APPENDIX B

FIELD SAMPLING AND ANALYSIS PLAN

Final
Appendix B
Field Sampling and Analysis Plan
for the
UST Removals and Closure Reports Work Plan
Fort McClellan, Calhoun County, Alabama

Prepared for:

U.S. Army Corps of Engineers, Mobile District
109 St. Joseph Street
Mobile, Alabama 36602

Prepared by:

IT Corporation
312 Directors Drive
Knoxville, Tennessee 37923

Task Order CK08, Modification No. 2
Contract No. DACA21-96-D-0018
IT Project No. 783149

July 2000

Revision 1

Table of Contents

Page

List of Tables ii

List of Acronyms iii

1.0 Introduction 1

2.0 Data Quality Objectives 2

2.1 Overview 2

2.2 Data Users and Available Data 2

2.3 Data Types and Quality 2

2.4 Precision, Accuracy, and Completeness 3

3.0 Field Activities 4

3.1 Confirmatory UST Excavation Sampling 4

3.1.1 Sample Locations 4

3.1.2 Sample Collection 5

3.2 Stockpile Sampling 5

3.2.1 Sample Locations 5

3.2.2 Sample Collection 5

3.3 Tank Cleaning Water Sampling 6

3.3.1 Sample Locations 6

3.3.2 Sample Collection 6

3.4 Groundwater Sampling 6

3.4.1 Permanent Monitoring Wells 7

3.4.2 Sample Locations 7

3.4.3 Sample Collection 7

3.5 Sampling Equipment Decontamination Requirements 8

3.6 Surveying of Sample Locations 8

3.7 Analytical Program 8

3.8 Sample Preservation, Packaging, and Shipping 10

3.9 Investigation-Derived Waste Management 10

3.10 Site-Specific Safety and Health 11

3.11 Closure Reports 11

4.0 References 12

List of Tables

Table	Title	Follows Page
3-1	Sampling Locations	4
3-2	Excavation Confirmation Soil Sample Designations QA/QC Sample Quantities	4
3-3	Excavation Soil Stockpike Sample Designations and QA/QC Sample Quantities	5
3-4	Groundwater Sample Designations and QA/QC Sample Quantities	7
3-5	Analytical Samples	10

List of Acronyms

ADEM	Alabama Department of Environmental Management
ASTM	American Society for Testing and Materials
CESAS	Corps of Engineers South Atlantic Savannah
CLP	Contract Laboratory Procedure
DRO	diesel-range organics
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
FSAP	field sampling and analysis plan
FTMC	Fort McClellan
GPS	global positioning system
GRO	gasoline-range organics
IDW	investigation-derived waste
IT	IT Corporation
ppm	parts per million
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
QAP	installation-wide quality assurance plan
SAP	installation-wide sampling and analysis plan
SHP	installation-wide safety and health plan
SSHP	site-specific safety and health plan
TCLP	toxicity characteristic leaching procedure
TPH	total petroleum hydrocarbons
USACE	U.S. Army Corps of Engineers
UST	underground storage tank
WP	installation-wide work plan

1.0 Introduction

This Field Sampling and Analysis Plan (FSAP) included as Appendix B to the UST Removals and Closure Reports work plan provides details of the confirmatory soil, groundwater and waste sampling procedures and analytical methods to be used to successfully perform the UST removal closures. This FSAP attachment to the installation-wide sampling and analysis plan (SAP) (IT, 2000) for FTMC has been prepared to provide technical guidance for sample collection and analysis at the at the UST removal sites. This FSAP will be used in conjunction with the site-specific safety and health plan (SSHP) developed for the UST removal sites and the installation-wide work plan (WP) (IT, 1998) and SAP. The SAP includes the installation-wide safety and health plan (SHP), waste management plan, and quality assurance plan (QAP). Site-specific hazard analyses are included in the SSHP.

Detailed descriptions and figures of the each of the UST removal sites are presented in Section 1.2 of the UST Removals and Closure Reports work plan. Additionally, the work plan includes figures for each of the UST removal sites that show the results of the geophysical surveys conducted during the SI field work. The anomalies that were found at each of parcels are shown on the figures to indicate the locations IT will investigate for USTs.

3.0 Field Activities

3.1 Confirmatory UST Excavation Sampling

The confirmatory sampling program for the UST removal activities includes the collection of confirmatory soil from the UST removal excavations for chemical analyses. These samples will be collected and analyzed to provide data for characterizing each UST removal excavation to determine if soil contamination remains in the UST excavations, and if any further action is to be conducted at each of the removal sites. Confirmatory soil samples will be collected from UST removal excavation sites that include both open UST excavations and piping trenches. Soil confirmation samples will be collected from the open excavation after the tank has been removed and excavation of any contaminated soil has been completed.

3.1.1 Sample Locations

Confirmatory soil samples will be collected from the location within the UST excavation as required by the *ADEM UST Guidance Manual, Section III, November, 1997* provided in Appendix C of the UST Removals and Closure Reports work plan. The expected confirmatory soil sample locations are listed in Table 3-1. Confirmatory soil samples to be collected are listed in Table 3-2. The actual confirmatory soil sample locations will be determined in the field by the on-site geologist, based on actual field observations and excavation conditions.

Confirmatory soil samples shall be collected from the sides and base of the tank excavation pit and the bottom of the piping trenches. At least one sample shall be collected from each side of the excavation pit and at least one sample from the excavation pit base for every tank that was present in the excavation. In cases where multiple tanks are located in one excavation pit and/or the excavation pit is large, side samples shall be taken every 25 feet of linear length of excavation wall. Side samples shall be collected from the lowest one-third of the tank diameter. At least, one sample per 10 linear feet will be collected from the base of the piping trenches. Samples from the tank excavation pit side, base, and piping trenches shall be representative of the area being sampled.

Excavation floor samples will be collected from a location directly underneath the tank. If a concrete slab is present in the excavation, floor samples will be collected from a location on the side of the slab beginning at a depth equal to the bottom of the slab.

Table 3-1

Sampling Locations
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parcel Number	Sample Location	Sample Media	Sample Location Rationale
16	UST-16A1-CS01	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-16A1-CS02	Confirmatory soil	Anomaly A1: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the Shallow soil sample is to be collected, then the Shallow soil sample is to be collected just above the waterline in the excavation.
	UST-16A1-CS03	Confirmatory soil	Anomaly A1: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the Shallow soil sample is to be collected, then the Shallow soil sample is to be collected just above the waterline in the excavation.
	UST-16A1-CS04	Confirmatory soil	Anomaly A1: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the Shallow soil sample is to be collected, then the Shallow soil sample is to be collected just above the waterline in the excavation.
	UST-16A1-CS05	Confirmatory soil	Anomaly A1: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the Shallow soil sample is to be collected, then this Shallow soil sample will not be collected.
	UST-16A1-CS06	Confirmatory soil	Anomaly A1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the Shallow soil sample is to be collected, then this Shallow soil sample will not be collected.
	UST-16A1-CS07	Confirmatory soil	Anomaly A1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the Shallow soil sample is to be collected, then this Shallow soil sample will not be collected.
	UST-16A1-SP01	Stockpile soil	Anomaly A-1 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-16A1-MW01	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A1-MW02	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A1-MW03	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A1-MW04	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A2-CS01	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the Shallow soil sample is to be collected, then the Shallow soil sample is to be collected just above the waterline in the excavation.
	UST-16A2-CS02	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the Shallow soil sample is to be collected, then the Shallow soil sample is to be collected just above the waterline in the excavation.
	UST-16A2-CS03	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the Shallow soil sample is to be collected, then the Shallow soil sample is to be collected just above the waterline in the excavation.
	UST-16A2-CS04	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the Shallow soil sample is to be collected, then the Shallow soil sample is to be collected just above the waterline in the excavation.
	UST-16A2-CS05	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the Shallow soil sample is to be collected, then this Shallow soil sample will not be collected.
	UST-16A2-CS06	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the Shallow soil sample is to be collected, then this Shallow soil sample will not be collected.
	UST-16A2-CS07	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the Shallow soil sample is to be collected, then this Shallow soil sample will not be collected.
	UST-16A2-SP01	Stockpile soil	Anomaly A-2 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-16A2-MW01	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A2-MW02	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A2-MW03	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.

Table 3-1

Sampling Locations
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parcel Number	Sample Location	Sample Media	Sample Location Rationale
16	UST-16A2-MW04	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A3-CS01	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-16A3-CS02	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-16A3-CS03	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-16A3-CS04	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-16A3-CS05	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-16A3-CS06	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-16A3-CS07	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-16A3-SP01	Stockpile soil	Anomaly A-3 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-16A3-MW01	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A3-MW02	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A3-MW03	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-16A3-MW04	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
132	UST-132A6-CS01	Confirmatory soil	Anomaly A-6: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-132A6-CS02	Confirmatory soil	Anomaly A-6: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-132A6-CS03	Confirmatory soil	Anomaly A-6: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-132A6-CS04	Confirmatory soil	Anomaly A-6: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-132A6-CS05	Confirmatory soil	Anomaly A-6: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-132A6-CS06	Confirmatory soil	Anomaly A-6: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping+D51 trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-132A6-CS07	Confirmatory soil	Anomaly A-6: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-132A6-SP01	Stockpile soil	Anomaly A-6 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-132A6-MW01	Groundwater	Anomaly A-6: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-132A6-MW02	Groundwater	Anomaly A-6: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.

Table 3-1

Sampling Locations
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parcel Number	Sample Location	Sample Media	Sample Location Rationale
132	UST-132A6-MW03	Groundwater	Anomaly A-6: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-132A6-MW04	Groundwater	Anomaly A-6: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
133	UST-133A1-CS01	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-133A1-CS02	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-133A1-CS03	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-133A1-CS04	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-133A1-CS05	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-133A1-CS06	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-133A1-CS07	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-133A1-SP01	Stockpile soil	Anomaly A-1 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-133A1-MW01	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-133A1-MW02	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-133A1-MW03	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-133A1-MW04	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
134	UST-134A3-CS01	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A3-CS02	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A3-CS03	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A3-CS04	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A3-CS05	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-134A3-CS06	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-134A3-CS07	Confirmatory soil	Anomaly A-3: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-134A3-SP01	Stockpile soil	Anomaly A-3 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-134A3-MW01	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.

Table 3-1

Sampling Locations
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parcel Number	Sample Location	Sample Media	Sample Location Rationale
134	UST-134A3-MW02	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-134A3-MW03	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-134A3-MW04	Groundwater	Anomaly A-3: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-134A5-CS01	Confirmatory soil	Anomaly A-5: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A5-CS02	Confirmatory soil	Anomaly A-5: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A5-CS03	Confirmatory soil	Anomaly A-5: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A5-CS04	Confirmatory soil	Anomaly A-5: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-134A5-CS05	Confirmatory soil	Anomaly A-5: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-134A5-CS06	Confirmatory soil	Anomaly A-5: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-134A5-CS07	Confirmatory soil	Anomaly A-5: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-134A5-SP01	Stockpile soil	Anomaly A-5 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-134A5-MW01	Groundwater	Anomaly A-5: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-134A5-MW02	Groundwater	Anomaly A-5: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-134A5-MW03	Groundwater	Anomaly A-5: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-134A5-MW04	Groundwater	Anomaly A-5: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
135	UST-135A1-CS01	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-135A1-CS02	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-135A1-CS03	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-135A1-CS04	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-135A1-CS05	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-135A1-CS06	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-135A1-CS07	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-135A1-SP01	Stockpile soil	Anomaly A-1 Excavation: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.

Table 3-1

Sampling Locations
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parcel Number	Sample Location	Sample Media	Sample Location Rationale
135	UST-135A1-MW01	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-135A1-MW02	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-135A1-MW03	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-135A1-MW04	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
136	UST-136A1-CS01	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A1-CS02	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A1-CS03	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A1-CS04	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A1-CS05	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-136A1-CS06	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-136A1-CS07	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-136A1-SP01	Stockpile soil	Anomaly A-1: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-136A1-MW01	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-136A1-MW02	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-136A1-MW03	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-136A1-MW04	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-136A2-CS01	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A2-CS02	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A2-CS03	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A2-CS04	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-136A2-CS05	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-136A2-CS06	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-136A2-CS07	Confirmatory soil	Anomaly A-2: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.

Table 3-1

Sampling Locations
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parcel Number	Sample Location	Sample Media	Sample Location Rationale
136	UST-136A2-SP01	Stockpile soil	Anomaly A-2: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-136A2-MW01	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-136A2-MW02	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-136A2-MW03	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-136A2-MW04	Groundwater	Anomaly A-2: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
137	UST-137A1-CS01	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-137A1-CS02	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-137A1-CS03	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-137A1-CS04	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-137A1-CS05	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-137A1-CS06	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-137A1-CS07	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-137A1-SP01	Stockpile soil	Anomaly A-1: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-137A1-MW01	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-137A1-MW02	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-137A1-MW03	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-137A1-MW04	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
140	UST-140A1-CS01	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the north wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-140A1-CS02	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the east wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-140A1-CS03	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the south wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-140A1-CS04	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the west wall of the excavation at the lowest one third depth of the tank diameter. If groundwater is above the location where the soil sample is to be collected, then the soil sample is to be collected just above the waterline in the excavation.
	UST-140A1-CS05	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the center of the floor of the excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-140A1-CS06	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.

Table 3-1

Sampling Locations
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parcel Number	Sample Location	Sample Media	Sample Location Rationale
140	UST-140A1-CS07	Confirmatory soil	Anomaly A-1: Shallow soil sample to be collected from the bottom of the piping trench excavation in the center of the second 10 feet of piping trench nearest the UST excavation. If groundwater is above the location where the soil sample is to be collected, then this soil sample will not be collected.
	UST-140A1-SP01	Stockpile soil	Anomaly A-1: Composite soil stockpile sample collected from five grab sample locations throughout the stockpile.
	UST-140A1-MW01	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and upgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-140A1-MW02	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-140A1-MW03	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.
	UST-140A1-MW04	Groundwater	Anomaly A-1: Monitoring well for groundwater samples to be placed adjacent and downgradient of the UST excavation if groundwater is found to be within 5 feet below the base of the excavation.

Table 3-2
Excavation Confirmation Soil Sample Designations QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Alabama
(Page 1 of 3)

Sample Location	Sample Designation	Sample Depth (ft)	QA/QC Samples			Analytical Suite
			Field Duplicates	Field Splits	MS/MSD	
UST-16A1-CS01	UST-16A1-CS01-CS-LD0001-REG	a			UST-16A1-CS01-CS-LD0001-MS/MSD	BTEX, PAH, and Pb
UST-16A1-CS02	UST-16A1-CS02-CS-LD0002-REG	a				BTEX, PAH, and Pb
UST-16A1-CS03	UST-16A1-CS03-CS-LD0003-REG	a	UST-16A1-CS03-CS-LD0004-FD	UST-16A1-CS03-CS-LD0005-FS		BTEX, PAH, and Pb
UST-16A1-CS04	UST-16A1-CS04-CS-LD0006-REG	a				BTEX, PAH, and Pb
UST-16A1-CS05	UST-16A1-CS05-CS-LD0007-REG	a				BTEX, PAH, and Pb
UST-16A1-CS06	UST-16A1-CS06-CS-LD0008-REG	a				BTEX, PAH, and Pb
UST-16A1-CS07	UST-16A1-CS07-CS-LD0009-REG	a				BTEX, PAH, and Pb
UST-16A2-CS01	UST-16A2-CS01-CS-LD0010-REG	a				BTEX, PAH, and Pb
UST-16A2-CS02	UST-16A2-CS02-CS-LD0011-REG	a				BTEX, PAH, and Pb
UST-16A2-CS03	UST-16A2-CS03-CS-LD0012-REG	a				BTEX, PAH, and Pb
UST-16A2-CS04	UST-16A2-CS04-CS-LD0013-REG	a				BTEX, PAH, and Pb
UST-16A2-CS05	UST-16A2-CS05-CS-LD0014-REG	a				BTEX, PAH, and Pb
UST-16A2-CS06	UST-16A2-CS06-CS-LD0015-REG	a				BTEX, PAH, and Pb
UST-16A2-CS07	UST-16A2-CS07-CS-LD0016-REG	a				BTEX, PAH, and Pb
UST-16A3-CS01	UST-16A3-CS01-CS-LD0017-REG	a				BTEX, PAH, and Pb
UST-16A3-CS02	UST-16A3-CS02-CS-LD0018-REG	a				BTEX, PAH, and Pb
UST-16A3-CS03	UST-16A3-CS03-CS-LD0019-REG	a	UST-16A3-CS03-CS-LD0020-FD			BTEX, PAH, and Pb
UST-16A3-CS04	UST-16A3-CS04-CS-LD0021-REG	a				BTEX, PAH, and Pb
UST-16A3-CS05	UST-16A3-CS05-CS-LD0022-REG	a			UST-16A3-CS05-CS-LD0022-MS/MSD	BTEX, PAH, and Pb
UST-16A3-CS06	UST-16A3-CS06-CS-LD0023-REG	a				BTEX, PAH, and Pb
UST-16A3-CS07	UST-16A3-CS07-CS-LD0024-REG	a				BTEX, PAH, and Pb
UST-132A6-CS01	UST-132A6-CS01-CS-LE0001-REG	a				BTEX, PAH, and Pb
UST-132A6-CS02	UST-132A6-CS02-CS-LE0002-REG	a				BTEX, PAH, and Pb
UST-132A6-CS03	UST-132A6-CS03-CS-LE0003-REG	a	UST-132A6-CS03-CS-LE0004-FD			BTEX, PAH, and Pb
UST-132A6-CS04	UST-132A6-CS04-CS-LE0005-REG	a				BTEX, PAH, and Pb
UST-132A6-CS05	UST-132A6-CS05-CS-LE0006-REG	a				BTEX, PAH, and Pb
UST-132A6-CS06	UST-132A6-CS06-CS-LE0007-REG	a				BTEX, PAH, and Pb
UST-132A6-CS07	UST-132A6-CS07-CS-LE0008-REG	a				BTEX, PAH, and Pb
UST-133A1-CS01	UST-133A1-CS01-CS-LF0001-REG	a				BTEX, PAH, and Pb
UST-133A1-CS02	UST-133A1-CS02-CS-LF0002-REG	a				BTEX, PAH, and Pb
UST-133A1-CS03	UST-133A1-CS03-CS-LF0003-REG	a				BTEX, PAH, and Pb
UST-133A1-CS04	UST-133A1-CS04-CS-LF0004-REG	a				BTEX, PAH, and Pb
UST-133A1-CS05	UST-133A1-CS05-CS-LF0005-REG	a				BTEX, PAH, and Pb
UST-133A1-CS06	UST-133A1-CS06-CS-LF0006-REG	a	UST-133A1-CS06CS-LF0007-FD	UST-133A1-CS06CS-LF0008-FS		BTEX, PAH, and Pb
UST-133A1-CS07	UST-133A1-CS07-CS-LF0009-REG	a				BTEX, PAH, and Pb
UST-134A3-CS01	UST-134A3-CS01-CS-LG0001-REG	a				BTEX, PAH, and Pb
UST-134A3-CS02	UST-134A3-CS02-CS-LG0002-REG	a				BTEX, PAH, and Pb
UST-134A3-CS03	UST-134A3-CS03-CS-LG0003-REG	a				BTEX, PAH, and Pb
UST-134A3-CS04	UST-134A3-CS04-CS-LG0004-REG	a			UST-134A3-CS04-CS-LG0004-MS/MSD	BTEX, PAH, and Pb

Table 3-2
Excavation Confirmation Soil Sample Designations QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Alabama
(Page 2 of 3)

Sample Location	Sample Designation	Sample Depth (ft)	QA/QC Samples			Analytical Suite
			Field Duplicates	Field Splits	MS/MSD	
UST-134A3-CS05	UST-134A3-CS05-CS-LG0005-REG	a				BTEX, PAH, and Pb
UST-134A3-CS06	UST-134A3-CS06-CS-LG0006-REG	a	UST-134A3-CS06-CS-LG0007-FD			BTEX, PAH, and Pb
UST-134A3-CS07	UST-134A3-CS07-CS-LG0008-REG	a				BTEX, PAH, and Pb
UST-134A5-CS01	UST-134A5-CS01-CS-LG0009-REG	a				BTEX, PAH, and Pb
UST-134A5-CS02	UST-134A5-CS02-CS-LG0010-REG	a				BTEX, PAH, and Pb
UST-134A5-CS03	UST-134A5-CS03-CS-LG0011-REG	a				BTEX, PAH, and Pb
UST-134A5-CS04	UST-134A5-CS04-CS-LG0012-REG	a				BTEX, PAH, and Pb
UST-134A5-CS05	UST-134A5-CS05-CS-LG0013-REG	a				BTEX, PAH, and Pb
UST-134A5-CS06	UST-134A5-CS06-CS-LG0014-REG	a				BTEX, PAH, and Pb
UST-134A5-CS07	UST-134A5-CS07-CS-LG0015-REG	a				BTEX, PAH, and Pb
UST-135A1-CS01	UST-135A1-CS01-CS-LH0001-REG	a	UST-135A1-CS01-CS-LH0002-FD	UST-135A1-CS01-CS-LH0003-FS		BTEX, PAH, and Pb
UST-135A1-CS02	UST-135A1-CS02-CS-LH0004-REG	a				BTEX, PAH, and Pb
UST-135A1-CS03	UST-135A1-CS03-CS-LH0005-REG	a				BTEX, PAH, and Pb
UST-135A1-CS04	UST-135A1-CS04-CS-LH0006-REG	a				BTEX, PAH, and Pb
UST-135A1-CS05	UST-135A1-CS05-CS-LH0007-REG	a				BTEX, PAH, and Pb
UST-135A1-CS06	UST-135A1-CS06-CS-LH0008-REG	a				BTEX, PAH, and Pb
UST-135A1-CS07	UST-135A1-CS07-CS-LH0009-REG	a				BTEX, PAH, and Pb
UST-136A1-CS01	UST-136A1-CS01-CS-LJ0001-REG	a				BTEX, PAH, and Pb
UST-136A1-CS02	UST-136A1-CS02-CS-LJ0002-REG	a				BTEX, PAH, and Pb
UST-136A1-CS03	UST-136A1-CS03-CS-LJ0003-REG	a				BTEX, PAH, and Pb
UST-136A1-CS04	UST-136A1-CS04-CS-LJ0004-REG	a				BTEX, PAH, and Pb
UST-136A1-CS05	UST-136A1-CS05-CS-LJ0005-REG	a				BTEX, PAH, and Pb
UST-136A1-CS06	UST-136A1-CS06-CS-LJ0006-REG	a			UST-136A1-CS06-CS-LJ0006-MS/MSD	BTEX, PAH, and Pb
UST-136A1-CS07	UST-136A1-CS07-CS-LJ0007-REG	a				BTEX, PAH, and Pb
UST-136A2-CS01	UST-136A2-CS01-CS-LJ0008-REG	a				BTEX, PAH, and Pb
UST-136A2-CS02	UST-136A2-CS02-CS-LJ0009-REG	a	UST-136A2-CS02-CS-LJ0010-FD			BTEX, PAH, and Pb
UST-136A2-CS03	UST-136A2-CS03-CS-LJ0011-REG	a				BTEX, PAH, and Pb
UST-136A2-CS04	UST-136A2-CS04-CS-LJ0012-REG	a				BTEX, PAH, and Pb
UST-136A2-CS05	UST-136A2-CS05-CS-LJ0013-REG	a				BTEX, PAH, and Pb
UST-136A2-CS06	UST-136A2-CS06-CS-LJ0014-REG	a				BTEX, PAH, and Pb
UST-136A2-CS07	UST-136A2-CS07-CS-LJ0015-REG	a				BTEX, PAH, and Pb
UST-137A1-CS01	UST-137A1-CS01-CS-LK0001-REG	a				BTEX, PAH, and Pb
UST-137A1-CS02	UST-137A1-CS02-CS-LK0002-REG	a				BTEX, PAH, and Pb
UST-137A1-CS03	UST-137A1-CS03-CS-LK0003-REG	a				BTEX, PAH, and Pb
UST-137A1-CS04	UST-137A1-CS04-CS-LK0004-REG	a				BTEX, PAH, and Pb
UST-137A1-CS05	UST-137A1-CS05-CS-LK0005-REG	a	UST-137A1-CS05-CS-LK0006-FD	UST-137A1-CS05-CS-LK0007-FS		BTEX, PAH, and Pb
UST-137A1-CS06	UST-137A1-CS06-CS-LK0008-REG	a				BTEX, PAH, and Pb
UST-137A1-CS07	UST-137A1-CS07-CS-LK0009-REG	a				BTEX, PAH, and Pb
UST-140A1-CS01	UST-140A1-CS01-CS-LL0001-REG	a				BTEX, PAH, and Pb

Table 3-2
Excavation Confirmation Soil Sample Designations QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Alabama
(Page 3 of 3)

Sample Location	Sample Designation	Sample Depth (ft)	QA/QC Samples			Analytical Suite
			Field Duplicates	Field Splits	MS/MSD	
UST-140A1-CS02	UST-140A1-CS02-CS-LL0002-REG	a				BTEX, PAH, and Pb
UST-140A1-CS03	UST-140A1-CS03-CS-LL0003-REG	a				BTEX, PAH, and Pb
UST-140A1-CS04	UST-140A1-CS04-CS-LL0004-REG	a				BTEX, PAH, and Pb
UST-140A1-CS05	UST-140A1-CS05-CS-LL0005-REG	a				BTEX, PAH, and Pb
UST-140A1-CS06	UST-140A1-CS06-CS-LL0006-REG	a				BTEX, PAH, and Pb
UST-140A1-CS07	UST-140A1-CS07-CS-LL0007-REG	a				BTEX, PAH, and Pb

BTEX - Benzene, toluene, ethylbenzene, xylene.
FD - Field duplicate.
FS - Field split.
MS/MSD - Matrix spike/matrix spike duplicate.
REG - Field sample.
QA/QC - Quality assurance/quality control.
PAH - Polyaromatic hydrocarbons.
Pb- lead.

Where the groundwater elevation is above the level where soil samples are normally required to be taken, soil samples will not be taken below the groundwater in the excavation. Instead, soil samples should be taken just above the groundwater elevation from excavation pit walls and as appropriate. Excavation pit water samples may be taken to determine the appropriate method of properly handling the water, but not in place of required groundwater samples.

3.1.2 Sample Collection

Confirmation soil sampling will be performed using stainless-steel hand tools to collect soil samples from excavation soil material typically retrieved in an excavator bucket. Sampling personnel will not enter UST excavations over 4 feet below ground surface to collect any samples. Soil that has come in contact with the excavator bucket sides will not be sampled. Sampling equipment will be decontaminated between locations. Confirmation soil samples will be collected from the upper 1 foot of soil as specified in Section 4.9.1.1 of the SAP (IT, 2000). Sample documentation and chain of custody will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this FSAP are listed in Section 5.0, Table 5-1 of the QAP. The samples will be analyzed for the parameters listed in Section 3.7 of this FSAP.

3.2 Stockpile Sampling

Stockpile soil will be sampled from the UST removal sites to complete the closure activities. Samples from stockpiled soil at UST removal sites will be required by ADEM Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes. Stockpiled material subjected to chemical confirmation testing will be used as backfill if it is found to contain less than 100 parts per million (ppm) of total petroleum hydrocarbons (TPH).

3.2.1 Sample Locations

The stockpile soil sample locations to be collected are listed in Table 3-1. Stockpile soil samples to be collected are listed in Table 3-3. The actual stockpile soil sample locations will be determined in the field by the on-site geologist, based on actual field observations and excavation stockpile conditions.

3.2.2 Sample Collection

All stockpile soil sampling will be performed using stainless-steel hand tools to collect soil samples from the stockpiles. Sampling equipment will be decontaminated between locations. Confirmation soil samples will be collected from the upper 1 foot of soil as specified in Section

Table 3-3

Excavation Soil Stockpile Sample Designations and QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	Sample Depth (ft)	QA/QC Samples			Analytical Suite
			Field Duplicates	Field Splits	MS/MSD	
UST-16A1-SP01	UST-16A1-SP01-SP-LD8001-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-16A2-SP01	UST-16A2-SP01-SP-LD8002-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-16A3-SP01	UST-16A3-SP01-SP-LD8003-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-132A6-SP01	UST-132A6-SP01-SP-LE8001-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-133A1-SP01	UST-133A1-SP01-SP-LF8001-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-134A3-SP01	UST-134A3-SP01-SP-LG8001-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-134A5-SP01	UST-134A5-SP01-SP-LG8002-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-135A1-SP01	UST-135A1-SP01-SP-LH8001-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-136A1-SP01	UST-136A1-SP01-SP-LJ8001-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-136A2-SP01	UST-136A2-SP01-SP-LJ8002-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-137A1-SP01	UST-137A1-SP01-SP-LK8003-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)
UST-140A1-SP01	UST-140A2-SP01-SP-LL8004-REG	(a)				TPH-DRO/GRO, Pb and Paint Filter Test(b)

(a) Composite sample composed of 5 grab samples for each 20 cubic feet of stockpile soil.
(b) If the results for total lead is 100 ppm or greater after analysis of each stockpile sample, then in addition, the stockpile sample will be analyzed for TCLP Lead by EPA Method 1311.

DRO - diesel range organics.
GRO - gasoline range organics.
FD - Field duplicate.
FS - Field split.
MS/MSD - Matrix spike/matrix spike duplicate.
REG - Field sample.
QA/QC - Quality assurance/quality control.
Pb - lead.
TPH - total petroleum hydrocarbons.

4.9.1.1 of the SAP (IT, 2000). Stockpile samples will include a 5-point grab sample composited to one sample for each stockpile. One composite stockpile sample will be collected for every 20 cubic yards of stockpile soil. Composite samples will be collected and prepared as specified in Section 4.9.1.1 of the SAP. Sample documentation and chain of custody will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this FSAP are listed in Section 5.0, Table 5-1 of the QAP. The samples will be analyzed for the parameters listed in Section 3.7 of this FSAP.

3.3 Tank Cleaning Water Sampling

Tank interiors will be decontaminated prior to being cut into sections. The tank interiors will be cleaned using a high pressure, low volume water spray and appropriate cleaning solution until all loose scale and residue is removed and contamination in the form of a sheen is no longer visible in the effluent stream. All contaminated water resulting from cleaning operations will be collected. Tank cleaning water samples will be collected after USTs are cleaned and inspected. Contaminated water will be disposed of off-site in accordance with Federal and State regulations.

3.3.1 Sample Locations

The tank cleaning water samples will be collected as needed. The exact sample locations will be determined as required in the field by the UST removal team, based on the amount of water that is collected during the tank cleaning activities. Tank cleaning water will be collected and tracked in a similar manner to the investigation derived wastewater.

3.3.2 Sample Collection

The tank cleaning water samples will be collected in accordance with the procedures specified in Section 4.9.1.3 of the SAP (IT, 2000). Sample documentation and chain of custody will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this FSAP are listed in Section 5.0, Table 5-1, of the QAP. The samples will be analyzed for the parameters listed in Section 3.7 of this FSAP.

3.4 Groundwater Sampling

ADEM UST Closure Site Assessments Guidance Manual requires that groundwater sampling be conducted at each UST site where the seasonal high groundwater table is less than 5 feet below the bottom of the tank excavation pit and/or piping trench or where standing water in the excavation pit or piping trench is indicative of the groundwater table elevation. Groundwater

Table 3-4

Groundwater Sample Designations and QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	Sample Matrix	Sample Depth (ft)	QA/QC Samples			Analytical Suite
				Field Duplicates	Field Splits	MS/MSD	
UST-16A1-MW01	UST-16A1-MW01-GW-LD3001-REG	Groundwater	a			UST-16A1-MW01-GW-LD3001-MS/MSD	BTEX, PAH, and Pb
UST-16A1-MW02	UST-16A1-MW02-GW-LD3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A1-MW03	UST-16A1-MW03-GW-LD3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A1-MW04	UST-16A1-MW04-GW-LD3004-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A2-MW01	UST-16A2-MW01-GW-LD3005-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A2-MW02	UST-16A2-MW02-GW-LD3006-REG	Groundwater	a	UST-16A2-MW02-GW-LD3007-FD	UST-16A2-MW02-GW-LD3008-FS		BTEX, PAH, and Pb
UST-16A2-MW03	UST-16A2-MW03-GW-LD3009-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A2-MW04	UST-16A2-MW04-GW-LD3010-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A3-MW01	UST-16A3-MW01-GW-LD3011-REG	Groundwater	a			UST-16A3-MW01-GW-LD3011-MS/MSD	BTEX, PAH, and Pb
UST-16A3-MW02	UST-16A3-MW02-GW-LD3012-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A3-MW03	UST-16A3-MW03-GW-LD3013-REG	Groundwater	a				BTEX, PAH, and Pb
UST-16A3-MW04	UST-16A3-MW04-GW-LD3014-REG	Groundwater	a				BTEX, PAH, and Pb

Table 3-4

Groundwater Sample Designations and QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	Sample Matrix	Sample Depth (ft)	QA/QC Samples			Analytical Suite
				Field Duplicates	Field Splits	MS/MSD	
UST-132A6-MW01	UST-132A6-MW01-GW-LE3001-REG	Groundwater	a				BTEX, PAH, and Pb
UST-132A6-MW02	UST-132A6-MW02-GW-LE3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-132A6-MW03	UST-132A6-MW03-GW-LE3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-132A6-MW04	UST-132A6-MW04-GW-LE3004-REG	Groundwater	a				BTEX, PAH, and Pb
UST-133A1-MW01	UST-133A1-MW01-GW-LF3001-REG	Groundwater	a				BTEX, PAH, and Pb
UST-133A1-MW02	UST-133A1-MW02-GW-LF3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-133A1-MW03	UST-133A1-MW03-GW-LF3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-133A1-MW04	UST-133A1-MW04-GW-LF3004-REG	Groundwater	a	UST-133A1-MW04-GW-LF3005-FD	UST-133A1-MW04-GW-LF3006-FS		BTEX, PAH, and Pb
UST-134A3-MW01	UST-134A3-MW01-GW-LG3001-REG	Groundwater	a				BTEX, PAH, and Pb
UST-134A3-MW02	UST-134A3-MW02-GW-LG3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-134A3-MW03	UST-134A3-MW03-GW-LG3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-134A3-MW04	UST-134A3-MW04-GW-LG3004-REG	Groundwater	a				BTEX, PAH, and Pb

Table 3-4

Groundwater Sample Designations and QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	Sample Matrix	Sample Depth (ft)	QA/QC Samples			Analytical Suite
				Field Duplicates	Field Splits	MS/MSD	
UST-134A5-MW01	UST-134A5-MW01-GW-LG3005-REG	Groundwater	a				BTEX, PAH, and Pb
UST-134A5-MW02	UST-134A5-MW02-GW-LG3006-REG	Groundwater	a				BTEX, PAH, and Pb
UST-134A5-MW03	UST-134A5-MW03-GW-LG3007-REG	Groundwater	a				BTEX, PAH, and Pb
UST-134A5-MW04	UST-134A5-MW04-GW-LG3008-REG	Groundwater	a	UST-134A5-MW04-GW-LG3009-FD			BTEX, PAH, and Pb
UST-135A1-MW01	UST-135A1-MW01-GW-LH3001-REG	Groundwater	a				BTEX, PAH, and Pb
UST-135A1-MW02	UST-135A1-MW02-GW-LH3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-135A1-MW03	UST-135A1-MW03-GW-LH3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-135A1-MW04	UST-135A1-MW04-GW-LH3004-REG	Groundwater	a				BTEX, PAH, and Pb
UST-136A1-MW01	UST-136A1-MW01-GW-LJ3001-REG	Groundwater	a				BTEX, PAH, and Pb
UST-136A1-MW02	UST-136A1-MW02-GW-LJ3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-136A1-MW03	UST-136A1-MW03-GW-LJ3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-136A1-MW04	UST-136A1-MW04-GW-LJ3004-REG	Groundwater	a				BTEX, PAH, and Pb

Table 3-4

Groundwater Sample Designations and QA/QC Sample Quantities
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	Sample Matrix	Sample Depth (ft)	QA/QC Samples			Analytical Suite
				Field Duplicates	Field Splits	MS/MSD	
UST-136A2-MW01	UST-136A2-MW01-GW-LJ3005-REG	Groundwater	a	UST-136A2-MW01-GW-LJ3006-FD			BTEX, PAH, and Pb
UST-136A2-MW02	UST-136A2-MW02-GW-LJ3007-REG	Groundwater	a				BTEX, PAH, and Pb
UST-136A2-MW03	UST-136A2-MW03-GW-LJ3008-REG	Groundwater	a				BTEX, PAH, and Pb
UST-136A2-MW04	UST-136A2-MW04-GW-LJ3009-REG	Groundwater	a				BTEX, PAH, and Pb
UST-137A1-MW01	UST-137A1-MW01-GW-LK3001-REG	Groundwater	a				BTEX, PAH, and Pb
UST-137A1-MW02	UST-137A1-MW02-GW-LK3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-137A1-MW03	UST-137A1-MW03-GW-LK3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-137A1-MW04	UST-137A1-MW04-GW-LK3004-REG	Groundwater	a				BTEX, PAH, and Pb
UST-140A1-MW01	UST-140A1-MW01-GW-LL3001-REG	Groundwater	a				BTEX, PAH, and Pb
UST-140A1-MW02	UST-140A1-MW02-GW-LL3002-REG	Groundwater	a				BTEX, PAH, and Pb
UST-140A1-MW03	UST-140A1-MW03-GW-LL3003-REG	Groundwater	a				BTEX, PAH, and Pb
UST-140A1-MW04	UST-140A1-MW04-GW-LL3004-REG	Groundwater	a				BTEX, PAH, and Pb

[a]Sample depth will depend on where sufficient first water is encountered to collect a water sample.

BTEX - Benzene, toluene, ethylbenzene, xylene.
FD - Field duplicate.
FS - Field split.
MS/MSD - Matrix spike/matrix spike duplicate.
REG - Field sample.
QA/QC - Quality assurance/quality control.
PAH - Polyaromatic hydrocarbons.
Pb- lead.

Groundwater samples will be collected in accordance with the procedures outlined in Section 4.9.1.4 of the SAP (IT, 2000).

Sample documentation and chain of custody will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1 of the QAP (IT, 2000). The samples will be analyzed for the parameters listed in Section 3.7 of this SFSP.

3.5 Sampling Equipment Decontamination Requirements

Decontamination will be performed on sampling and nonsampling equipment to prevent cross-contamination between sample locations. Decontamination of sampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.1 of the SAP (IT, 2000). Decontamination of nonsampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.2 of the SAP.

3.6 Surveying of Sample Locations

Confirmatory sample locations will be marked with pin flags, stakes, and/or flagging at the edge of the UST excavations and will be surveyed using global positioning system (GPS) or conventional civil survey techniques. Horizontal coordinates for soil locations will be recorded using a GPS to an accuracy within 1 meter. Procedures to be used for GPS surveying are described in Section 4.3 of the SAP. Conventional land survey requirements are presented in Section 4.19 of the SAP.

Horizontal coordinates will be referenced to the U.S. State Plane Coordinate System, Alabama East Zone, North American Datum (NAD83), 1983. Elevations will be referenced to the National Geodetic Vertical Datum of 1929 or the North American Vertical Datum of 1988 (soon to be established on site).

3.7 Analytical Program

Confirmatory soil samples and groundwater samples collected at locations specified in this chapter of this FSAP will be analyzed for the specific suites of chemicals and elements as required by ADEM UST removal regulations as well as EPA, FTMC, and USACE requirements. Confirmatory soil samples from the excavations and groundwater samples will be tested in accordance with EPA SW-846 for the following parameters:

The samples will be analyzed using EPA SW-846 methods, including Update III Methods where applicable, as presented in Table 3-5 in this FSAP and Table 6-1 in the QAP. Data will be reported and evaluated in accordance with CESAS Level B criteria (USACE, 1994) and the stipulated requirements for the generation of definitive data (Section 3.1.2 of the QAP). Chemical data will be reported via hard copy data packages by the laboratory using CLP-like forms. The data packages for confirmatory samples, only, will be validated in accordance with EPA National Functional Guidelines by Level III criteria.

3.8 Sample Preservation, Packaging, and Shipping

Sample preservation, packaging, and shipping will follow the procedures specified in Section 4.13.2 of the SAP (IT, 2000). Completed analysis request/chain of custody records will be secured and included with each shipment of coolers to:

Attn: John Reynolds
Severn Trent Laboratories, Inc.
5815 Middlebrook Pike
Knoxville, Tennessee 37921
Telephone: (865) 588-6401.

QA split samples collected for the USACE laboratory will be shipped to the following address:

U.S. Army Engineer District, Savannah
Environmental & Materials Unit
Attn: Sample Receiving
200 North Cobb Parkway
Building 400, Suite 404
Marietta, Georgia 30062
Telephone: (678) 354-0310.

3.9 Investigation-Derived Waste Management

Management and disposal of the investigation-derived wastes (IDW) will follow procedures and requirements as described in Appendix D of the SAP (IT, 2000). The IDW generated at the UST removal sites is expected to include decontamination fluids and disposable personal protective equipment. The IDW will be staged in the fenced area surrounding Buildings 335 and 336 while awaiting final disposal.

Table 3-5

Analytical Samples
UST Removal Sites, Parcels 16(7), 132(7), 133(7), 134(7), 135(7), 136(7), 137(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Parameters	Analysis Method	Sample Matrix	TAT Needed	Field Samples: No. of Sample Points	Field Samples: No. of Events	Field Samples: No. of Field Samples	QA/QC Samples (1): Field Dups (10%)	QA/QC Samples (1): Splits w/ QA Lab (5%)	QA/QC Samples (1): MS/MSD (5%)	QA/QC Samples (1): Trip Blank (1/ship)	QA/QC Samples (1): Eq. Rinse (1/wk/matrix)	Sevem Trent Total No. Analysis	QA Lab Total No. Analysis
Tank Contents - Water/waste: No samples will be taken assume tanks are empty or full of product.													
Soil Confirmation - Soil: 147 samples plus QC samples													
BTEX	8021B	soil	**48-Hr**	7	12	84	8	4	4		4	104	4
PAHs	8310	soil	**48-Hr**	7	12	84	8	4	4		4	104	4
Lead	6010B	soil	**48-Hr**	7	12	84	8	4	4		4	104	4
Soil Disposal - Soil: 12 samples assuming 1 sample per tank location													
TPH-GRO	8015B	soil	**48-Hr**	1	12	12						12	0
TPH-DRO	8015B	soil	**48-Hr**	1	12	12						12	0
Lead	6010B	soil	**48-Hr**	1	12	12						12	0
TCLP Lead	1311	soil	**48-Hr**	1	12	12						12	0
Paint Filter	9095	soil	**48-Hr**	1	12	12						12	0
Groundwater: 84 samples assuming 4 sample per tank location/excavation													
BTEX	8021B	soil	**48-Hr**	4	12	48	4	2	2	12	3	71	2
PAHs	8310	soil	**48-Hr**	4	12	48	4	2	2		3	59	2
Lead	6010B	soil	**48-Hr**	4	12	48	4	2	2		3	59	2
Tank Cleaning Water - Water: 4 samples													
TPH-GRO	8015B	water	**48-Hr**	1	4	4						4	0
TPH-DRO	8015B	water	**48-Hr**	1	4	4						4	0
Lead	6010B	water	**48-Hr**	1	4	4						4	0
					UST Removal Sites Subtotal:	468	36	18	18	12	21	573	18

(1) Field duplicate, QA split, and MS/MSD samples were calculated as a percentage of the field samples collected per site and were rounded up to the nearest whole number. Trip blank samples will be collected in association with water matrix samples for VOC analysis only. Equipment blanks will be collected once per event whenever sampling equipment is field decontaminated and re-used. They will be repeated weekly for sampling events that are anticipated to last more than one week.
No QC was assigned for waste characterization or disposal samples.

Ship samples to: Severn Trent Laboratories, Inc.
5815 Middlebrook Pike
Knoxville, Tennessee 37921
Attn: John Reynolds
Tel: 865-588-6401
Fax: 865-584-4315

USACE Laboratory split samples are shipped to: U.S. Army Engineer District, Savannah
Environmental & Materials District
Attn: Sample Receiving
200 North Cobb Parkway
Building 400, Suite 404
Marietta, Georgia 30062
Tel: 678-354-0310

BTEX - Benzene, toluene, ethylbenzene, xylene.
FD - Field duplicate.
FS - Field split.
MS/MSD - Matrix spike/matrix spike duplicate.
REG - Field sample.
QA/QC - Quality assurance/quality control.
PAH - Polyaromatic hydrocarbons.
Pb - lead.

3.10 Site-Specific Safety and Health

The site-specific health and safety requirements for the UST removal activities are provided in Appendix A (SSHP) of the UST Removals and Closure Reports work plan. The SSHP in Appendix A will be used in conjunction with the installation-wide SHP.

3.11 Closure Reports

For each UST excavation site opened, a Tank Closure Report will be prepared in a standard three ring binder and submitted with a copy to the Contracting Officer's Representative within 45 days of completing work at each site. The Tank Closure Report will include the following sampling information, at a minimum, in addition to the requirements listed in the UST Removals and Closure Reports work plan.

- ADEM UST Closure Site Assessment Form (Appendix A of the *ADEM UST Guidance Manual, Section III, November 1997)* (The ADEM manual is included as Appendix C of the UST Removals and Closure Reports work plan).

- Copies of all analysis performed for verification that underlying soil is not contaminated, with copies of chain-of-custody for each sample. All analysis will give the identification number of the sample used. Sample identification numbers will correspond to those provided on the one-line drawings.

- Copies of analyses performed for disposal.

- Copies of waste analyses or waste profile sheets.

- Information on who sampled, analyzed, transported, and accepted all wastes encountered and copies of manifests.

- Scaled one-line drawings showing the following:

  - tank locations
  - limits of excavation
  - limits of contamination
  - underground utilities within 50 feet
  - sample locations
  - sample identification numbers.

- Progress Photographs. A minimum of four views of the site showing such things as the location of each tank, entrance/exit road, and any other notable site condition before work begins. After work has been started at the site, a photographic record of activities at each work location daily. Photographs will be taken with a digital camera.

4.0 References

IT Corporation (IT), 2000, ***Final Installation-Wide Sampling and Analysis Plan, Fort McClellan, Calhoun County, Alabama***, April.

IT Corporation (IT), 1998, ***Final Installation-Wide Work Plan, Fort McClellan, Calhoun County, Alabama***, August.

U.S. Army Corps of Engineers (USACE), 1999, ***Statement of Work for Modification No. 2 to Task Order CK08, Underground Storage Tank (UST) Removals and Closure Reports,*** December.

U.S. Army Corps of Engineers (USACE), 1994, ***Requirements for the Preparation of Sampling and Analysis Plan***, Engineer Manual EM 200-1-3, September 1.

U.S. Environmental Protection Agency (EPA), 1993, ***Data Quality Objectives Process for Superfund, Interim Final Guidance***, EPA 540-R-93-071, September.