Appendix D

ADEM Closure Assessment Report for Parcel 133(7), Former Gas Station, Building 1494, at Former Motor Pool Area 1500, Parcel 94(7), Anomaly A-1(2)

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.:	NA	DATE OF THIS REPORT:	8/2/00
INCIDENT NO. (If applicable).	UST __ __ - __ __ - __ __	UST OWNER:	U.S. Army
FACILITY COUNTY:	Calhoun	ADDRESS:	Ft. McClellan Anniston, AL
FACILITY NAME:	Parcel 133	CONTACT NAME:	
LOCATION:	A-1(2)	CONTACT PHONE #:	
ADDRESS:	Ft. McClellan Anniston, AL		

NAME OF CONTRACTOR USED TO CLOSE (REMOVE): IT Corporation

NAME OF CONSULTANT CONDUCTING ASSESSMENT: IT Corporation

NAME OF LABORATORY USED: Severn Trent Laboratories

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS". THESE API BULLETINS ARE AVAILABLE FROM THE AMERICAN PETROLEUM INSTITUTE.

NUMBER OF TANKS CLOSED: **NONE (none present)(previously removed; no record)**

NUMBER OF TANKS REMAINING AT SITE: **NONE**

CLOSURE DATE: **8/3/00**

UNIQUE TANK #:	**UNK**	**UNK**			
TANK SIZE:	**UNK**	**UNK**			
TANK CAPACITY:	**10,000 gal**	**10,000 gal**			
TANK AGE:	**UNK**	**UNK**			
DATE TANK LAST USED:	**UNK**	**UNK**			
SUBSTANCE STORED:	**Gasoline**	**Diesel**			
TYPE OF PRODUCT PIPING:	**2" STEEL**	**2" STEEL**			
(Pressurized/Suction)	**UNK**	**UNK**			
FARM TANK:	☐	☐	☐	☐	☐
HEATING OIL TANK:	☐	☐	☐	☐	☐

1. COMPLETE THE FOLLOWING SECTION FOR ALL CLOSURES:

a. Provide the results of a 500 ft. survey for domestic water supply wells in the following table and place their locations on the attached site map:

Name of Owner of Domestic Water Supply Well	Distance from UST Site	Depth of Well	Status: Active or Inactive?
NONE	NA	NA	NA

b. Provide the results of a 1,000 ft. survey for public water supply wells in the following table and place their locations on the attached site map:

Name of Owner of Public Water Supply Well	Distance from UST Site	Depth of Well	Status: Active or Inactive?
NONE	NA	NA	NA

c. Is the UST site located in a delineated wellhead protection or source water area?

YES ☐ NO ☒

d. Are there any public water supply surface water intakes within 500 ft. of the UST site?

YES ☐ NO ☒

If yes, locate the intake on the attached site map.

NOTE: If an active domestic water supply well or an active public water supply well is located within 500 ft. or 1,000 ft. respectively of the UST site, or if the answer to 1c. or 1d. is Yes, the Department may require groundwater sampling to occur at the UST site. If the groundwater sampling is not performed by the owner/operator during the closure site assessment, the Department may require that groundwater sampling occur as part of a Preliminary Investigation.

Groundwater sampling remains a requirement of the closure site assessment when shallow groundwater is present or when performing an in-place closure site assessment.

e. Indicate the current on-site land use and the most likely future land use:

Current On-Site Land Use			Most Likely Future On-Site Land Use	
Residential	☐		Residential	☐
Commercial	☐		Commercial	☐
Other	☒		Other	☒
Describe: Military Installation (being closed)			Describe: Active Recreational	

f. Describe the current off-site land use within 500 ft of the UST site. State whether the area, in general, is residential, commercial, mixed residential/commercial or other:

North:	Primarily woodland and/or undeveloped	
	Northeast:	
	Northwest:	
South:	Primarily woodland and/or undeveloped	
	Southeast:	
	Southwest:	
West:	Primarily woodland and/or undeveloped	
East:	Primarily woodland and/or undeveloped	

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

2. TANK CLOSURE BY REMOVAL: Tanks previously removed, not found during investigative dig based on geophysical information.

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

	YES	NO
c. Is the groundwater more than 5 feet below the bottom of the excavation?	☒	☐
If no, provide the depth from the ground surface to the groundwater table. Feet: _____		
Indicate method used to determine water table depth:	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐
	YES	NO
d. Was there a notable odor found in the excavation?	☐	☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

	YES	NO
e. Was there water in the excavation?	☐	☒
If yes, how was it handled?	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____		
	YES	NO
f. Was free product found in the excavation?	☐	☒

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO NA

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):
No tank found. Anomaly investigated (suspected as potential UST) was determined to be Two 2"-diameter, 9' long product/vent piping buried approx. 1.5' below grade.

h. Describe the soil type and thickness of all soil layers encountered in the excavation:
Light brownish-red silty, gravelly, clayey SAND (backfill).

i. Was the excavation backfilled? YES ☒ NO ☐

If yes, provide the date of backfilling: 8/4/00.

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

3. TANK CLOSURE WITHOUT REMOVAL(CLOSED IN-PLACE): N/A

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depths at which soil samples were taken,
4. Boring logs.

c. Attach groundwater sampling data, if required based on depth to groundwater.

d. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

Provide the depth from the ground surface to the groundwater table. Feet: _____

Refer to Closure Site Assessment Guidance (page 11) for further details regarding requirements for determining groundwater elevation.

e. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

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

_____

_____

_____

h. Specify the inert solid material used to fill the tank(s):

_____

_____

i. Provide the date the tank(s) were filled: _____

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

4. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☐ NO ☒
If yes, was the product properly disposed of? ☐ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	☒	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

e. Was there a notable odor found in the piping trench? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐

5. Other? Explain: _____

g. Was free product found in the piping trench? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☒ NO ☐

If yes, indicate the location(s) and provide a general description as to the size and number of holes:
Two 2"-diameter, 9' long product/vent piping running east from the southeastern corner of the pad; not capped (hole).

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
Light brownish-red silty, gravelly, clayey SAND (backfill)

j. Was the piping trench backfilled? YES ☒ NO ☐

If yes, provide the date of backfilling: _____

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

5. PRODUCT PIPING CLOSURE WITHOUT REMOVAL (CLOSED IN-PLACE): N/A

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Attach groundwater sampling data, if required based on depth to groundwater.
Refer to Closure Site Assessment Guidance for further details regarding requirements for groundwater sampling.

d. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? ☐ ☐

e. Was the piping capped? YES ☐ NO ☐

f. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

Provide the depth from the ground surface to the groundwater table. Feet: _____

Refer to Closure Site Assessment Guidance (page 11) for further details regarding requirements for determining groundwater elevation.

g. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other)
describe: _____

(2) The odor indicates what type of product:
(gasoline) (diesel) (waste oil) (kerosene) (other)
describe: _____

h. Was free product found in the bore holes? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

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

_____

_____

_____

_____

j. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐

If yes, provide the date: _____

6. GROUNDWATER SAMPLING (If required by attached closure guidelines): N/A

a. Indicate the following on the plan and section views required by Section 2.b., 3.b, 4.b, or 5.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)

2. The most probable direction of groundwater flow. State basis for determining direction:

_____

_____

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

c. **SUMMARY OF GROUNDWATER SAMPLING RESULTS: N/A**

Date of Sampling: _____

Boring or MW #:							
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Benzene							
Ethylbenzene							
Toluene							
Xylenes							
MTBE							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b) fluoranthene							
Benzo(k)fluoranthene							
Benzo(g,h,i)perylene							
Chrysene							
Fluoranthene							
Fluorene							
Naphthalene							
Phenanthrene							
Pyrene							
Lead							

Note: Attach additional tables as needed based on number of groundwater samples or variations in sampling dates.

d. Attach the original chain of custody record (**copies are not acceptable**) and the original laboratory data sheet (**copies are not acceptable**) for each sample.

7. SUMMARY OF SOIL ANALYTICAL DATA

a. Provide the analytical data obtained from the site in the following tables:

TANK PIT SAMPLES: N/A

Date of Sampling: _____

Sample #:							
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH OPTION:							
TPH							
Lead							
COC OPTION:							
Benzene							
Ethylbenzene							
Toluene							
Xylenes							
MTBE							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b) fluoranthene							
Benzo(k)fluoranthene							
Benzo(g,h,i)perylene							
Chrysene							
Fluoranthene							
Fluorene							
Naphthalene							
Phenanthrene							
Pyrene							
Lead							

Note: Attach additional tables as needed based on number of soil samples or variations in sampling dates.

PIPING & DISPENSER SAMPLES:

Date of Sampling: **7/26/00**

Sample #:	LF0006						
	East end of pipe						
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH OPTION:							
TPH							
Lead							
COC OPTION:							
Benzene	ND						
Ethylbenzene	ND						
Toluene	ND						
Xylenes	ND						
MTBE							
Acenaphthene	ND						
Acenaphthylene	ND						
Anthracene	0.15J						
Benzo(a)anthracene	0.25						
Benzo(a)pyrene	0.8						
Benzo(b) fluoranthene	0.44						
Benzo(k)fluoranthene	0.39						
Benzo(g,h,i)perylene	0.49						
Chrysene	0.42						
Dibenz(a,h)anthracene	0.064						
Fluoranthene	0.5						
Fluorene	ND						
Indeno(1,2,3-cd)pyrene	0.48						
Naphthalene	ND						
Phenanthrene	ND						
Pyrene	0.34						
Lead	20.3						

Note: Attach additional tables as needed based on number of soil samples or variations in sampling dates.

b. Attach the original chain of custody record (**copies are not acceptable**) and the original laboratory data sheet (**copies are not acceptable**) for each sample.

8. EXCAVATED SOIL

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

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches**.

a. If **piping** was closed by removal, provide an estimate of the volume of soil removed: 5 cubic yds

b. Provide a summary of analytical results for the excavated soil:

Date of Sampling: **7/26/00**

Sample #	TPH Results mg/kg	Lead Results (If applicable) mg/kg
LF8001	35	29.7

Note: Attach additional tables as needed based on number of soil sample or variations in sampling dates.

c. Attach the original chain of custody record (**copies are not acceptable**) and the original laboratory data sheet (**copies are not acceptable**) for each sample.

d. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

e. Indicate current method and location of soil management and/or treatment prior to final disposal:

f. Check the method of soil disposal used or to be used:

- ☒ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

g. If soil was disposed of prior to the submittal of this form, indicate the final destination below and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

9. TANK CLEANING: N/A

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☐	NA

If no, describe how tank(s) were cleaned:
No tanks were identified during investigative dig.

b. Provide an estimate of the volume of sludge removed from the tank: NA Gallons

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

10. ATTACHMENTS

Attach the following to the closure form in the following order as applicable to the type of closure site assessment performed. Check each box to indicate that a particular map or information is attached to the closure site assessment form. The section of the closure site assessment form that indicates the required attachment is shown.

☒	Topographic Map showing location of site (Section 2.a., 3.a., 4.a., & 5.a.)	
☒	Area map showing general location of the site. Include land use on-site and within 500' of site. (Section 1)	
	☐	Include locations of domestic and public water supply wells, and surface water intakes (Section 1)
☒	Plan and sectional views of the site including the following: (Section 2.b., 3.b., 4.b., & 5.b.)	
	☐	Location of the closed tanks and piping including depth. Include any remaining tanks or piping at site. Include tank identification numbers.
	☐	Excavation dimensions of the tank system
	☒	Locations of soil samples taken for piping and tank which includes the analytical results.
	☐	Location of areas of visible contamination
	☐	Location of any stockpiled excavated soil
	☐	Location of soil borings for an in-place closure
☐	The location and depth of the one up-gradient and 3 down-gradient borings or monitoring wells (Section 6.a.)	
☐	Map illustrating the most probable direction of groundwater flow (Section 6.a.)	
☐	Schematic diagrams of the monitoring wells installed (Section 6.b.)	
☐	Boring logs of soil borings (Section 3.b., 5.b. &6.b.)	
☐	Site Classification Checklist	
☐	**Invoices and/or receipts for sludge disposal (Section 9.c.)**	
☐	Invoices, manifests and certificates of burn or disposal for soil disposal (Section 8.f.)	

☒	Attach the **original** chain of custody record (copies are not acceptable) for each sample which includes at least the following: (Sections 6.d., 7.b., & 8.c.)	
	☒	Sample identification number,
	☒	Date and time sample was taken,
	☒	Name and title of person collecting sample (see certification requirement on page 15 of this form),
	☒	Type of sample (soil or water),
	☒	Type of sample container,
	☒	Method of preservation,
	☒	Date and time sample was relinquished,
	☒	Person relinquishing sample,
	☒	Date and time sample was received by lab,
	☒	Person receiving sample at lab.

☒	Attach the **original** laboratory data sheet (**copies are not acceptable**) which includes at least the following: (Sections 6.d., 7.b., & 8.c.)	
	☒	A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 2.b., 3.b., 4.b., or 5.b. above
	☒	The sample analytical results with appropriate units,
	☒	The method used to analyze each sample,
	☒	The date and time the sample was analyzed,
	☒	The person analyzing the sample.

11. SIGNATURES

This form should be completed, signed, and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: James R. Messer

Company: IT Corporation

Telephone Number: 256-848-3499

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

Signature: _____ Date: _____

Either a Geologist or an Alabama Registered Professional Engineer must sign this form:

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted soil and groundwater investigation practices; I am either a Geologist or an Alabama Registered Professional Engineer; I am experienced in soil and groundwater investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: David B. Tester, P.E. Date: 10/8/01

Alabama P.E. Registration Number: 23633

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

Signature of Tank Owner: _____ Date: _____

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

FORM 1133
11/05/97

FOR ADEM OFFICE USE ONLY	
TO: Air Division	FROM: UST Compliance Section

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

FACILITY I.D. NO.: NA

DATE OF THIS REPORT: 8/30/00

INCIDENT NO. (If applicable). UST __ __ - ___ - ___

UST OWNER: U.S. Army

FACILITY COUNTY: Calhoun

ADDRESS: Ft. McClellan, Anniston, AL

FACILITY NAME: Parcel 133

CONTACT NAME:

LOCATION: A-1(2)

CONTACT PHONE #:

ADDRESS: Ft. McClellan, Anniston, AL

Name of Consultant who performed calculations: James R. Messer

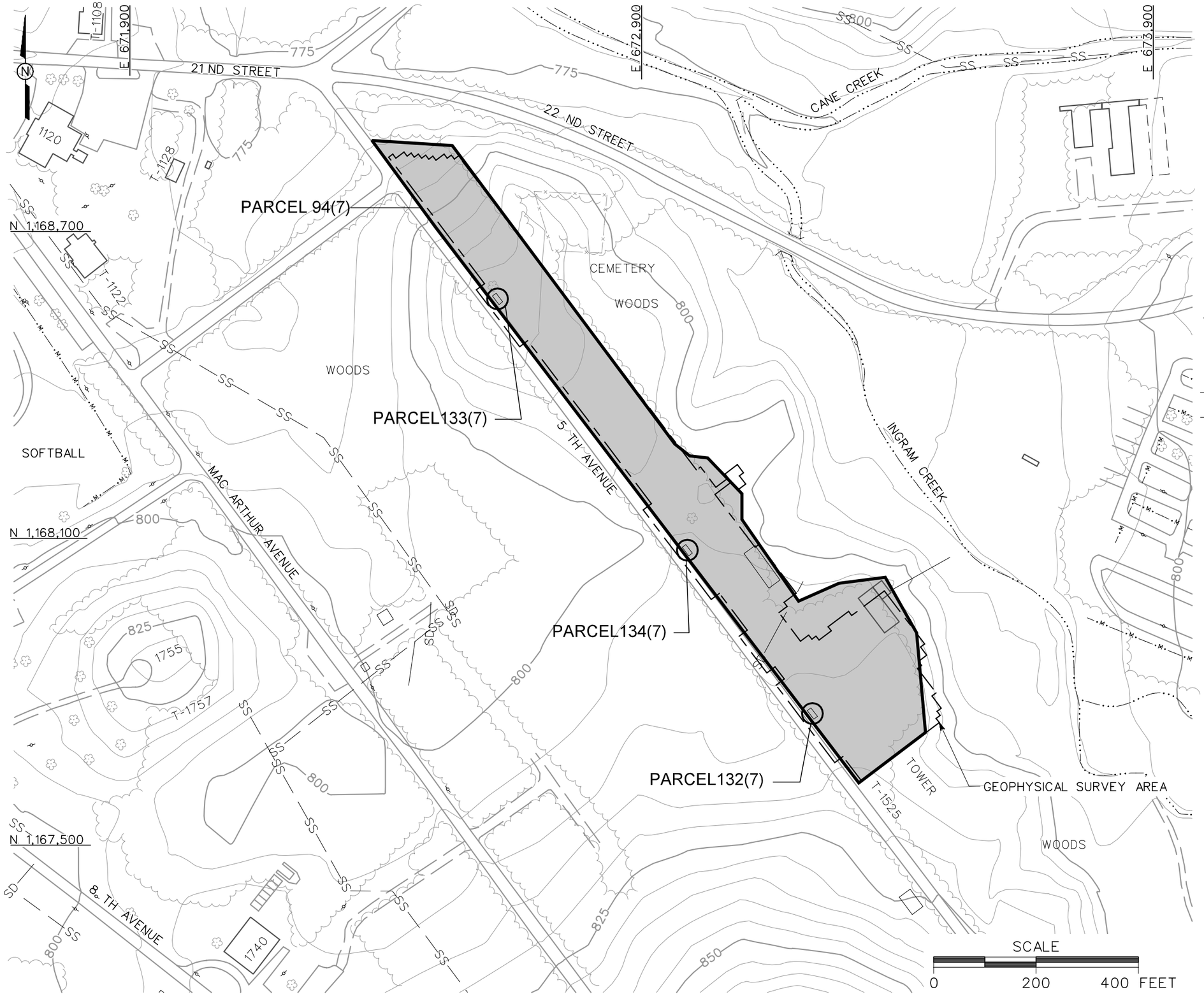
Consultant's Phone Number: 256-848-3499

	a	ppm x	b	cyds x .002 =	c	lbs. VOC emissions
Sample 1	35	ppm x	5	cyds x .002 =	0.35	lbs. VOC emissions
Sample 2		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 3		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 4		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 5		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 6		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 7		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 8		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 9		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 10		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 11		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 12		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 13		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 14		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 15		ppm x		cyds x .002 =		lbs. VOC emissions

TOTAL POTENTIAL EMISSIONS = 0.35 lbs. VOC emissions

*** NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.**
This form must be completed and submitted with the ADEM UST Closure Site Assessment Report Form.

FIGURES



LEGEND

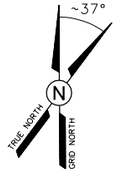
- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- GEOPHYSICAL SURVEY AREA
- BRIDGE
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- SANITARY SEWER LINE
- STORM DRAINAGE LINE

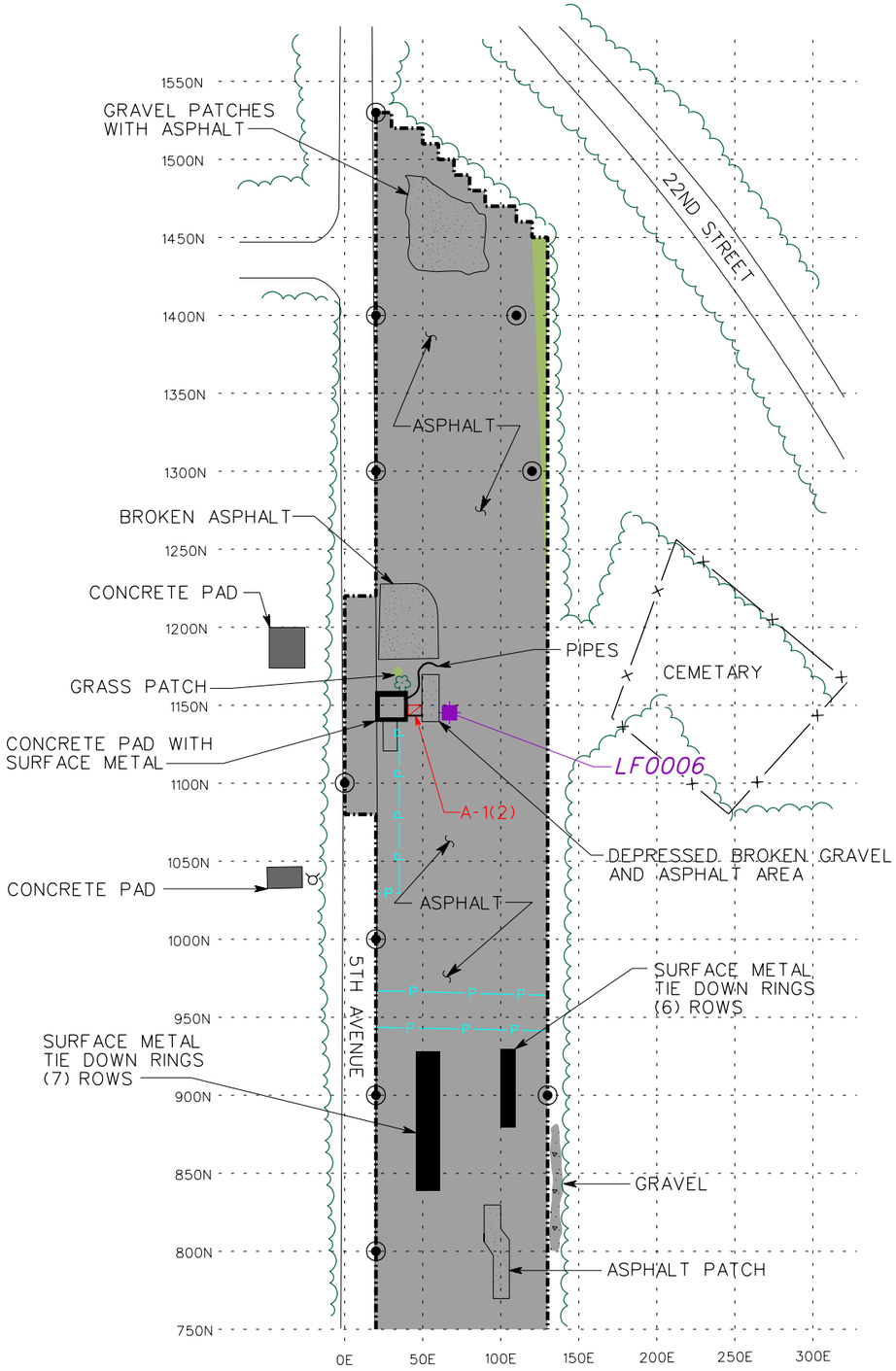
FIGURE D-1
SITE MAP, PARCELS 132(7), 133(7), AND 134(7), FORMER GAS STATIONS, FORMER BUILDINGS 1594, 1494, AND 1594A, AT FORMER MOTOR POOL AREA 1500, PARCEL 94(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

IT CORPORATION
A Member of The IT Group

DBILLING: c:\cadd\design\783149es.163 | 02/13/01 04:44:27
DATE LAST REV.: | DRAWN BY: | DRAFT. CHCK. BY:
DATE: 02/08/01 | DRAWN BY: D. BOMAR | ENGR. CHCK. BY: J. JENKINS
STARTING | PROJ. MGR.: J. YACOUB | INITIATOR: J. BOND
PROJ. NO.: 783149 | DWG. NO.: ...\783149es.163





LEGEND

- GEOPHYSICAL SURVEY BOUNDARY
- CIVIL SURVEY STAKE LOCATION
- GEOPHYSICAL ANOMALY (A-1(2))
- PIPE/BURIED UTILITY (P)
- FIRE HYDRANT
- FENCE
- TREES / TREELINE
- SOIL SAMPLE LOCATION

NAD 83 SPHEROID, ALABAMA EAST STATE PLANE DATUM		
LOCAL GRID COORDINATES	STATE PLANE COORDINATES	
800N,20E	1168295.870N	672812.560E
900N,20E	1168375.740N	672752.501E
900N,130E	1168442.910N	672839.364E
1000N,20E	1168455.590N	672692.494E
1100N,0E	1168523.062N	672616.332E
1300N,20E	1168695.029N	672512.281E
1300N,120E	1168755.073N	672590.110E
1400N,110E	1168829.443N	672523.679E
1400N,20E	1168774.924N	672452.259E
1530N,20E	1168878.105N	672374.359E

SCALE
0 100 200 FEET

FIGURE D-2
SITE MAP WITH SAMPLE LOCATION AND GEOPHYSICAL INTERPRETATION PARCELS 132(7), 133(7), AND 134(7) FORMER GAS STATION BUILDINGS 1494, 1594, AND 1594A AT FORMER MOTOR POOL AREA 1500 PARCEL 94(7), NORTHERN PORTION OF THE SITE

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

IT CORPORATION
A Member of The IT Group

DBILLING c:\cadd\design\783149es.164 02/14/01 04:08:08 PM
DRAFT. CHCK. BY: ENGR. CHCK. BY: J. JENKINS PROJ. MGR.: PROJ. MGR.: INITIATOR: J. BOND DWG. NO.: ...\783149es.164
DATE LAST REV.: DRAWN BY: STARTING DATE: 02/08/01 DRAWN BY: D. BOMAR PROJ. NO.: 783149

UST INVESTIGATION PHOTOGRAPHS

Photo 1: Anomaly A-1(2). Pre-dig conditions. Facing northeast.

Photo 2: Anomaly A-1(2). Note piping on the southeast corner of the pad (right lower center of photo). Facing east.

Photo 3: Anomaly A-1(2). Trench and exposed piping extending through anomaly area. Facing west.

Photo 4: Anomaly A-1(2). Depth of excavation extended to 6-feet below ground surface. No water.

ANALYTICAL RESULTS

SEVERN TRENT SERVICES

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947

Tel: 865-291-3000
Fax: 865-584-4315
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 783149

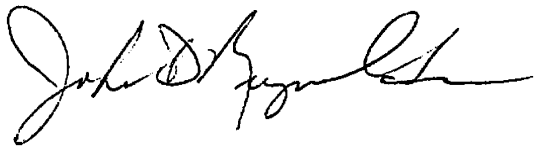
FTMC

Lot #: H0G270153

Duane Nielsen

IT Corp - Ft. McClellan
312 Directors Drive
Knoxville, TN 37923

SEVERN TRENT LABORATORIES, INC.



John Reynolds
Project Manager

August 7, 2000

SAMPLE SUMMARY

H0G270153

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
DGWA8	001	LF0006	07/26/00	14:00
DGWAH	002	LF0007	07/26/00	14:00
DGWAL	003	LF8001	07/26/00	14:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

H0G270153

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Paint Filter Test	SW846 9095
Percent Moisture	MCAWW 160.3 MOD
Polynuclear Aromatic Hydrocarbons by HPLC	SW846 8310
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Petroleum Hydrocarbons	SW846 8015B
Volatiles by GC	SW846 8021B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

PROJECT NARRATIVE
H0G270153

The results reported herein are applicable to the samples submitted for analysis only.

The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Subcontract

The following analyses were performed by STL Tampa East, 5910 Breckenridge Parkway, Tampa, FL 33601: Percent Solids (MCAWW 160.3 MOD), Gasoline and Diesel Range Organics (SW846 8015B), Paint Filter Test (SW846 9095), Polynuclear Aromatic Hydrocarbons (SW846 8310) and BTEX (SW846 8021B).

Quality Control

All holding times and QC criteria were met with the following exception:

Polynuclear Aromatic Hydrocarbons

The surrogate recoveries for samples LF0006 and LF0007 were not calculated because the extract was diluted beyond the ability to quantitate a recovery.

IT CORP - FT. MCCLELLAN

Client Sample ID: LF8001

GC Semivolatiles

Lot-Sample #...:	H0G270153-003	Work Order #...:	DGWAL102	Matrix.....:	SOLID
Date Sampled...:	07/26/00	Date Received..:	07/27/00		
Prep Date.....:	07/27/00	Analysis Date..:	07/31/00		
Prep Batch #...:	0209608				
Dilution Factor:	1				
% Moisture.....:	11	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Diesel Range Organics	35	11	mg/kg	3.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetratriacontane	64	(25 - 113)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: H0G270153 **Work Order #...:** DH06Q101 **Matrix.....:** SOLID
MB Lot-Sample #: B0G270000-608

Prep Date.....: 07/27/00
Analysis Date..: 07/31/00 **Prep Batch #...:** 0209608
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	ND	10	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetratriacontane	86	(25 - 113)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: H0G270153 **Work Order #...:** DH06Q102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G270000-608 DH06Q103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 07/31/00
Prep Batch #...: 0209608
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diesel Range Organics	**59.2**	**58.3**	**mg/kg**	**99**		**SW846 8015B**
	59.2	**68.0**	**mg/kg**	**115**	**15**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetratriacontane	97	(25 - 113)
	98	(25 - 113)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: H0G270153 **Work Order #...:** DH06Q102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G270000-608 DH06Q103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 07/31/00
Prep Batch #...: 0209608
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**99**	**(35 - 115)**			**SW846 8015B**
	115	**(35 - 115)**	**15**	**(0-34)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetratriacontane	97	(25 - 113)
	98	(25 - 113)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

IT CORP - FT. MCCLELLAN

Client Sample ID: LF8001

GC Volatiles

Lot-Sample #...:	H0G270153-003	**Work Order #...:**	DGWAL103	**Matrix.....:**	SOLID
Date Sampled...:	07/26/00	**Date Received..:**	07/27/00		
Prep Date.....:	07/27/00	**Analysis Date..:**	07/28/00		
Prep Batch #...:	0210172				
Dilution Factor:	1				
% Moisture.....:	11	**Method.....:**	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Gasoline Range Organics	ND	5.6	mg/kg	0.48

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	71	(39 - 163)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: H0G270153 **Work Order #...:** DH0JH101 **Matrix.....:** SOLID
MB Lot-Sample #: B0G280000-172

Prep Date.....: 07/27/00
Analysis Date..: 07/28/00 **Prep Batch #...:** 0210172
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	5.0	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	86	(39 - 163)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: H0G270153 **Work Order #...:** DH0JH102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G280000-172 DH0JH103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 07/28/00
Prep Batch #...: 0210172
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**20.0**	**16.5**	**mg/kg**	**82**		**SW846 8015B**
	20.0	**17.4**	**mg/kg**	**87**	**5.4**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	78	(39 - 163)
	85	(39 - 163)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: H0G270153 **Work Order #...:** DH0JH102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G280000-172 DH0JH103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 07/28/00
Prep Batch #...: 0210172
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**82**	**(26 - 115)**			**SW846 8015B**
	87	**(26 - 115)**	**5.4**	**(0-25)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	78	(39 - 163)
	85	(39 - 163)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0006

GC Volatiles

Lot-Sample #...: H0G270153-001 **Work Order #...:** DGWA8102 **Matrix.....:** SOLID
Date Sampled...: 07/26/00 **Date Received..:** 07/27/00
Prep Date.....: 07/27/00 **Analysis Date..:** 07/27/00
Prep Batch #...: 0210168
Dilution Factor: 1
% Moisture.....: 17 **Method.....:** SW846 8021B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzene	ND	60	ug/kg	22
Ethylbenzene	ND	60	ug/kg	26
Toluene	ND	60	ug/kg	17
Xylenes (total)	ND	60	ug/kg	56

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(46 - 143)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0007

GC Volatiles

Lot-Sample #...: H0G270153-002 **Work Order #...:** DGWAH103 **Matrix.....:** SOLID
Date Sampled...: 07/26/00 **Date Received..:** 07/27/00
Prep Date.....: 07/27/00 **Analysis Date..:** 07/27/00
Prep Batch #...: 0210168
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8021B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzene	ND	60	ug/kg	21
Ethylbenzene	ND	60	ug/kg	26
Toluene	ND	60	ug/kg	17
Xylenes (total)	ND	60	ug/kg	56

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	112	(46 - 143)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: H0G270153 **Work Order #...:** DH0J6101 **Matrix.....:** SOLID
MB Lot-Sample #: B0G280000-168

Prep Date.....: 07/27/00
Analysis Date..: 07/27/00 **Prep Batch #...:** 0210168
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	50	ug/kg	SW846 8021B
Ethylbenzene	ND	50	ug/kg	SW846 8021B
Toluene	ND	50	ug/kg	SW846 8021B
Xylenes (total)	ND	50	ug/kg	SW846 8021B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	92	(46 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: H0G270153 **Work Order #...:** DH0J6102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G280000-168 DH0J6103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 07/27/00
Prep Batch #...: 0210168
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**1000**	**890**	**ug/kg**	**89**		**SW846 8021B**
	1000	**913**	**ug/kg**	**91**	**2.5**	**SW846 8021B**
Ethylbenzene	**1000**	**958**	**ug/kg**	**96**		**SW846 8021B**
	1000	**997**	**ug/kg**	**100**	**3.9**	**SW846 8021B**
Toluene	**1000**	**955**	**ug/kg**	**95**		**SW846 8021B**
	1000	**959**	**ug/kg**	**96**	**0.45**	**SW846 8021B**
m-Xylene & p-Xylene	**2000**	**1930**	**ug/kg**	**97**		**SW846 8021B**
	2000	**2030**	**ug/kg**	**102**	**5.1**	**SW846 8021B**
o-Xylene	**1000**	**952**	**ug/kg**	**95**		**SW846 8021B**
	1000	**996**	**ug/kg**	**100**	**4.6**	**SW846 8021B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(46 - 143)
	105	(46 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: H0G270153 **Work Order #...:** DH0J6102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G280000-168 DH0J6103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 07/27/00
Prep Batch #...: 0210168
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**89**	**(62 - 128)**			**SW846 8021B**
	91	**(62 - 128)**	**2.5**	**(0-30)**	**SW846 8021B**
Ethylbenzene	**96**	**(66 - 119)**			**SW846 8021B**
	100	**(66 - 119)**	**3.9**	**(0-20)**	**SW846 8021B**
Toluene	**95**	**(73 - 123)**			**SW846 8021B**
	96	**(73 - 123)**	**0.45**	**(0-20)**	**SW846 8021B**
m-Xylene & p-Xylene	**97**	**(70 - 130)**			**SW846 8021B**
	102	**(70 - 130)**	**5.1**	**(0-20)**	**SW846 8021B**
o-Xylene	**95**	**(70 - 130)**			**SW846 8021B**
	100	**(70 - 130)**	**4.6**	**(0-20)**	**SW846 8021B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(46 - 143)
	105	(46 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0006

HPLC

Lot-Sample #...:	H0G270153-001	Work Order #...:	DGWA8101	Matrix.....:	SOLID
Date Sampled...:	07/26/00	Date Received..:	07/27/00		
Prep Date.....:	07/27/00	Analysis Date..:	08/02/00		
Prep Batch #...:	0209607				
Dilution Factor:	10				
% Moisture.....:	17	Method.....:	SW846 8310		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	600	ug/kg	60
Acenaphthylene	ND	600	ug/kg	77
Anthracene	**150 J**	**600**	**ug/kg**	**40**
Benzo(a)anthracene	**250**	**60**	**ug/kg**	**12**
Benzo(a)pyrene	**800**	**60**	**ug/kg**	**10**
Benzo(b)fluoranthene	**440**	**60**	**ug/kg**	**9.4**
Benzo(ghi)perylene	**490**	**60**	**ug/kg**	**13**
Benzo(k)fluoranthene	**390**	**60**	**ug/kg**	**6.0**
Chrysene	**420**	**60**	**ug/kg**	**11**
Dibenz(a,h)anthracene	**64**	**60**	**ug/kg**	**10**
Fluoranthene	**500**	**60**	**ug/kg**	**11**
Fluorene	ND	600	ug/kg	110
Indeno(1,2,3-cd)pyrene	**480**	**60**	**ug/kg**	**8.4**
Naphthalene	ND	600	ug/kg	200
Phenanthrene	ND	600	ug/kg	120
Pyrene	**340**	**60**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	NC,SRD	(17 - 115)

NOTE(S):

NC The recovery and/or RPD were not calculated.

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0007

HPLC

Lot-Sample #...:	H0G270153-002	**Work Order #...:**	DGWAH101	**Matrix.....:**	SOLID
Date Sampled...:	07/26/00	**Date Received..:**	07/27/00		
Prep Date.....:	07/27/00	**Analysis Date..:**	08/02/00		
Prep Batch #...:	0209607				
Dilution Factor:	10				
% Moisture.....:	16	**Method.....:**	SW846 8310		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	600	ug/kg	60
Acenaphthylene	ND	600	ug/kg	76
Anthracene	ND	600	ug/kg	39
Benzo(a)anthracene	**76**	**60**	**ug/kg**	**12**
Benzo(a)pyrene	**160**	**60**	**ug/kg**	**10**
Benzo(b)fluoranthene	**74**	**60**	**ug/kg**	**9.3**
Benzo(ghi)perylene	**49 J**	**60**	**ug/kg**	**13**
Benzo(k)fluoranthene	**49 J**	**60**	**ug/kg**	**6.0**
Chrysene	**120**	**60**	**ug/kg**	**10**
Dibenz(a,h)anthracene	ND	60	ug/kg	9.9
Fluoranthene	**330**	**60**	**ug/kg**	**10**
Fluorene	ND	600	ug/kg	110
Indeno(1,2,3-cd)pyrene	**71**	**60**	**ug/kg**	**8.4**
Naphthalene	ND	600	ug/kg	200
Phenanthrene	**270 J**	**600**	**ug/kg**	**110**
Pyrene	**180**	**60**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	NC,SRD	(17 - 115)

NOTE(S):

NC The recovery and/or RPD were not calculated.

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

HPLC

Client Lot #...: H0G270153 **Work Order #...:** DH06P101 **Matrix.....:** SOLID
MB Lot-Sample #: B0G270000-607

Prep Date.....: 07/27/00
Analysis Date..: 08/01/00 **Prep Batch #...:** 0209607
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	50	ug/kg	SW846 8310
Acenaphthylene	ND	50	ug/kg	SW846 8310
Anthracene	ND	50	ug/kg	SW846 8310
Benzo(a)anthracene	ND	5.0	ug/kg	SW846 8310
Benzo(a)pyrene	ND	5.0	ug/kg	SW846 8310
Benzo(b)fluoranthene	ND	5.0	ug/kg	SW846 8310
Benzo(ghi)perylene	ND	5.0	ug/kg	SW846 8310
Benzo(k)fluoranthene	ND	5.0	ug/kg	SW846 8310
Chrysene	ND	5.0	ug/kg	SW846 8310
Dibenz(a,h)anthracene	ND	5.0	ug/kg	SW846 8310
Fluoranthene	ND	5.0	ug/kg	SW846 8310
Fluorene	ND	50	ug/kg	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	5.0	ug/kg	SW846 8310
Naphthalene	ND	50	ug/kg	SW846 8310
Phenanthrene	ND	50	ug/kg	SW846 8310
Pyrene	ND	5.0	ug/kg	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	83	(17 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: H0G270153 **Work Order #...:** DH06P102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G270000-607 DH06P103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 08/01/00
Prep Batch #...: 0209607
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	**333**	**232**	**ug/kg**	**70**		**SW846 8310**
	333	**246**	**ug/kg**	**74**	**5.6**	**SW846 8310**
1-Methylnaphthalene	**333**	**224**	**ug/kg**	**67**		**SW846 8310**
	333	**247**	**ug/kg**	**74**	**9.6**	**SW846 8310**
Chrysene	**33.3**	**25.0**	**ug/kg**	**75**		**SW846 8310**
	33.3	**26.3**	**ug/kg**	**79**	**5.3**	**SW846 8310**
Fluorene	**333**	**232**	**ug/kg**	**70**		**SW846 8310**
	333	**248**	**ug/kg**	**74**	**6.4**	**SW846 8310**
Naphthalene	**333**	**203**	**ug/kg**	**61**		**SW846 8310**
	333	**227**	**ug/kg**	**68**	**11**	**SW846 8310**
Pyrene	**33.3**	**24.8**	**ug/kg**	**74**		**SW846 8310**
	33.3	**26.1**	**ug/kg**	**78**	**5.0**	**SW846 8310**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	84	(17 - 115)
	87	(17 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: H0G270153 **Work Order #...:** DH06P102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: B0G270000-607 DH06P103-LCSD
Prep Date.....: 07/27/00 **Analysis Date..:** 08/01/00
Prep Batch #...: 0209607
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	**70**	**(41 - 115)**			**SW846 8310**
	74	**(41 - 115)**	**5.6**	**(0-30)**	**SW846 8310**
1-Methylnaphthalene	**67**	**(45 - 115)**			**SW846 8310**
	74	**(45 - 115)**	**9.6**	**(0-27)**	**SW846 8310**
Chrysene	**75**	**(45 - 115)**			**SW846 8310**
	79	**(45 - 115)**	**5.3**	**(0-27)**	**SW846 8310**
Fluorene	**70**	**(42 - 115)**			**SW846 8310**
	74	**(42 - 115)**	**6.4**	**(0-28)**	**SW846 8310**
Naphthalene	**61**	**(28 - 116)**			**SW846 8310**
	68	**(28 - 116)**	**11**	**(0-26)**	**SW846 8310**
Pyrene	**74**	**(46 - 115)**			**SW846 8310**
	78	**(46 - 115)**	**5.0**	**(0-50)**	**SW846 8310**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	84	(17 - 115)
	87	(17 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0006

TOTAL Metals

Lot-Sample #...: H0G270153-001 Matrix.....: SOLID
Date Sampled...: 07/26/00 Date Received..: 07/27/00
% Moisture.....: 17

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0210131						
Lead	20.3	0.36	mg/kg	SW846 6010B	07/28/00	DGWA8105
		Dilution Factor: 1		Analysis Time..: 16:48	MDL.....: 0.14	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0007

TOTAL Metals

Lot-Sample #...: H0G270153-002 Matrix.....: SOLID
Date Sampled...: 07/26/00 Date Received..: 07/27/00
% Moisture.....: 16

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0210131						
Lead	18.2	0.36	mg/kg	SW846 6010B	07/28/00	DGWAH105
		Dilution Factor: 1		Analysis Time..: 16:53	MDL.....: 0.14	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT CORP - FT. MCCLELLAN

Client Sample ID: LF8001

TOTAL Metals

Lot-Sample #...: H0G270153-003 Matrix.....: SOLID
Date Sampled...: 07/26/00 Date Received..: 07/27/00
% Moisture.....: 11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0210131						
Lead	29.7	0.34	mg/kg	SW846 6010B	07/28/00	DGWAL106
		Dilution Factor: 1		Analysis Time..: 17:07	MDL.....: 0.13	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: H0G270153 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: H0G280000-131 **Prep Batch #...:** 0210131						
Lead	ND	0.30	mg/kg	SW846 6010B	07/28/00	DH0E9101
		Dilution Factor: 1				
		Analysis Time..: 15:39				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: H0G270153 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H0G280000-131 **Prep Batch #...:** 0210131							
Lead	50.0	48.3	mg/kg	97	SW846 6010B	07/28/00	DH0E9102
			Dilution Factor: 1				
			Analysis Time..: 15:44				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: H0G270153 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H0G280000-131 **Prep Batch #...:** 0210131					
Lead	97	(80 - 120)	SW846 6010B	07/28/00	DH0E9102
		Dilution Factor: 1			
		Analysis Time..: 15:44			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0006

General Chemistry

Lot-Sample #...: H0G270153-001 Work Order #...: DGWA8 Matrix.....: SOLID
Date Sampled...: 07/26/00 Date Received..: 07/27/00
% Moisture.....: 17

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	16.6	0.10	%	MCAWW 160.3 MOD	07/31-08/01/00	0214149

Dilution Factor: 1 MDL.....: 0.10

IT CORP - FT. MCCLELLAN

Client Sample ID: LF0007

General Chemistry

Lot-Sample #...: H0G270153-002 Work Order #...: DGWAH Matrix.....: SOLID
Date Sampled...: 07/26/00 Date Received..: 07/27/00
% Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	16.2	0.10	%	MCAWW 160.3 MOD	07/31-08/01/00	0214149

Dilution Factor: 1 MDL.....: 0.10

IT CORP - FT. MCCLELLAN

Client Sample ID: LF8001

General Chemistry

Lot-Sample #...: H0G270153-003 Work Order #...: DGWAL Matrix.....: SOLID
Date Sampled...: 07/26/00 Date Received..: 07/27/00
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Paint Filter Test	NO		No Units	SW846 9095	07/28/00	0210428
		Dilution Factor: 1		MDL.....:		
Percent Moisture	11.0	0.10	%	MCAWW 160.3 MOD	07/31-08/01/00	0214149
		Dilution Factor: 1		MDL.....:		

SEVERN TRENT
Environmental Services

Sample Delivery Group Assignment Form

IT CORPORATION
FT McCLELLAN
UST 133

SDG# UST13301

*	DATE REC'D	LOT#	CLIENT ID	VOA	PAH	PEST	EXP	MET	PCB	PH	DRO	GRO	PAINT
				8021B	8310	8081A	8330	6010B	8082	9045	8015	8015	FILTER
1	7/27/00	H0G270153	LF0006	T	T			X					
2			LF0007	T	T			X					
3			LF8001					X			T	T	T
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

NC = NORTH CANTON
T = STL TAMPA
D= STL DENVER
WS = STL WEST SACRAMENTO
P = PITTSBURGH
IT = IT CORP KNOX

MATRIX: SOIL
ANALYTICAL DUE: 7-31-00
REPORT DUE: 8-7-00
CLOSED? YES

8/11/008:04 AM

H0627015 3

IT CORPORATION
A Member of The IT Group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 133-072600-QSK
Page 1 of 1

Project Number: 783149
Project Name: Fort McClellan, SAD TERC
Sample Coordinator: Oliver Allen
Turnaround Time: 48 hour Turn

Samples Shipment Date: 27 JUL 2000
Lab Destination: Quanterra Environmental Services - Knoxville
Lab Contact: John Reynolds
Project Contact: Randy McBride
Carrier/Waybill No.: Quality Express/Courier

Bill To: Duane Nielsen
312 Directors Drive
Knoxville TN 37923

Report To: Duane Nielsen
312 Directors Drive
Knoxville TN 37923

Special Instructions: 48 Hour Turnaround

Possible Hazard Indentification:
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal:
Return to Client ☐ Disposal by Lab ☑ Archive (mos.)

1. Relinquished By (Signature/Affiliation) O.K. Allen IT	Date: 7-27-00 Time: 0850	1. Received By (Signature/Affiliation) Ray Owens	Date: 7/27 Time: 9:05 AM CT
2. Relinquished By (Signature/Affiliation) Ray Owens	Date: 7-27-00 Time: 14:30	2. Received By (Signature/Affiliation) David D. Flores	Date: 7-27-00 Time: 1430
3. Relinquished By (Signature/Affiliation)	Date: Time:	3. Received By (Signature/Affiliation)	Date: Time:

Comments: None

Recd Temp. 2°c
Custody Seals Intact
MFH. 7-27-00

Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	Fil	CID	Condition On Receipt
LF0006	UST-133A1-CS06-CS-LF0006-REG	26 JUL 2000	14:00	8 oz CWM	1	None except cool to 4 C	Lead by 6010B	N		
LF0007	UST-133A1-CS06-CS-LF0007-FD	26 JUL 2000	14:00	8 oz CWM	1	None except cool to 4 C	Lead by 6010B	N		
LF8001	UST-133A1-SP01-SP-LF8001-REG	26 JUL 2000	14:30	8 oz CWM	1	None except cool to 4 C	Lead by 6010B	N		

H06270153

UST13301

IT CORPORATION
A Member of The IT Group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 133-072600-QST

Page 1 of 1

Project Number: 783149
Project Name: Fort McClellan, SAD TERC
Sample Coordinator: Oliver Allen
Turnaround Time: 48 hour Turn

Samples Shipment Date: 26 JUL 2000
Lab Destination: QUANTERRA - TAMPA
Lab Contact: Michelle Lersch
Project Contact: Randy McBride
Carrier/Waybill No.: FedEx/790866391164

Bill To: Duane Nielsen
312 Directors Drive
Knoxville TN 37923

Report To: Duane Nielsen
312 Directors Drive
Knoxville TN 37923

Special Instructions: 48 Hour Turnaround

Possible Hazard Indentification:
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal:
Return to Client ☐ Disposal by Lab ☑ Archive (mos.)

1. Relinquished By (Signature/Affiliation) DK Oee	Date: 26 July 00 Time: 1530	1. Received By (Signature/Affiliation)	Date: Time:
2. Relinquished By (Signature/Affiliation)	Date: Time:	2. Received By (Signature/Affiliation)	Date: Time:
3. Relinquished By (Signature/Affiliation)	Date: Time:	3. Received By (Signature/Affiliation)	Date: Time:

Comments: None

7-31
8-7

Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	Fil	CID	Condition On Receipt
LF0006	UST-133A1-CS06-CS-LF0006-REG	26 JUL 2000	14:00	5 g EnCore	3	None except cool to 4 C	BTEX by 8021B	N		
LF0006	UST-133A1-CS06-CS-LF0006-REG	26 JUL 2000	14:00	8 oz CWM	1	None except cool to 4 C	PAH's by 8310	N		
LF0007	UST-133A1-CS06-CS-LF0007-FD	26 JUL 2000	14:00	5 g EnCore	3	None except cool to 4 C	BTEX by 8021B	N		
LF0007	UST-133A1-CS06-CS-LF0007-FD	26 JUL 2000	14:00	8 oz CWM	1	None except cool to 4 C	PAH's by 8310	N		
LF8001	UST-133A1-SP01-SP-LF8001-REG	26 JUL 2000	14:30	8 oz CWM	1	None except cool to 4 C	Deisel Range Organics by 8015B	N		
LF8001	UST-133A1-SP01-SP-LF8001-REG	26 JUL 2000	14:30	5 g EnCore	1	None except cool to 4 C	Gasoline Range Organics by 8015B	N		
LF8001	UST-133A1-SP01-SP-LF8001-REG	26 JUL 2000	14:30	8 oz CWM	1	None except cool to 4 C	Paint Filter	N		

35

IT CORPORATION
A Member of The IT Group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 133-072600-QST
Page 1 of 1

Project Number: 783149
Project Name: Fort McClellan, SAD TERC
Sample Coordinator: Oliver Allen
Turnaround Time: 48 hour Turn

Samples Shipment Date: 26 JUL 2000
Lab Destination: QUANTERRA - TAMPA
Lab Contact: Michelle Lersch
Project Contact: Randy McBride
Carrier/Waybill No.: FedEx/790866391164

Bill To: Duane Nielsen
312 Directors Drive
Knoxville TN 37923

Report To: Duane Nielsen
312 Directors Drive
Knoxville TN 37923

Special Instructions: 48 Hour Turnaround

Possible Hazard Indentification:
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal:
Return to Client ☐ Disposal by Lab ☑ Archive (mos.)

1. Relinquished By (Signature/Affiliation)	Date: 26 July 00 Time: 1530	1. Received By (Signature/Affiliation) Carol McNulty	Date: 7/27/00 Time: 1000
2. Relinquished By (Signature/Affiliation)	Date: Time:	2. Received By (Signature/Affiliation)	Date: Time:
3. Relinquished By (Signature/Affiliation)	Date: Time:	3. Received By (Signature/Affiliation)	Date: Time:

Comments: None

Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	Fil	CID	Condition On Receipt
LF0006	UST-133A1-CS06-CS-LF0006-REG	26 JUL 2000	14:00	5 g EnCore	3	None except cool to 4 C	BTEX by 8021B	N		
LF0006	UST-133A1-CS06-CS-LF0006-REG	26 JUL 2000	14:00	8 oz CWM	1	None except cool to 4 C	PAH's by 8310	N		
LF0007	UST-133A1-CS06-CS-LF0007-FD	26 JUL 2000	14:00	5 g EnCore	3	None except cool to 4 C	BTEX by 8021B	N		
LF0007	UST-133A1-CS06-CS-LF0007-FD	26 JUL 2000	14:00	8 oz CWM	1	None except cool to 4 C	PAH's by 8310	N		
LF8001	UST-133A1-SP01-SP-LF8001-REG	26 JUL 2000	14:30	8 oz CWM	1	None except cool to 4 C	Deisel Range Organics by 8015B	N		
LF8001	UST-133A1-SP01-SP-LF8001-REG	26 JUL 2000	14:30	5 g EnCore	3	None except cool to 4 C	Gasoline Range Organics by 8015B	N		
LF8001	UST-133A1-SP01-SP-LF8001-REG	26 JUL 2000	14:30	8 oz CWM	1	None except cool to 4 C	Paint Filter	N		

STL KNOXVILLE

SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Page 1 of 12

KO 7.27.00

CLIENT: It Corp. PROJECT: Fort McClellan Lot No.: HD6270153

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

1. Sample Receipt:	YES	NO	NA
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits?	✓		
c. Were samples received with correct preservative (excluding Encore)?	✓		
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓		
g. Were containers received for VOAs received without headspace?			✓
h. Were samples received in the appropriate containers?	✓		
i. Did you check for residual chlorine, if necessary?			✓
j. Were samples received within 1/2 of the (QAMP) holding time?	✓		
k. Were samples screened for radioactivity?			✓
l. Were client's sample documents (RFA/COC) received?	✓		
m. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
n. Are test/parameters listed for each sample?	✓		
o. Is the matrix of the samples noted?	✓		
p. Is the date/time of sample collection noted?	✓		
q. Is the client and project name/No. identified?	✓		

SAMPLE RECEIVING ASSOCIATE: Matthew F. Howard DATE: 7/27/00

TO BE COMPLETED BY PROJECT MANAGER :

1. Project manager "Sample Greet":	YES	NO	NA
a. Quote number to be logged-in under 25476			
b. Informed Login associates of special instructions ? Jason due 8/1/00	✓		✓
2. If custody seals were missing/not intact, was client notified?			

PROJECT MANAGER : [signature] DATE: 7/27/00

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action

☐ Client informed on _____ by _____. Person contacted: _____.

☐ Noted actions in comments section above.

☐ No action necessary; process as is.

Project Manager: _____ Date: _____

STL KNOXVILLE

SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST LEGEND

Item	Condition
Cooler:	1a Not received, COC available
	1b Leaking
	1c Other: _____
Temperature:	2a Temp Blank = _____
	2b Cooler Temp = _____
	(cooler temp should be used only if there is no temp blank)
Container:	3a Leaking
	3b Broken
	3c Extra
	3d No labels
	3e Headspace (VOA only)
	3f Other: _____
Samples:	4a Samples received but not on COC
	4b Samples not received but on COC
	4c Holding time expired
	4d Sample received with < ½ holding time remaining
	4e Sample preservative: _____
	4f Other: _____
Custody Seals:	5a None
	5b Not intact
	5c Other: _____
Chain of Custody (COC):	6a Not relinquished by client
	6b Incomplete information
	6c Other: _____
Container Labels:	7a Doesn't match COC
	7b Incomplete information
	7c Marking smeared
	7d Label torn
	7e Other: _____

Other (8): _____

_____

_____

_____