If not, provide the depth from the ground surface to the groundwater table. 11½ APPROX ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit ✓
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO ✓ If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES ✓ NO _____
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval ✓
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO ✓
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ✓
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0- 12 FT BGS - YELLOWISH RED SILTY CLAY

i. Was the excavation backfilled? YES ✓ NO _____ If yes, provide the date. 3-25-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline)(diesel)
   (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____
   _____
   2. What was the measured thickness of the free product?_____
   _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). _____
_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES _____ NO ___X___ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2 FT BGS - YELLOWISH RED SILTY CLAY

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 4-2-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLING NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM. THE CLOSURE PROTOCOL IS PROVIDED IN ATTACHMENT A. NO EVIDENCE OF PETROLEUM CONTAMINATION WAS OBSERVED.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 648 cy cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL WAS STOCKPILED ADJACENT TO THE TANK, THEN RETURNED TO THE EXCAVATION. 32 CY OF SATURATED (WET) SOIL WAS TRANSPORTED TO THE BASE BORROW PIT.

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other 32 CY OF WATER-SATURATED SOIL WAS TRANSFERRED TO THE BOTTOM PIT.

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

N/A

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO ____

If no, describe how tank(s) were cleaned. ____

b. Provide an estimate of the volume of sludge removed from the tank.

100 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GALLON DRUMS. MANIFESTS WILL BE PROVIDED UPON DISPOSAL.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No Samples were collected
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D K R _____ Date: 6-24-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

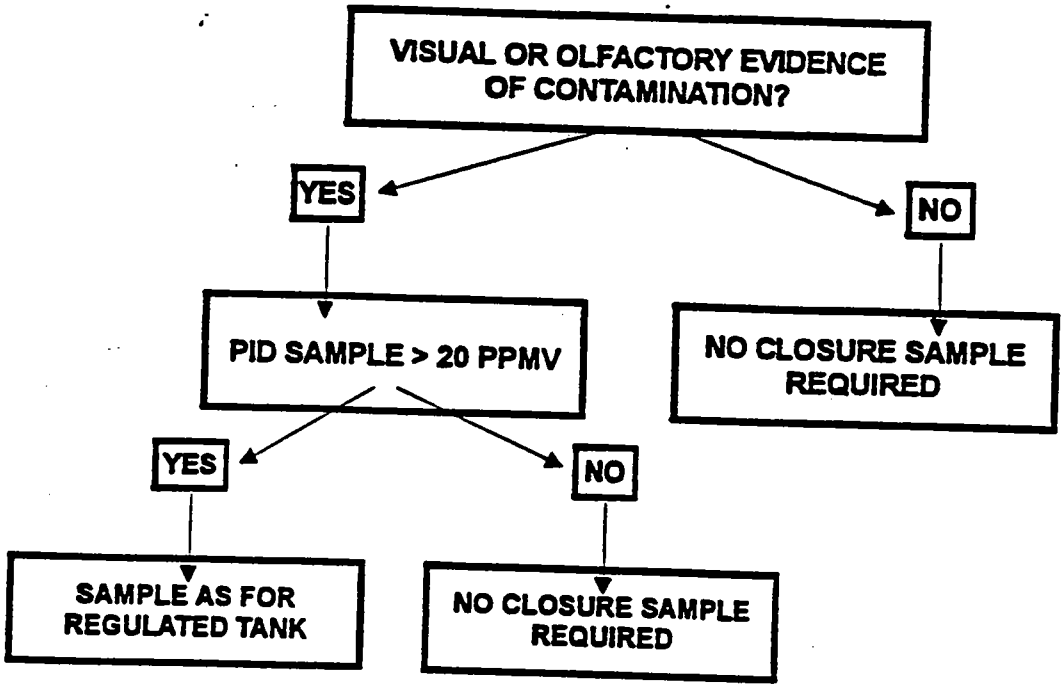
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

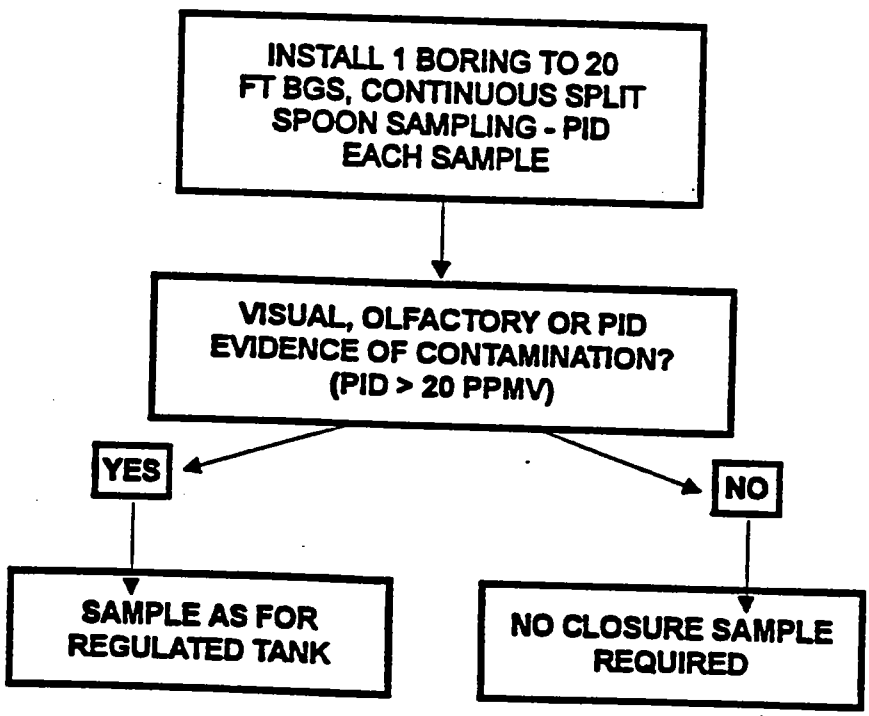
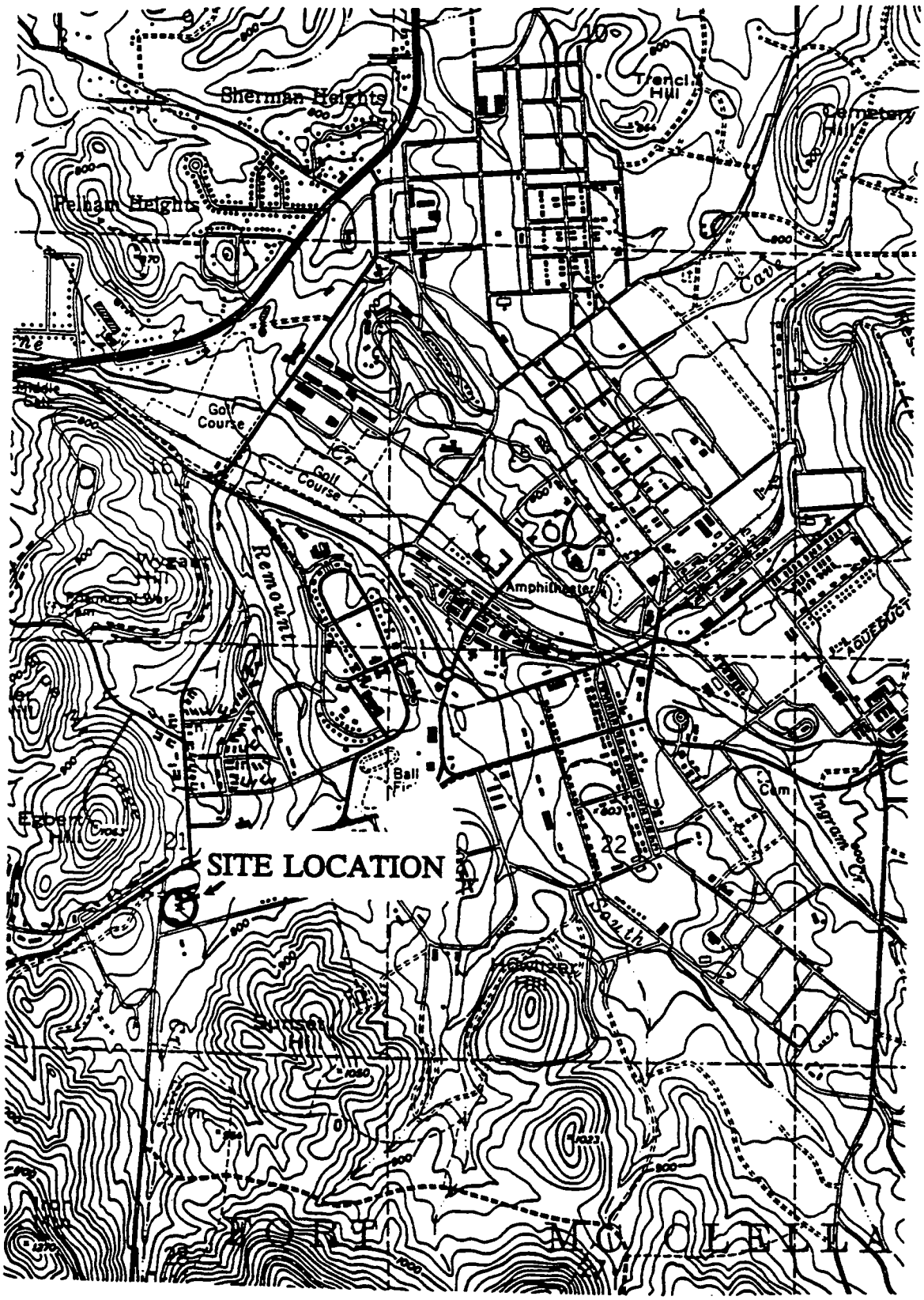


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



DRAWN BY:	D. REEVES
DATE:	6/10/96
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG ENV0000	REV 0

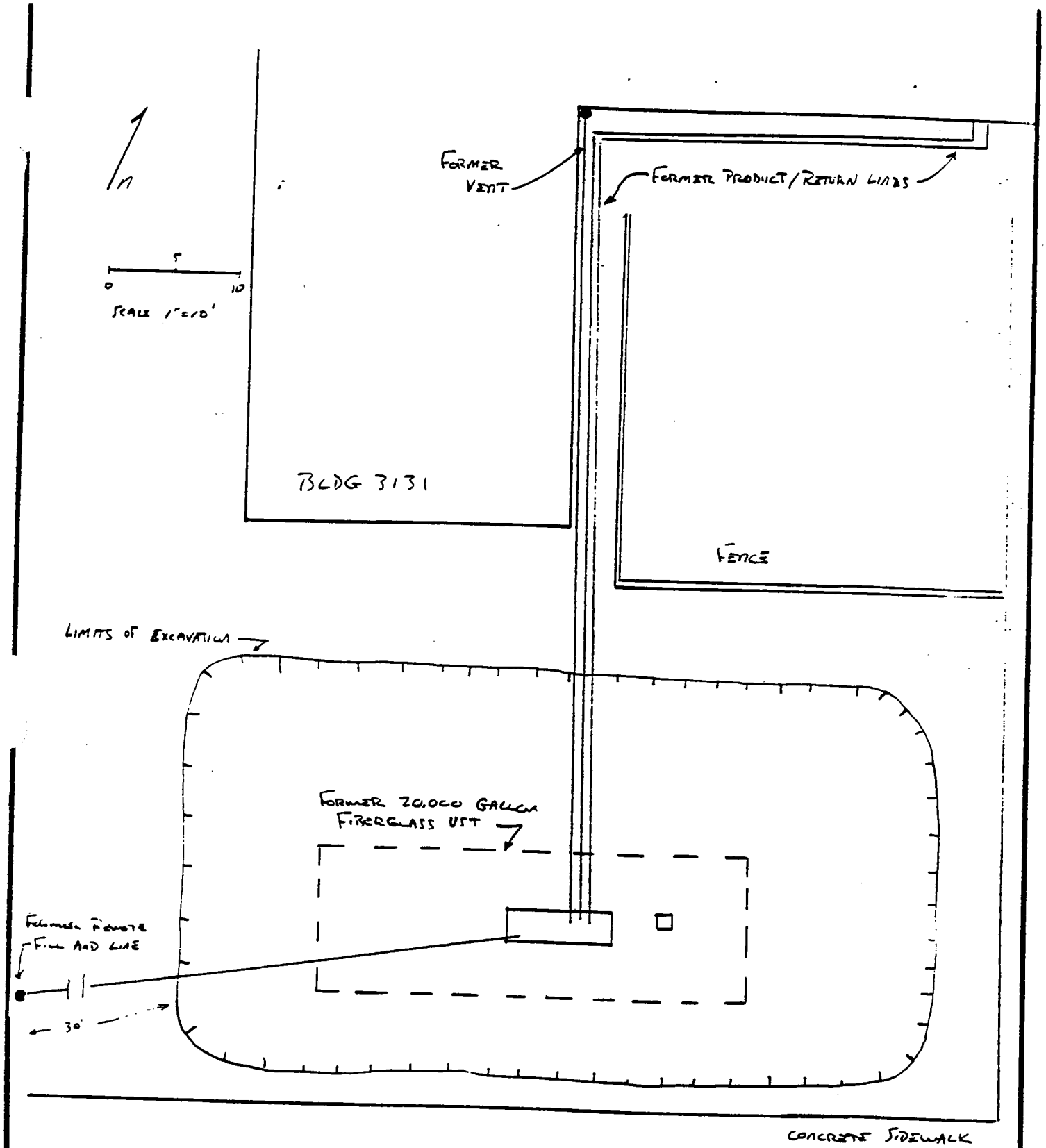
THETA ENGINEERING, INC.

101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/425-[illegible]

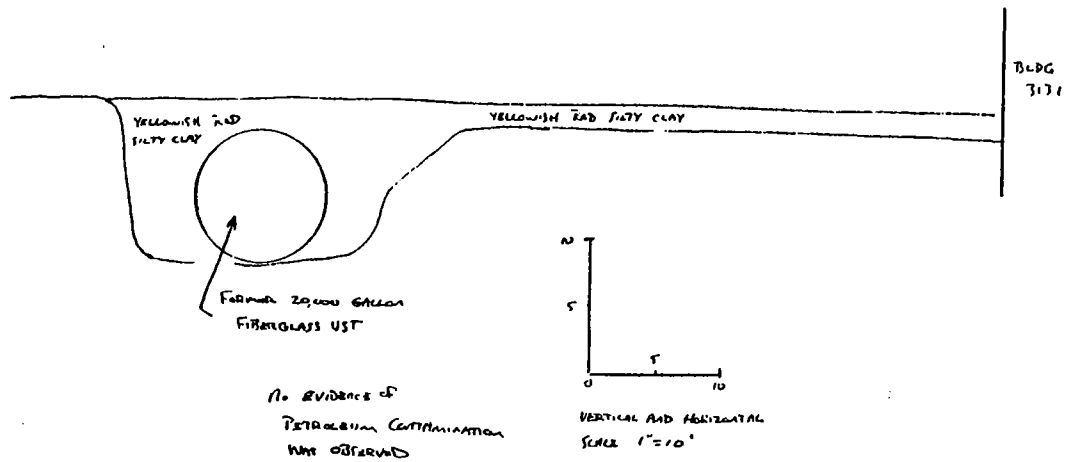
SITE LOCATION MAP

SITE 3131

FORT McCLELLAN, ALABAMA



DRAWN BY: D. REEVES DATE: 6/10/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/[illegible]	SITE PLAN SITE 3131 FORT McCLELLAN, ALABAMA



No evidence of Petroleum Contamination was observed

TANK PIT AND PIPING TRENCH
CROSS SECTION

DRAWN BY: D. REEVES DATE: 6/10/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37[illegible] 15/482-[illegible]	SITE PLAN SITE 3131 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

ATTACHMENT 33

BUILDING 3162 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-3161
(NON-REGULATED TANK)

Incident No.(If applicable)
UST _ _-_ _-_ _

Facility County: CALHOUN

Facility Name: FORT MCCLELLAN

Location: BLDG 3161

Address: FORT MCCLELLAN ANNISTON ALABAMA 36205-5000

Date of this Report: 3-29-96

UST Owner: U.S. DEPT OF DEFENSE

Address: FORT MCCLELLAN ANNISTON ALABAMA 36205-5000

Contact: MR. CANDY CEFCIK

Contact Telephone No.: (205) 848-7312

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING INC.

Name of Laboratory used: NO SAMPLES WERE COLLECTED - NON-REGULATED TANK - NO CONTAMINATION OBSERVED

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: 1

Number of tanks remaining at site: Ø

Closure Date: 2-27-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	4.0x11.3'L				
Tank Capacity	1000-GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES UNKNOWN NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-0.3 FT BGS - DARK BROWN SANDY TOPSOIL; 0.3 - 7 FT - MOTTLED REDDISH YELLOW AND YELLOW SILTY CLAY. TANK BACKFILL CONSISTED OF PEA GRAVEL

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 2-27-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench (IN ADJACENT TANK PIT)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0 - 0.3 FT BGS - DARK BROWN SANDY TOPSOIL
0.3 - 2 FT BGS - MOTTLED REDDISH YELLOW + YELLOW SILTY CLAY

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 3-4-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) * GROUNDWATER SAMPLING NOT REQUIRED *

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: No EVIDENCE of CONTAMINATION WAS OBSERVED. No SAMPLES WERE COLLECTED. SEE ATTACHMENT 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 12.2 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
No EVIDENCE of CONTAMINATION WAS OBSERVED
EXCAVATED SOIL WAS RETURNED TO THE TANK PIT EXCAVATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

_____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
20 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. INVOICES / RECEIPTS WILL BE PROVIDED AT THAT TIME

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: NON-REGULATED TANK-
Company: NO CONTAMINATION WAS OBSERVED,
Telephone Number: NO SAMPLES WERE COLLECTED.

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. R Date: 3-29-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

<u>API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.</u>

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

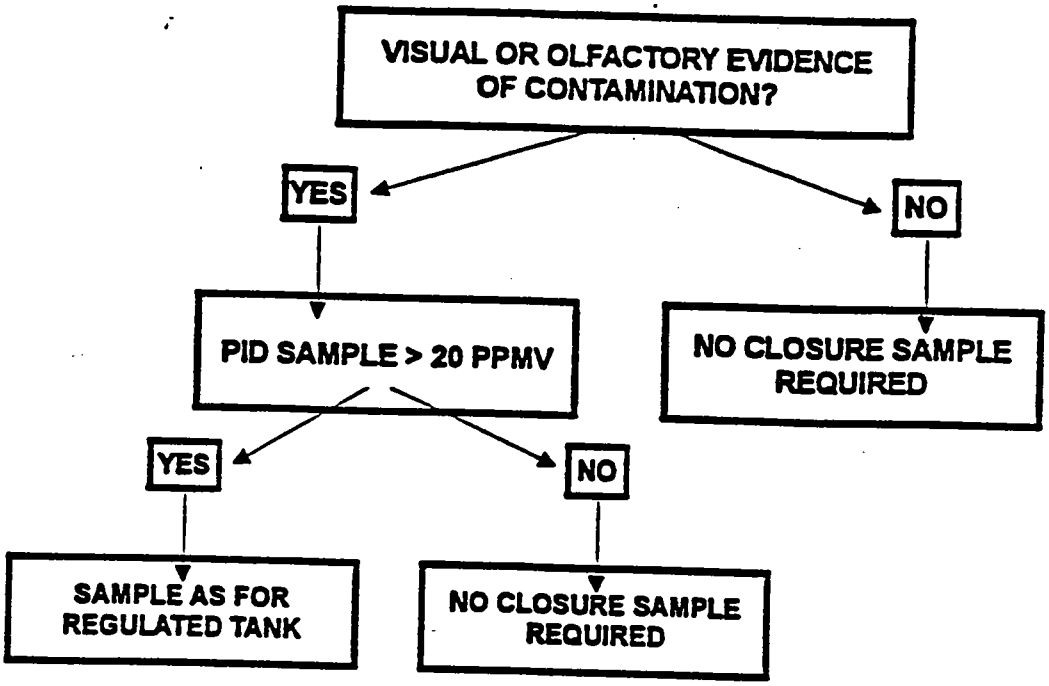
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

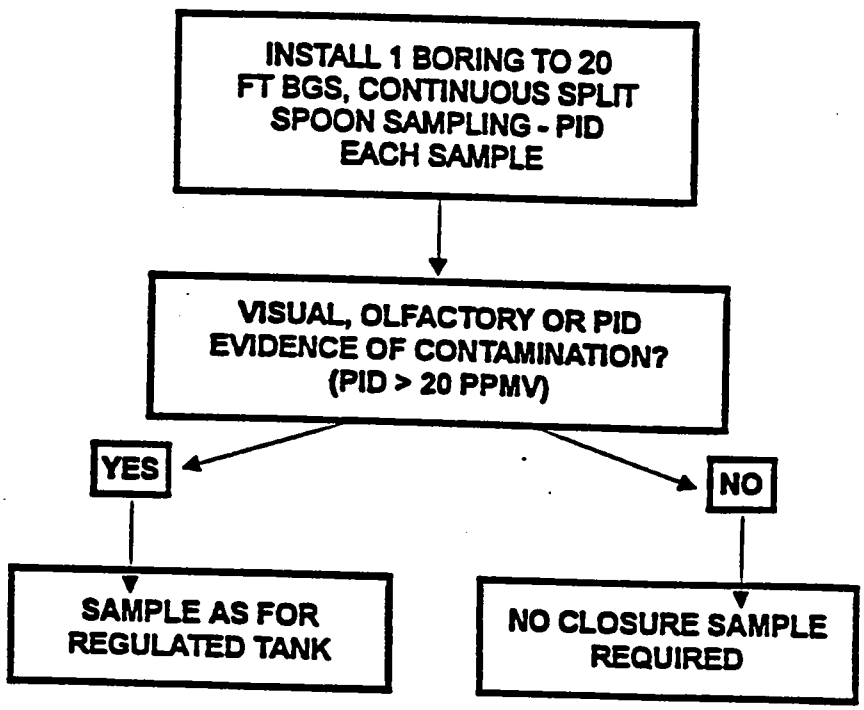
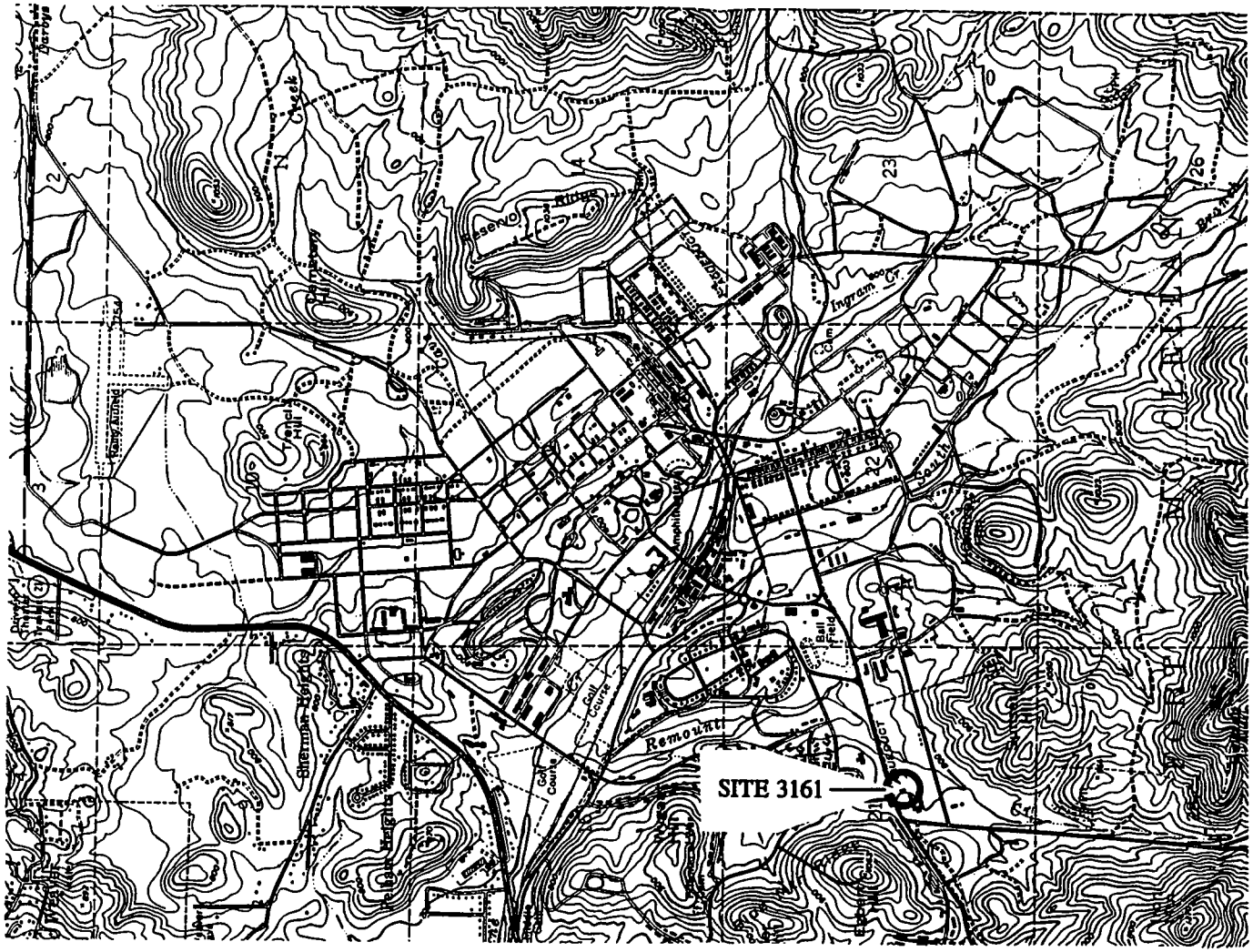
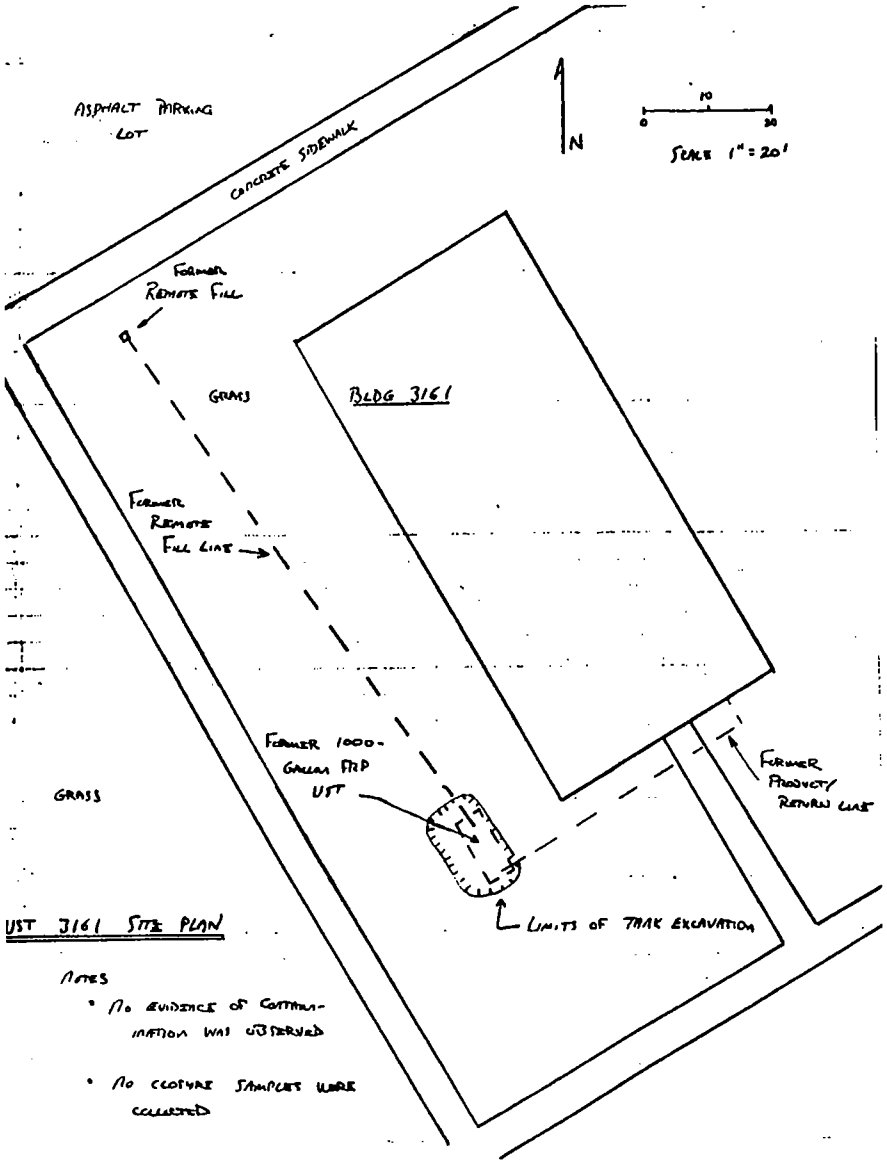


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



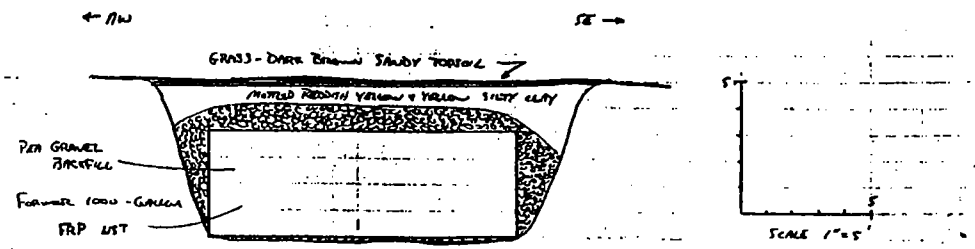
DRAWN BY: D. NEVES DATE: 3/29/96 CHECKED BY: D. NEVES PROJ. NO.: 8001-001	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/425-0056	SITE LOCATION MAP SITE 3161 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



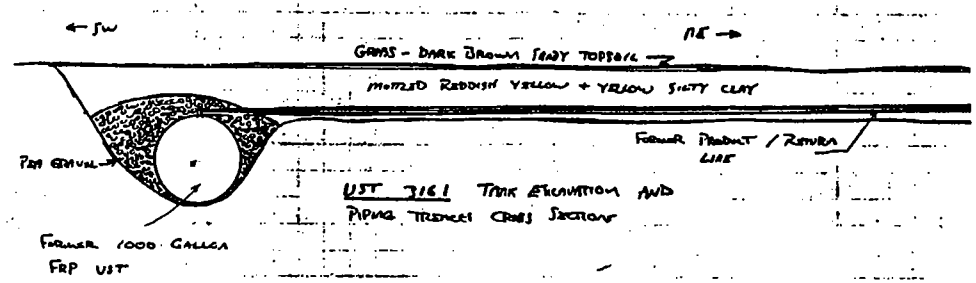
UST 3161 SITE PLAN

NOTES

- No EVIDENCE OF CONTAMINATION WAS OBSERVED
- No SOIL SAMPLES WERE COLLECTED



UST 3161 TANK EXCAVATION CROSS SECTION



UST 3161 TANK EXCAVATION AND PIPING TRENCH CROSS SECTION

DRAWN BY: D. REEVES DATE: 3/29/91 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0088	SITE PLAN SITE 3161 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

ATTACHMENT 34

BUILDING 3293 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 953-015-3293
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _ _-_ _-_ _
Facility County: CALHOUN
Facility Name: FORT McCLELLAN
Location: BLDG 3293

Address: FORT McCLELLAN
ANNISTON ALABAMA 36205-5000

Date of this Report: 4-1-96

UST Owner: U.S. DEPT. OF DEFENSE

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: MS. CANDY SEFCIK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NO SAMPLES COLLECTED

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE
Closure Date: 2-29-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	6'3" x 21'				
Tank Capacity	4000				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES UNKNOWN NO UNKNOWN If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit. _____
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES X NO _____
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval X
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-0.3 FT BGS - DARK BROWN SANDY TOPSOIL 0.3 - 9 FT BGS MOTTLED REDDISH YELLOW AND YELLOW SILTY CLAY. TANK PIT BACKFILL CONSISTED OF PEA GRAVEL

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 3-18-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench (IN ADJACENT TANK EXCAVATION)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES_____ NO___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-0.3 FT BGS - DARK BROWN SANDY TOPSOIL
0.3-2 FT BGS MOTTLED REDDISH YELLOW AND YELLOW SILTY CLAY

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 7-18-91 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER NOT SAMPLED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: No EVIDENCE of CONTAMINATION WAS OBSERVED. No SAMPLES WERE COLLECTED. SEE ATTACHMENT 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 182.5 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed. No EVIDENCE OF CONTAMINATION WAS OBSERVED – NO SAMPLES COLLECTED

c. Indicate method and location of soil management and/or treatment prior to final disposal.
48 CY OF BACKFILL WERE UNSUITABLE FOR COMPACTION AND WERE TRANSPORTED TO THE BASS BORROW PIT FOR DISPOSAL. THE REMAINING SOIL WAS USED TO BACKFILL THE TANK PIT

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

_____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
70 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. INVOICE / RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No Samples
Company: were collected
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. R Date: 4-1-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

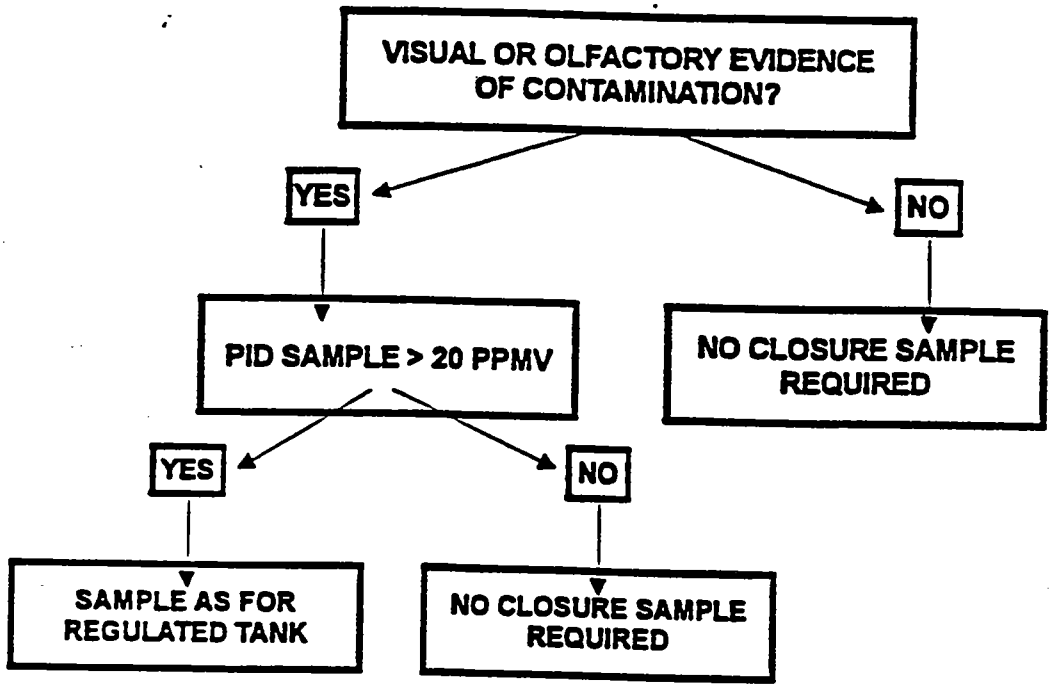
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

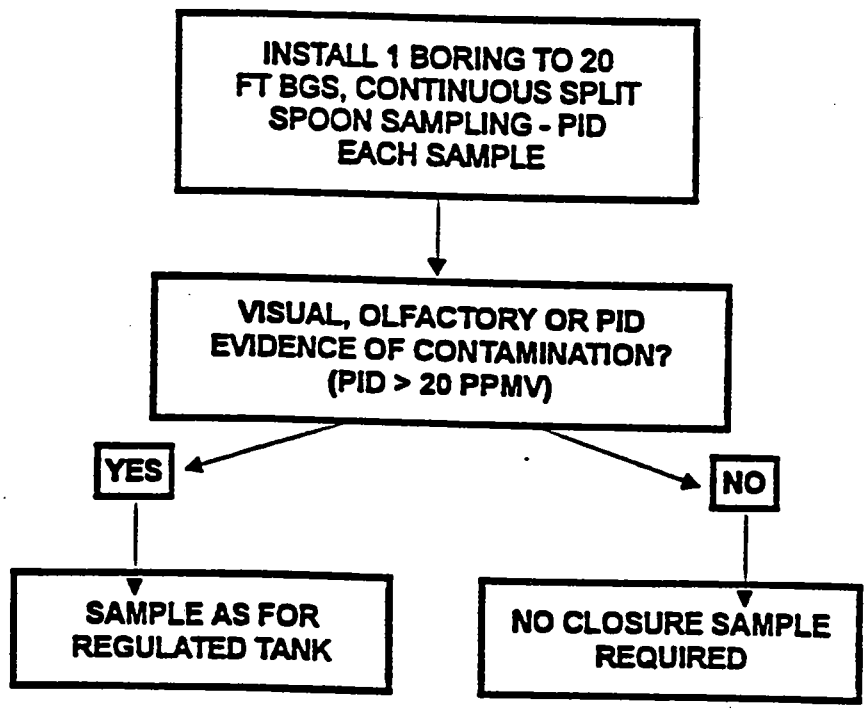
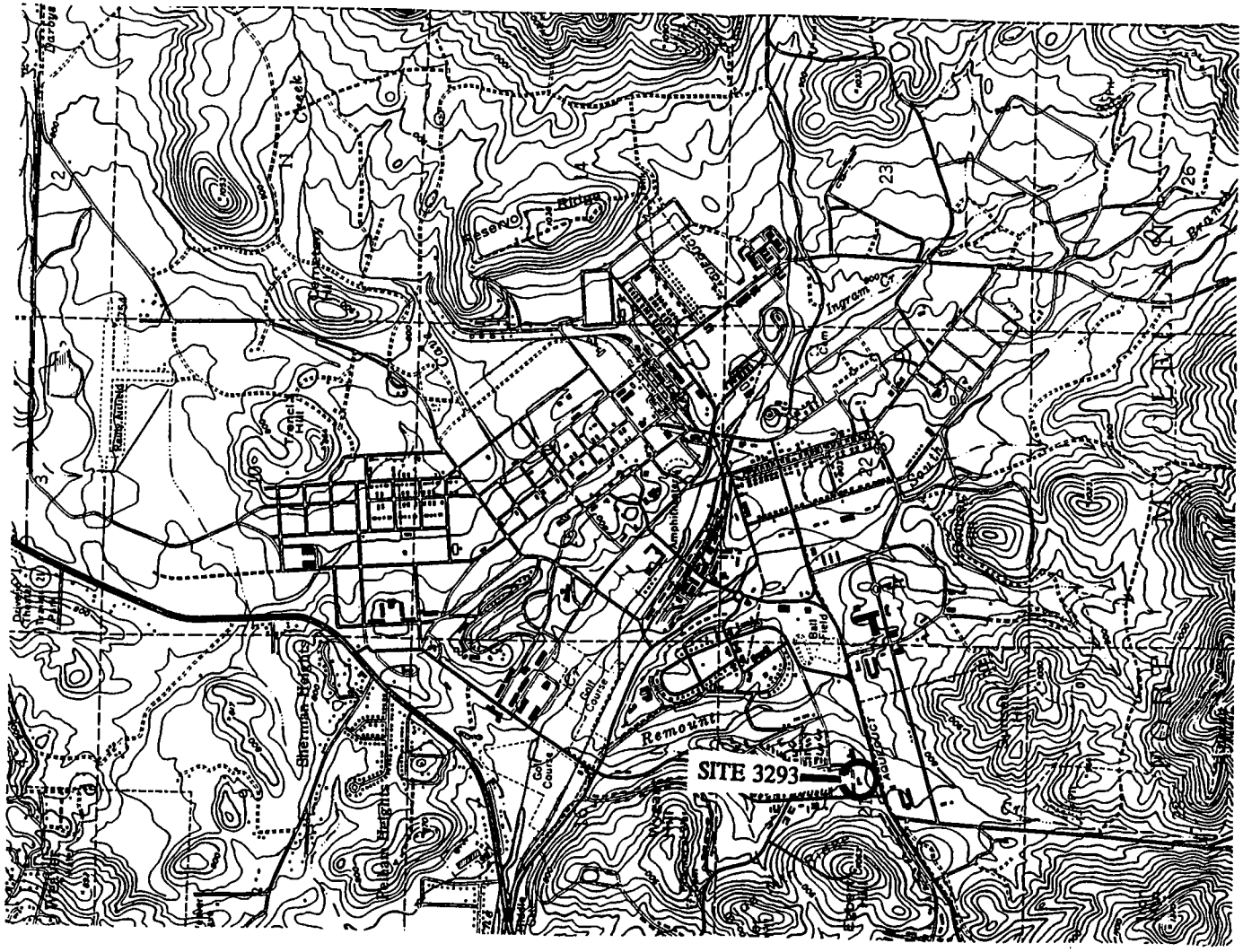
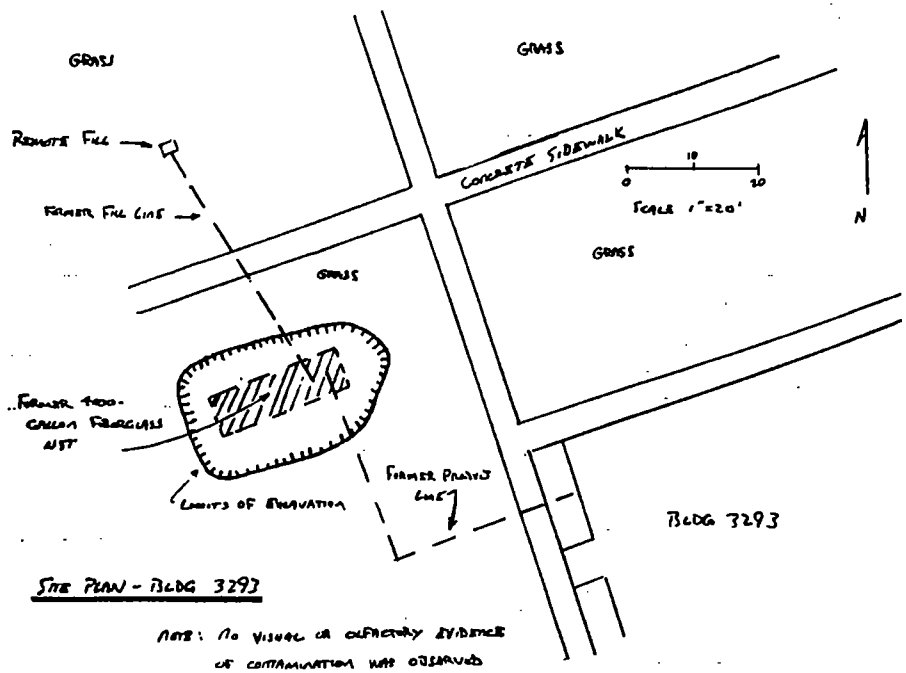


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING

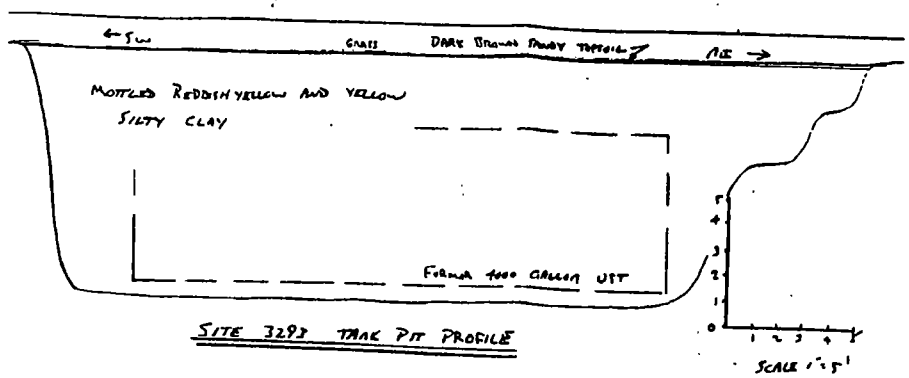


DRAWN BY: D. REEVES DATE: 4/1/96 CHECKED BY: D. REEVES PROJ. NO.: 6001-001 DWG EN/5000 REV 0	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0056	SITE LOCATION MAP SITE 3293 FORT McCLELLAN, ALABAMA

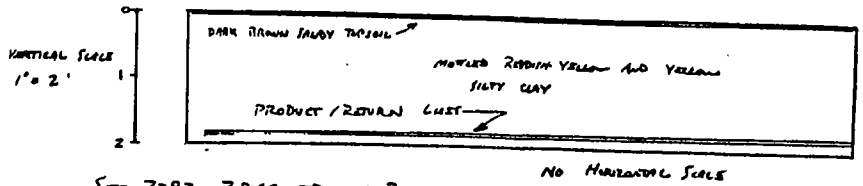


SITE PLAN - BLDG 3293

NOTE: NO VISUAL OR OLFACTORY EVIDENCE OF CONTAMINATION WAS OBSERVED



SITE 3293 TANK PIT PROFILE



SITE 3293, PIPING TRENCH PROFILE

DRAWN BY: D. REEVES DATE: 4/1/96 CHECKED BY: D. REEVES PROJ. NO.: 5001-001 DWG ENV0000 REV 0	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0066	SITE PLAN SITE 3293 FORT McCLELLAN, ALABAMA

ATTACHMENT 35

BUILDING 162 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-162
(NON-REGULATED TANK)
Incident No.(If applicable)
UST _-_-_-_
Facility County: CALHOUN
Facility Name: FORT McCLELLAN
Location: BUILDING 162

Address: FORT McCLELLAN
ANNISTON ALABAMA 36205-5000

Date of this Report: 7-22-96

UST Owner: U.S. DEPT OF DEFENSE

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000
Contact: Ms. CANDY SEECIE

Contact Telephone No.:
(205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.
Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: Ø
Closure Date:

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	6' x 13'9"				
Tank Capacity	2500 gal.				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ✓ NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO ✓ If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO ✓
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO ✓
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO ✓
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 1"-2" BGS TOPSOIL 2" to 10' CHERTY MOTTLED YELLOW AND RED CLAY WITH SOME GRAVEL

i. Was the excavation backfilled? YES ✓ NO _____ If yes, provide the date. 5-20-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____ _____
   2. What was the measured thickness of the free product? _____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ✓ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ✓ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

No TRENCH WAS DUG - PIPE WAS REMOVED BY PULLING IT OUT

1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitor Well _____
3. Topographic features TANK WAS LOCATED AT ELEVATION CONSIDERABLY HIGHER THAN SURROUNDING AREA
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ✓ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ✓
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ✓ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ✓
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: _____

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLING NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.), NOTE: THIS TANK WAS NOT REGULATED
4. Type of sample (soil or water), BY ADEM. THE CLOSURE ASSESSMENT
5. Type of sample container, PROTOCOL EMPLOYED WAS REVISED BY THETA,
6. Method of preservation, AND APPROVED BY ADEM. (SEE
7. Date and time sample was relinquished, ATTACHMENT 1) - NO VISUAL, OLFACTO
8. Person relinquishing sample, OR PID EVIDENCE WAS OBSERVED
9. Date and time sample was received by lab, AND NO SAMPLES WERE COLLECTE
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 33 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
THERE WAS NO EVIDENCE OF CONTAMINATION. SOIL WAS RETURNED TO THE EXCAVATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

NA

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
30 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINED IN 55 GAL. DRUMS. INVOICES WILL BE PROVIDED UPON DISPOSAL.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: NO SAMPLES WERE COLLECTED BECAUSE THERE WAS NO VISUAL OR OLFACTORY EVIDENCE OF CONTAMINATION
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

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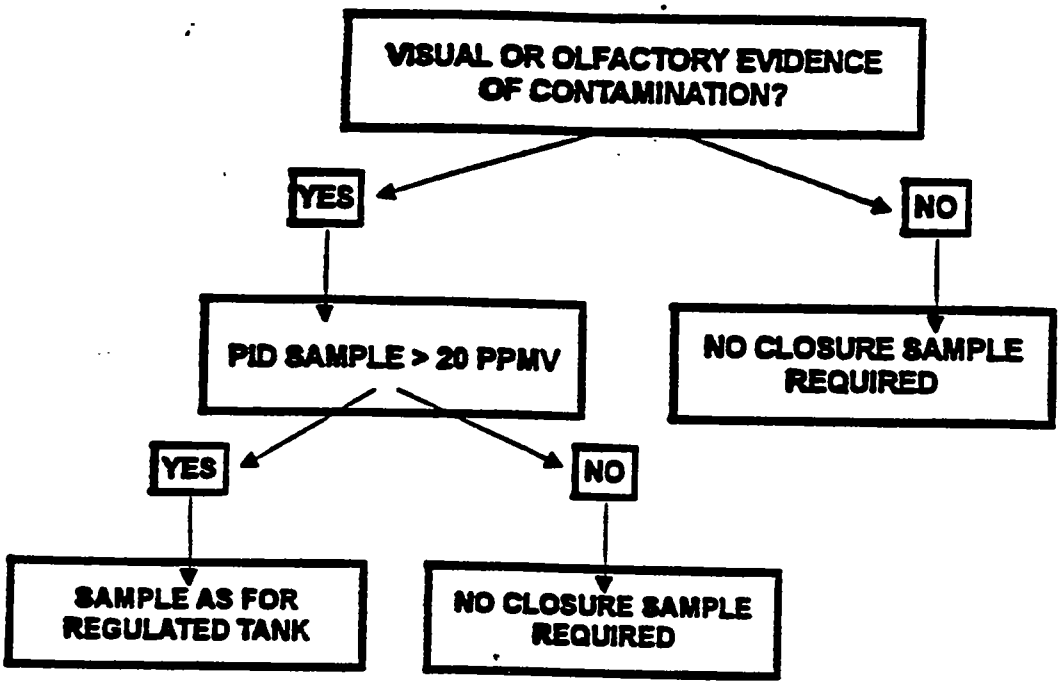


CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

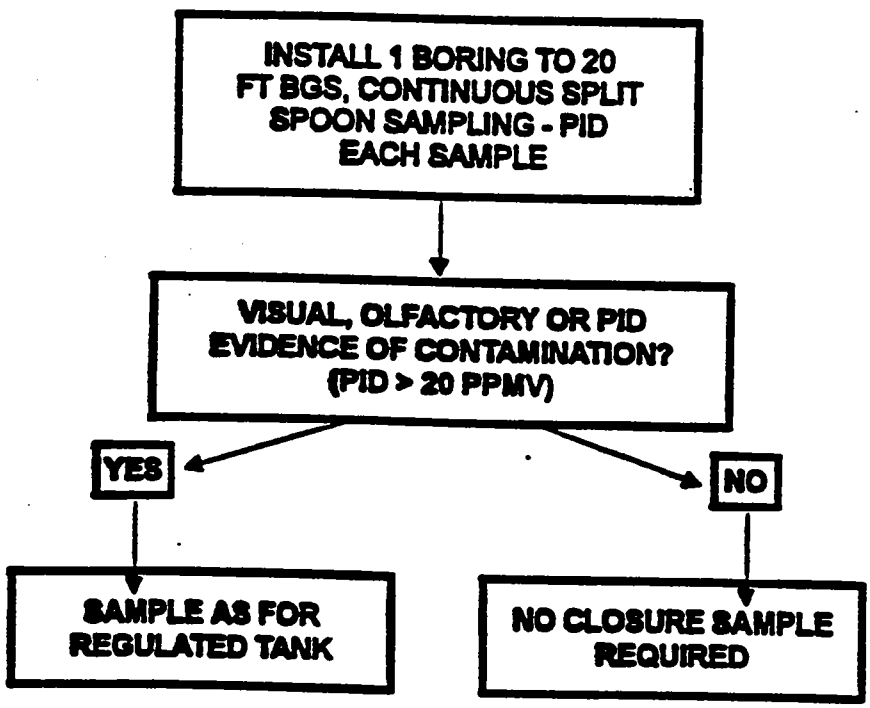
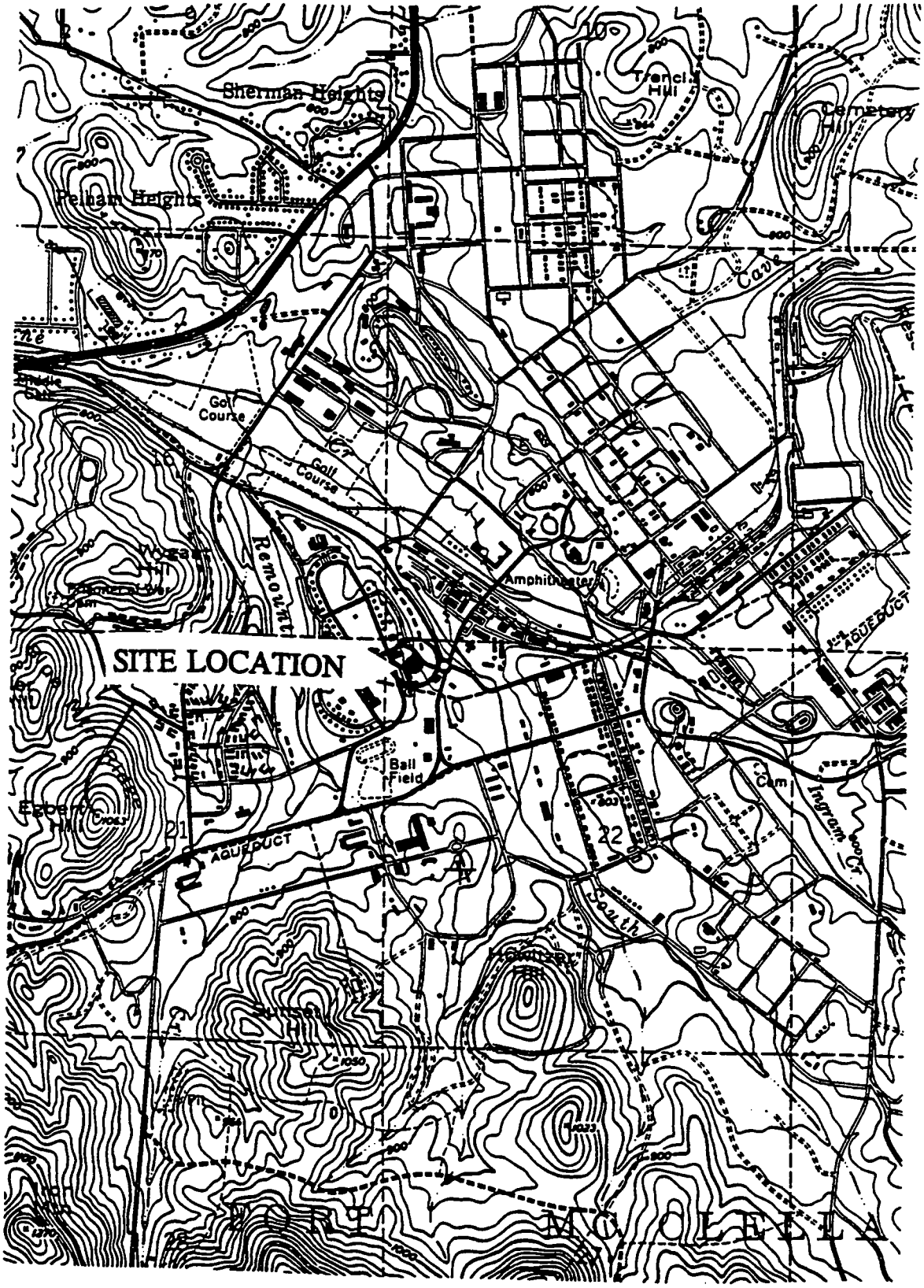
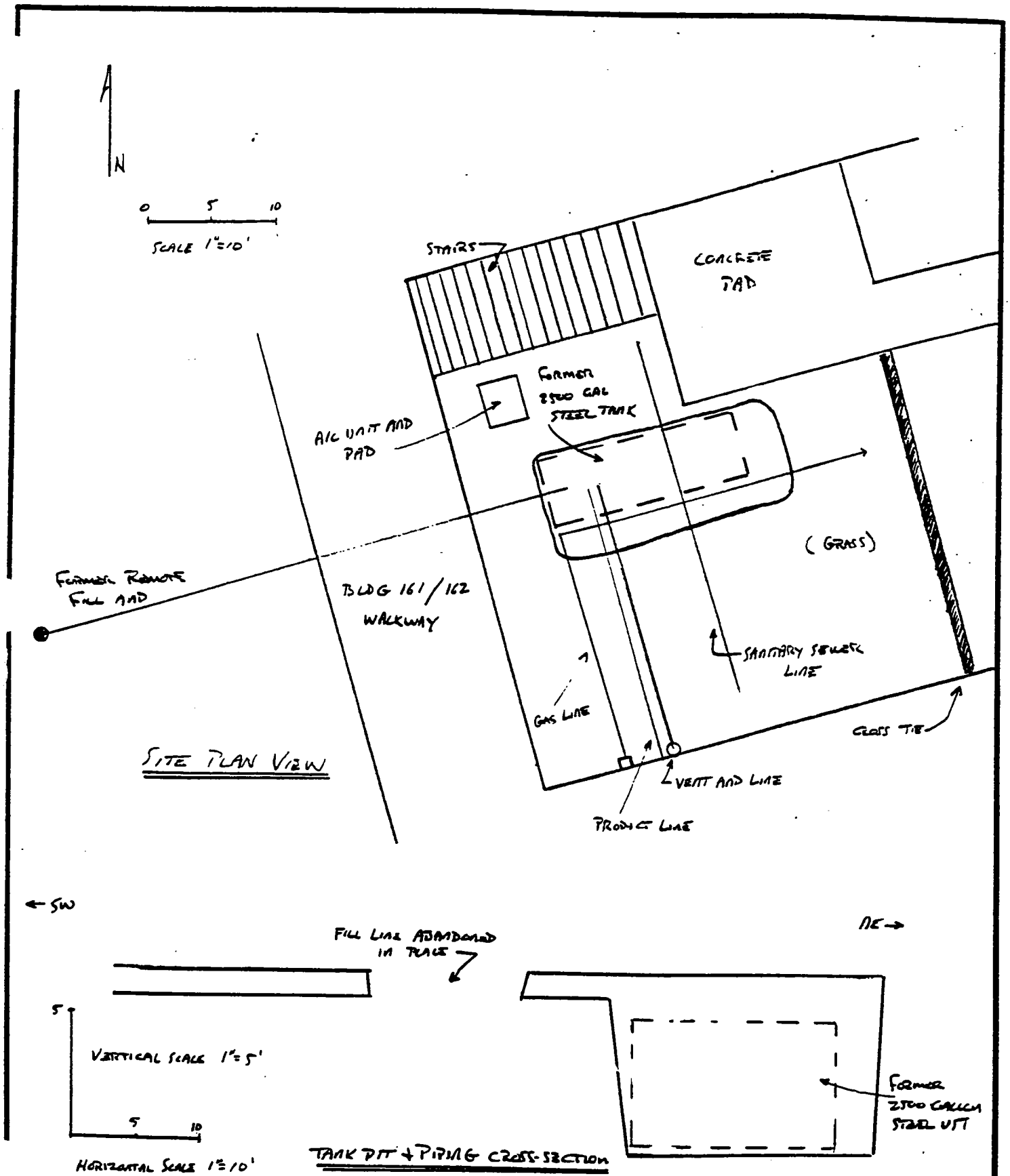


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



DRAWN BY: D. REEVES DATE: __/__/__ CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE LOCATION MAP SITE 162 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		



DRAWN BY: D. REEVES DATE: 6/24/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC.	SITE PLAN SITE 162 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

ATTACHMENT 36

BUILDING 1077 (THETA)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-1077
(NON REGULATED TANK)

Date of this Report: 9-5-96

Incident No.(If applicable)
UST _ _ - _ - _ _

UST Owner: U.S. DEPT of DEFENSE

Facility County: CALHOUN

Address: FORT McCLELLAN
ANNISTON, ALABAMA 36205-5000

Facility Name: FORT McCLELLAN

Contact: MS. CANDY SEFCIK

Location: BUILDING 1077

Address: FORT McCLELLAN
ANNISTON ALABAMA 36205-5000

Contact Telephone No.:
(205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: one

Number of tanks remaining at site: 0

Closure Date: 8-14-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	4'x10'8"				
Tank Capacity	1000 gal				
Tank Age	UNKNOWN				
Date Tank Last Used	[illegible]				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	[illegible]				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES X NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit Yes
2. Boring or Monitor well _____
3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-6" BGS BROWN-REDDISH BROWN SANDY TOPSOIL; 6"-2' BGS MOTTLED REDDISH YELLOW & YELLOW SILT, SOME SAND, 2'-6' BGS, BROWNISH YELLOW SAND

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-6" BGS MED. BROWN TO REDDISH BROWN SANDY TOPSOIL; 6"-2' MOTTLED REDDISH YELLOW AND YELLOW SILT, SOME SAND.

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

5. Has a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM AND IS PROVIDED IN ATTACHMENT 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 25.2 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

NO EVIDENCE OF CONTAMINATION WAS OBSERVED. SOIL WAS RETURNED TO THE EXCAVATION

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES ✓ NO _____
If no, describe how tank(s) were cleaned. _____

_____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
_____ gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ON SITE PENDING PROJECT COMPLETION. INVOICE/RECEIPTS WILL BE PROVIDED AT THAT TIME.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No Samples were collected
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. [illegible] Date: 9-5-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

<u>API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.</u>

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

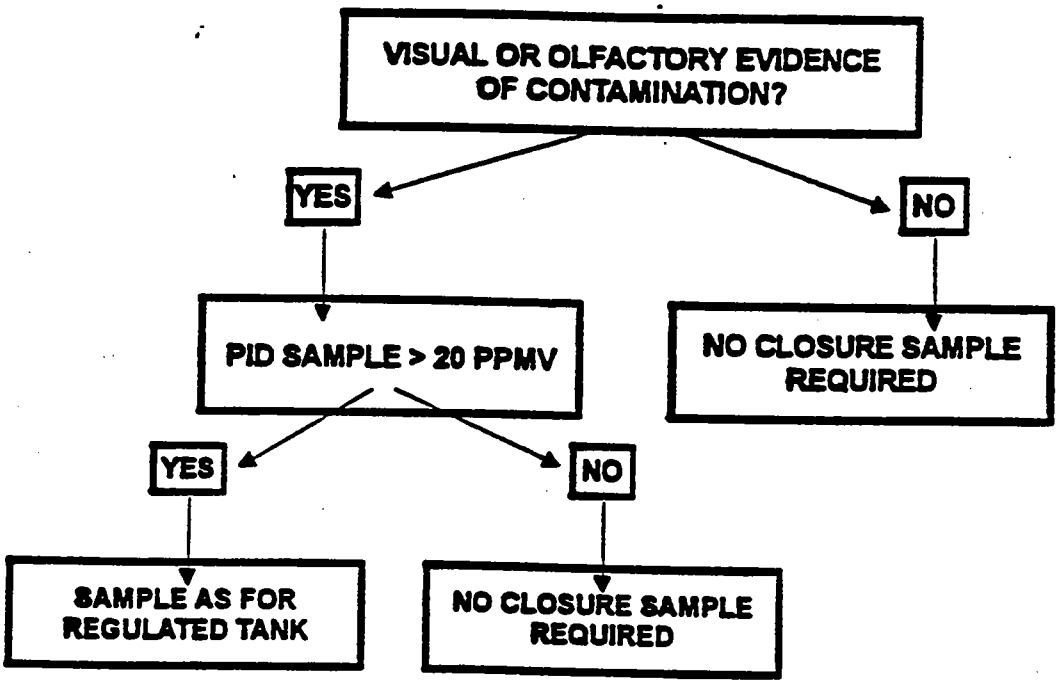
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

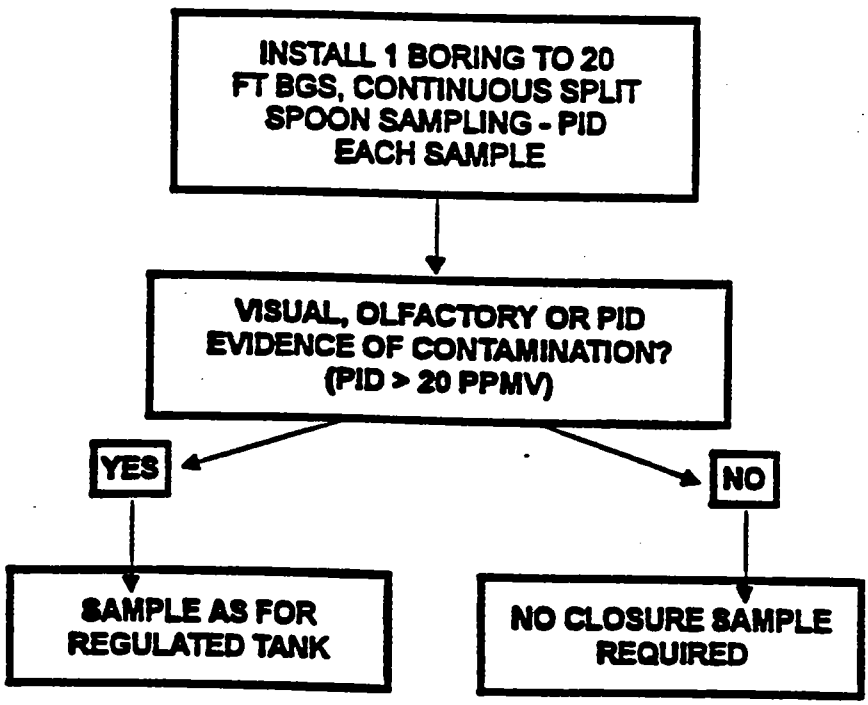


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING

DRAWN BY:	D. REEVES
DATE:	/ /
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG ENV0000	REV 0

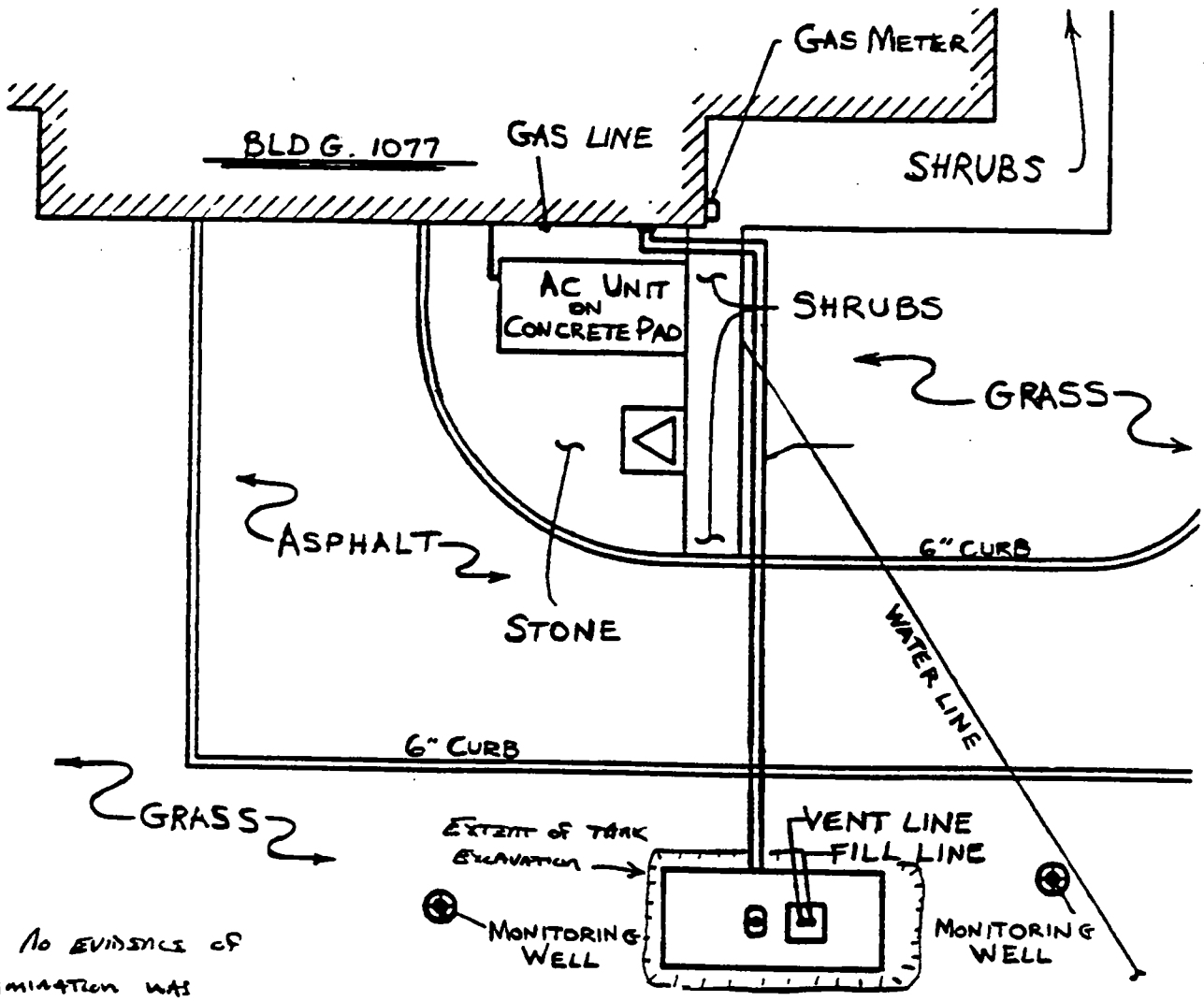
THETA ENGINEERING, INC.

SITE LOCATION MAP

SITE 1077

FORT McCLELLAN, ALABAMA

PLAN VIEW



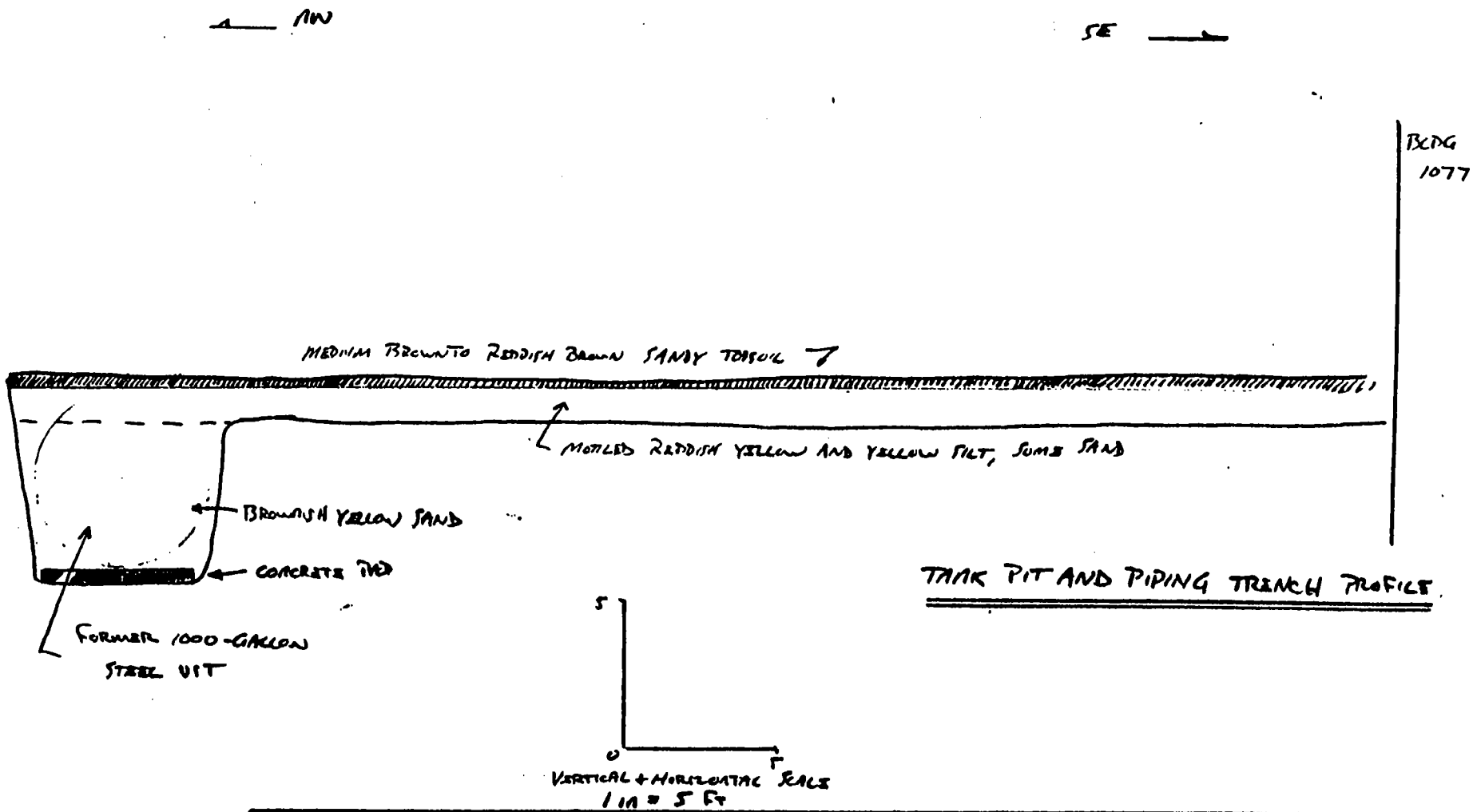
NOTE: NO EVIDENCE OF CONTAMINATION WAS OBSERVED.

FORMER LOCATION OF OLD TANK

SCALE: 1" = 10'-0"

5 0 5 10 FT.

DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC.	SITE PLAN SITE 1077 FORT McCLELLAN, ALABAMA



TANK PIT AND PIPING TRENCH PROFILE

DRAWN BY: D. REEVES DATE: 9/5/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/482-0084	SITE PLAN SITE 1077 FORT McCLELLAN, ALABAMA
DWG ENV0000 REV 0		

ATTACHMENT 37

BUILDING OMS #10 (MOORE GEOLOGICAL CONSULTING)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: not-registered

Date of this Report: 9/15/94

Incident No.(If applicable)
UST _-_-_-_

Facility County: Calhoun
Facility Name: AL Army Nation Guard
Location: OMS #10
Fort McClellen
Address:
Anniston, AL

UST Owner: AL Army National Guard
Address: P.O. BOX 3711
Montgomery, AL 36109
Contact: Mr. W. B. Turk
Contact Telephone No.: 205-271-7427

Name of Contractor and/or Consultant used to close tanks:
Precision Tanktesters, Inc.-- Geologist: Donald B. Moore
Name of Laboratory used:
TTL, INc. Tuscaloosa, AL

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: two (2)

Number of tanks remaining at site: zero (0)
Closure Date: 8/30/94

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	8'x 21'	7'x 14'			
Tank Capacity	6000	4000			
Tank Age	7 yrs	7 yrs			
Date Tank Last Used	8/94	8/94			
Substance Stored	Diesel	Gasoline			
Type of Product Piping (pressurized/suction)	Suction	Suction			
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES XX NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit Yes (no water found)
   2. Boring or Monitor well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO XX If yes;
   1. The odor strength was (mild)(strong)(other, describe _____)
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO XX
   If yes, how was it handled?
   1. One time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO XX
   If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO XX
   If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks. (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: Clay; multi colors of laminated layers of ~~orange, gray, yellow, and tan clay.~~

i. Was the excavation backfilled? YES XX NO _____ If yes, provide the date. 9/5/94 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal N.A.

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____ _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____ _____
   2. What was the measured thickness of the free product?_____ _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____ _____ _____ _____

g. Specify the inert solid material used to fill the tank(s). _____ _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal Note: pumps were over excavation.

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES XX NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES XX NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench Yes (no water)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO XX If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO XX
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO XX If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO XX
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: Clay; yellowish orange to tan

j. Was the piping trench backfilled? YES XX NO _____
If yes, provide the date 9/5/94 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. Sixty (60) cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
A portion of the excavated soil is stored on plastic on site. Soil which checked out less than 100 ppm was returned to the pit.

d. Indicate method of soil disposal used or to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
   2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES XX NO _____
If no, describe how tank(s) were cleaned. _____
The tanks were fiberglass

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
less than 20 gallons each tank.

c. Indicate the final destination of the sludge and attach invoices or receipts. According to Jim McIntyre of Precision - Remaining fuel was pumped out by a small portable pump. Tanks were shipped with remaining fuel sludge for disposal to Southern Tank Salvage

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: DONALD B. MOORE
Company: MOORE GEOLOGICAL CONSULTING
Telephone Number: 1-205-928-1259

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: Donald B. Moore Date: 10/12/94

Name of Engineer or Geologist performing closure and completing Form: DONALD B. MOORE
Company: MOORE GEOLOGICAL CONSULTING
Telephone Number: 1-205-928-1259

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true to the best of my belief and knowledge.

Signature of Geologist or Engineer: Donald B. Moore Date: 10/12/94

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 those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: [illegible] Date 21 November 1994

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

FOR OFFICE USE ONLY

TO: Air Division FROM: UST Compliance Section

M E M O R A N D U M

January 28, 1991

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

Facility I.D. No.: not- registered

Date of this Report: 9/15/94

Facility County: Calhoun

UST Owner: AL Army National Guard

Facility Name: OMS # 10

UST Owner:

Location: Fort McClellen

Owner Address: P.O. Box 3711
Montgomery, AL

Address: Fort McClellen
Anniston, AL

Contact: Mr. W. B. Turk

Contact Telephone No.: 1-205-271-7427

Name of Consultant who performed calculations: Donald B. Moore

Consultants Phone Number: 1-205-928-1259

	a	ppm x	b	cyds x	.002 =	c	lbs VOC emissions
Sample 1		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 2		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 3		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 4		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 5		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 6		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 7		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 8		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 9		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 10		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 11	158	ppm x	20	cyds x	.002 =	6.32	lbs VOC emissions
Sample 12	58.4	ppm x	20	cyds x	.002 =	2.34	lbs VOC emissions
Sample 13	31.8	ppm x	20	cyds x	.002 =	1.27	lbs VOC emissions
Sample 14		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 15		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 16		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 17		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 18		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 19		ppm x		cyds x	.002 =		lbs VOC emissions
Sample 20		ppm x		cyds x	.002 =		lbs VOC emissions
		TOTAL POTENTIAL EMMISSIONS				9.93	lbs VOC emissions

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

MOORE GEOLOGICAL CONSULTING

104 SOUTH SECTION STREET FAIRHOPE, ALABAMA 36532 (205) 928-1259

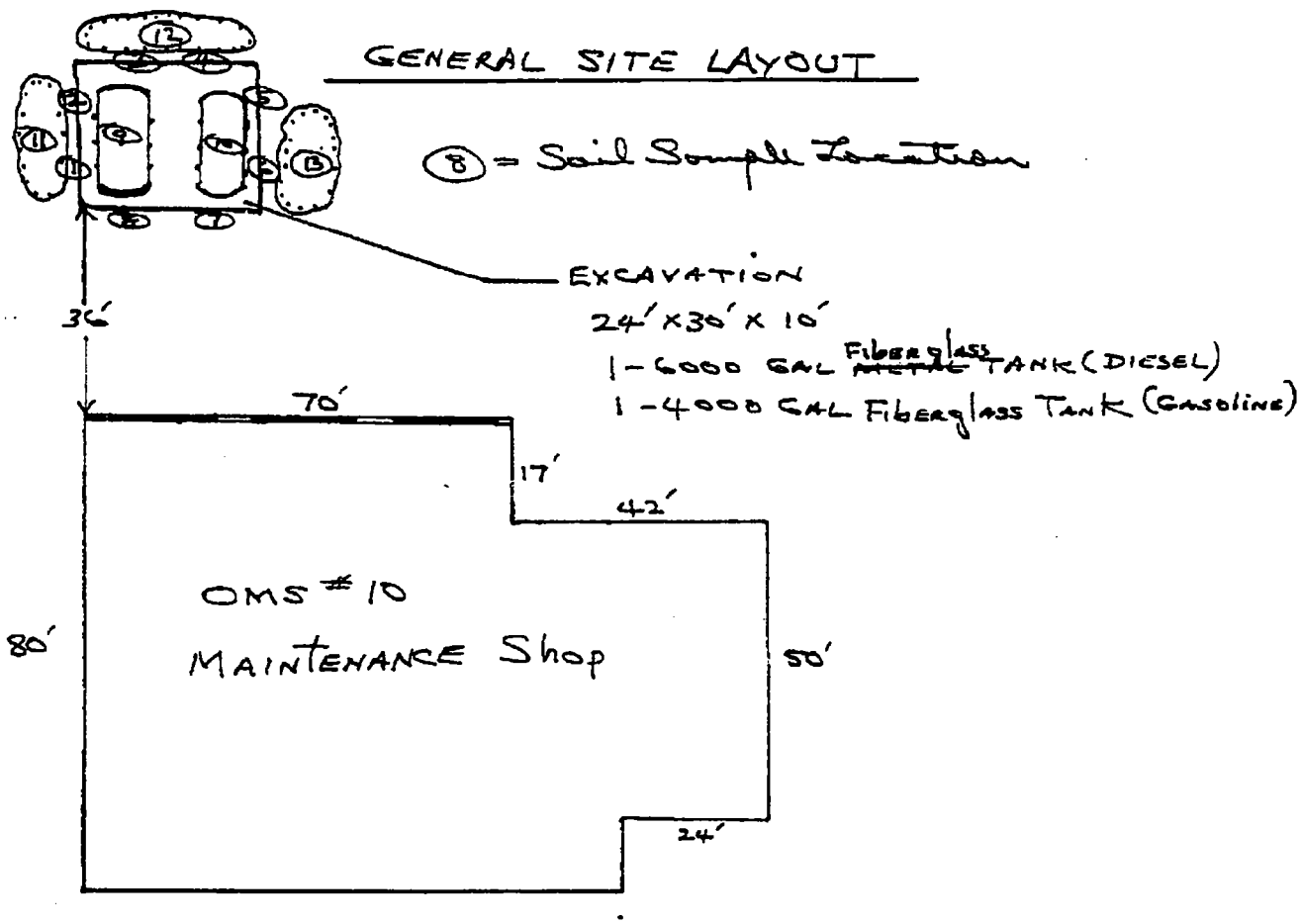
DONALD B. MOORE
Geologist

UST CLOSURE

SITE # NOT REGISTERED

Facility: Ala Army National Guard
OMS #10
Fort McClellen
Anniston, Al

GENERAL SITE LAYOUT



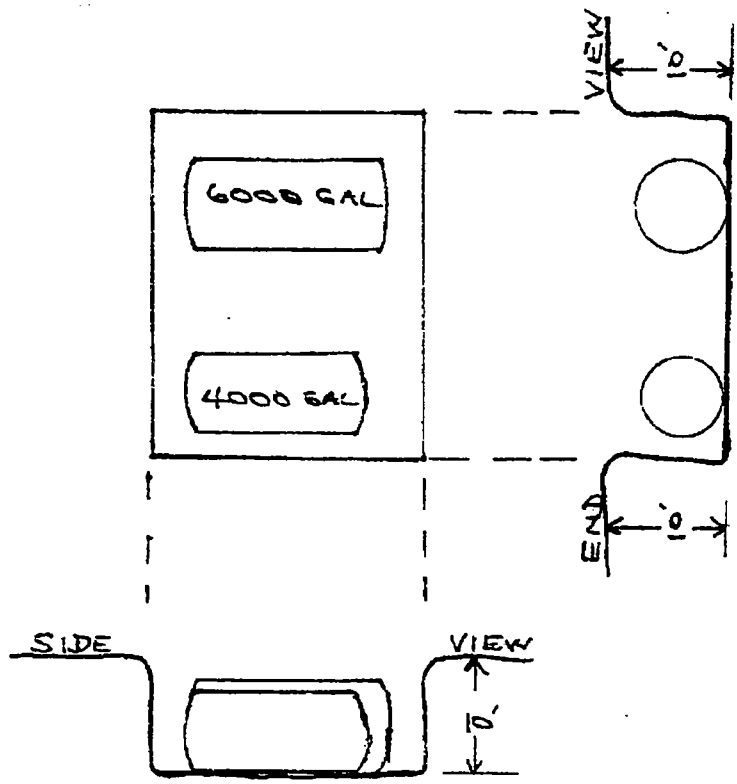
Samples were collected by Donald B. Moore on 8/30/94.
Sample containers were new 9 oz glass (garpac) sample jars with teflon lids.

UST CLOSURE

ALA ARMY NATIONAL GUARD

OMS # 10
FT. McCELLEN

SCALE: ONE SQUARE EQUALS 4 FEET



Jun 10 98 10:03a Harpse Speckner 1 013 687 1014 p.11

TTL, Inc. PRACTICING IN THE GEOSCIENCES

3516 Greensboro Avenue • P.O. Drawer 1128 • Tuscaloosa, Alabama 35403 • Telephone 205-345-0816 • FAX 205-345-0992

August 31, 1994

Mr. Donald B. Moore
10350 Turkey Creek Road
Northport, Alabama 35476

Dear Mr. Moore:

Attached are the results of the analyses on the samples received by TTL.

Sample Date:	August 30, 1994
Date Analyzed:	August 31, 1994
Sample Type:	Soil
Sampled By:	Client
Sample Site:	Army Nation Guard OMS #10 Anniston, Alabama (Ft. McClellen)

The samples were analyzed in accordance with Standard Methods for the Examination of Water and Wastewater, Sixteenth Edition, 1985, Method 503E, (IR).

If you or your associates have any questions or comments please do not hesitate to call.

Sincerely,
TTL, Inc.

Steve C. Martin
Chemist

SCM/tlc

Attachments

cc: Donald B. Moore
104 South Section Street
Fairhope, Alabama 36532

tph\moore.rpt-40

TTL, Inc. PRACTICING IN THE GEOSCIENCES

3516 Greensboro Avenue • P.O. Drawer 1128 • Tuscaloosa, Alabama 35403 • Telephone 205-345-0816 • FAX 205-345-0992

Client:	Donald B. Moore
Sample Date:	August 30, 1994
Date Analyzed:	August 31, 1994
Sample Type:	Soil
Sampled By:	Client
Sample Site:	Army National Guard OMS #10 Anniston, Alabama (Ft. McClellen)
TTL Lab Number:	940831.17-29

Sample ID	Total Petroleum Hydrocarbons, ppm
#1 - S	<10.0
#2 - S	<10.0
#3 - S	<10.0
#4 - S	<10.0
#5 - S	<10.0
#6 - S	<10.0
#7 - S	<10.0
#8 - S	<10.0
#9 - Bottom	<10.0
#10 - Bottom	<10.0
#11 - Pile	158
#12 - Pile	58.4
#13 - Pile	31.8

The samples were analyzed in accordance with Standard Methods for the Examination of Water and Wastewater, Sixteenth Edition, 1985, Method 503E, (IR).

tph\moore.rpt-41

TTL, INC.
Chain of Custody Form

KUSH

Sheet ____ of ____

Client: Donald B. Moore
Contact: Don Moore
Mailing Address: 10350 Turkey Ck Rd
City, State, Zip: Montgomery, al
Phone No.: 1-205-928/257
Date: 8/31/94
Sampled By: Donald B. Moore
Sample Site: Army National Guard OMS #10 Anniston, Al (Ft. McClellan)
TTL Job No.:

Sample Security Requirements

1. Condition of Contents:
2. Sealed for Shipping By:
3. Initial Contents Temp.: ____ °C Seal #
4. Sampling Status: Complete Expected Completion Date
5. Custody Seal Intact Upon Receipt by Laboratory: Yes No
6. Condition of Contents: good
7. Comments: on ice

Date	Time	Sample ID/Description	Sample Type	Sample Method		# of Containers	Preservatives	Analysis Parameters (Remarks)
			Solid, Etc.	Grab	Comp			
8/30/94	4:00 PM	#1-S		✓			ICE	Run for TPH
"		#2-S		✓				
"		#3-S		✓				
"		#4-S		✓				
"		#5-S		✓				
"		#6-S		✓				
"		#7-S		✓				
"		#8-S		✓				
"		#9 & 10 Bottom		✓				
"	5:30 PM	#11, #12, #13 Pile			✓			

CUSTODY TRANSFERS PRIOR TO SHIPPING

Relinquished by: (signed)	Received by: (signed)	Date	Time
1 Donald B. Moore		8/31/94	9:00 AM
2			
3			

SHIPPING DETAILS

Delivered to Shipper by:
Method of Shipment: Airbill #
Received By Lab: [illegible]
Date/Time 8-31-94 9:00

TTL, Inc. - Tuscaloosa Office/Laboratory: 3516 Greensboro Avenue, Tuscaloosa, Alabama 35403, Telephone (205) 345-0816, FAX (205) 345-0992
TTL, Inc. - Montgomery Office: 4250 Lomac Street, Mon[illegible]ry, Alabama 36106, Telephone (205) 244-0766, FAX (205) 244-6668

TTL, INC.

Chain of Custody Form

Sheet ____ of ____

Client: _____

Contact: _____

Mailing Address: _____

City, State, Zip: _____

Phone No.: _____

Date: _____

Sampled By: _____

Sample Site: _____

TTL Job No.: _____

Sample Security Requirements

1. Condition of Contents: _____
2. Sealed for Shipping By: _____
3. Initial Contents Temp.: _____ °C Seal # _____
4. Sampling Status: Complete Expected Completion Date _____
5. Custody Seal Intact Upon Receipt by Laboratory: Yes No
6. Condition of Contents: _____
7. Comments: _____

Date	Time	Sample ID/Description	Sample Type	Sample Method		# of Containers	Preservatives	Analysis Parameters (Remarks)
			Solid, Etc.	Grab	Comp			

CUSTODY TRANSFERS PRIOR TO SHIPPING

Relinquished by: (signed)	Received by: (signed)	Date	Time
1			
2			
3			

SHIPPING DETAILS

Delivered to Shipper by: _____

Method of Shipment: _____ Airbill # _____

Received By Lab: _____

Date/Time _____

TTL, Inc. - Tuscaloosa Office/Laboratory: 3516 Greensboro Avenue. Tuscaloosa, Alabama 35403, Telephone (205) 345-0816, FAX (205) 345-0992
TTL, Inc. - Montgomery Office: 4250 Lomac Street, Montr ', Alabama 36106, Telephone (205) 244-0766, FAX (205) 244-6668

CERTIFICATE OF PROPER DISPOSAL

SOUTHERN TANK SALVAGE

A SUBSIDIARY OF
RAYCO INC.
2089 Gunn Road
MONTGOMERY, ALABAMA 36117
(205) 272-5524

Date 8-31 19 94

Equipment Description PETROLEUM STORAGE TANKS No. 2 Size 1-6,000 1-4,000 FIBERGLAS

Transferred to RAYCO INC Transferred from TRECISION TANK TESTERS (ANNISTON,AL)

How Shipped DELIVERED Freight Charges $100.00

Remarks RAYCO INC HEREBY CERTIFIES THAT THE TANKS HAVE BEEN PROPERLY DISPOSED OF IN ACCORDANCE WITH API 1604 AND ADEMS GUIDELINES. THE TANKS CONTAINED NO SLUDGE. THE TANKS HAVE BEEN CUT UP INTO SMALL PIECES AND DELIVERED TO MONTG. CTY LANDFILL. THE FOREGOING IS TRUE TO THE BEST OF MY KNOWLEDGE.
RAY THIBEAULT PRESIDENT RAYCO INC. Ray Thibeault

Received by DON MIMS D.M. Transferred by TED

Date 8-31-94 Date 8-31-94

PS