

U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
CONTRACT DACA21-92-D-0002, DELIVERY ORDER #0101

CLOSURE REPORT

WASTE OIL TANK
BUILDING 4529, TANK 225
FACILITY ID NUMBER: 9-089090
FT. STEWART, GEORGIA

PREPARED BY:

ANDERSON COLUMBIA ENVIRONMENTAL, INC.

OCTOBER 1996

P.O. Box 1386, Lake City, Florida 32056-1386
Phone: (904) 755-1196 Fax: (904) 758-9050

US Army Corps of Engineers
Delivery Order 0101
Ft. Stewart, Hinesville, Georgia
Underground Storage Tank Removal and Closure

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Prepared by

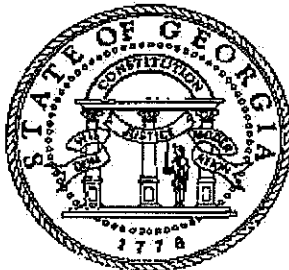
Anderson Columbia Enviornmental, Inc.

TAB 1

GEORGIA CLOSURE REPORT
FORMS

Georgia Department of Natural Resources

Environmental Protection Division
Underground Storage Tank Management Program
4244 International Parkeay, Suite 104, Atlanta, Georgia 30354
Lonice C. Barrett, Commissioner
Harold F. Reheis, Director
(404) 362-2687



CLOSURE REPORT FORM

Please complete the following form, include the listed items and check all of the boxes that apply. This form can be used as a Closure Report, provided documentation is attached when specified, to substantiate the information on this form, as outlined in the guidance document "So You Want to Close an UST?" (GUST-9). If one of the items does not apply to your tank closure, please provide a written explanation for the omission. If soil was excavated and disposed of, be sure to complete the applicable sections and attach the proper disposal documents.

1. Owner of UST System:

Name: US Army/Ft. Stewart
Phone Number: (912) 767-2010/1234
Company: US Army
Address: Cdr. 3rd Inf. Div. (Mech.), Attn: AFZP-DEV, Bldg. 1139
Ft. Stewart GA 31314-5000
(city) (state) (zip code)

I hereby certify that the information contained in this Closure Report and in all the attachments is true, accurate, and complete, and the Closure Report satisfies all criteria and requirements of Rule 391-3-15-.09 of the Georgia Rules for Underground Storage Tank Management.

Signature: _____ Date: _____

2. UST System Site Location:

Facility Name: Ft. Stewart, GA FAC 4529
Street Address: FAC 4529
Ft. Stewart GA 31314-5000
(city) (state) (zip code)
Facility ID# 9-089090

3. Contract Certification:

I hereby certify that I have performed or supervised the work detailed in this report, and have examined and am familiar with the information submitted in this and all attached documents. The submitted information is, to the best of knowledge, true, accurate, complete, and in accordance with the Georgia Rules for Underground Storage Tank Management, revised February, 1995.

Name: David F. Black
Address: PO Box 1386 Lake City, Florida 32056

Signature: David F. Black Date: 10/24/96

4. Site-specific Hydrogeology:

Depth to Groundwater >8' ft. if encountered

☐ Not Applicable

5. Site Map: Include the following items on an attached site map:

REFER TO TAB 5

- Tank Pit Area
- Sewer Lines (if present)
- Sample Locations (with sample numbers and depths)
- Scale 1 in = 10 ft
- Piping Trenches
- Water Lines
- North Arrow
- Dispensers
- Tanks with thier ID#s, corresponding to the Notification Form 7530-1

6. Tank Removal

- Date of Removal: 18-Jun-96
- Tank Information:

<u>Tank #</u>	<u>Tank Size (gallons)</u>	<u>Tank Contents</u>
225	1000	Waste Oil

(This information should correspond to the 7530-1 Form.)

- Attach Amended Notification Form 7530-1
- Describe Soil Sampling Procedures (and groundwater, if encountered):

REFER TO TAB 6

REFER TO TAB 6

7. Laboratory Analytical Data:

The following items must be included on attached copies

REFER TO TAB 7

- Laboratory Method
- Date of Sampling
- Date of Analysis
- Detection Limits
- Signed Chain of Custody
- Quality Control Data

8. Regulated Substance Released:

Check the applicable box(es).

☐ Gasoline ☐ Diesel ☐ Kerosene ☒ Used Oil ☐ Other _____

9. Excavation and Treatment/Disposal of Contaminated Soil:

- Attach Soil Disposal Manifests
- Volume of Soil Excavated (less than 6 ft from USTs and 4 ft from piping or dispenser islands)
21.81 Tons OR _____ yd³

☐ Not Applicable

10. Local Water Resources: Attach documentation only if Table B Soil Threshold Values and/or in-Stream Water Quality Standards are proposed for soil disposal, or No Further Action Required status. Check the applicable box(es).

☐ Drinking water supplies are NOT located in:
High or average groundwater pollution susceptibility area:*
Public water systems within 2.0 miles and
Non-public water systems within 0.5 mile

OR

Low groundwater pollution susceptibility area:*
Public water systems within 1.0 mile and
Non-public water systems within 0.25 mile

* As defined by the Groundwater Pollution Susceptibility Map of Georgia

☐ Streams, Lakes, and Ponds:
Distance to closest surface water body: _____ mile(s) or _____ feet

☒ Not Applicable

SEE TAB 7, 10

11. Conclusions or Recommendations: Choose one.

☐ Clean Closure, thus No Further Action is Required.

☐ Soil Excavated within the Limits Specified in Question 7 (GUST-9) and Transported to an EPD Treatment/Disposal Facility, Thus No Further Action is Required.

TAB 4

SITE PHOTOGRAPHS

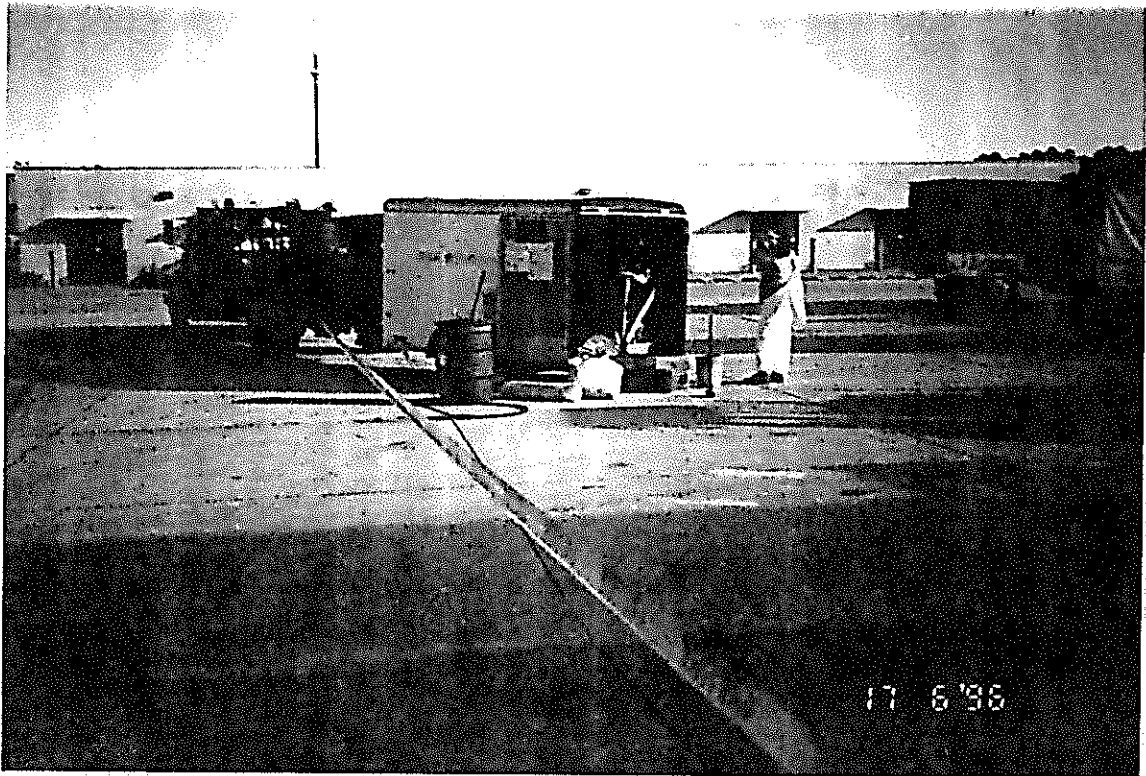


Photo 1. The site prior to breaking concrete.



Photo 2. A trench dug along side the in-place tank.

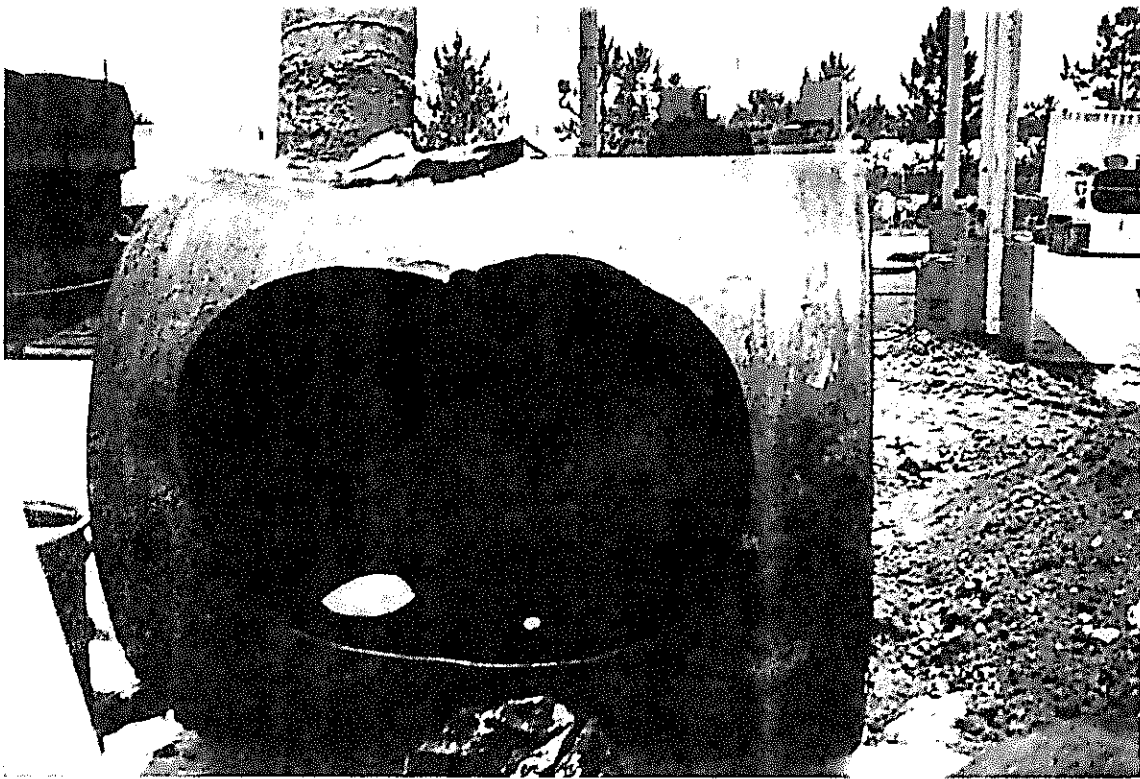
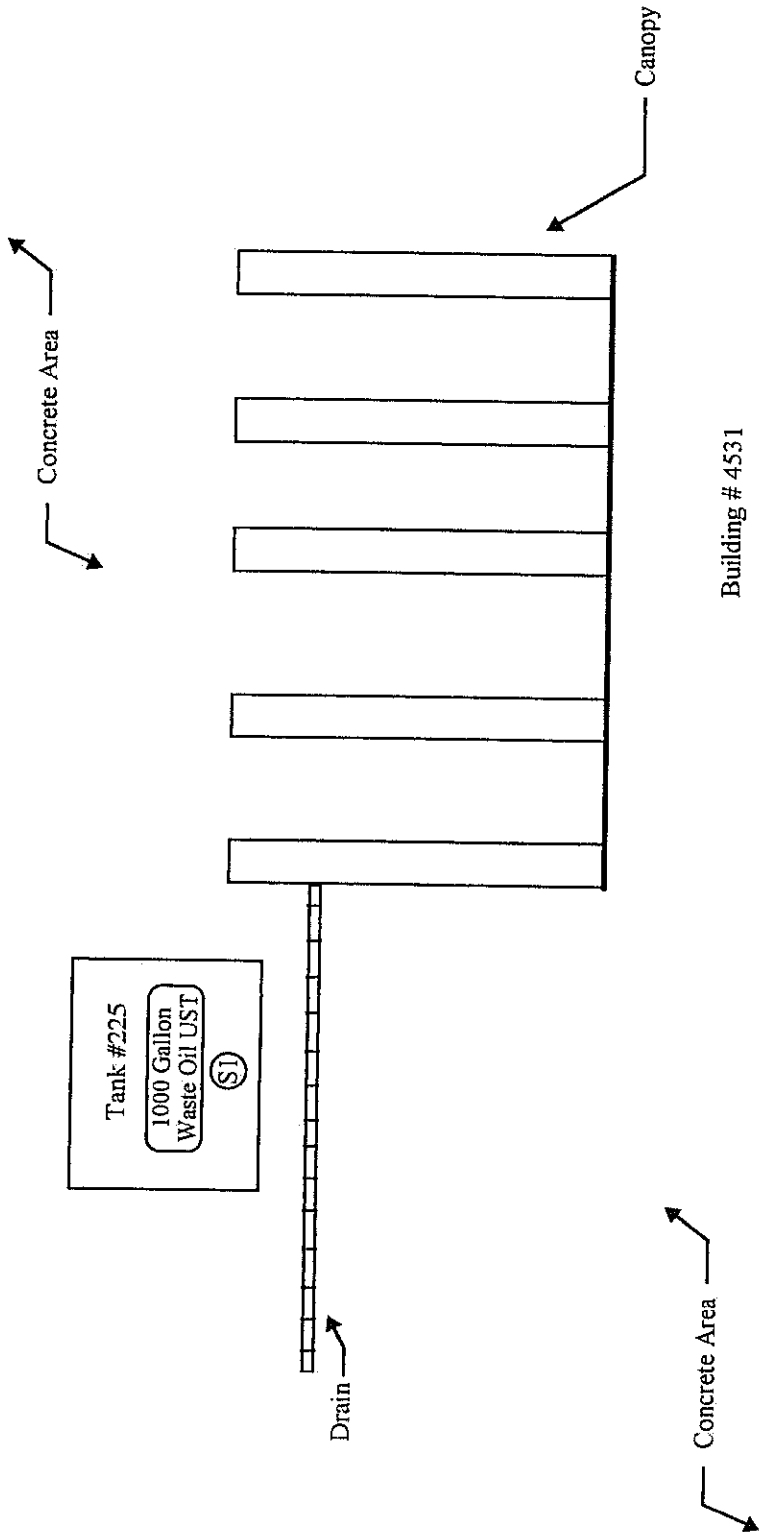
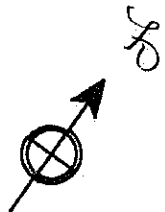


Photo 3. Tank 225 after cutting and cleaning.

TAB 5

SITE MAPS



LEGEND

⑤ Location of Closure Sample

ANDERSON COLUMBIA

Environmental, Inc.

P.O. BOX 1386, LAKE CITY, FLORIDA 32056-1386 PHONE: (904) 755-1196 FAX: (904) 758-9050

DR. AJR

DR. APP.

DATE: 25 June 96

SCALE: 1" = 10'

Sampling Map - Tank 225

Building 4529

Ft. Stewart, Georgia

Delivery Order 101

FIGURE NO.: 1

TAB 6

EPA FORM 7530-1
&
FIELD ASSESSMENT METHODS

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

state use only

Part I: Facility Data

FACILITY ID NUMBER: 9-089090

OWNER'S ID: 197

INITIAL DATE RECEIVED: 12/18/92

DATE AMENDED LAST: _____

NOTIFICATION TYPE: ☐ New ☒ Amended ☒ Closure

OWNERSHIP OF TANK (S):

NUMBER OF TANK (S): 1

Name : US ARMY/FT STEWART
Mailing Address : HQ 3RD INF DIV (M), AFZP-DEV/BLDG 1139
City : FT STEWART State: GEORGIA Zip Code: 31314-5000
Phone : 912-767-1071 County: LIBERTY

LOCATION OF TANK (S):

Name : FT STEWART/FAC 4531 4529
Street Address : FAC 4531 4529
City : FT STEWART State: GEORGIA Zip Code: 31314-5000
County : LIBERTY Latitude: _____ Longitude: _____
Phone : _____

OWNER TYPE: ☒ Federal ☐ State ☐ Local ☐ Commercial ☐ Private

FACILITY TYPE (S):

<input type="checkbox"/> Gas Station	<input type="checkbox"/> Local Government	<input type="checkbox"/> Contractor
<input type="checkbox"/> Petroleum Dist	<input type="checkbox"/> State Government	<input type="checkbox"/> Truck/Transport
<input type="checkbox"/> Air Tax (Airport)	<input type="checkbox"/> Fed Non-Military	<input type="checkbox"/> Utilities
<input type="checkbox"/> Aircraft Owner	<input checked="" type="checkbox"/> Fed Military	<input type="checkbox"/> Farm
<input type="checkbox"/> Auto Dealership	<input type="checkbox"/> Commercial	<input type="checkbox"/> Residential
<input type="checkbox"/> Railroad	<input type="checkbox"/> Industrial	<input type="checkbox"/> Other
<input type="checkbox"/> Hospital	<input type="checkbox"/> Educational	

CONTACT PERSON IN CHARGE OF TANK (S):

Name : US ARMY/FT STEWART Title: JOHN SPEAR/ENV ENG
Address : HQ 3RD INF DIV (M), AFZP-DEV/BLDG 1139
City : FT STEWART State: GEORGIA Zip Code: 31314-5000
Phone : 912-767-1071

**STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK**

Part I: Facility Data

FINANCIAL RESPONSIBILITY:

FACILITY ID NUMBER:

- ☐ I meet the financial responsibility requirements of SS12-13-9 Official Code of Georgia Annotated by providing or participating in one of the following financial assurance mechanisms.

Primary Financial Responsibility Mechanism (check one)

- | | |
|---|---|
| <input type="checkbox"/> GUST Trust Fund | <input type="checkbox"/> Insurance |
| <input type="checkbox"/> Surety Bond | <input type="checkbox"/> Guarantee |
| <input type="checkbox"/> Letter of Credit | <input type="checkbox"/> Trust Fund (other than GUST) |
| <input type="checkbox"/> Risk Retention Group | <input checked="" type="checkbox"/> Other Method |
| <input type="checkbox"/> Self-insured | <input type="checkbox"/> None |

If a primary coverage mechanism other than GUST Trust Fund is checked, provide the following information pursuant to GUST Rule 391-3-15-.12 (1) :

Financial Responsibility Provider (primary):

Name: US Army

Address: HQ 3rd Inf. Div. (M) AFZP-DEV/BLDG 1139 City: Ft. Stewart State: GA

Mechanism Id Number: _____

Mechanism Anniversary Date: _____

Deductible Financial Responsibility, if any: (check one)

Note: If your primary Financial Responsibility Mechanism is provided through participation in the GUST Trust Fund by payment of Environmental Assurance Fees, as required under GUST Rule 391-3-15-.13, you must also check one of the following boxes indicating how coverage for the GUST Trust Fund \$10,000 deductible is being provided.

If your Financial Responsibility Mechanism is other than GUST Trust Fund and it has a deductible, you must also check one of the following boxes indicating how coverage for the deductible is being provided.

- | | |
|---|---|
| <input type="checkbox"/> Surety Bond | <input type="checkbox"/> Insurance |
| <input type="checkbox"/> Letter of Credit | <input type="checkbox"/> Guarantee |
| <input type="checkbox"/> Risk Retention Group | <input type="checkbox"/> Trust Fund (other than GUST) |
| <input type="checkbox"/> Self-insured | <input type="checkbox"/> Other Method |

Provide the name and address of Financial Responsibility Provider for Deductible pursuant to GUST Rule 391-15-.12 (1) :

Financial Responsibility Provider (deductible):

Name: _____

Address: _____ City: _____ State: _____

Mechanism Id Number: _____

Mechanism Anniversary Date: _____

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part II: Tank Data

FACILITY ID	9-089090				
TANK ID	225				
Status of Tank					
Currently in Use	X				
Temp. Out of Use					
Perm. Out of Use	X				
Date of Installation	1-Jan-85				
Age	11				
Est. Total Capacity	10000				
MATERIAL OF CONSTRUCTION					
Asphalt or Bare Steel					
Cath. Protected Steel					
Epoxy Coated Steel					
Composite					
Fiberglass Reinf. Plas.	x				
Lined Interior					
Double Walled					
Poly. Tank Jacket					
Concrete					
Excavation Liner					
Unknown					
Other, Explanation					
Date Tank Repaired					
PIPING MATERIAL					
Bare Steel					
Galvanized Steel	x				
Fiberglass					
Copper					
Cathodically Protected					
Double Walled					
Secondary Containment					
Unknown					
Other, Explanation					
Date Piping Installed					
Piping Type					
Suction: No Valve					
Suction: Valve					
Pressure					
Gravity Fed					
Date Piping Repaired					
Substance Stored in Tank					
Gasoline					
Diesel					
Gasohol					
Kerosene					
Heating Oil					
Used Oil	x				
Propane					
Empty					
Other, Explanation					

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part II: Tank Data

FACILITY ID	9-089090										
TANK ID	225										
Substance Stored in Tank											
Hazardous Substance											
CERCLA Name											
CAS Number											
Mixture											
Mixture, Specification											
Out of Use/Chg. Ser.	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	
Est. Date Last Used	5/96	5/96									
Est. Date Closed	6/20/96	6/20/96									
Removed from Ground	X	X									
Closed in Ground											
Filled with Iner. Mat.											
Change in Service											
Site Assessment Compl.											
Leak Detected											
Installation											
Certified by Manufac.											
Certified by Imple. Agn.											
Inspected by Engineer											
Checklists Completed											
Another Allowed Method											
Method Description											
Certified by Imple. Agn.											
Inspected by Engineer											
Checklists Completed											
Another Allowed Method											
Method Description											
Release Detection	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	
Tank Tightness Testing											
Inventory Controls											
SIR											
Automatic Tank Guaging											
Inter. Mon./Double Wall											
Groundwater Monitoring											
Manual Tank Guaging											
Vapor Monitoring											
Inter. Mon./Sec. Cont.											
Auto. Line Leak Detect.											
Line Tightness Testing											
Other Method											
Other Description											
Spill and Overfill											
Date Overfill Device											
Date Spill Device											
Installer Certification											
Name											
Position											
Company											
Date											

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part III: Certifications

OATH OF

INSTALLATION: I certify the information concerning installation of the UST system, release detection, and spill/overflow protection specified in Part II-Tank Data is true to the best of my belief and knowledge.

Installer:

Company

Company Address

Authorized Representative

Signature

Date

Title

Telephone Number (include Area Code)

CERTIFICATION: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Owner:

JOHN H. SPEARS

Owner Name

Chief, Environmental Branch

Title

Owner's Signature

Date

TAB 6

FIELD ASSESSMENT METHODS

SOIL SAMPLES

Soil samples for analytical testing were collected by Anderson Columbia Environmental, Inc. (ACE) personnel two (2) feet below both end of the excavated tanks and from the side walls of the excavation. Soil samples were collected into precleaned, labeled laboratory sample bottles and immediately placed on ice. The samples were shipped under Chain of Custody to the Corps of Engineers contract laboratory, Ecosys Laboratory Services.

Soil samples for field screening were collected by ACE personnel from each side and bottom of the tank pit. Soil samples were collected at various intervals and soil vapors were withdrawn for volatile organic compounds (VOCs) with a Heath PORTA-FID II, Model No. 8000 Flame Ionization Detector (FID) fitted with a methane filter. Calibration was performed prior to field sampling with a 100 ppm methane/air mixture.

FID readings of soil samples were collected by filling a clean glass jar one-half full with soil, capping the jar with clean aluminum foil and allowing conditions in the jar to equilibrate for approximately 60 minutes. The tip of the FID was then carefully inserted through the aluminum foil and an air sample from the jar's headspace was analyzed for total VOCs.

GROUNDWATER SAMPLES

Groundwater samples were collected from the bottom of the tank pits only when groundwater invaded the excavation. Groundwater samples were collected from the excavation site with a disposable Teflon bailer and immediately placed in precleaned, labeled laboratory sample containers. Following collection, samples were immediately placed in a sample cooler with ice and were delivered, under Chain of Custody, to Ecosys Laboratory Services.

TAB 7

ANALYTICAL DATA

TAB 7 - Laboratory Analytical Data

Delivery Order #101
Fort Stewart, Georgia
Tank Number 225
Building Number 4529

<i>Method</i> Sample ID <i>unit</i>	9073 TRPH ppm	9071 Oil & Grease ppm	8020 BTEX ppm	8100 Semi-Volatile Organics Pesticide/ PCB's (ppb)
225-T1-S1		22200	20721	27430
bdl= below method detection limits				

**Fort Stewart is in an area of 'High or Average Groundwater pollution susceptibility' and these tanks are within 1000 feet of a public water well (but greater than 500 feet from the well). These analytical results should be compared with Table A, >500 feet to withdrawal point on the sheet that follows.

21.81 tons of petroleum contaminated soil was removed from the Tank 225 pit.

Complete Data Package Follows

Table A

Petroleum Constituents and Soil Threshold Levels^a

At UST corrective action sites where withdrawal points for public and non-public water supplies exist within distances defined in GUST Rule 391-3-15-.09(3):

CONSTITUENT	AVERAGE OR HIGHER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^b (Where public water supplies exist within 2.0 miles and/or non-public supplies exist within 0.5 miles)		LOWER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^c (Where public water supplies exist within 1.0 mile and/or non-public supplies exist within 0.25 mile)	
	≤500 feet to withdrawal point	>500 feet to withdrawal point	≤500 feet to withdrawal point	>500 feet to withdrawal point
VOLATILE ORGANIC COMPOUNDS				
Benzene ^d	0.005 mg/kg ^d	0.008 mg/kg	0.005 mg/kg ^d	0.71 mg/kg
Toluene	0.400 mg/kg	6.00 mg/kg	0.400 mg/kg	500.00 mg/kg
Ethylbenzene	0.370 mg/kg	10.00 mg/kg	0.500 mg/kg	140.00 mg/kg
Xylenes (total)	20.00 mg/kg	700.00 mg/kg	27.00 mg/kg	700.00 mg/kg
POLYNUCLEAR AROMATIC HYDROCARBONS				
Acenaphthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Anthracene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benz(a)anthracene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benzo(a)pyrene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(b)fluoranthene	0.820 mg/kg ^{d,f}	N/A ^e	N/A ^e	N/A ^e
Benzo(g,h,i)perylene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benzo(k)fluoranthene	1.60 mg/kg ^{d,f}	N/A ^e	N/A ^e	N/A ^e
Chrysene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Dibenz(a,h)anthracene	1.50 mg/kg ^{d,f}	N/A ^e	N/A ^e	N/A ^e
Fluoranthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Fluorene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Indeno(1,2,3-c,d)pyrene	0.660 mg/kg ^d	N/A ^e	0.660 mg/kg ^d	N/A ^e
Naphthalene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Phenanthrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Pyrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e

- a - Based on worst-case assumptions for one-dimensional vadose zone and groundwater contaminant fate and transport models.
- b - Based on an assumed distance of 0.5 feet between contaminated soils and the water table.
- c - Based on an assumed distance of 5.0 feet between contaminated soils and the water table.
- d - Estimated Quantitation Limit. The health-based threshold level is less than the laboratory method limit of detection.
- e - Not applicable. The health-based threshold level exceeds the expected soil concentration under free product condition.
- f - In order to protect surface waters, the soil threshold level in Table B may supersede that found in Table A.
- g - In the presence of other petroleum contaminants in concentrations exceeding 1.0 mg/kg, the Estimated Quantitation Limit, and hence the soil threshold level, may be substantially greater, as approved by EPD.

Table B

Petroleum Constituents and Soil Threshold^a Levels

... other UST corrective action sites where withdrawal points for public and non-public water supplies do not exist within distances defined in GUST Rule 391-3-15-.09(3):

CONSTITUENT	AVERAGE OR HIGHER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^b		LOWER GROUNDWATER POLLUTION SUSCEPTIBILITY AREA ^c	
	≤500 feet to sur- face water body	>500 feet to sur- face water body	≤500 feet to sur- face water body	>500 feet to sur- face water body
VOLATILE ORGANIC COMPOUNDS				
Benzene ^f	0.017 mg/kg	0.120 mg/kg	0.020 mg/kg	11.30 mg/kg
Toluene	115.00 mg/kg	500.00 mg/kg	135.00 mg/kg	500.00 mg/kg
Ethylbenzene	18.00 mg/kg	140.00 mg/kg	28.00 mg/kg	140.00 mg/kg
Xylenes (total)	700.00 mg/kg	700.00 mg/kg	700.00 mg/kg	700.00 mg/kg
POLYNUCLEAR AROMATIC HYDROCARBONS				
Acenaphthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Anthracene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benz(a)anthracene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(a)pyrene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(b)fluoranthene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Benzo(g,h,i)perylene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Benzo(k)fluoranthene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Chrysene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Dibenz(a,h)anthracene	0.660 mg/kg ^d	N/A ^e	N/A ^e	N/A ^e
Fluoranthene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Fluorene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Indeno(1,2,3-c,d)pyrene	0.660 mg/kg ^d	N/A ^e	0.660 mg/kg ^d	N/A ^e
Naphthalene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Phenanthrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e
Pyrene	N/A ^e	N/A ^e	N/A ^e	N/A ^e

^a based on worst-case assumptions for one-dimensional vadose zone and groundwater contaminant fate and transport models.

^b based on an assumed distance of 0.5 feet between contaminated soils and the water table.

^c based on an assumed distance of 5.0 feet between contaminated soils and the water table.

^d - Estimated Quantitation Limit. The health-based threshold level is less than the laboratory method limit of detection.

^e - Not applicable. The health-based threshold level exceeds the expected soil concentration under free product condition.

^f - In the presence of other petroleum contaminants in concentrations exceeding 1.0 mg/kg, the Estimated Quantitation Limit, and hence the soil threshold level, may be substantially greater, as approved by EPD.

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: Commander, Savannah District
US Army Corps of Engineers
ATTN: CESAS-PM-H
Mr. Brent Rose
P.O. Box 889
Savannah, GA 31402-0889

FROM: Director (CESAD-ET-EL)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Ft. Stewart

REQN NO: PMS-96-109
W.O. NO: 7996

SUBJECT: Analytical Testing Results

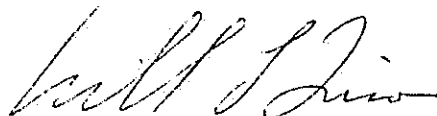
1. Enclosed is our report of analytical test results and chain of custody forms for samples collected on 18 June 1996 from Ft. Stewart.
2. If you have any questions, please call Mr. Blaise Willis at 770-919-5295 or me at 770-919-3990.

SUBMITTED BY:

SIGNATURE

DATE:

WILLIAM L. TISON, P. E.
Director, SAD Laboratory



16 July 1996

South Atlantic Division Laboratory
U. S. Army Corps of Engineers
611 South Cobb Drive
Marietta, Georgia 30060-3112

District - SAVANNAH FT. STEWART ARMY AF
Date Received - 96/06/24 Requisition - PMS-96-109
Date Reported - 96/07/09 09:00:26 Work Order - 7996 Job Number - 3962

Lab #	Field ID	Date Sampled	Time Sampled
29337	#224-T1-S1	96/06/18	09:45

Test Performed	Result	Units	Tested By	Test Date
TOTAL SOLIDS, % OF WET	86.90	%	SPA	96/06/29
AROMATIC VOLATILE ORGANICS	*		SPA	96/06/28
PAH'S	*		SPA	96/06/29
OIL AND GREASE (INFRARED)	34.6	MG/KG	SPA	96/06/26

*NOTE: See Attached

Sampled by District Personnel

Checked by: BT

Signed by:

Blaise Willis

Blaise Willis
Chemist

Lab # Field ID

9338 #225-T1-S1

Date Sampled

96/06/18

Time Sampled

12:25

Test Performed -----	Result -----	Units -----	Tested By -----	Test Date -----
TOTAL SOLIDS, % OF WET	91.00	%	SPA	96/06/29
AROMATIC VOLATILE ORGANICS	*		SPA	96/06/28
PAH'S	*		SPA	96/06/29
OIL AND GREASE (INFRARED)	22200.0	MG/KG	SPA	96/06/26

*NOTE: See Attached

Sampled by District Personnel

Checked by: BT

Signed by:

Blaise Willis

Blaise Willis
Chemist

heet 2 of 3

Lab # Field ID

19339 TRIP BLANK

Date Sampled

96/06/18

Time Sampled

00:00

Test Performed

AROMATIC VOLATILE ORGANICS

Result	Units	Tested By	Test Date
-----	-----	-----	-----
*		SPA	96/06/26

*NOTE: See Attached

Sampled by District Personnel

Checked by: BT

Signed by:

Blaise Willis
Blaise Willis
Chemist

Page 3 of 3

Page 7 of 7

[illegible]

SOUTH ATLANTIC DIVISION LABORATORY
SAMPLE RECEIVING AND COOLER RECEIPT DATA SHEET
CHEMICAL SECTION - Sample Log-In

DATE: 6/24/96

Number of coolers 1 Returned cooler(s) to: J.H. Carr

PROJECT: FL Stewart W.O.# _____ JOB# 3962

Coolers(s) opened by (print name) M. Self (sign) M Self

1. Did cooler come with shipping slip?

If yes, enter Tracking Number here 9932278974

☒ Yes ☐ no

2. Were custody seals on out side of cooler?

How many? _____ Date on seal(s) _____ Name on seal(s) _____

☐ yes ☒ no

3. Were custody seals unbroken upon receipt?

☐ yes ☐ no NA

4. Did you screen sample(s) for "Radioactivity"?

☒ yes ☐ no

5. Were custody papers filled out properly? (ink, signed, etc.,)

☒ yes ☐ no

6. Temperature of sample(s) upon receipt: 30°C *

7. Describe cooler packing: Bubble Wrap

8. Did all sample containers arrive unbroken?

☒ yes ☐ no

9. Were the sample containers sealed in separate plastic bags?

☒ yes ☐ no

10. Were labels on containers in good condition and agree with Custody paper?

☒ yes ☐ no

11. Were correct containers used for the test(s) indicated?

☒ yes ☐ no

12. Were correct preservatives added to sample(s)?

☐ yes ☐ no ☒ unk

13. Was a sufficient amount of sample sent for test?

☒ yes ☐ no

14. Were bubbles absent in Volatile sample(s)?

If no, list field ID# _____

☒ yes ☐ no ☐ N/A

15. Numbers of days from sample date, samples received in Lab 6

16. Number of Samples: 3 Sample Type: ☒ soil ☐ water ☐ other _____

SAMPLE ANALYSIS PERFORMED BY: SpA TAT 7 day

COMMENTS: *Temp. well above required 2-4°C

17. Did you sign custody papers in the appropriate place?

☒ yes ☐ no

LAB NUMBER(S): 29337-39

SIGNATURE: M. Self

**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 29337 #224-T1-S1
FT. STEWART

Lab Number: 96-A037722

Sampler: BOBBI THORN

Date Collected: 6/18/96

Date Received: 6/25/96

Time Collected: 9:45

Time Received: 8:30

Sample type: Soil

Percent solids: 86.9

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Napthalene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Acenaphthene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Anthracene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Fluoranthene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Fluorene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Pyrene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Benzo(a)anthracene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Benzo(a)pyrene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Benzo(b)fluoranthene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Benzo(k)fluoranthene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Chrysene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Dibenzo(a,h)anthracene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Indeno(1,2,3-cd)pyrene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Acenaphthylene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Benzo(g,h,i)perylene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
Phenanthrene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
1-Methylnapthalene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
2-Methylnapthalene	380.	U	1	ug/kg	6/29/96	9:27	K.Walkup	8100
PAH extraction	Completed			ug/kg	6/26/96	14:29	C.Bardwell	3550

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Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 29337 #224-T1-S1
FT. STEWART

Lab Number: 96-A037722

Sampler: BOBBI THORN

Date Collected: 6/18/96

Date Received: 6/25/96

Time Collected: 9:45

Time Received: 8:30

Sample type: Soil

UNDERGROUND STORAGE TANK RESULTS

Analyte	Result	Units	PQL	Dil	Date	Time	Analyst	Method
				Factor				
Benzene	< 0.115	mg/kg	0.115	1	6/28/96	0:43	Holingwrth	8020
Toluene	< 0.115	mg/kg	0.115	1	6/28/96	0:43	Holingwrth	8020
Ethylbenzene	< 0.115	mg/kg	0.115	1	6/28/96	0:43	Holingwrth	8020
Xylenes, total	< 0.115	mg/kg	0.115	1	6/28/96	0:43	Holingwrth	8020
Oil and Grease	34.6	mg/kg	11.5	1	6/26/96	16:00	M.Himelick	9071

Sample Extraction Data

PAH's Extracted 6/26/96 Wt extracted: 30.0 gm Extract Volume: 1.00 ml

**** QUALITY CONTROL DATA ******Surrogate Recoveries**

Surrogate	% Recovery	Target Range
GRO Surrogate, soil	109.	50 - 150
PAH Surrogate	59.	39 - 147



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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Lab Number: 96-A037722

Sample ID: 29337 #224-T1-S1

Date Collected: 6/18/96

Project: CALL #247

Time Collected: 9:45

Project Name:

Date Received: 6/25/96

Sampler: BOBBI THORN

Time Received: 8:30

State Certification:

Sample Type: Soil

Site I.D.:

** QUALITY CONTROL DATA **

Surrogate Recoveries

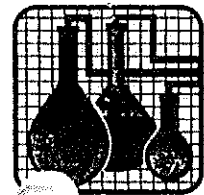
Surrogate	% Recovery	Target Range
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Report Approved By:

Theodore J. Duello

Report Date: 7/ 2/96

Theodore J. Duello, Ph.D.
Michael H. Dunn, M.S.
Danny B. Hale, M.S.

**SPECIALIZED ASSAYS, INC.**

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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 29338 #225-T1-S1
FT. STEWART

Lab Number: 96-A037723

Sampler: BOBBI THORN

Date Collected: 6/18/96

Date Received: 6/25/96

Time Collected: 12:25

Time Received: 8:30

Sample type: Soil

Percent solids: 91.0

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Napthalene	2300		2	ug/kg	6/29/96	10:03	K.Walkup	8100
Acenaphthene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Anthracene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Fluoranthene	846.	J	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Fluorene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Pyrene	1650		2	ug/kg	6/29/96	10:03	K.Walkup	8100
Benzo (a)anthracene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Benzo (a)pyrene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Benzo (b)fluoranthene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Benzo (k)fluoranthene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Chrysene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Dibenzo (a,h)anthracene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Indeno (1,2,3-cd)pyrene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Acenaphthylene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Benzo (g,h,i)perylene	1460	U	2	ug/kg	6/29/96	10:03	K.Walkup	8100
Phenanthrene	4650		2	ug/kg	6/29/96	10:03	K.Walkup	8100
1-Methylnapthalene	7330		2	ug/kg	6/29/96	10:03	K.Walkup	8100
2-Methylnapthalene	11500		2	ug/kg	6/29/96	10:03	K.Walkup	8100
PAH extraction	Completed			ug/kg	6/26/96	14:29	C.Bardwell	3550

**SPECIALIZED ASSAYS, INC.**

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Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 29338 #225-T1-S1
FT. STEWART

Lab Number: 96-A037723

Sampler: BOBBI THORN

Date Collected: 6/18/96

Date Received: 6/25/96

Time Collected: 12:25

Time Received: 8:30

Sample type: Soil

UNDERGROUND STORAGE TANK RESULTS

Analyte	Result	Units	PQL	Dil	Date	Time	Analyst	Method
				Factor				
Benzene	0.231	mg/kg	0.220	2	6/28/96	1:14	Holingwrth	8020
Toluene	2.31	mg/kg	0.220	2	6/28/96	1:14	Holingwrth	8020
Ethylbenzene	1.88	mg/kg	0.220	2	6/28/96	1:14	Holingwrth	8020
Xylenes, total	16.3	mg/kg	0.220	2	6/28/96	1:14	Holingwrth	8020
Oil and Grease	22200	mg/kg	11.0	1	6/26/96	16:00	M.Himelick	9071

Sample Extraction Data

PAH's Extracted 6/26/96 Wt extracted: 30.0 gm Extract Volume: 2.00 ml

**** QUALITY CONTROL DATA ******Surrogate Recoveries**

Surrogate	% Recovery	Target Range
GRD Surrogate, soil	76.	50 - 150
PAH Surrogate	41.	39 - 147



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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Lab Number: 96-A037723

Sample ID: 29338 #225-T1-S1

Date Collected: 6/18/96

Project: CALL #247

Time Collected: 12:25

Project Name:

Date Received: 6/25/96

Sampler: BOBBI THORN

Time Received: 8:30

State Certification:

Sample Type: Soil

Site I.D.:

== QUALITY CONTROL DATA ==

Surrogate Recoveries

Surrogate	% Recovery	Target Range
-----------	------------	--------------

Report Approved By:

Theodore J. Duello

Report Date: 7/ 2/96

Theodore J. Duello, Ph.D.
Michael H. Dunn, M.S.
Danny B. Hale, M.S.

**SPECIALIZED ASSAYS, INC.**

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Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 29339 TRIP BLANK
FT. STEWART

Lab Number: 96-A037724

Date Collected: 6/18/96

Date Received: 6/25/96

Time Collected:

Time Received: 8:30

Sampler: BOBBI THORN

Sample type: Water

UNDERGROUND STORAGE TANK PARAMETERS

Allyte	Result	Units	Quan Limit	Dil Factor	Date	Time	Analyst	Method
Benzene	< 0.001	mg/l	0.001	1	6/26/96	23:30	J. James	8020
Toluene	< 0.001	mg/l	0.001	1	6/26/96	23:30	J. James	8020
Ethylbenzene	< 0.001	mg/l	0.001	1	6/26/96	23:30	J. James	8020
Xylenes, total	< 0.001	mg/l	0.001	1	6/26/96	23:30	J. James	8020

**** QUALITY CONTROL DATA ******Surrogate Recoveries**

Surrogate	% Recovery	Target Range
BTEX/GRO Surrogate	98.	50 - 150

Report Approved By:

Theodore J. Duello

Report Date: 7/ 2/96

Theodore J. Duello, Ph.D.
Michael H. Dunn, M.S.
Danny B. Hale, M.S.

**SPECIALIZED ASSAYS, INC.**

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 96-A037725

Sample I.D.: METHOD BLANK

Lab Project: 46688

Project: CALL #247

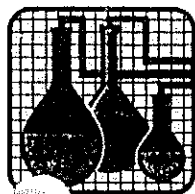
Date Received: 6/25/96

**** UST Spike/Duplicate Results ****

Compound	%Recovery	Target Range	Precision RPD	Target Range
Benzene QC	106.	70 - 130	0.	0 - 20
Toluene QC	100.	70 - 130	3.	0 - 20
1,2,4-trimethyl benzene QC	87.	70 - 130	4.	0 - 20
Oil and Grease	87.	70 - 130	4.	0 - 20
Oil and Grease	102.	75 - 125	3.	0 - 25

**** Organics Spike/Duplicate Results ****

Compound	%Recovery	Target Range	Precision RPD	Target Range
Acenaphthene	85.0	10 - 124	See note	0 - 20
Acenaphthylene	81.0	10 - 139	See note	0 - 20
Anthracene	98.0	10 - 126	See note	0 - 20
Benzo (a) anthracene	99.0	12 - 135	See note	0 - 20
Benzo (a) pyrene	98.0	10 - 128	See note	0 - 20
Benzo (b) fluoranthene	110.	6 - 150	See note	0 - 20
Benzo (ghi) perylene	100.	10 - 116	See note	0 - 20
Benzo (k) fluoranthene	110.	10 - 159	See note	0 - 20
Chrysene	105.	10 - 199	See note	0 - 20
Dibenzo (ah) anthracene	92.0	10 - 110	See note	0 - 20
Fluoranthene	98.0	14 - 123	See note	0 - 20
Fluorene	95.0	10 - 142	See note	0 - 20
Indeno (1,2,3-cd) pyrene	92.0	10 - 116	See note	0 - 20
Naphthalene	76.0	10 - 122	See note	0 - 20
Phenanthrene	98.0	10 - 155	See note	0 - 20
Pyrene	102.	10 - 140	See note	0 - 20



SPECIALIZED ASSAYS, INC.

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Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 96-A037725

Sample I.D.: METHOD BLANK

Lab Project: 46688

Project: CALL #247

Date Received: 6/25/96

** Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Napthalene	330.	U	ug/kg	8100
Acenaphthene	330.	U	ug/kg	8100
Anthracene	330.	U	ug/kg	8100
Fluoranthene	330.	U	ug/kg	8100
Fluorene	330.	U	ug/kg	8100
Pyrene	330.	U	ug/kg	8100
Benzo(a)anthracene	330.	U	ug/kg	8100
Benzo(a)pyrene	330.	U	ug/kg	8100
Benzo(b)fluoranthene	330.	U	ug/kg	8100
Benzo(k)fluoranthene	330.	U	ug/kg	8100
Chrysene	330.	U	ug/kg	8100
Dibenzo(a,h)anthracene	330.	U	ug/kg	8100
Indeno(1,2,3-cd)pyrene	330.	U	ug/kg	8100
Acenaphthylene	330.	U	ug/kg	8100
Benzo(g,h,i)perylene	330.	U	ug/kg	8100
Phenanthrene	330.	U	ug/kg	8100
1-Methylnapthalene	330.	U	ug/kg	8100
2-Methylnapthalene	330.	U	ug/kg	8100

NOTE:

MS and MSD were diluted
out due to sample matrix.
LCS was within acceptable
limits and is reported.

Theodore J. Daulton



SPECIALIZED ASSAYS, INC.

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Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 96-A037726

Sample I.D.:

Lab Project: 46688

Project: CALL #247

Date Received: 6/25/96

** UST Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
Benzene	100.	70 - 130	0.	0 - 20
Toluene	100.	70 - 130	0.	0 - 20
yl benzene	96.	70 - 130	0.	0 - 20
ene	101.	70 - 130	1.	0 - 20

Chain of Custody: Design

DATE 7/1/12

D

mt. CTE

TAB 9

MANIFESTS

225

REYNOLDS CONSTRUCTION COMPANY

Highway 84 • P. O. Box 749

Ludowici, Georgia 31316

Office (912) 368-7488 • Plant (912) 876-8085

Date	19	Load No.	3
Customer	Triple "R" Mgmt.	Description	PCS soil
Project Number	BRR 104		
Location	Ft. Stewart	County	Liberty

43620 Net

23000 lb Net tare

00 lb Tare

23000 lb+ Gross

11:10 AM AU 12 96

66620 lb Net

00 lb Tare

66620 lb+ Gross

11:06 AM AU 12 96

[Signature]

Signature of Weigher

TONS: 21.81

TOTAL TONS: 63.50

Hendrix

TRUCKER

Robert Stroll

DRIVER

33

TRUCK NO.

TICKET NO. 58820

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

NON-HAZARDOUS WASTE MANIFEST		Manifest Document No. 00022	1. Page 1 of 1		
2. Generator's Name and Mailing Address Ft. Stewart Hinesville, GA 31313					
3. Generator's Phone (912) 234-6579					
4. Transporter 1 Company Name Hendricks Hauling					
5. Transporter 2 Company Name					
6. Designated Facility Name and Site Address Triple R Management, Inc. c/o Reynolds Constr Co. Rt. 84 Ludowici, GA 31316			A. Transporter's Phone B. Transporter's Phone 912-427-6758 C. Facility's Phone 912-756-3655		
7. Waste Shipping Name and Description			8. Containers No.	9. Total Quantity	10. Unit Wt/Vol
a. Petroleum Contaminated Soil			1	18.00	CY
b.					
c.					
d.					
D. Additional Descriptions for Materials Listed Above			E. Handling Codes for Wastes Listed Above		
11. Special Handling Instructions and Additional Information 8101 Tank # 225					
12. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name Tom C. Fry			Signature Tom C. Fry		Month Day Year 08 06 96
13. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name ROBERT STOVALL			Signature Robert Stovall		Month Day Year 08 12 96
14. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature 7		Month Day Year
15. Discrepancy Indication Space					
16. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name Charles Pruitt			Signature Charles Pruitt		Month Day Year 08 12 96

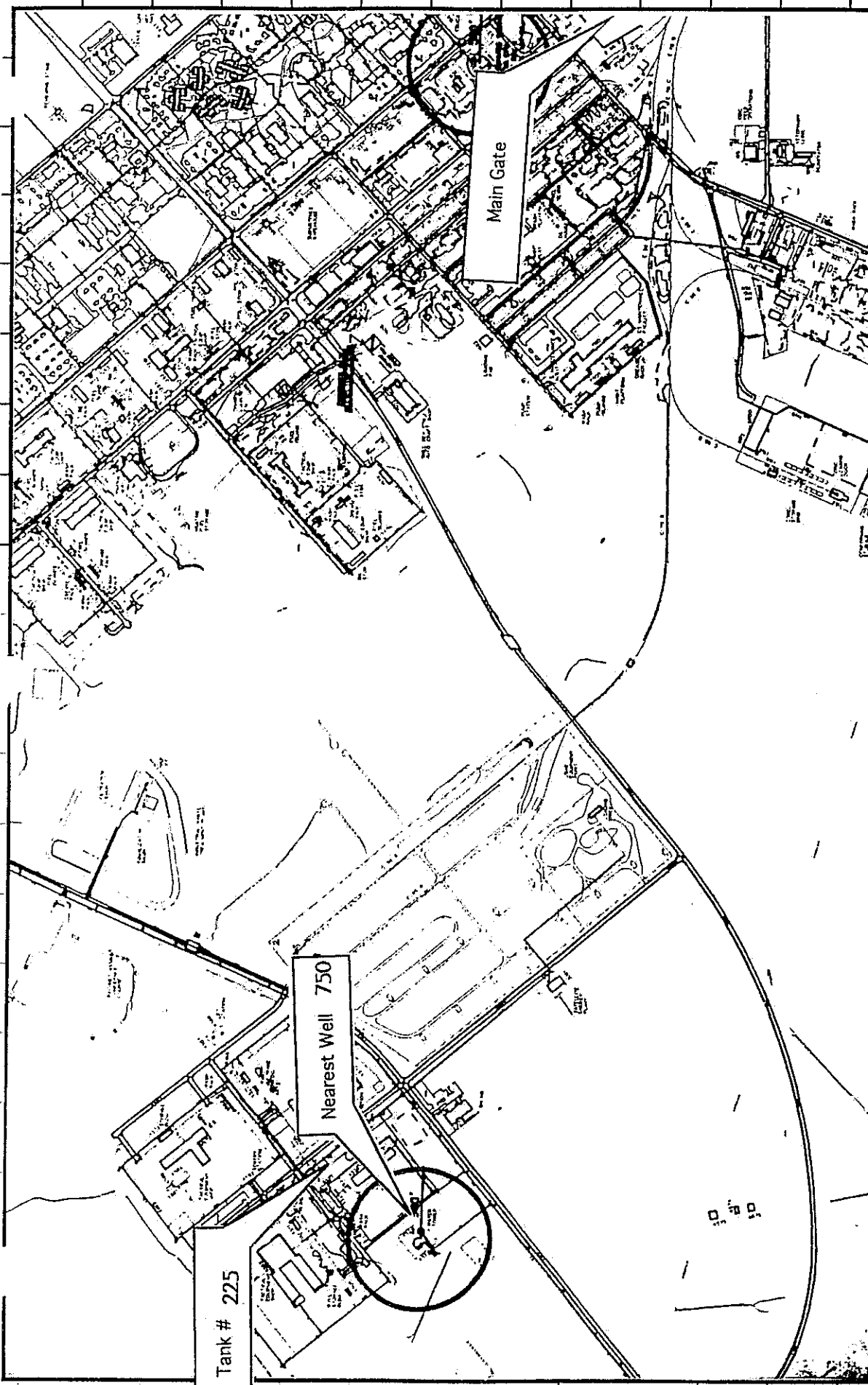
GENERATOR

TRANSPORTER

FACILITY

TAB 10

FORT STEWART AREA MAP



LEGEND/REF. DRWG'S	ANDERSON COLUMBIA ENVIRONMENTAL, INC. P.O. BOX 1386 LAKE CITY, FLORIDA 32856 (904) 755-1196		Area Map for Tank # 225 Fort Stewart Hinesville, Georgia	
	DR. AJR CH'D SRC DR. APP. DFB ENGR. ENGR'G DEPT. DATE 9 Oct 96 SCALE 1"=1000'		DRAWING NO.: FIGURE 1	