CLOSURE REPORT

Used Oil Storage Tank

Building 1503, UST #215

Facility ID #: 9-089015

Fort Stewart, Georgia

Prepared by

Fort Stewart
Directorate of Public Works
Environmental Branch

July 1999

Fort Stewart, Georgia
Underground Storage Tank Removal and Closure Report

Table of Contents

Prepared by

Fort Stewart
Directorate of Public Works
Environmental Branch

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		
Company:	US Army		
Address:	Cdr. 3rd Inf. Div. (Mech.), 1557 Frank Cochran Drive		
	Ft. Stewart	GA	31314-4928
	(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: Thomas C. Fry Date: 09/27/99

2. UST System Site Location:

Facility Name:	Ft. Stewart, GA FAC 1503		
Street Address:	FAC 1503		
	Ft. Stewart	GA	31314-5000
	(city)	(state)	(zip code)
Facility ID#	9-089015		

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: [signature] Date: 12/4/96

4. Site-specific Hydrogeology:

Depth to Groundwater ~6 ft. if encountered
(encountered during may 98 sampling event)

[ ] Not Applicable

5. Site Map: Include the following items on an attached site map: **REFER TO TAB 5**

- Tank Pit Area
- Piping Trenches
- Dispensers
- Sewer Lines (if present)
- Water Lines
- Tanks with thier ID#s, corresponding to the Notification Form 7530-1
- Sample Locations (with sample numbers and depths)
- Scale: See Tab 5 — Map 1: 1"=40' Maps 2a & 2b: NTS.
- North Arrow

6. Tank Removal

- Date of Removal: 31-Jul-96
- Tank Information:

Tank #	Tank Size (gallons)	Tank Contents
215	500	Used Oil

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

- Attach Amended Notification Form 7530-1 **REFER TO TAB 6**
- Describe Soil Sampling Procedures (and groundwater, if encountered):
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
- Dectection Limits
- Signed Chain of Custody
- Quality Control Data

8. Regulated Substance Released: Check the applicable box(es).

[ ] Gasoline [ ] Diesel [ ] Kerosene [X] Used Oil [ ] Other _____

9. Excavation and Treatment/Disposal of Contaminated Soil: Refer to Tab 9

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

_____ Tons OR _____ yd^3

[X] 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. Tank 215 during product sampling.

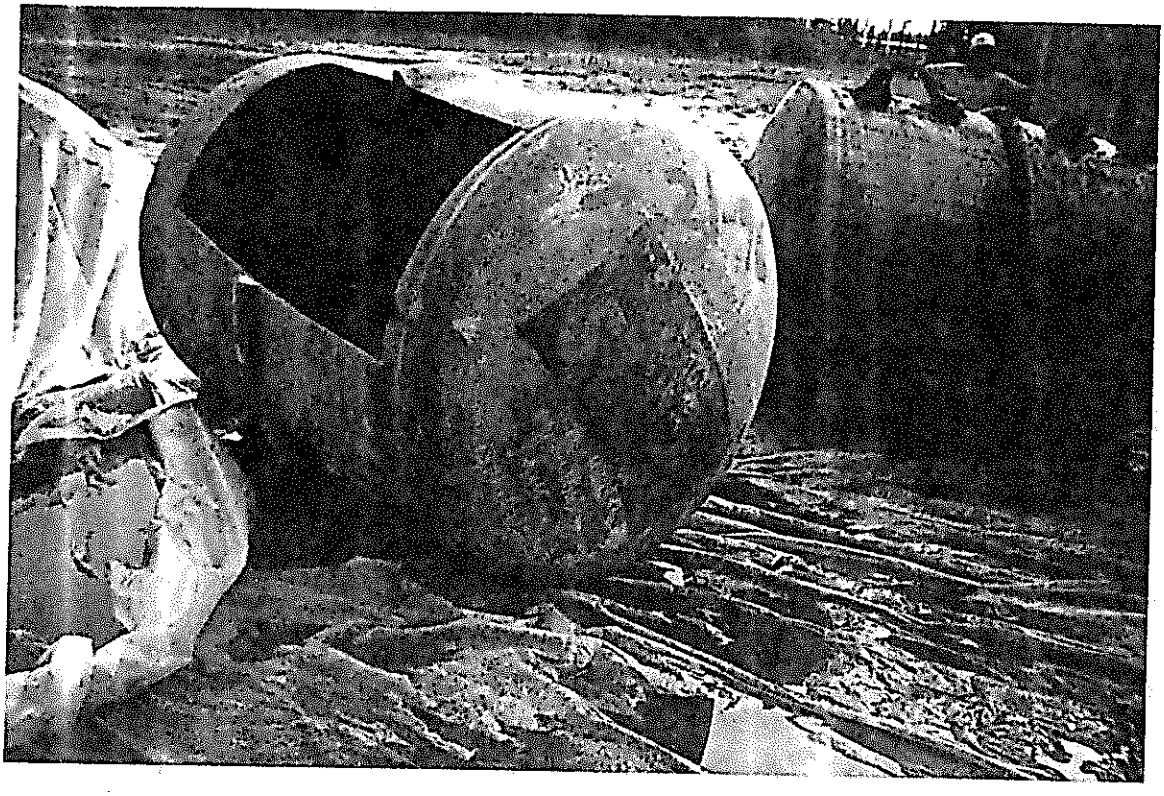


Photo 2. Tank 215 after removal, cutting, and cleaning.

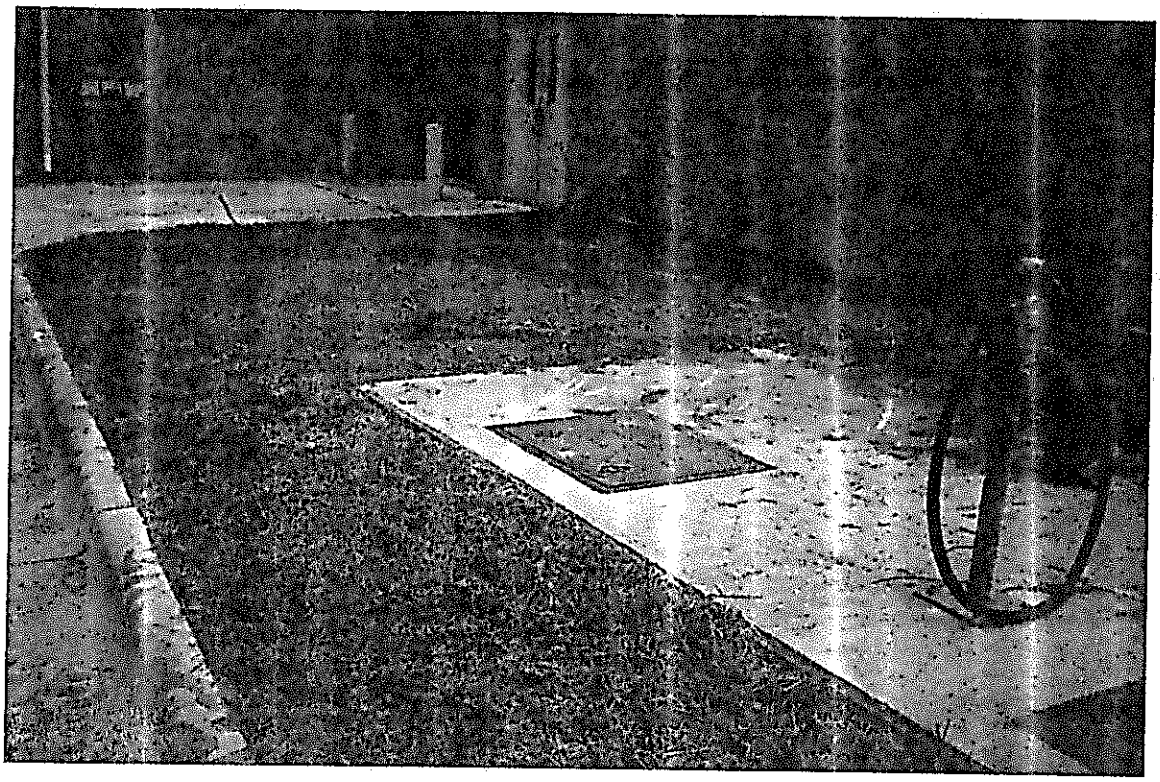


Photo 3. The site after tank removal, backfilling and grading.

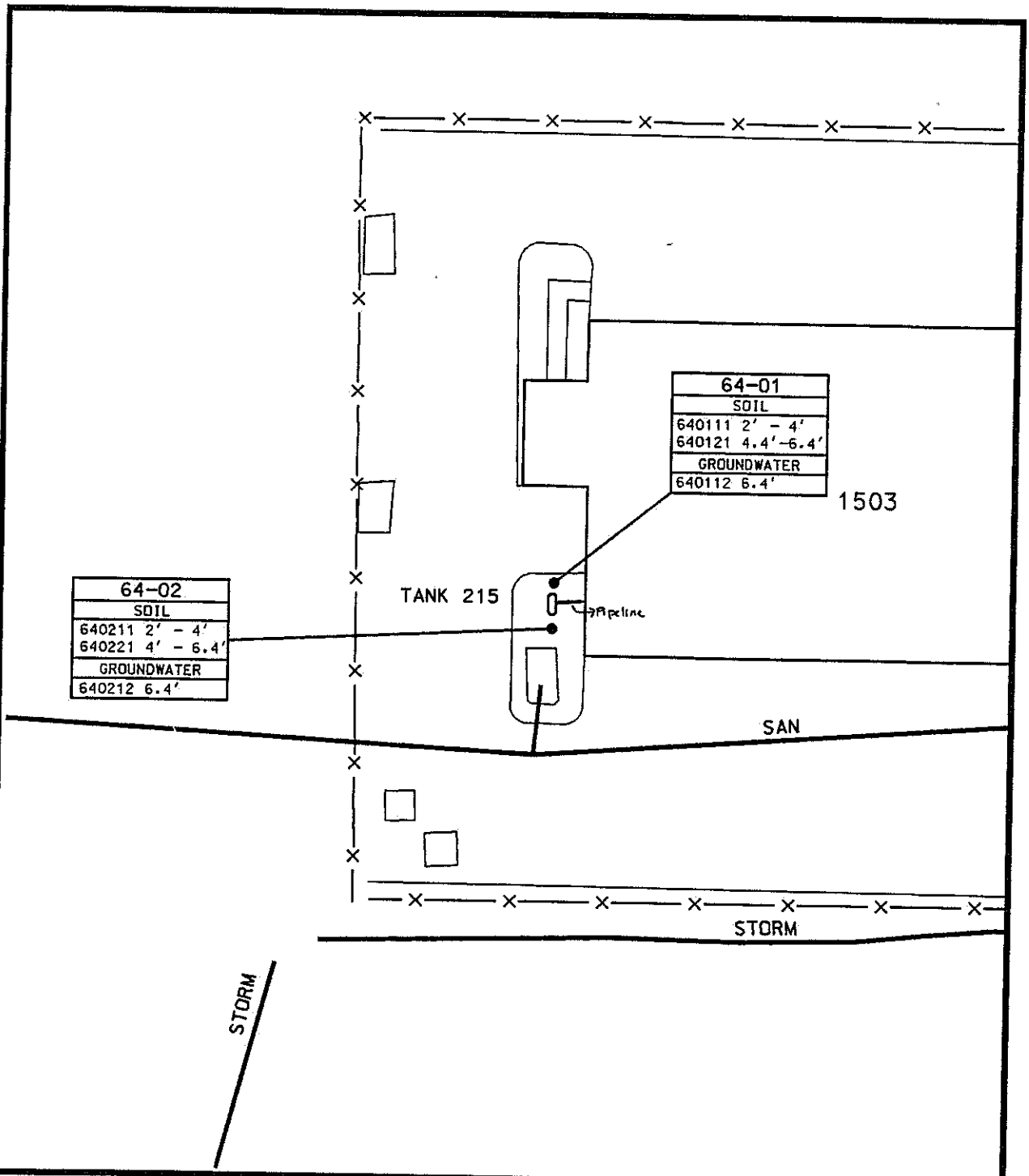
TAB 5

SITE MAPS

TAB 5
SITE MAPS

MAP #1: Provided by SAIC after second site investigation. Scaled map depicts the tank pit area, sewer lines, water lines, sample locations (May 1998 sampling event), and directional arrow.

MAPs #2a & 2b: Note to Scale. Provided by ACE after removal of UST. Map 2a indicates location of soil sample obtained at time of UST closure.



MAP #1 (May 98 Sampling Event)

MAP #29

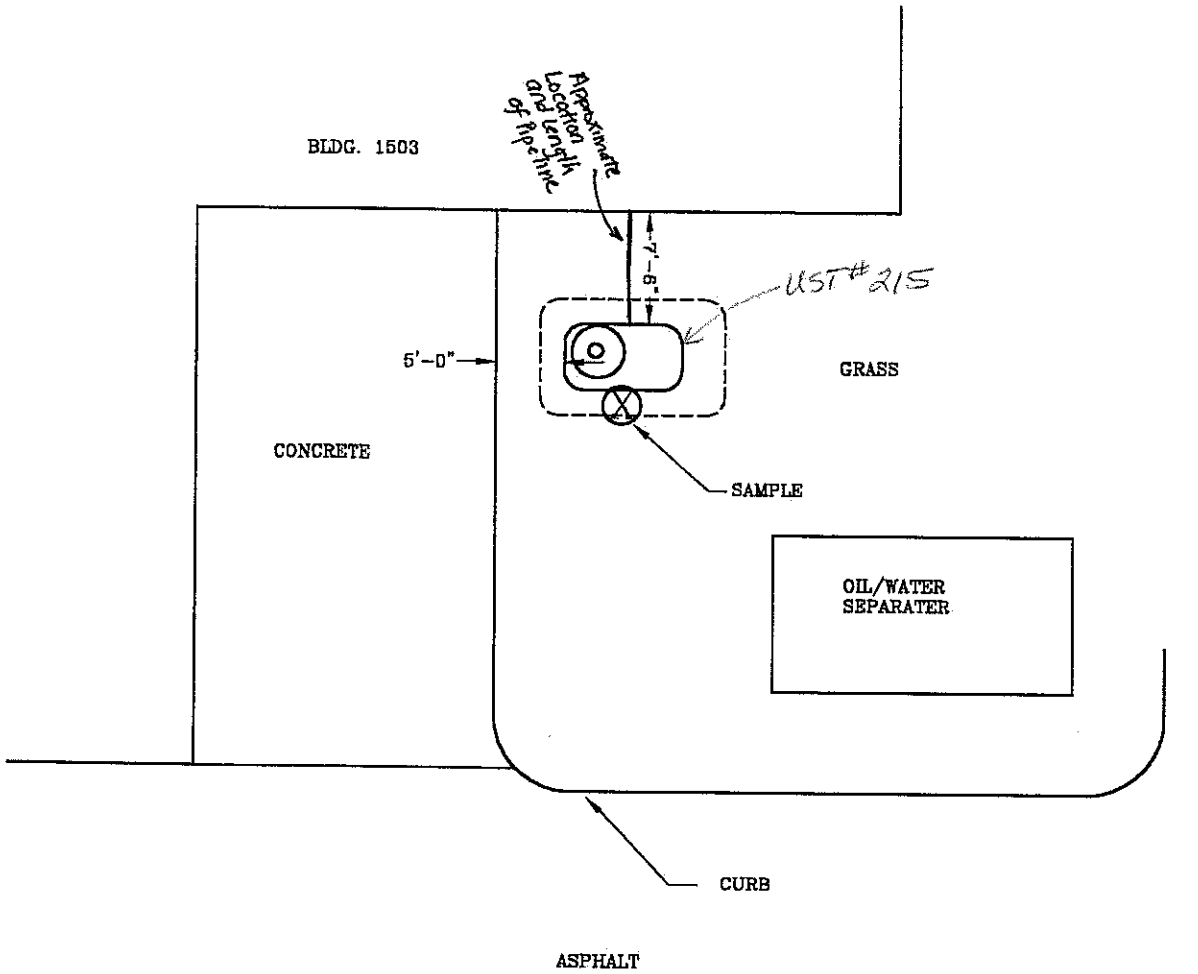
Headspace Analyses

Instrument: _____ Serial #: _____

Source: _____ Temp: _____

PID Correlation: 50 ppm

Sample	Depth	PID	FID	Methane	VOA



LEGEND/REF. DRWG.'S

EXCAVATION AREA: 10' X 12' X 8' DEEP

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.
P.O. BOX 1386 LAKE CITY, FLORIDA 32056 (904) 755-1196

DR. N.A.M. CH'D _____ DR. APP. _____

ENGR. _____ ENGR.'S DEPT. _____

DATE 11-6-96 SCALE N.T.S.

JOB #8101 FT. STEWART, GA

LOCATION: BLDG. 1503

TANK 215 Used Oil

Facility Id. No. 9-089015

(July 96 Sampling Event)
Tank Removal

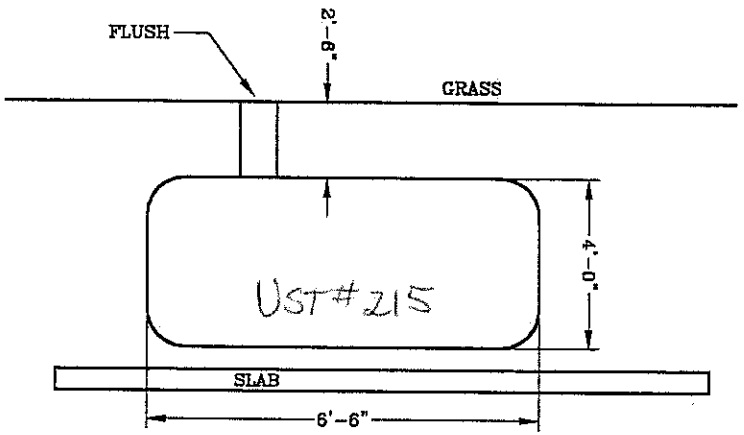
Headspace Analyses

Instrument: _____ Serial #: _____

Source: _____ Temp: _____

PID Correlation: 50 ppm

Sample	Depth	PID	FID	Methane	VOA



MAP #29

LEGEND/REF. DRWG.'S

CROSS SECTION

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.
P.O. BOX 1386 LAKE CITY, FLORIDA 32056 (904) 755-1195

DR. N.A.M. CH'D _____ DR. APP. _____

ENGR. _____ ENGR.'S DEPT. _____

DATE 11-6-96 SCALE N.T.S.

JOB #8101 FT. STEWART, GA

LOCATION: BLDG. 1503

TANK 215 Used Oil

Facility Id. No. 9-089015

(July 96 Tank Removal)

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: 9-089015

OWNER'S ID: 197

INITIAL DATE RECEIVED: 05-06-1986

DATE AMENDED LAST: 09-10-1996

NOTIFICATION TYPE: [ ] New [X] Amended [X] Closure

OWNERSHIP OF TANK(S): NUMBER OF TANK(S): 2

Name : US ARMY/FT STEWART
Mailing Address: HQS 3RD INF DIV (MECH) ,1557 FRANK COCHRAN DRIVE
City : FT STEWART State : GA Zip Code: 31314-4928
Phone: (912) 767-2010 County: LIBERTY

LOCATION OF TANK(S):

Name : FT STEWART/FAC 1503
Street Address: FAC 1503
City : FT STEWART State : GA Zip Code : 31314-5000
County: LIBERTY Latitude: : : Longitude: : :
Phone : ( ) -

OWNER TYPE: [X] Federal [ ] State [ ] Local [ ] Commercial [ ] Private

FACILITY TYPE(S):

[ ] Gas Station	[ ] Local Government	[ ] Contractor
[ ] Petroleum Dist	[ ] State Government	[ ] Truck/Transport
[ ] Air Taxi (Airport)	[ ] Fed Non-Military	[ ] Utilities
[ ] Aircraft Owner	[X] Fed Military	[ ] Farm
[ ] Auto Dealership	[ ] Commercial	[ ] Residential
[ ] Railroad	[ ] Industrial	[ ] Other
[ ] Hospital	[ ] Educational	

CONTACT PERSON IN CHARGE OF TANK(S):

Name : US ARMY/FT STEWART Attn: Thomas C. Fry Title: ~~JOHN SPEAR/ENV ENG~~ DPW's Chief, ENRD
Address: HQ ~~3~~24TH INF DIV (M), ~~AFZP-DEV/BLDG 1139~~ 7 ; 1557 Frank Cochran Dr.
City : FT STEWART State: GA Zip Code: 31314-5000
Phone : (912) 767-1071 4928

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part I: Facility Data

I ICIAL RESPONSIBILITY: FACILITY ID NUMBER: 9-089015

[X] I meet the financial responsibility requirements of §12-13-9 Official Code of Georgia Annotated by providing or participating in one of the following financial assurance mechanisms.

Primary Financial Responsibility Mechanism: (check one):

[ ] GUST Trust Fund	[ ] Insurance
[ ] Surety Bond	[ ] Guarantee
[ ] Letter of Credit	[ ] Trust Fund (other than GUST)
[ ] Risk Retention Group	[X] Other Method Federal Gov't Funding
[X] Self-Insured	[ ] None

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

Financial Responsibility Provider (Primary):

Name :

Address: City: State:

Mechanism Id Number:

Mechanism Anniversary Date:

Deductible Financial Responsibility, if any: (check one)

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

[ ] Surety Bond	[ ] Insurance
[ ] Letter of Credit	[ ] Guarantee
[ ] Risk Retention Group	[ ] Trust Fund (other than GUST)
[ ] Self-Insured	[ ] 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	9-089015	9-089015			
TANK ID	214	215			
Status of Tank					
Currently In Use					
Temp. Out of Use					
Perm. Out of Use					
Date of Installation	01-01-1988	01-01-1988			
Age	10	10			
Est. Total Capacity	550	500			
Material of Construction					
Asphalt or Bare Steel					
Cath. Protected Steel					
Epoxy Coated Steel					
Composite					
Fiberglass Reinf. Plas.	X	X			
Lined Interior					
Double Walled					
Poly. Tank Jacket					
Concrete					
Excavation Liner					
Unknown					
Other, explanation					
Date Tank Repaired					
[illegible] Material					
[illegible]re Steel					
Galvanized Steel	X	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	X			
Propane					
[illegible]pty					
Other, explanation					

STATE OF GEORGIA
NOTIFICATION DATA FOR UNDERGROUND STORAGE TANK

Part II: Tank Data

FACILITY ID	9-089015		9-089015				
TANK ID	214		215				
Substance Stored in Tank							
Hazardous Substance							
CERCLA Name							
CAS Number							
Mixture							
Mixture, Specification							
Tanks Out of Use/Chg. Ser.	**Tank**	**Piping**	**Tank**	**Piping**			
Est. Date Last Used	08-96	08-96	08-96	08-96			
Est. Date Closed	08-96	08-96	08-96	08-96			
Removed from Ground	X	X	X	X			
Closed in Ground							
Filled with Inert Mat.							
Change in Service							
Site Assessment Compl.							
Leak Detected							
Installation							
Certified by Mfg							
Certified by Imple Agn.							
Inspected by Engineer							
Checklists Completed							
Another Allowed Method							
Method Description							
Release Detection	**Tank**	**Piping**	**Tank**	**Piping**			
Tank Tightness Testing							
Inventory Controls							
SIR							
Automatic Tank Gauging							
Inter. Mon./Double Wall							
Groundwater Monitoring							
Manual Tank Gauging							
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/overfill 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:

Thomas C. Fry	Chief, Environmental & Natural Resources Division
Owner Name	Title
Thomas C. Fry	07/27/99
Owner's Signature	Date

TAB 6
FIELD ASSESSMENT METHODS

6.1 ACE Field Investigation

During the tank removal operation, one soil sample was collected for analytical testing by Anderson Columbia Environmental, Inc. (ACE) personnel two feet below the former tank. The soil samples (from numerous tank removal sites) were collected into appropriate (i.e., dependent upon required analyses) 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, located in Norcross, Georgia.

Soil samples for field screening were collected by ACE personnel from each side of the excavation and from the bottom of the excavated 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 membrane 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 to equilibrate for approximately 15 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.

6.2 SAIC Field Investigation

Additional soil and groundwater samples were collected and analyzed during a second field investigation which was performed by Science Applications International Corporation (SAIC).

Two soil boreholes were drilled within the former tank pit down to the local water table using a hollow-stem auger rig. Soil samples were collected at 2.5 foot intervals during borehole drilling, with field headspace gas analysis being performed on each sample to determine organic vapor concentration. When organic vapors were detected in a borehole, soil samples collected from the 2.5-foot interval with the highest vapor concentration and the 2.5-foot interval located immediately above or at the water table were analyzed for BTEX, PAH, and TPH. In boreholes where no organic vapors were detected, no soil samples for chemical analysis were collected.

Upon reaching the water table, one groundwater sample was collected from each borehole using a Hydropunch II or similar sampling device. Chemical parameters for groundwater samples submitted for laboratory analysis included BTEX and PAH.

TAB 6
PIPING CERTIFICATION

The undersigned certifies that, to the best of my knowledge and those working under my direct supervision, the piping associated with UST #215, formerly located at Building 1503, Fort Stewart, Georgia, was closed in-place by Fort Stewart's contractor, Anderson Columbia Environmental.

The undersigned also certifies that the piping at this facility associated with UST #215, which was used for storage of used oil, was not greater than 25 feet in length. Therefore, in accordance with GUST Rules, pipeline sampling was not required.

Name: Thomas C. Fry

Title: Acting Chief, Environmental and Natural Resources Division

Signature: Thomas C. Fry

Date: 07/27/99

TAB 7

ANALYTICAL DATA

TAB 7
LABORATORY ANALYTICAL DATA

The analytical results from the one soil sample obtained during UST closure activities and the two additional borings installed at this site in May 1998 are provided for your use and convenience. The analytical results from the Science Applications International Corporation (SAIC, May 1998) investigation is followed by the analytical results from the Anderson Columbia Environmental (ACE) UST removal project (July 1996). All corresponding chain of custody forms and data validation is included in this section.

NOTE: Map #1, included in Tab 5, indicates sampling locations from the SAIC investigation. Map #2a, also included in Tab 5, indicates the sampling location from the tank removal.

UST #215, BUILDING 1503, FACILITY ID. NO. 9-089015
SUMMARY OF SOIL ANALYTICAL DATA OBTAINED DURING MAY 1998 SAMPLING

Station:	Screening Levels			64-01		64-01		64-02		64-02	
Sample ID:	GA UST			640111		640121		640211		640221	
Sample Interval:	Corrective			2'-4'		4.4'-6.4'		2'-4'		4'-6.4'	
Media:	Action	Risk-based		Soil		Soil		Soil		Soil	
Sample Type:	Levels	Screening	Leaching to	Grab		Grab		Grab		Grab	
Collection Date:	for Soil[a]	Level[b]	Groundwater[c]	5/9/98		5/9/98		5/9/98		5/9/98	
Units:	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)		(µg/kg)		(µg/kg)		(µg/kg)	
2-Chloronaphthalene	N/A[e]	82000000	84000	365	U	354	U	370	U	370	U
Acenaphthene	N/A[e]	120000000	570000	365	U	354	U	370	U	370	U
Acenaphthylene	ND	61000000	4200000	365	U	354	U	370	U	370	U
Anthracene	N/A[e]	610000000	12000000	365	U	354	U	370	U	370	U
Benzene	8	200000	30	2.2	U	2.2	U	1.1	U	2	J
Benzo(a)anthracene	N/A[e]	7800	2000	365	U	354	U	370	U	370	U
Benzo(a)pyrene	N/A[e]	780	8000	365	U	354	U	370	U	370	U
Benzo(b)fluoranthene	N/A[e]	7800	5000	365	U	354	U	370	U	370	U
Benzo(g,h,i)perylene	N/A[e]			365	U	354	U	370	U	370	U
Benzo(k)fluoranthene	N/A[e]	78000	49000	365	U	354	U	370	U	370	U
Chrysene	N/A[e]	780000	160000	365	U	354	U	370	U	370	U
Dibenzo(a,h)anthracene	N/A[e]	780	2000	365	U	354	U	370	U	370	U
Ethylbenzene	10000	200000000	13000	2.2	U	2.2	U	4.4	U	217	J
Fluoranthene	N/A[e]	82000000	4300000	365	U	354	U	370	U	370	U
Fluorene	N/A[e]	82000000	560000	365	U	354	U	370	U	370	U
Indeno(1,2,3-cd)pyrene	N/A[e]	7800	140000	365	U	354	U	370	U	370	U
Naphthalene	N/A[e]	82000000	84000	365	U	354	U	370	U	370	U
Phenanthrene[f]	N/A[e]	61000000	4200000	365	U	354	U	370	U	370	U
Pyrene	N/A[e]	61000000	4200000	365	U	354	U	370	U	370	U
Toluene	6000	210000000	12000	796	J	96	J	163	=	28.7	J
TPH	-	-	-	79	=	10.9	=	53.8	=	80.2	=
Xylenes, Total	700000	1000000000	190000	6.6	U	6.5	U	13.3	U	86.7	=

[a] Average of higher groundwater pollution susceptability area (where public water supply is within 2.0 mi.).
[b] Protective of soil exposure during Industrial Land Use.
[c] Protective of groundwater ingestion. Used a dilution attenuation factor of 20.
[d] Values based on naphthalene as a surrogate chemical.
[e] Not applicable. The screening level exceeds the expected soil concentration under free product condition.
[f] Values based on pyrene as a surrogate chemical.
10 Bold values indicate results exceeding Georgia UST action levels.
10 Italicized values indicate results exceeding risk-based screening levels.
<u>10</u> Underlined values indicate results exceeding leaching to groundwater screening levels.
U Indicates that the compound was not detected above the reported sample quantitation limit.
J Indicates that the value for the compound was an estimated value.
UJ Indicates that the sample was not detected above an approximate sample quantitation limit.
R Indicates that the sample results are unusable and the presence or absence of the compound could not be verified.
= Indicates that the compound was detected at the concentration reported.

UST #215, BUILDING 1503, FACILITY ID. NO. 9-089015

SUMMARY OF GROUNDWATER ANALYTICAL DATA OBTAINED DURING MAY 1998 SAMPLING

Station:	Screening Levels	64-01		64-02	
Sample ID:		640112		640212	
Sample Depth:		6.4'		6.4'	
Media:	Federal SDWA MCLs	Water		Water	
Sample Type:	(ug/L)	Grab		Grab	
Collection Date:		5/9/98		5/9/98	
Units:		(ug/L)		(ug/L)	
2-Chloronaphthalene		20.0	U	13.3	U
Acenaphthene		20.0	U	13.3	U
Acenaphthylene		20.0	U	13.3	U
Anthracene		20.0	U	13.3	U
Benzene	5	2.0	U	4.0	U
Benzo(a)anthracene		20.0	U	13.3	U
Benzo(a)pyrene	0.2	20.0	U	13.3	U
Benzo(b)fluoranthene		20.0	U	13.3	U
Benzo(g,h,i)perylene		20.0	U	13.3	U
Benzo(k)fluoranthene		20.0	U	13.3	U
Chrysene		20.0	U	13.3	U
Dibenzo(a,h)anthracene		20.0	U	13.3	U
Ethylbenzene	700	2.0	U	4.0	U
Fluoranthene		20.0	U	13.3	U
Fluorene		20.0	U	13.3	U
Indeno(1,2,3-cd)pyrene		20.0	U	13.3	U
Naphthalene		20.0	U	13.3	U
Phenanthrene[r]		20.0	U	13.3	U
Pyrene		20.0	U	13.3	U
Toluene	1000	2.0	U	4.0	U
Xylenes, Total	10000	6.0	U	12.0	U

10 Bold values indicate results exceeding MCL

U Indicates that the compound was not detected above the reported sample quantitation limit.

= Indicates that the compound was detected at the concentration reported.

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

STATEMENT ON LABORATORY DETECTION LIMITS

General Engineering has been performing chemical analysis on soil and groundwater samples for SAIC managed Ft. Stewart, GA, UST CAP Part-A and CAP Part-B Investigations for the past two years.

In the course of these studies GEL has employed appropriate EPA SW-846 protocols according to Methods 8020 for BTEX compounds, 8270 for PAH compounds, and modified 8015 for TPH-GRO and TPH-DRO components.

In performance of these methods the laboratory has consistently maintained analyte reporting levels of:

Analyte	Soil ug/Kg	Water ug/L
Benzene	5	5
Toluene	5	5
Ethylbenzene	5	5
Xylenes	10	10
PAHs	330	10
	mg/Kg	mg/L
TPH-GRO	5	0.1
TPH-DRO	4	0.1
TPH	10	0.2

Analytical method detection levels (MDLs) have been maintained at the following levels:

Analyte	Soil ug/Kg	Water ug/L
Benzene	2	2
Toluene	2	2
Ethylbenzene	2	2
Xylenes	4	4
PAHs	70	2
	mg/Kg	mg/L
TPH-GRO	2	0.05
TPH-DRO	2	0.05
TPH	4	0.1

P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29414

(803) 556-8171 • Fax (803) 766-1178

When an analyte was observed between the laboratory MDL and the reporting level, an estimated ("J") value was reported. If an analyte is not determined above the MDL, the laboratory will report the reporting level as a "U" (undetected). The above reporting levels and MDLs are applicable for all values reported for these analyses. For example, when a Benzene concentration of 500 ug/Kg is reported the associated reporting level is 5 ug/Kg and the associated MDL is 2 ug/Kg.

Soil data has been reported on a dry weight basis. This introduces a correction factor based on the moisture content found in each sample for both positive values and for the reporting level and MDL. For example, when a soil sample's reporting level is corrected for its percent moisture (say 10% moisture), the dry weight reporting level for benzene becomes 5.5 ug/gm and the MDL becomes 2.2 ug/gm. Therefore soil reporting levels will vary based on the moisture.

These reporting protocols follow current EPA direction.

GEL attempted in every sample analysis to achieve the requirements of GUST for soil and groundwater analyses. However, in some cases, it was not possible to achieve standard MDLs and reporting levels for each individual analyte. When a single analyte is found in the sample at high concentrations (example: xylenes at 5,000 ug/Kg), the sample must be diluted to properly quantify the level of that analyte. Dilution of the sample for one analyte will dilute the sample for all other analytes, raising the reporting levels for those analytes by the multiple of the dilution factor (example: a dilution of 1:10 will raise reporting levels of benzene to 50 ug/Kg). At other times concentrations of undetermined contaminants will require samples to be diluted, causing reporting levels and MDLs to become elevated.

The data produced for these Ft. Stewart UST Investigations was determined using approved EPA methodology by qualified analytical chemists. It has been reviewed by the laboratory and is considered technically sound and defensible.

Name: Robert L. Pullano Title: Quality Systems Manager

Signature: Robert L. Pullano Date: 1 April 98

GENERAL ENGINEERING LABORATORIES
PO Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407
(803) 556-8171 • Fax (803) 766-1178

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4006S

Matrix: (soil/water) SOIL Lab Sample ID: 9805295-06

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 2I4029

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: not dec. 9 Date Analyzed: 05/15/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ml) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q		
71-43-2	Benzene	796	2.2	U	UJ	KØ1
108-88-3	Toluene		~~535~~	~~E~~ Ø	J	KØ1
100-41-4	Ethylbenzene		2.2	U	UJ	KØ1
1330-20-7	Xylenes (total)		6.6	U	UJ	KØ1

DATA VALIDATION COPY

Use

FORM I VOA

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640111

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4006S

Matrix: (soil/water) SOIL Lab Sample ID: 9805295-06

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 2T530

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: 9 decanted: (Y/N) N Date Extracted: 05/14/98

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 05/16/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

DATA VALIDATION COPY

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	365	U
91-58-7	2-chloronaphthalene	365	U
209-96-8	acenaphthylene	365	U
83-32-9	acenaphthene	365	U
86-73-7	fluorene	365	U
85-01-8	phenanthrene	365	U
120-12-7	anthracene	365	U
206-44-0	fluoranthene	365	U
129-00-0	pyrene	365	U
56-55-3	benzo(a)anthracene	365	U
218-01-9	chrysene	365	U
205-99-2	benzo(b)fluoranthene	365	U
207-08-9	benzo(k)fluoranthene	365	U
50-32-8	benzo(a)pyrene	365	U
193-39-5	indeno(1,2,3-cd)pyrene	365	U
53-70-3	dibenz(a,h)anthracene	365	U
191-24-2	benzo(g,h,i)perylene	365	U

U

FORM I SV-1

OLM03.0

DATA VALIDATION COPY

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Lorene Rollins
Project Description: CAP-Part A for UST Sites (Task Order No. 8)

cc: SAIC00598

Report Date: May 20, 1998

Sample ID	: 640111
Lab ID	: 9805295-06
Matrix	: Soil
Date Collected	: 05/09/98
Date Received	: 05/11/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		79.0 F01,F08, =	2.18	11.0	mg/kg	1.0	JLP	05/13/98	1100	122011	1

M = Method	Method-Description
M 1	EPA 418.1 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Valerie Davis at (803) 769-7391.

Reviewed By

9805295-06

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640121

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4006S

Matrix: (soil/water) SOIL Lab Sample ID: 9805295-10

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 2I4033

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: not dec. 8 Date Analyzed: 05/15/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ml) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	2.2	U	UJ K01
108-88-3	Toluene	96.0		J K01
100-41-4	Ethylbenzene	2.2	U	UJ K01
1330-20-7	Xylenes (total)	6.5	U	UJ K01

DATA VALIDATION COPY

USL

FORM I VOA

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640121

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4006S

Matrix: (soil/water) SOIL Lab Sample ID: 9805295-10

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 2T534

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: 8 decanted: (Y/N) N Date Extracted: 05/14/98

Concentrated Extract Volume: 1.00 (mL) Date Analyzed: 05/16/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

DATA VALIDATION COPY

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	354	U
91-58-7	2-chloronaphthalene	354	U
209-96-8	acenaphthylene	354	U
83-32-9	acenaphthene	354	U
86-73-7	fluorene	354	U
85-01-8	phenanthrene	354	U
120-12-7	anthracene	354	U
206-44-0	fluoranthene	354	U
129-00-0	pyrene	354	U
56-55-3	benzo(a)anthracene	354	U
218-01-9	chrysene	354	U
205-99-2	benzo(b)fluoranthene	354	U
207-08-9	benzo(k)fluoranthene	354	U
50-32-8	benzo(a)pyrene	354	U
193-39-5	indeno(1,2,3-cd)pyrene	354	U
53-70-3	dibenz(a,h)anthracene	354	U
191-24-2	benzo(g,h,i)perylene	354	U

U

DATA VALIDATION COPY

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Lorene Rollins
Project Description: CAP-Part A for UST Sites (Task Order No. 8)

cc: SAIC00598

Report Date: May 20, 1998

Sample ID	: 640121
Lab ID	: 9805295-10
Matrix	: Soil
Date Collected	: 05/09/98
Date Received	: 05/11/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	J	10.9 ~~4.93~~ U F01, F06, [illegible]	2.16	10.9	mg/kg	1.0	JLP	05/13/98	1100	122011	1

M = Method	Method-Description
M 1	EPA 418.1 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis at (803) 769-7391.

Reviewed By

DATA VALIDATION COPY

SDG No.: FS4006S

Method Type: Total Metals

Sample ID: 9805295-10

Client ID: 640121

Contract: SAIC00598 Lab Code: GEL Case No.: SAS No.:

Matrix: SOIL Date Received: 5/11/98 Level: LOW

% Solids: 92.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	1.9	mg/kg	5	P U2	P	0.10	TJA61 Trace ICPAES	980514a-1

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4015W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9805309-08

Sample wt/vol: 10.00 (g/ml) ML Lab File ID: 2J3035

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: not dec. _____ Date Analyzed: 05/21/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(ml) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
71-43-2	Benzene	2.0	U	U
108-88-3	Toluene	2.0	U	
100-41-4	Ethylbenzene	2.0	U	
1330-20-7	Xylenes (total)	6.0	U	

DATA VALIDATION COPY

FORM I VOA

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640112

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4012W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9805304-09

Sample wt/vol: 250.0 (g/mL) ML Lab File ID: 1T315

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/13/98

Concentrated Extract Volume: 0.50(mL) Date Analyzed: 05/13/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	naphthalene	20.0	U
91-58-7	2-chloronaphthalene	20.0	U
208-96-8	acenaphthylene	20.0	U
83-32-9	acenaphthene	20.0	U
86-73-7	fluorene	20.0	U
85-01-8	phenanthrene	20.0	U
120-12-7	anthracene	20.0	U
206-44-0	fluoranthene	20.0	U
129-00-0	pyrene	20.0	U
56-55-3	benzo(a)anthracene	20.0	U
218-01-9	chrysene	20.0	U
205-99-2	benzo(b)fluoranthene	20.0	U
207-08-9	benzo(k)fluoranthene	20.0	U
50-32-8	benzo(a)pyrene	20.0	U
193-39-5	indeno(1,2,3-cd)pyrene	20.0	U
53-70-3	dibenz(a,h)anthracene	20.0	U
191-24-2	benzo(g,h,i)perylene	20.0	U

u

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4007S

Matrix: (soil/water) SOIL Lab Sample ID: 9805298-17

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 2I6036

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: not dec. 10 Date Analyzed: 05/17/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 2.0

Soil Extract Volume:_____(ml) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	1.1	U	U
108-88-3	Toluene	163		
100-41-4	Ethylbenzene	4.4	U	U
1330-20-7	Xylenes (total)	13.3	U	U

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FORM I VOA

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640211

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4007S

Matrix: (soil/water) SOIL Lab Sample ID: 9805298-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1U323

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: 10 decanted: (Y/N) N Date Extracted: 05/15/98

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 05/21/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

DATA VALIDATION COPY

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	370	U
91-58-7	2-chloronaphthalene	370	U
208-96-8	acenaphthylene	370	U
83-32-9	acenaphthene	370	U
86-73-7	fluorene	370	U
85-01-8	phenanthrene	370	U
120-12-7	anthracene	370	U
206-44-0	fluoranthene	370	U
129-00-0	pyrene	370	U
56-55-3	benzo(a)anthracene	370	U
218-01-9	chrysene	370	U
205-99-2	benzo(b)fluoranthene	370	U
207-08-9	benzo(k)fluoranthene	370	U
50-32-8	benzo(a)pyrene	370	U
193-39-5	indeno(1,2,3-cd)pyrene	370	U
53-70-3	dibenz(a,h)anthracene	370	U
191-24-2	benzo(g,h,i)perylene	370	U

U

DATA VALIDATION COPY

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Lorene Rollins
Project Description: CAP-Part A for UST Sites (Task Order No. 8)

cc: SAIC00598

Report Date: June 01, 1998

Sample ID	: 640211
Lab ID	: 9805298-17
Matrix	: Soil
Date Collected	: 05/09/98
Date Received	: 05/11/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry												
Total Rec. Petro. Hydrocarbons		53.8	= FØ1, FØ8	2.20	11.1	mg/kg	1.0	JLP	05/26/98	1330	122880	1

M = Method	Method-Description
M 1	EPA 418.1 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis at (803) 769-7391.

Reviewed By

9805298-17

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640221

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4005S

Matrix: (soil/water) SOIL Lab Sample ID: 9805294-15

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 2I5025

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: not dec. 10 Date Analyzed: 05/15/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(ml) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
71-43-2	Benzene	2.0	J	J GΦ1
108-88-3	Toluene	28.7	P	J GΦ1, MΦ8
100-41-4	Ethylbenzene	217		J GΦ1
1330-20-7	Xylenes (total)	86.7 ~~807~~	~~E~~ D	=

DATA VALIDATION COPY

use

J GΦ1

FORM I VOA

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640221

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4005S

Matrix: (soil/water) SOIL Lab Sample ID: 9805294-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 2T334

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: 10 decanted: (Y/N) N Date Extracted: 05/12/98

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 05/14/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	naphthalene	370	U
91-58-7	2-chloronaphthalene	370	U
209-96-8	acenaphthylene	370	U
83-32-9	acenaphthene	370	U
86-73-7	fluorene	370	U
85-01-8	phenanthrene	370	U
120-12-7	anthracene	370	U
206-44-0	fluoranthene	370	U
129-00-0	pyrene	370	U
56-55-3	benzo(a)anthracene	370	U
218-01-9	chrysene	370	U
205-99-2	benzo(b)fluoranthene	370	U
207-08-9	benzo(k)fluoranthene	370	U
50-32-8	benzo(a)pyrene	370	U
193-39-5	indeno(1,2,3-cd)pyrene	370	U
53-70-3	dibenz(a,h)anthracene	370	U
191-24-2	benzo(g,h,i)perylene	370	U

U

DATA VALIDATION COPY

Client: Science Applications International Corp.
P.O. Box 2502
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37831
Contact: Ms. Lorene Rollins
Project Description: CAP-Part A for UST Sites (Task Order No. 8)

cc: SAIC00598

Report Date: June 01, 1998

Sample ID	: 640221
Lab ID	: 9805294-15
Matrix	: Soil
Date Collected	: 05/09/98
Date Received	: 05/11/98
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons		80.2 = F01, F08	2.20	11.1	mg/kg	1.0	JLP	05/13/98	1100	122011	1

M = Method	Method-Description
M 1	EPA 418.1 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis at (803) 769-7391.

Reviewed By

9805294-15

DATA VALIDATION COPY

SDG No.: FS4005S

Method Type: Total Metals

Sample ID: 9805294-15

Client ID: 640221

Contract: SAIC00598 Lab Code: GEL Case No.: SAS No.:

Matrix: SOIL Date Received: 5/11/98 Level: LOW

% Solids: 90.00

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7439-92-1	Lead	27.5	mg/kg	=	~~J~~	P	0.10	TJA61 Trace ICPAES	980517-1

Color Before: Clarity Before: SRK 6/24/98 Texture:

Color After: Clarity After: Artifacts:

Comments:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4015W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9805309-07

Sample wt/vol: 10.00 (g/ml) ML Lab File ID: 2J3015

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: not dec. _____ Date Analyzed: 05/20/98

GC Column: J&W DB-624(PID) ID: 0.53 (mm) Dilution Factor: 2.0

Soil Extract Volume: _____(ml) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	4.0	U
108-88-3	Toluene	4.0	U
100-41-4	Ethylbenzene	4.0	U
1330-20-7	Xylenes (total)	12.0	U

U ↓

DATA VALIDATION COPY

FORM I VOA

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

640212

Lab Name: GENERAL ENGINEERING LABOR Contract: NA

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: FS4010W

Matrix: (soil/water) GROUNDH2O Lab Sample ID: 9805302-20

Sample wt/vol: 750.0 (g/mL) ML Lab File ID: 2T511

Level: (low/med) LOW Date Received: 05/11/98

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/12/98

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 05/15/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

DATA VALIDATION COPY

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	naphthalene	13.3	U
91-58-7	2-chloronaphthalene	13.3	U
209-96-8	acenaphthylene	13.3	U
83-32-9	acenaphthene	13.3	U
86-73-7	fluorene	13.3	U
85-01-8	phenanthrene	13.3	U
120-12-7	anthracene	13.3	U
206-44-0	fluoranthene	13.3	U
129-00-0	pyrene	13.3	U
56-55-3	benzo(a)anthracene	13.3	U
218-01-9	chrysene	13.3	U
205-99-2	benzo(b)fluoranthene	13.3	U
207-08-9	benzo(k)fluoranthene	13.3	U
50-32-8	benzo(a)pyrene	13.3	U
193-39-5	indeno(1,2,3-cd)pyrene	13.3	U
53-70-3	dibenz(a,h)anthracene	13.3	U
191-24-2	benzo(g,h,i)perylene	13.3	U

u

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2012

CHAIN OF CUSTODY RECORD

COC NO.: GAB014

PROJECT NAME: Fort Stewart New CAP Part A UST Investigation 9805
PROJECT NUMBER: 01-0331-04-0606-200
PROJECT MANAGER: Patty Stoll
Sampler (Signature): Laura Lumley (Printed Name): Laura Lumley

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	TOC	BTEX, GRO	PAH, DRO	PAH, DRO, Lead	PAH, TPH	PAH, TPH, Lead	PAH, TPH, Lead, TOC	No. of Bottles/ Vials:	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
730581	5/9/98	1457	Soil	1			1			1			2	9805294-19
730561	5/9/98	1350		1			1			1			2	-20
730551	5/9/98	1015		1			1			1			2	9805295-01
730571	5/9/98	1422		1			1			1			2	-02
730541	5/9/98	1000		1			1			1			2	-03
690211	5/9/98	1640		1			1			1			2	-04
690311	5/9/98	1810		1			1			1			2	-05
640111	5/9/98	1415		1			1			1			2	-06
690121	5/9/98	1545		1			1			1			2	-07
690321	5/9/98	1815		1			1			1			2	-08
690221	5/9/98	1645		1			1			1			2	-09
640121	5/9/98	1415		1			1			1			2	-10
730511	5/9/98	910		1			1			1			2	-11

REQUESTED PARAMETERS

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	5/11/98	Divine Francis	5/11/98
COMPANY NAME: SAIC	1130	COMPANY NAME: GEL	1600
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	5/11-98 1130	COMPANY NAME:	
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME:	5-11-98 1600	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 52
Cooler ID: #131

LABORATORY NAME: General Engineering Laboratory
LABORATORY ADDRESS: 2040 Savage Raod, Charleston, SC 29417
PHONE NO: (803) 556-8171
Cooler Temperature: 4°C
FEDEX NUMBER:

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1 of 2

CHAIN OF CUSTODY RECORD

COC NO.: GAB016

PROJECT NAME: Fort Stewart New CAP Part A UST Investigation 9805

PROJECT NUMBER: 01-0331-04-6000-200

PROJECT MANAGER: Patty Stall

Sampler (Signature): Laura Lumley (Printed Name)

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417

PHONE NO: (803) 556-8171

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	TOC	BTEX, GRO	PAH, DRO	PAH, DRO, Lead	PAH, TPH	PAH, TPH, Lead	PAH, TPH, Lead, TOC	No. of Bottles/ Vials	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
580211	5/10/98	1120	Soil	1			1			1			2	9805298-14
730111	5/10/98	1110		1			1			1			2	-15
730311	5/10/98	1430		1			1			1			2	-16
640211	5/9/98	1510		1			1			1			2	-17
100521	5/10/98	1035		1			1			1			2	-18
590111	5/10/98	1010		1			1			1			2	-19
130541	5/10/98	1455		1			1			1			2	-20
130531	5/10/98	1450		1			1			1			2	9805300-01
730411	5/10/98	1545		1			1			1			2	-02
130521	5/10/98	1335		1			1			1			2	-03
600111	5/10/98	1520		1			1			1			2	-04
580221	5/10/98	1120		1									2	-05
590121	5/10/98	1010		1									2	-06

RELINQUISHED BY: Laura Lumley	Date/Time 5/11/98 1130	RECEIVED BY: Dianne Francis	Date/Time 5/11/98 1600	TOTAL NUMBER OF CONTAINERS:	Cooler Temperature: 4°C
COMPANY NAME: SAIC		COMPANY NAME: GEL		Cooler ID: # 234	FEDEX NUMBER:
RECEIVED BY:	Date/Time 5/11/98 1430	RELINQUISHED BY:	Date/Time		
COMPANY NAME: GEL		COMPANY NAME:			
RELINQUISHED BY:	Date/Time 5/11/98 1600	RECEIVED BY:	Date/Time		
COMPANY NAME: GEL		COMPANY NAME:			

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CHAIN OF CUSTODY RECORD

COC NO.: GAB008

PROJECT NAME: Fort Stewart New CAP Part A UST Investigation 9805
PROJECT NUMBER: 01-0331-04-9805-200
PROJECT MANAGER: Patty Stoll
Sampler (Signature): Laura Lumley (Printed Name): Laura Lumley

LABORATORY NAME: General Engineering Laboratory
LABORATORY ADDRESS: 2040 Savage Road, Charleston, SC 29417
PHONE NO: (803) 556-8171

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	TOC	BTEX, GRO	PAH, DRO	PAH, DRO, Lead	PAH, TPH	PAH, TPH, Lead	PAH, TPH, Lead, TOC	No. of Bottles/ Vials	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
770412	5/8/98	1730	water		X		X		X		X		2	9805302-19
640212	5/9/98	1530			X		X		X		X		2	-20
760532	5/8/98	1645			X		X		X		X		2	9805303-01
760522	5/8/98	1745			X		X		X		X		2	-02
580214	5/10/98	1150			X		X		X		X		2	-03
760712	5/9/98	1640			X		X		X		X		2	-04
690112	5/9/98	1600			X		X		X		X		2	-05

REQUESTED PARAMETERS

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	5/11/98	David Fraser	5/11/98
COMPANY NAME: SAIC	1130	COMPANY NAME: GEL	1600
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time
COMPANY NAME: GEL	5-11-98 1130	COMPANY NAME:	
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
COMPANY NAME: GEL	5-11-98 1600	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 13
Cooler ID: 16 4K69, 4°C
Cooler Temperature: 4°C
FEDEX NUMBER:

08-25-1998 15:12 8037661178 GENERAL ENGINEERIN P.05

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CHAIN OF CUSTODY RECORD

COC NO.: GAB009

PROJECT NAME: Fort Stewart New CAP Part A UST Investigation 9805

PROJECT NUMBER: 01-0331-04-8395-200

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Laura Lumley (Printed Name)

Sample ID	Date Collected	Time Collected	Matrix
770412	5/8/98	1730	water
640112	5/9/98	1445	
690212	5/9/98	1700	
760612	5/9/98	1750	
760912	5/9/98	1930	
690412	5/10/98	945	
730212	5/10/98	1325	
760912	5/10/98	1345	
	5/11/98		

REQUESTED PARAMETERS

BTEX	PAH	TOC	BTEX, GRO	PAH, DRO	PAH, DRO, Lead	PAH, TPH	PAH, TPH, Lead	PAH, TPH, Lead, TOC	No. of Bottles/ Vials:	
									1	9805303-06
									1	-07
									2	-08
									2	-09
									2	-10

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Road Charleston, SC 29417

PHONE NO: (803) 556-8171

OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	5/11/98	Denise Frances	5/11/98
COMPANY NAME: SAIC	1130	COMPANY NAME: GEL	1600
RECEIVED BY:	Date/Time	RELINQUISHED BY:	Date/Time
	5-11-98		
COMPANY NAME: GEL	1130	COMPANY NAME:	
RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
	5-11-98		
COMPANY NAME: GEL	1600	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS: 13

Cooler ID: 549, 4°C

Cooler Temperature: 4°C

FEDEX NUMBER:

GENERAL ENGINEERIN 8037661178

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800 Oak Ridge Turnpike, Oak Ridge, TN 37831 (423) 481-4800

1212

CHAIN OF CUSTODY RECORD

COC NO.: GAB014

PROJECT NAME: Fort Stewart New CAP Part A UST Investigation 9805

PROJECT NUMBER: 01-0331-04-9805-200

PROJECT MANAGER: Patty Stoll

Sampler (Signature): Laura Lumley (Printed Name): Laura Lumley

Sample ID	Date Collected	Time Collected	Matrix	BTEX	PAH	TOC	BTEX, GRO	PAH, DRO	PAH, DRO, Lead	PAH, TPH	PAH, TPH, Lead	PAH, TPH, Lead, TOC	No. of Bottles/ Vials:
760811	5/9/98	1855	Soil					1					2
750211	5/8/98	1900						1					2
750411	5/8/98	1650						1					2
770211	5/8/98	1725						1					2
770411	5/8/98	1555						1					2
750221	5/8/98	1905											2
770421	5/8/98	1615											2
770221	5/8/98	1735											2
690111	5/9/98	1540		1						1			2
640221	5/9/98	1500		1									2
730521	5/9/98	915		1						1			2
730531	5/9/98	935		1						1			2
690411	5/10/98	910		1						1			2

REQUESTED PARAMETERS

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Raod Charleston, SC 29417

PHONE NO: (803) 556-8171

OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS

9805294-06
-07
-08
-09
-10
-11
-12
-13
-14
-15
-16
-17
-18

RELINQUISHED BY: Laura Lumley	Date/Time 5/11/98	RECEIVED BY: Dione Frances	Date/Time 5/11/98	TOTAL NUMBER OF CONTAINERS:	Cooler Temperature: 4°C
COMPANY NAME: SAIC	1130	COMPANY NAME: GEL	1600	Cooler ID: #131	FEDEX NUMBER:
RECEIVED BY: [illegible]	Date/Time 5-11-98	RELINQUISHED BY:	Date/Time		
COMPANY NAME: GEL	1130	COMPANY NAME:			
RELINQUISHED BY: [illegible]	Date/Time 5/11/98	RECEIVED BY:	Date/Time		
COMPANY NAME: GEL	1600	COMPANY NAME:			

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1005

CHAIN OF CUSTODY RECORD

COC NO: GAB018

PROJECT NAME: Fort Stewart New CAP Part A UST Investigation
9805

PROJECT NUMBER: 01-6331-04-6305-220

PROJECT MANAGER: Patty Stall

Sampler (Signature): Laura Lumley (Printed Name)

LABORATORY NAME: General Engineering Laboratory

LABORATORY ADDRESS: 2040 Savage Road, Charleston, SC 29417

PHONE NO: (803) 556-8171

Sample ID	Date Collected	Time Collected	Matrix	No. of Bottles/ Vials	REQUESTED PARAMETERS: BTEX	PAH	TCE	BTEX, GRO	PAH, GRO	PAH, DRO, Lead	PAH, TPH	PAH, TPH, Lead	PAH, TPH, Lead, TOC	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
600112	5/10/96	1555	water	2										9805307-20 Unpreserved
7160514	5/6/98	1345		2										9805309-01
590112	5/10/96	1040		2										-02
760412	5/6/98	1345		2										-03
760532	5/8/98	1845		2										-04
600212	5/10/96	1630		2										-05
760522	5/8/98	1745		2										-06
640212	5/9/98	1530		2										-07
640112	5/9/96	1445		2										-08
760312	5/6/98	1630		2										-09
600214	5/10/96	1630		2										-10
760812	5/9/98	1930		2										-11
761012	5/10/96	1445		2										9805309-12

RELINQUISHED BY:	Date/Time	RECEIVED BY:	Date/Time
Laura Lumley	5/11/98	Diane Tramel	5/11/98
COMPANY NAME: SAIC	1130	COMPANY NAME: Gel	1600
RECEIVED BY: Shacks	5/11/98	RELINQUISHED BY:	
COMPANY NAME: GEL	1130	COMPANY NAME:	
RELINQUISHED BY: Shacks	5/11/98	RECEIVED BY:	
COMPANY NAME: GEL	1600	COMPANY NAME:	

TOTAL NUMBER OF CONTAINERS:

Cooler ID: #3886

Cooler Temperature: 4°C

FEDEX NUMBER:

TAB 7 - Laboratory Analytical Data

Delivery Order #101
Fort Stewart, Georgia
Tank Number 215
Building Number 1503

Method / **Sample ID** / *unit*	9073 **TRPH** ppm	418.1 **TPH** ppm	8020 **BTEX** ppb	8270B **Semi-Volatile Organics** ppb
8101-TK215-S1		1880	bdl	1110
bdl= below method detection limits				

**Fort Stewart is in an area of 'High or Average Groundwater pollution susceptibility' and this tank is approximately 2500 feet from a withdrawal point. Comparisons should be made to Table A for contaminants >500 feet from a withdrawal point.

Complete Data Package Follows

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)	
VOLATILE ORGANIC COMPOUNDS	≤500 feet to withdrawal point	>500 feet to withdrawal point	≤500 feet to withdrawal point	>500 feet to withdrawal point
Benzene[g]	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

ther 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]	
VOLATILE ORGANIC COMPOUNDS	≤500 feet to surface water body	>500 feet to surface water body	≤500 feet to surface water body	>500 feet to surface water body
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 - ased on worst-case assumptions for one-dimensional vadose zone and groundwater contaminant fate and transport models.
b - ased on an assumed distance of 0.5 feet between contaminated soils and the water table.
c - ed on an assumed distance of 5.0 feet between contaminated soils and the water table.
d - stimated 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.

BW

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 31 July and 1 August 1996 from Ft. Stewart.

2. If you have any questions, please call Mr. Blaise Willis at 770-919-5295 me at 770-919-3990.

SUBMITTED BY:	SIGNATURE	DATE:
LIAM L. TISON, P. E. Director, SAD Laboratory		20 Aug 1996

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

District - SAVANNAH
Date Received - 96/08/02
Date Reported - 96/08/16 10:44:50

FT. STEWART ARMY AF
Requisition - PMS-96-109
Work Order - 7996 Job Number - 4050

Lab #	Field ID	Date Sampled	Time Sampled
29678	8101-TK215-S1	96/07/31	15:30

Test Performed	Result	Units	Tested By	Test Date
TOTAL SOLIDS, % OF WET	90.10	%	SPA	96/08/05
AROMATIC VOLATILE ORGANICS	*		SPA	96/08/06
SEMIVOLATILE ORGANICS GC/MS	*		SPA	96/08/10
TRPH	1880.0	MG/KG	SPA	96/08/05

NOTE: See Attached

ampled by District Personnel

hecked by: JHS

Signed by:

Blaise Willis
Chemist

ge 1 of 4

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

DATE: 8/24/96

Number of coolers 1 Returned cooler(s) to: Atlanta Chemistry

PROJECT: Ft. Stewart W.O.# _____ JOB# 4050

Coolers(s) opened by (print name) Rose G. McDonald (sign) _____

1. Did cooler come with shipping slip? [X] yes [ ] no
If yes, enter Tracking Number here 102038322 1

2. Were custody seals on out side of cooler? [X] yes [ ] no
How many? 1 Date on seal(s) 8/24/96 Name on seal(s) —

3. Were custody seals unbroken upon receipt? [X] yes [ ] no

4. Did you screen sample(s) for "Radioactivity"? [X] yes [ ] no

5. Were custody papers filled out properly? (ink,signed,etc..) [X] yes [ ] no

6. Temperature of sample(s) upon receipt: 4C

7. Describe cooler packing: Bubble Bags

8. Did all sample containers arrive unbroken? [X] yes [ ] no

9. Were the sample containers sealed in separate plastic bags? [X] yes [ ] no

10. Were labels on containers in good condition and agree with Custody paper? [X] yes [ ] no

11. Were correct containers used for the test(s) indicated? [X] yes [ ] no

12. Were correct preservatives added to sample(s)? [X] yes [ ] no [ ] unk

13. Was a sufficient amount of sample sent for test? [X] yes [ ] no

14. Were bubbles absent in Volatile sample(s)? [X] yes [ ] no [ ] N/A
If no, list field ID# _____

15. Numbers of days from sample date, samples received in Lab 1-2 days

16. Number of Samples: 4 Sample Type: [X] soil [ ] water [ ] other _____

SAMPLE ANALYSIS PERFORMED BY: SDG TAT 5 day CAR

COMMENTS: _____

17. Did you sign custody papers in the appropriate place? [X] yes [ ] no

LAB NUMBER(S): 96782-81

SIGNATURE: _____

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: 29678 8101-TK215-S1
FT. STEWART

Lab Number: 96-A047529

Sampler: BOBBI THORN

Date Collected: 7/31/96

Date Received: 8/ 3/96

Time Collected: 15:30

Time Received: 8:30

Sample type: Soil

Organics Reference Data

BNA Blank	57480SBB
GC/MS Tune, BNA	DF0809B
Calibration Check, BNA	CC0809B

Percent solids: 90.1

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Acenaphthene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Acenaphthylene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Anthracene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Benzo(a)anthracene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Benzo(a)pyrene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Benzo(b)fluoranthene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Benzo(g,h,i)perylene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Benzo(k)fluoranthene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
4-Bromophenylphenylether	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Butylbenzylphthalate	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Carbazole	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
4-Chloro-3-methylphenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
4-Chloroaniline	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
bis(2-Chloroethoxy)methane	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
bis(2-Chloroethyl)ether	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
bis(2-Chloroisopropyl)ether	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2-Chloronaphthalene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B

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: 29678 8101-TK215-S1
FT. STEWART

Lab Number: 96-A047529

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Date Collected: 7/31/96

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Sample type: Soil

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

lyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
2-Chlorophenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
4-Chlorophenylphenylether	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Chrysene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Dibenzofuran	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Dibenz(a,h)anthracene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
1,2-Dichlorobenzene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
1,3-Dichlorobenzene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
1,4-Dichlorobenzene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
3,3'-Dichlorobenzidine	2220	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2,4-Dichlorophenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Diethylphthalate	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2,4-Dimethylphenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Dimethylphthalate	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Di-n-butylphthalate	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
4,6-Dinitro-2-methylphenol	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2,4-Dinitrophenol	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2,4-dinitrotoluene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2,6-Dinitrotoluene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Di-n-octylphthalate	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Fluoranthene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Fluorene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Hexachlorobenzene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
H chlorobutadiene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
He achlorocyclopentadiene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Hexachloroethane	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B

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611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

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FT. STEWART

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Time Collected: 15:30

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Sample type: Soil

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Indeno(1,2,3-cd)pyrene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Isophorone	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2-Methylnaphthalene	1110		1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2-Methylphenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
m,p-Methylphenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Naphthalene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2-Nitroaniline	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
3-Nitroaniline	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
4-Nitroaniline	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Nitrobenzene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2-Nitrophenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
4-Nitrophenol	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
N-nitrosodi-n-propylamine	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
N-nitrosodiphenylamine	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Pentachlorophenol	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Phenanthrene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Phenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Pyrene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Bis(2-ethylhexyl)phthalate	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
1,2,4-Trichlorobenzene	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2,4,5-Trichlorophenol	2770	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
2,4,6-Trichlorophenol	1110	U	1	ug/kg	8/10/96	4:33	M.Goodrich	8270B
Extraction, BNA,s	Completed			ug/kg	8/ 5/96	14:44	C.Gerenser	3550

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611 SOUTH COBB DRIVE
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Sample Location: 29678 8101-TK215-S1
FT. STEWART

Lab Number: 96-A047529

Sampler: BOBBI THORN

Date Collected: 7/31/96

Date Received: 8/ 3/96

Time Collected: 15:30

Time Received: 8:30

Sample type: Soil

UNDERGROUND STORAGE TANK RESULTS

Analyte	Result	Units	PQL	Dil Factor	Date	Time	Analyst	Method
Benzene	< 0.111	mg/kg	0.111	1	8/ 6/96	2:32	S. Wani	8020
Toluene	< 0.111	mg/kg	0.111	1	8/ 6/96	2:32	S. Wani	8020
Ethylbenzene	< 0.111	mg/kg	0.111	1	8/ 6/96	2:32	S. Wani	8020
Xylenes, total	< 0.111	mg/kg	0.111	1	8/ 6/96	2:32	S. Wani	8020
Petroleum Hydrocarbons,IR	1880	mg/kg	11.1	1	8/ 5/96	16:00	M.Himelick	418.1 M

Sample Extraction Data

BNA's Extracted 8/ 5/96 Wt extracted: 10.0 gm Extract Volume: 1.0 ml

** QUALITY CONTROL DATA **

Surrogate Recoveries

Surrogate	% Recovery	Target Range
GRO Surrogate, soil	72.	50 - 150
BNA Surrogate, Nitrobenzene	70.0	23 - 120
BNA Surr., 2-Fluorobiphenyl	94.0	30 - 115
BNA Surrogate, Terphenyl d14	108.	18 - 140

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CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Lab Number: 96-A047529

Samole ID: 29678 8101-TK215-S1

Date Collected: 7/31/96

Project: CALL #124

Time Collected: 15:30

Project Name:

Date Received: 8/ 3/96

Sampler: BOBBI THORN

Time Received: 8:30

State Certification:

Sample Type: Soil

Site I.D.:

** QUALITY CONTROL DATA **

Surrogate Recoveries

Surrogate	% Recovery	Target Range
BNA Surrogate, Phenol d5	82.0	10 - 115
BNA Surrogate, 2-Fluorophenol	60.0	20 - 121
BNA Surrogate, 2,4,6-Tribromophenol	106.	19 - 122

Due to sample matrix, semivolatile results were elevated.

Report Approved By: Theodore J. Duello Report Date: 8/14/96

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-A047533

Samole I.D.: METHOD BLANK — Lab Project: 49229

Project: CALL #124 — Date Received: 8/ 3/96

****

** UST Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
Benzene QC	110.	70 - 130	3.1	0 - 20
Toluene QC	106.	70 - 130	3.2	0 - 20
Ethyl benzene QC	106.	70 - 130	3.2	0 - 20
Xylene QC	106.	70 - 130	0.0	0 - 20
T , 418.1	108.	75 - 125	0.4	0 - 25.0

** Organics Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
Phenol	64.	26 - 90	3.0	0 - 35
2-Chlorophenol	52.	25 - 102	4.0	0 - 50
1,4-Dichlorobenzene	58.	28 - 104	2.0	0 - 27
Nitroso-di-n-propylamine	74.	41 - 126	0.0	0 - 38
1,2,4-Trichlorobenzene	[illegible]	38 - 107	1.0	0 - 23
4-Chloro-3-methylphenol	75.	26 - 103	3.0	0 - 33
Acenaphthene	78.	31 - 137	1.0	0 - 19
4-Nitrophenol	98.	11 - 114	3.0	0 - 50
2,4-Dinitrotoluene	78.	28 - 100	1.0	0 - 47
Pentachlorophenol	89.	17 - 109	2.0	0 - 47
Pyrene	73.	35 - 142	6.0	0 - 36

* Semi-Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
ce nthene	330.	U	ug/kg	8270B
cenaphthylene	330.	U	ug/kg	8270B

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 96-A047533

Sample I.D.: METHOD BLANK

Lab Project: 49229

Project: CALL #124

Date Received: 8/ 3/96

****

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

Compound	Result	Flag	Units	Method
Anthracene	330.	U	ug/kg	8270B
Benzo(a)anthracene	330.	U	ug/kg	8270B
Benzo(a)pyrene	330.	U	ug/kg	8270B
Benzo(b)fluoranthene	330.	U	ug/kg	8270B
Benzo(g,h,i)perylene	330.	U	ug/kg	8270B
Benzo(k)fluoranthene	330.	U	ug/kg	8270B
4-[illegible]mophenylphenylether	330.	U	ug/kg	8270B
Bu[illegible]benzylphthalate	330.	U	ug/kg	8270B
Carbazole	330.	U	ug/kg	8270B
4-Chloro-3-methylphenol	330.	U	ug/kg	8270B
4-Chloroaniline	330.	U	ug/kg	8270B
bis(2-Chloroethoxy)methane	330.	U	ug/kg	8270B
bis(2-Chloroethyl)ether	330.	U	ug/kg	8270B
bis(2-Chloroisopropyl)ether	330.	U	ug/kg	8270B
2-Chloronaphthalene	330.	U	ug/kg	8270B
2-Chlorophenol	330.	U	ug/kg	8270B
4-Chlorophenylphenylether	330.	U	ug/kg	8270B
Chrysene	330.	U	ug/kg	8270B
Dibenzofuran	330.	U	ug/kg	8270B
Dibenz(a,h)anthracene	330.	U	ug/kg	8270B
1,2-Dichlorobenzene	330.	U	ug/kg	8270B
1,3-Dichlorobenzene	330.	U	ug/kg	8270B
1,4-Dichlorobenzene	330.	U	ug/kg	8270B
3,3'-Dichlorobenzidine	670.	U	ug/kg	8270B
2,4-Dichlorophenol	330.	U	ug/kg	8270B
Diethylphthalate	330.	U	ug/kg	8270B
2,4-Dimethylphenol	330.	U	ug/kg	8270B
Dimethylphthalate	330.	U	ug/kg	8270B
Di-n-butylphthalate	330.	U	ug/kg	8270B
4,6-Dinitro-2-methylphenol	830.	U	ug/kg	8270B
2,4-Dinitrophenol	830.	U	ug/kg	8270B
2,[illegible]nitrotoluene	330.	U	ug/kg	8270B
2,6-[illegible]nitrotoluene	330.	U	ug/kg	8270B
Di-n-octylphthalate	330.	U	ug/kg	8270B

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 96-A047533

Sample I.D.: METHOD BLANK

Lab Project: 49229

Project: CALL #124

Date Received: 8/ 3/96

****

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

Compound	Result	Flag	Units	Method
Fluoranthene	330.	U	ug/kg	8270B
Fluorene	330.	U	ug/kg	8270B
Hexachlorobenzene	330.	U	ug/kg	8270B
Hexachlorobutadiene	330.	U	ug/kg	8270B
Hexachlorocyclopentadiene	330.	U	ug/kg	8270B
Hexachloroethane	330.	U	ug/kg	8270B
Ind n(1,2,3-cd)pyrene	330.	U	ug/kg	8270B
Isc rone	330.	U	ug/kg	8270B
2-Methylnaphthalene	330.	U	ug/kg	8270B
2-Methylphenol	330.	U	ug/kg	8270B
n,p-Methylphenol	330.	U	ug/kg	8270B
Naphthalene	330.	U	ug/kg	8270B
2-Nitroaniline	830.	U	ug/kg	8270B
3-Nitroaniline	830.	U	ug/kg	8270B
4-Nitroaniline	830.	U	ug/kg	8270B
Nitrobenzene	330.	U	ug/kg	8270B
2-Nitrophenol	330.	U	ug/kg	8270B
4-Nitrophenol	830.	U	ug/kg	8270B
N-nitrosodi-n-propylamine	330.	U	ug/kg	8270B
N-nitrosodiphenylamine	330.	U	ug/kg	8270B
Pentachlorophenol	830.	U	ug/kg	8270B
Phenanthrene	330.	U	ug/kg	8270B
Phenol	330.	U	ug/kg	8270B
Pyrene	330.	U	ug/kg	8270B
Bis(2-ethylhexyl)phthalate	330.	U	ug/kg	8270B
1,2,4-Trichlorobenzene	330.	U	ug/kg	8270B
2,4,5-Trichlorophenol	830.	U	ug/kg	8270B
2,4,6-Trichlorophenol	330.	U	ug/kg	8270B

Theodore J. Smith

Data File : C:\HPCHEM\1\DATA\DF0809C.D
Acq On : 10 Aug 96 6:57 am
Sample : tune
Misc :

Vial: 2
Operator: HP - 5
Inst : 5972 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
tle : SW846 METHOD 8270

Scan Number 2837

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.3	2246	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	58.8	2679	PASS
70	69	0	2	0.1	3	PASS
127	198	30	60	43.5	1982	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	4556	PASS
199	198	5	9	6.7	303	PASS
275	198	10	30	25.9	1180	PASS
365	198	1	100	2.9	134	PASS
441	443	0	100	0.3	14	PASS
442	198	40	100	99.9	4551	PASS
443	442	17	23	18.7	853	PASS

DF0809C.D 8270.M Sat Aug 10 15:43:44 1996

Data File : C:\HPCHEM\1\DATA\CC0809C.D
Acq On : 10 Aug 96 7:33 am
Sample : 50 ppm con cal
Misc :

Vial: 3
Operator: HP - 5
Inst : 5972 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
Title : SW846 METHOD 8270
Last Update : Tue Aug 06 16:17:22 1996
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	72	-0.05
2	T	Pyridine	0.202	0.149	26.3	54	0.00
3	T	N-Nitroso-dimethylamine	0.664	0.581	12.4	59	0.00
4	S	2-Fluorophenol	0.871	0.910	-4.4	62	-0.03
5		Aniline	1.190	1.072	9.9	57	-0.05
6		Bis-(2-Chloroethyl)ether	0.909	0.774	14.9	56	-0.05
7	S	Phenol-d5	1.004	0.901	10.3	53	-0.05
8	MC	Phenol	1.048	0.935	10.7	58	-0.05
9	M	2-Chlorophenol	0.789	0.788	0.1	66	-0.05
10		1,3-Dichlorobenzene	0.797	0.800	-0.4	65	-0.05
11	MC	1,4-Dichlorobenzene	0.833	0.824	1.1	61	-0.05
12		1,2-Dichlorobenzene	0.787	0.746	5.2	62	-0.05
13		Benzyl Alcohol	0.673	0.665	1.1	65	-0.07
14		Bis-(2-chloroisopropyl)ethe	0.100	0.094	5.8	61	-0.05
15		2-Methylphenol	0.678	0.630	7.1	61	-0.05
16		Hexachloroethane	0.321	0.308	4.2	62	-0.05
17		N-Nitroso-di-n-propylamine	0.533	0.514	3.5	63	-0.06
18		3,4-Methylphenol	0.843	0.788	6.6	61	-0.06
19	I	Naphthalene-d8	1.000	1.000	0.0	66	-0.05
20	S	Nitrobenzene-d5	0.478	0.488	-2.1	66	-0.06
21		Nitrobenzene	0.411	0.433	-5.3	62	-0.06
22		Isophorone	0.920	0.875	4.9	58	-0.07
23	C	2-Nitrophenol	0.213	0.246	-15.7	67	-0.06
24		2,4-Dimethylphenol	0.372	0.397	-6.7	67	-0.07
25		Bis-(2-chloroethoxy)methane	0.525	0.483	7.8	58	-0.06
26	C	2,4-Dichlorophenol	0.308	0.324	-5.3	63	-0.06
27		Benzoic acid	0.153	0.221	-44.8	145	-0.10
28	M	1,2,4-Trichlorobenzene	0.325	0.333	-2.5	61	-0.05
29		Naphthalene	0.895	0.841	6.1	58	-0.06
30		4-chloroaniline	0.435	0.390	10.3	53	-0.06
31	C	Hexachlorobutadiene	0.175	0.198	-13.6	68	-0.06
32		4-Chloro-3-methylphenol	0.315	0.326	-3.6	65	-0.05
33		2-Methylnaphthalene	0.591	0.534	9.6	54	-0.06
34	I	Acenaphthene-d10	1.000	1.000	0.0	72	-0.05
35	P	Hexachlorocyclopentadiene	0.215	0.107	50.2	34	-0.05
36	C	2,4,6-Trichlorophenol	0.401	0.403	-0.5	65	-0.05
37		2,4,5-Trichlorophenol	0.378	0.392	-3.7	64	-0.06
38	S	2-fluorobiphenyl	1.257	1.073	14.6	62	-0.07
39		2-Chloronaphthalene	1.070	0.985	7.9	60	-0.06
40		2-Nitroaniline	0.453	0.432	4.7	59	-0.06
41		Acenaphthylene	1.521	1.313	13.7	57	-0.06
42		Dimethylphthalate	1.210	1.166	3.6	63	-0.06
43		2,6-Dinitrotoluene	0.324	0.340	-5.0	65	-0.07
44		3-Nitroaniline	0.310	0.247	20.2	53	-0.07

46	P	2,4-dinitrophenol	0.155	0.125	19.3	47	-0.07
47		Dibenzofuran	1.481	1.347	9.1	60	-0.07
48	M	2,4-Dinitrotoluene	0.410	0.420	-2.4	62	-0.07
49	MP	4-Nitrophenol	0.246	0.268	-8.6	67	-0.07
50		Fluorene	1.134	1.040	8.2	63	-0.07
51		4-Chlorophenyl phenylether	0.533	0.478	10.4	59	-0.07
52		Diethylphthalate	1.129	1.099	2.7	74	-0.07
53		4-Nitroaniline	0.365	0.321	12.1	54	-0.10
54		Azobenzene	1.125	1.346	-19.7	71	-0.07
55	I	Phenanthrene-d10	1.000	1.000	0.0	75	-0.07
56		4,6-Dinitro-2-methylphenol	0.110	0.091	17.1	46	-0.08
57	C	N-Nitroso-diphenylamine	0.423	0.362	14.5	60	-0.06
58	S	Tribromophenol	0.140	0.145	-3.6	61	-0.07
59		4-Bromophenyl phenyl ether	0.189	0.177	6.4	64	-0.07
60		Hexachlorobenzene	0.251	0.247	1.8	65	-0.07
61	MC	Pentachlorophenol	0.159	0.179	-12.8	71	-0.07
62		Phenanthrene	0.861	0.800	7.1	61	-0.16
63		Anthracene	0.861	0.815	5.3	62	-0.07
64		Carbazole	0.857	0.752	12.2	60	-0.08
65		Di-n-butyl phthalate	1.219	1.149	5.7	66	-0.07
66	C	Fluoranthene	0.947	0.927	2.2	66	-0.08
67	I	Chrysene-d12	1.000	1.000	0.0	73	-0.07
68		Benzidine	0.374	0.107	71.3	20	-0.09
69	M	Pyrene	1.139	1.134	0.4	64	-0.08
70	S	Terphenyl-d14	0.947	0.882	6.8	66	-0.08
71		Butylbenzylphthalate	0.699	0.685	2.1	66	-0.07
72		3,3'-Dichlorobenzidine	0.362	0.354	2.1	61	-0.08
73		Benzo(a)anthracene	1.087	0.859	20.9	51	0.04
74		Chrysene	0.911	0.825	9.4	63	-0.09
75		Bis-(2-ethylhexyl)phthalate	0.915	0.879	4.0	65	-0.07
76	I	Perylene-d12	1.000	1.000	0.0	64	-0.07
77	C	Di-n-octylphthalate	1.429	1.544	-8.1	65	-0.09
78		Benzo(b)fluoranthene	1.122	1.241	-10.6	81	-0.10
79		Benzo(k)fluoranthene	1.122	1.106	1.5	72	-0.03
80	C	Benzo(a)pyrene	0.948	0.970	-2.3	59	-0.09
81		Indeno(1,2,3-cd)pyrene	1.035	0.829	19.9	46	-0.10
82		Dibenz(a,h)anthracene	0.936	0.870	7.0	52	-0.10
83		Benzo(g,h,i)perylene	0.920	0.829	9.9	90	-0.10

(#) = Out of Range SPCC's out = 0 CCC's out = 0

0500805 D: 8270.M Sat Aug 10 15:42:22 1996

Temp Hc

SADD Labs

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Job # 4052

Project No.	Project Name
8101	Ft Stewart DO-0101

Samplers (Signature)

Sample Number	Date	Time	Grab	Comp.	Sample Location	No. of Containers	Preservative	8020	TPH 8270	418.1				Remarks:
8101-TK215-S1	7/31/96	1530	✓		Soil	3	No	✓	✓	✓		2678		Soil below UST.
8101-TK207A-S1	8-1-96	0800	✓	✓	Soil	3	No	✓	✓	✓			77	Soil below UST - northend
8101-TK207A-S2	8-1-96	0815	✓	✓	Soil	3	No	✓	✓	✓			80	Soil below UST - southend
8101-TK214-S1	8-1-96	1030	✓	✓	Soil	3	No	✓	✓	✓			81	Soil below UST
Temp Vial														

Relinquished by:	Date / Time	Received by:	Relinquished by:	Date / Time	Received by:
[signature]	8/1/96 1430				
Relinquished by:	Date / Time	Received by:	Relinquished by:	Date / Time	Remarks:
Relinquished by:	Date / Time	Received by:			

S. Army Corps of Engineers Work Order # _____ Job # 4158 Chain of Custody Record

(ER 1110-1-263)

TAT Regular

roj. No. | Project Name Ft. Stewart

Sampler: (Signature) 49229

Date	Time	Pres.	Grab	Comp	Site Code/Sample Number	Number of Containers	M8020	M8270	1CLP 418.1				Remarks: SAD NO.	MATRIX
8/1/96	1530				8101-TK215-S1	3	✓	✓	✓				29678	47529 Soil
8/1/96	0800				8101-TK207A-S1	3	✓	✓	✓				29679	47530
	0815				8101-TK207A-S2	3	✓	✓	✓				29680	47531
↓	1030				8101-TK214-S1	3	✓	✓	✓				29681	47532 Soil

Sampler Relinquished by:	Date/Time	Received by: (Sig.)	Date/Time	Hazards Associated with Samples
Relinquished by: (Sig.)	Date/Time 8/4/96	Received by: (Sig.)	Date/Time	96-A047533
Relinquished by: (Sig)	Date/Time	Received for Laboratory by: (Sig.)	Date/Time 8/3/96 0830	Remarks at time of receipt:
Custody Seal No.		Lab case No.:		

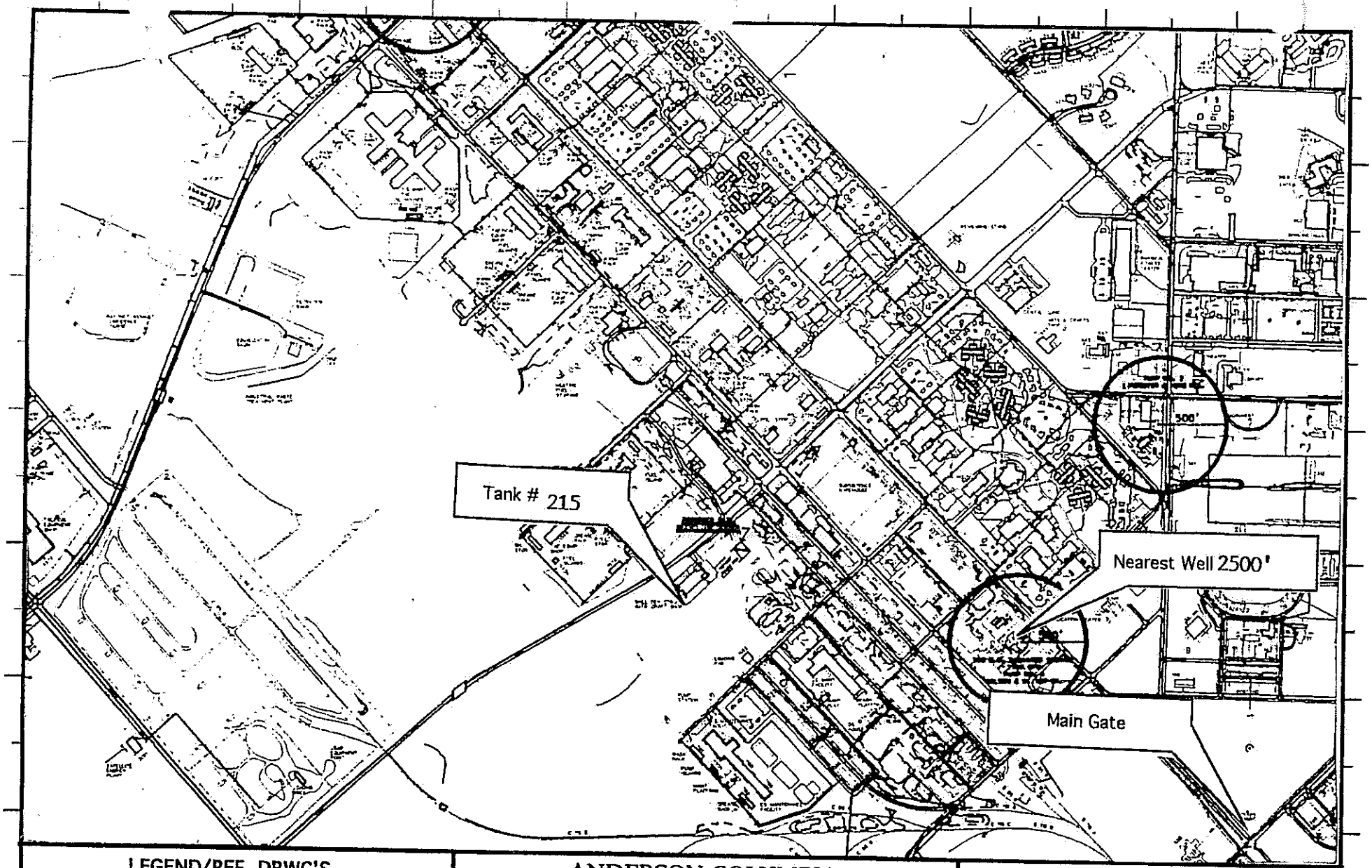
ENG Form 50[illegible], Oct 90 Propo[illegible]: CEHP-RI

TAB 9

MANIFESTS

TAB 9
MANIFESTS

No contaminated soil was removed from this site. Therefore, no manifests are included in this report.



LEGEND/REF. DRWG'S

Base map of Fort Stewart.

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.
P. O. BOX 1386 LAKE CITY, FLORIDA 32056 (904) 755-1196

DR. AJR CH'D SRC DR. APP. DFB
ENGR. _____ ENGR'G DEPT. _____
DATE 9 Oct 96 SCALE 1" = 1000'

Area Map for Tank # 215
Fort Stewart
Hinesville, Georgia
Facility Id. No. 9-089015

DRAWING NO.: FIGURE 1