4.0 Nature and Extent of Contamination

This chapter discusses the nature and extent of contamination at Parcel 94(7), including the results of the geophysical survey and sampling and analysis activities conducted at the site. In addition, information is provided on potential sources of contamination.

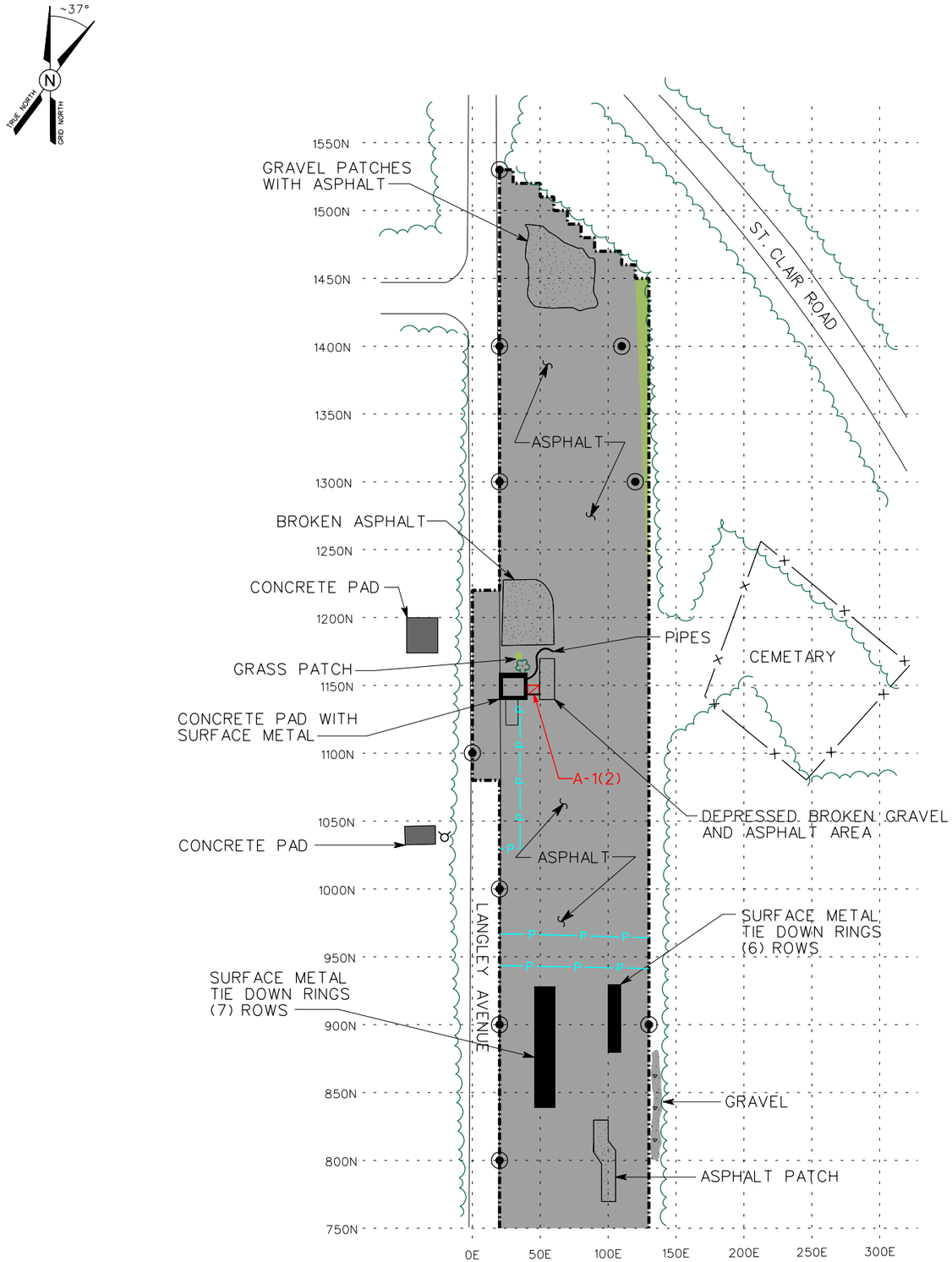
4.1 Geophysical Survey Results

The geophysical survey results indicate that seven geophysical anomalies potentially caused by one or more USTs were identified in the data from the sites of the former gas stations, Parcels 132(7), 133(7), and 134(7). According to the criteria established in the SFSP for UST identification, Anomaly A-6(1) (Parcel 132[7]) was interpreted to be a one or more USTs. Anomaly A-1(2) (Parcel 133[7]) and Anomaly A-5(2) (Parcel 134[7]) were interpreted to be potential USTs. Geophysical interpretation maps of the site (Figures 4-1 and 4-2) show the anomaly locations and provide a record of the survey boundaries. A detailed discussion of the data interpretation is included in the interpretation chapter of the geophysical survey report (Appendix A).

In July 2000, the three anomalies representing potential USTs were investigated by IT using exploratory trenching and excavation. No USTs were found at these locations. Anomaly A-6(1) was identified as a buried metal culvert. Anomaly A-1(2) was associated with two sections of 2-inch-diameter pipe, and anomaly A-5(2) was associated with a reinforced concrete slab. Although no USTs were found at any of the three parcels, ADEM UST site closure assessment reports were prepared for the anomalies at Parcels 132(7) and 133(7) (IT, 2001b). The BCT verbally agreed to "No Further Action" at Parcels 132(7), 133(7), and 134(7) during the August 2001 BCT meeting.

4.2 Summary of Analytical Results

The results of the chemical analysis of samples collected at the Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7), indicate that metals, VOCs, and SVOCs were detected in the various site media. In addition, two PCBs were detected in one subsurface soil sample. To evaluate the nature and extent of contamination at the site, the analytical results were compared to human health site-specific screening levels (SSSL), ecological screening values (ESV), and background screening values for FTMC. More rigorous human health and ecological risk assessments are provided in Chapters 6.0 and 7.0, respectively, of this report. The SSSLs and ESVs were developed by IT as part of the human health and ecological risk evaluations



LEGEND

- GEOPHYSICAL SURVEY BOUNDARY
- CIVIL SURVEY STAKE LOCATION
- A-1(2) — GEOPHYSICAL ANOMALY DISCUSSED IN TEXT; NUMBER SHOWN IN PARENTHESIS INDICATES ANOMALY TYPE FOR POTENTIAL UST
- P — PIPE/BURIED UTILITY
- FIRE HYDRANT
- FENCE
- TREES / TREELINE

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 4-1
GEOPHYSICAL INTERPRETATION MAP
(NORTHERN PORTION)
FORMER CHEMICAL LAUNDRY AND
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
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DWG. NO.: ...\796887es.421 | PROJ. NO.: 796887
INITIATOR: S. TAKATA | PROJ. MGR.: PROJ. MGR.:
DRAFT. CHCK. BY: | ENGR. CHCK. BY: J. HACKWORTH
DATE LAST REV.: | DRAWN BY:
STARTING DATE: 04/23/02 | DRAWN BY: D. BOMAR
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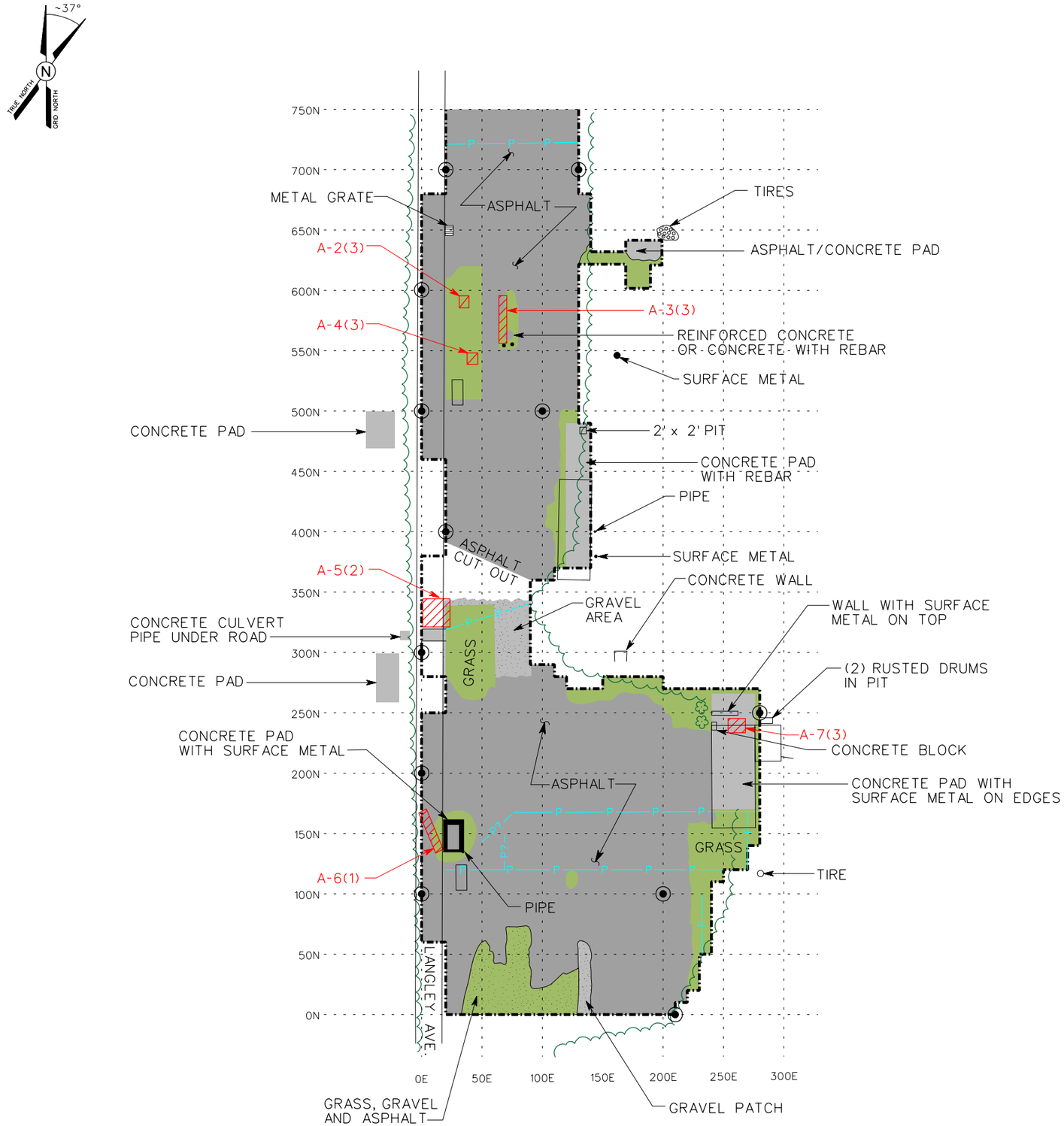

LEGEND

- GEOPHYSICAL SURVEY BOUNDARY
- CIVIL SURVEY STAKE LOCATION
- A-2(3) — GEOPHYSICAL ANOMALY DISCUSSED IN TEXT; NUMBER SHOWN IN PARENTHESIS INDICATES ANOMALY TYPE FOR POTENTIAL UST
- METAL GRATE
- P — PIPE/BURIED UTILITY
- TREES / TREELINE

NAD 83 SPHEROID, ALABAMA EAST STATE PLANE DATUM		
LOCAL GRID COORDINATES	STATE PLANE COORDINATES	
0N,210E	1167770.373N	673446.227E
100N,0E	1167725.093N	673217.598E
100N,200E	1167846.812N	673376.590E
200N,0E	1167804.791N	673157.351E
250N,280E	1168015.176N	673348.335E
300N,0E	1167884.901N	673097.683E
400N,20E	1167976.889N	673053.056E
500N,0E	1168044.523N	672976.720E
500N,100E	1168105.109N	673056.274E
600N,0E	1168124.273N	672916.517E
700N,20E	1168216.274N	672872.470E
700N,130E	1168282.776N	672959.396E

SCALE

0 100 200 FEET

FIGURE 4-2
GEOPHYSICAL INTERPRETATION MAP
(SOUTHERN PORTION)
FORMER CHEMICAL LAUNDRY
AND 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

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INITIATOR: S. TAKATA | PROJ. MGR.: PROJ. MGR.:
DRAFT. CHCK. BY: | ENGR. CHCK. BY: J. HACKWORTH
DATE LAST REV.: | DRAWN BY:
STARTING DATE: 04/23/02 | DRAWN BY: D. BOMAR
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associated with site investigations being performed under the BRAC Environmental Restoration Program at FTMC. The SSSLs, ESVs, and polynuclear aromatic hydrocarbon (PAH) background screening values are presented in the *Final Human Health and Ecological Screening Values and PAH Background Summary Report* (IT, 2000c). The PAH background screening values were developed by IT at the direction of the BRAC Cleanup Team to address the occurrence of PAH compounds in surface soils as a result of anthropogenic activities at FTMC. Background metals screening values are presented in the *Final Background Metals Survey Report, Fort McClellan, Alabama* (SAIC, 1998). Summary statistics for background metal samples collected at FTMC are included in Appendix K.

An integrated statistical and geochemical evaluation of metals in soil and groundwater was performed for Parcel 94(7) and is included in Appendix L. The evaluation was conducted following methodology outlined in the installation-wide work plan (IT, 2002).

The following sections and Tables 4-1 through 4-5 summarize the results of the comparison of detected constituents to the SSSLs, ESVs, and background screening values. Complete analytical results are presented in Appendix I.

4.2.1 Surface and Depositional Soil Analytical Results

Sixteen surface soil samples and four depositional soil samples were collected for chemical analysis at the Former Motor Pool Area 1500, Parcel 94(7). Surface and depositional soil samples were collected from the upper 1 foot of soil at the locations shown on Figure 2-2. Analytical results were compared to residential human health SSSLs, ESVs, and metals background screening values as presented in Table 4-1.

Metals. Thirteen surface and depositional soil samples were analyzed for metals. Nineteen metals were detected in surface and depositional soil samples collected at the site. The concentrations of five (aluminum, arsenic, chromium, iron, and manganese) exceeded SSSLs. Of these metals, aluminum (FTA-94-MW14), iron (FTA-94-GP05 and FTA-94-GP08), and manganese (FTA-94-GP01) also exceeded their respective background concentrations. However, the aluminum, iron, and manganese results were within the range of background values (Appendix K).

Thirteen metals were detected at concentrations exceeding ESVs. Of these, ten results also exceeded their respective background concentrations: aluminum (FTA-94-MW14), beryllium

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-DEP01						FTA-94-DEP02						FTA-94-DEP03					
Sample Number						EM0021						EM0022						EM0023					
Sample Date						11-Nov-98						11-Nov-98						11-Nov-98					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/kg	3.99E+04	1.63E+04	7.80E+03	5.00E+01	7.57E+03					YES	6.88E+03					YES	5.68E+03					YES
Arsenic	mg/kg	4.90E+01	1.37E+01	4.26E-01	1.00E+01	5.40E+00				YES		6.00E+00				YES		7.20E+00				YES	
Barium	mg/kg	2.88E+02	1.24E+02	5.47E+02	1.65E+02	6.48E+01						1.17E+02						1.06E+02					
Beryllium	mg/kg	8.70E-01	8.00E-01	9.60E+00	1.10E+00	ND						1.00E+00		YES	YES			1.20E+00		YES	YES		YES
Calcium	mg/kg	1.79E+04	1.72E+03	NA	NA	5.37E+03			YES			1.28E+03						2.79E+03			YES		
Chromium	mg/kg	1.34E+02	3.70E+01	2.32E+01	4.00E-01	1.67E+01					YES	1.70E+01					YES	2.38E+01				YES	YES
Cobalt	mg/kg	7.10E+01	1.52E+01	4.68E+02	2.00E+01	1.02E+01						1.26E+01						1.23E+01					
Copper	mg/kg	2.40E+01	1.27E+01	3.13E+02	4.00E+01	2.39E+01			YES			3.05E+01		YES	YES			3.64E+01		YES	YES		
Iron	mg/kg	5.63E+04	3.42E+04	2.34E+03	2.00E+02	1.97E+04				YES	YES	2.43E+04				YES	YES	2.94E+04				YES	YES
Lead	mg/kg	8.30E+01	4.01E+01	4.00E+02	5.00E+01	4.79E+01			YES			3.95E+01						7.80E+01			YES		YES
Magnesium	mg/kg	9.60E+03	1.03E+03	NA	4.40E+05	1.51E+03			YES			ND						ND					
Manganese	mg/kg	6.85E+03	1.58E+03	3.63E+02	1.00E+02	2.73E+02					YES	4.69E+02				YES	YES	7.15E+02				YES	YES
Mercury	mg/kg	3.20E-01	8.00E-02	2.33E+00	1.00E-01	1.10E-01			YES		YES	9.90E-02			YES			1.10E-01			YES		YES
Nickel	mg/kg	2.20E+01	1.03E+01	1.54E+02	3.00E+01	1.22E+01			YES			8.90E+00						9.30E+00					
Potassium	mg/kg	6.01E+03	8.00E+02	NA	NA	ND						ND						ND					
Selenium	mg/kg	1.30E+00	4.80E-01	3.91E+01	8.10E-01	1.40E+00		YES	YES		YES	1.40E+00		YES	YES		YES	1.70E+00		YES	YES		YES
Sodium	mg/kg	5.63E+02	6.34E+02	NA	NA	ND						ND						ND					
Vanadium	mg/kg	1.58E+02	5.88E+01	5.31E+01	2.00E+00	1.28E+01					YES	1.16E+01					YES	1.11E+01					YES
Zinc	mg/kg	2.09E+02	4.06E+01	2.34E+03	5.00E+01	1.53E+02			YES		YES	5.63E+01			YES		YES	8.69E+01			YES		YES
VOLATILE ORGANIC COMPOUNDS																							
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						ND					
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						ND					
2-Butanone	mg/kg	NA	NA	4.66E+03	8.96E+01	7.50E-03	B					7.70E-03	B					1.90E-02	B				
Acetone	mg/kg	NA	NA	7.76E+02	2.50E+00	1.80E-01	J					1.10E-01	J					3.20E-01	J				
Bromomethane	mg/kg	NA	NA	1.09E+01	NA	ND						ND						ND					
Carbon disulfide	mg/kg	NA	NA	7.77E+02	9.00E-02	ND						ND						ND					
Chlorobenzene	mg/kg	NA	NA	1.55E+02	5.00E-02	ND						ND						ND					
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.00E+00	8.40E-03	B					5.20E-03	B					5.30E-03	B				
Naphthalene	mg/kg	NA	NA	1.55E+02	1.00E-01	ND						ND						ND					
Toluene	mg/kg	NA	NA	1.55E+03	5.00E-02	2.80E-03	J					ND						ND					
cis-1,2-Dichloroethene	mg/kg	NA	NA	7.77E+01	1.00E-01	ND						ND						ND					
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
p-Cymene	mg/kg	NA	NA	1.55E+03	NA	2.40E-02	J					ND						ND					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-DEP01						FTA-94-DEP02						FTA-94-DEP03					
Sample Number						EM0021						EM0022						EM0023					
Sample Date						11-Nov-98						11-Nov-98						11-Nov-98					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																							
2-Methylnaphthalene	mg/kg	NA	NA	1.55E+02	NA	ND						ND						ND					
Acenaphthene	mg/kg	NA	7.02E-01	4.63E+02	2.00E+01	7.10E-02	J					ND						ND					
Acenaphthylene	mg/kg	NA	8.91E-01	4.63E+02	6.82E+02	5.20E-01	J					8.60E-02	J					ND					
Anthracene	mg/kg	NA	9.35E-01	2.33E+03	1.00E-01	7.20E-01					YES	9.20E-02	J					ND					
Benzo(a)anthracene	mg/kg	NA	1.19E+00	8.51E-01	5.21E+00	3.20E+00			YES	YES		1.70E-01	J					ND					
Benzo(a)pyrene	mg/kg	NA	1.42E+00	8.51E-02	1.00E-01	4.60E+00			YES	YES	YES	2.30E-01	J			YES	YES	4.90E-02	J				
Benzo(b)fluoranthene	mg/kg	NA	1.66E+00	8.51E-01	5.98E+01	7.20E+00			YES	YES		2.30E-01	J					7.10E-02	J				
Benzo(ghi)perylene	mg/kg	NA	9.55E-01	2.32E+02	1.19E+02	1.70E+00			YES			1.10E-01	J					ND					
Benzo(k)fluoranthene	mg/kg	NA	1.45E+00	8.51E+00	1.48E+02	4.40E+00			YES			2.80E-01	J					5.70E-02	J				
Carbazole	mg/kg	NA	NA	3.11E+01	NA	7.00E-01						5.40E-02	J					ND					
Chrysene	mg/kg	NA	1.40E+00	8.61E+01	4.73E+00	5.00E+00			YES		YES	2.30E-01	J					5.40E-02	J				
Dibenz(a,h)anthracene	mg/kg	NA	7.20E-01	8.61E-02	1.84E+01	9.10E-01			YES	YES		6.00E-02	J					ND					
Dibenzofuran	mg/kg	NA	NA	3.09E+01	NA	ND						ND						ND					
Fluoranthene	mg/kg	NA	2.03E+00	3.09E+02	1.00E-01	8.00E+00			YES		YES	4.40E-01					YES	6.70E-02	J				
Fluorene	mg/kg	NA	6.67E-01	3.09E+02	1.22E+02	1.10E-01	J					ND						ND					
Indeno(1,2,3-cd)pyrene	mg/kg	NA	9.37E-01	8.51E-01	1.09E+02	2.00E+00			YES	YES		1.20E-01	J					ND					
Naphthalene	mg/kg	NA	3.30E-02	1.55E+02	1.00E-01	ND						ND						ND					
Phenanthrene	mg/kg	NA	1.08E+00	2.32E+03	1.00E-01	1.80E+00			YES		YES	2.00E-01	J				YES	ND					
Pyrene	mg/kg	NA	1.63E+00	2.33E+02	1.00E-01	5.90E+00			YES		YES	3.10E-01	J				YES	5.30E-02	J				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	9.30E-01	ND						ND						ND					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-DEP04						FTA-94-GP01						FTA-94-GP02					
Sample Number						EM0024						EM0001						EM0003					
Sample Date						11-Nov-98						16-Oct-98						16-Oct-98					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/kg	3.99E+04	1.63E+04	7.80E+03	5.00E+01	2.61E+03					YES	8.04E+03				YES	YES	1.02E+04				YES	YES
Arsenic	mg/kg	4.90E+01	1.37E+01	4.26E-01	1.00E+01	3.10E+00				YES		3.50E+00				YES		6.20E+00				YES	
Barium	mg/kg	2.88E+02	1.24E+02	5.47E+02	1.65E+02	3.05E+01						9.45E+01						5.70E+01					
Beryllium	mg/kg	8.70E-01	8.00E-01	9.60E+00	1.10E+00	ND						1.20E+00		YES	YES		YES	8.60E-01			YES		
Calcium	mg/kg	1.79E+04	1.72E+03	NA	NA	6.75E+02						6.67E+03			YES			1.56E+04			YES		
Chromium	mg/kg	1.34E+02	3.70E+01	2.32E+01	4.00E-01	2.44E+01				YES	YES	2.52E+01				YES	YES	2.31E+01					YES
Cobalt	mg/kg	7.10E+01	1.52E+01	4.68E+02	2.00E+01	8.40E+00						1.82E+01			YES			ND					
Copper	mg/kg	2.40E+01	1.27E+01	3.13E+02	4.00E+01	6.00E+00						2.07E+01			YES			1.69E+01			YES		
Iron	mg/kg	5.63E+04	3.42E+04	2.34E+03	2.00E+02	1.55E+04				YES	YES	2.75E+04				YES	YES	2.73E+04				YES	YES
Lead	mg/kg	8.30E+01	4.01E+01	4.00E+02	5.00E+01	1.72E+01						2.00E+01	J					1.18E+01	J				
Magnesium	mg/kg	9.60E+03	1.03E+03	NA	4.40E+05	ND						1.58E+03			YES			2.94E+03			YES		
Manganese	mg/kg	6.85E+03	1.58E+03	3.63E+02	1.00E+02	5.16E+02				YES	YES	1.60E+03			YES	YES	YES	2.22E+02					YES
Mercury	mg/kg	3.20E-01	8.00E-02	2.33E+00	1.00E-01	ND						1.20E-01			YES		YES	ND					
Nickel	mg/kg	2.20E+01	1.03E+01	1.54E+02	3.00E+01	ND						9.80E+00						1.08E+01			YES		
Potassium	mg/kg	6.01E+03	8.00E+02	NA	NA	ND						ND						8.50E+02			YES		
Selenium	mg/kg	1.30E+00	4.80E-01	3.91E+01	8.10E-01	ND						7.90E-01			YES			1.40E+00		YES	YES		YES
Sodium	mg/kg	5.63E+02	6.34E+02	NA	NA	ND						ND						ND					
Vanadium	mg/kg	1.58E+02	5.88E+01	5.31E+01	2.00E+00	ND						1.03E+01					YES	1.97E+01					YES
Zinc	mg/kg	2.09E+02	4.06E+01	2.34E+03	5.00E+01	7.13E+01			YES		YES	3.35E+01						1.99E+01	B				
VOLATILE ORGANIC COMPOUNDS																							
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						2.90E-02	J				
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						2.50E-03	J				
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						6.80E-03	J				
2-Butanone	mg/kg	NA	NA	4.66E+03	8.96E+01	ND						3.00E-02						8.60E-03	J				
Acetone	mg/kg	NA	NA	7.76E+02	2.50E+00	3.60E-02	J					2.30E-01	J					1.70E-01	J				
Bromomethane	mg/kg	NA	NA	1.09E+01	NA	ND						ND						ND					
Carbon disulfide	mg/kg	NA	NA	7.77E+02	9.00E-02	ND						1.40E-02						1.50E-02					
Chlorobenzene	mg/kg	NA	NA	1.55E+02	5.00E-02	ND						ND						ND					
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.00E+00	3.40E-03	B					3.50E-03	B					3.30E-03	B				
Naphthalene	mg/kg	NA	NA	1.55E+02	1.00E-01	ND						4.40E-03	J					2.70E-02	J				
Toluene	mg/kg	NA	NA	1.55E+03	5.00E-02	ND						ND						ND					
cis-1,2-Dichloroethene	mg/kg	NA	NA	7.77E+01	1.00E-01	ND						ND						ND					
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						4.50E-03	J				
p-Cymene	mg/kg	NA	NA	1.55E+03	NA	4.30E-03	J					ND						ND					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-DEP04						FTA-94-GP01						FTA-94-GP02					
Sample Number						EM0024						EM0001						EM0003					
Sample Date						11-Nov-98						16-Oct-98						16-Oct-98					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																							
2-Methylnaphthalene	mg/kg	NA	NA	1.55E+02	NA	ND						ND						6.30E-01	J				
Acenaphthene	mg/kg	NA	7.02E-01	4.63E+02	2.00E+01	ND						6.20E-02	J					1.40E+00	J		YES		
Acenaphthylene	mg/kg	NA	8.91E-01	4.63E+02	6.82E+02	1.10E-01	J					1.90E-01	J					2.30E+00	J		YES		
Anthracene	mg/kg	NA	9.35E-01	2.33E+03	1.00E-01	1.20E-01	J				YES	3.90E-01	J				YES	5.60E+00			YES		YES
Benzo(a)anthracene	mg/kg	NA	1.19E+00	8.51E-01	5.21E+00	2.70E-01	J					9.70E-01				YES		6.50E+00			YES	YES	YES
Benzo(a)pyrene	mg/kg	NA	1.42E+00	8.51E-02	1.00E-01	3.60E-01	J			YES	YES	7.30E-01				YES	YES	5.30E+00			YES	YES	YES
Benzo(b)fluoranthene	mg/kg	NA	1.66E+00	8.51E-01	5.98E+01	4.50E-01						1.10E+00				YES		4.30E+00			YES	YES	
Benzo(ghi)perylene	mg/kg	NA	9.55E-01	2.32E+02	1.19E+02	1.70E-01	J					2.80E-01	J					1.60E+00	J		YES		
Benzo(k)fluoranthene	mg/kg	NA	1.45E+00	8.51E+00	1.48E+02	3.80E-01						6.70E-01						6.50E+00	J		YES		
Carbazole	mg/kg	NA	NA	3.11E+01	NA	8.10E-02	J					2.50E-01	J					3.00E+00	J				
Chrysene	mg/kg	NA	1.40E+00	8.61E+01	4.73E+00	3.80E-01						9.30E-01						6.10E+00			YES		YES
Dibenz(a,h)anthracene	mg/kg	NA	7.20E-01	8.61E-02	1.84E+01	8.60E-02	J					1.90E-01	J			YES		1.00E+00	J		YES	YES	
Dibenzofuran	mg/kg	NA	NA	3.09E+01	NA	ND						7.20E-02	J					2.00E+00	J				
Fluoranthene	mg/kg	NA	2.03E+00	3.09E+02	1.00E-01	6.60E-01					YES	2.00E+00					YES	2.00E+01			YES		YES
Fluorene	mg/kg	NA	6.67E-01	3.09E+02	1.22E+02	ND						2.20E-01	J					5.20E+00			YES		
Indeno(1,2,3-cd)pyrene	mg/kg	NA	9.37E-01	8.51E-01	1.09E+02	1.80E-01	J					3.40E-01	J					1.90E+00	J		YES	YES	
Naphthalene	mg/kg	NA	3.30E-02	1.55E+02	1.00E-01	ND						ND						ND					
Phenanthrene	mg/kg	NA	1.08E+00	2.32E+03	1.00E-01	2.20E-01	J				YES	8.40E-01					YES	1.80E+01			YES		YES
Pyrene	mg/kg	NA	1.63E+00	2.33E+02	1.00E-01	4.90E-01					YES	1.70E+00			YES		YES	1.40E+01			YES		YES
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	9.30E-01	ND						ND						ND					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP05						FTA-94-GP08						FTA-94-GP11					
Sample Number						EM0009						EM0013						EM0017					
Sample Date						27-Oct-98						27-Oct-98						21-Oct-98					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/kg	3.99E+04	1.63E+04	7.80E+03	5.00E+01	1.20E+04				YES	YES	1.08E+04				YES	YES	7.98E+03				YES	YES
Arsenic	mg/kg	4.90E+01	1.37E+01	4.26E-01	1.00E+01	1.04E+01				YES	YES	5.60E+00				YES		4.80E+00				YES	
Barium	mg/kg	2.88E+02	1.24E+02	5.47E+02	1.65E+02	6.73E+01						5.09E+01						5.68E+01					
Beryllium	mg/kg	8.70E-01	8.00E-01	9.60E+00	1.10E+00	ND						ND						8.90E-01		YES	YES		
Calcium	mg/kg	1.79E+04	1.72E+03	NA	NA	1.63E+03						6.03E+02						1.88E+03			YES		
Chromium	mg/kg	1.34E+02	3.70E+01	2.32E+01	4.00E-01	3.18E+01				YES	YES	2.22E+01					YES	2.56E+01				YES	YES
Cobalt	mg/kg	7.10E+01	1.52E+01	4.68E+02	2.00E+01	2.66E+01			YES		YES	8.60E+00						6.50E+00					
Copper	mg/kg	2.40E+01	1.27E+01	3.13E+02	4.00E+01	4.12E+01		YES	YES		YES	2.35E+01			YES			2.97E+01		YES	YES		
Iron	mg/kg	5.63E+04	3.42E+04	2.34E+03	2.00E+02	3.99E+04			YES	YES	YES	3.50E+04			YES	YES	YES	2.62E+04				YES	YES
Lead	mg/kg	8.30E+01	4.01E+01	4.00E+02	5.00E+01	1.66E+01						1.36E+01						2.17E+01	J				
Magnesium	mg/kg	9.60E+03	1.03E+03	NA	4.40E+05	ND						6.01E+02						ND					
Manganese	mg/kg	6.85E+03	1.58E+03	3.63E+02	1.00E+02	1.38E+02					YES	8.88E+01						1.75E+02					YES
Mercury	mg/kg	3.20E-01	8.00E-02	2.33E+00	1.00E-01	1.30E-01			YES		YES	8.90E-02			YES			ND					
Nickel	mg/kg	2.20E+01	1.03E+01	1.54E+02	3.00E+01	8.30E+00						8.40E+00						6.90E+00					
Potassium	mg/kg	6.01E+03	8.00E+02	NA	NA	ND						6.21E+02	B					6.37E+02					
Selenium	mg/kg	1.30E+00	4.80E-01	3.91E+01	8.10E-01	2.80E+00		YES	YES		YES	1.70E+00		YES	YES		YES	1.40E+00		YES	YES		YES
Sodium	mg/kg	5.63E+02	6.34E+02	NA	NA	ND						ND						ND					
Vanadium	mg/kg	1.58E+02	5.88E+01	5.31E+01	2.00E+00	2.57E+01					YES	6.90E+00					YES	6.20E+00					YES
Zinc	mg/kg	2.09E+02	4.06E+01	2.34E+03	5.00E+01	4.01E+01						2.95E+01	B					3.30E+01					
VOLATILE ORGANIC COMPOUNDS																							
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						1.20E-02	J				
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						ND					
2-Butanone	mg/kg	NA	NA	4.66E+03	8.96E+01	ND						ND						2.20E-02	J				
Acetone	mg/kg	NA	NA	7.76E+02	2.50E+00	2.80E-02	B					6.00E-02	J					2.00E-01	J				
Bromomethane	mg/kg	NA	NA	1.09E+01	NA	1.40E-03	B					ND						ND					
Carbon disulfide	mg/kg	NA	NA	7.77E+02	9.00E-02	3.70E-03	J					ND						1.20E-02					
Chlorobenzene	mg/kg	NA	NA	1.55E+02	5.00E-02	ND						ND						ND					
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.00E+00	4.20E-03	B					4.90E-03	B					9.70E-03	B				
Naphthalene	mg/kg	NA	NA	1.55E+02	1.00E-01	ND						ND						4.30E-02	J		YES		
Toluene	mg/kg	NA	NA	1.55E+03	5.00E-02	ND						ND						ND					
cis-1,2-Dichloroethene	mg/kg	NA	NA	7.77E+01	1.00E-01	4.60E-03	J					ND						ND					
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
p-Cymene	mg/kg	NA	NA	1.55E+03	NA	ND						ND						3.50E-03	J				

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP05						FTA-94-GP08						FTA-94-GP11					
Sample Number						EM0009						EM0013						EM0017					
Sample Date						27-Oct-98						27-Oct-98						21-Oct-98					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																							
2-Methylnaphthalene	mg/kg	NA	NA	1.55E+02	NA	ND						ND						1.30E-01	J				
Acenaphthene	mg/kg	NA	7.02E-01	4.63E+02	2.00E+01	ND						ND						9.80E-02	J				
Acenaphthylene	mg/kg	NA	8.91E-01	4.63E+02	6.82E+02	ND						ND						1.30E+00			YES		
Anthracene	mg/kg	NA	9.35E-01	2.33E+03	1.00E-01	ND						ND						8.90E-01					YES
Benzo(a)anthracene	mg/kg	NA	1.19E+00	8.51E-01	5.21E+00	ND						ND						9.00E-01				YES	
Benzo(a)pyrene	mg/kg	NA	1.42E+00	8.51E-02	1.00E-01	3.50E-02	J					ND						3.80E+00			YES	YES	YES
Benzo(b)fluoranthene	mg/kg	NA	1.66E+00	8.51E-01	5.98E+01	ND						ND						3.60E+00			YES	YES	
Benzo(ghi)perylene	mg/kg	NA	9.55E-01	2.32E+02	1.19E+02	ND						ND						8.70E-01					
Benzo(k)fluoranthene	mg/kg	NA	1.45E+00	8.51E+00	1.48E+02	ND						ND						3.30E+00	J		YES		
Carbazole	mg/kg	NA	NA	3.11E+01	NA	ND						ND						2.40E-01	J				
Chrysene	mg/kg	NA	1.40E+00	8.61E+01	4.73E+00	ND						ND						1.20E+00					
Dibenz(a,h)anthracene	mg/kg	NA	7.20E-01	8.61E-02	1.84E+01	ND						ND						5.50E-01				YES	
Dibenzofuran	mg/kg	NA	NA	3.09E+01	NA	ND						ND						9.40E-02	J				
Fluoranthene	mg/kg	NA	2.03E+00	3.09E+02	1.00E-01	ND						ND						2.00E+00					YES
Fluorene	mg/kg	NA	6.67E-01	3.09E+02	1.22E+02	ND						ND						2.60E-01	J				
Indeno(1,2,3-cd)pyrene	mg/kg	NA	9.37E-01	8.51E-01	1.09E+02	ND						ND						1.10E+00			YES	YES	
Naphthalene	mg/kg	NA	3.30E-02	1.55E+02	1.00E-01	ND						ND						2.50E-01	J		YES		YES
Phenanthrene	mg/kg	NA	1.08E+00	2.32E+03	1.00E-01	ND						ND						7.20E-01					YES
Pyrene	mg/kg	NA	1.63E+00	2.33E+02	1.00E-01	ND						ND						2.10E+00			YES		YES
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	9.30E-01	1.20E-01	J					ND						7.70E-02	B				

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP12						FTA-94-GP13						FTA-94-GP14					
Sample Number						EM0019						EMM0001						EMM0002					
Sample Date						21-Oct-98						6-Dec-00						6-Dec-00					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/kg	3.99E+04	1.63E+04	7.80E+03	5.00E+01	5.78E+03					YES	NR						NR					
Arsenic	mg/kg	4.90E+01	1.37E+01	4.26E-01	1.00E+01	2.00E+00				YES		NR						NR					
Barium	mg/kg	2.88E+02	1.24E+02	5.47E+02	1.65E+02	4.03E+01						NR						NR					
Beryllium	mg/kg	8.70E-01	8.00E-01	9.60E+00	1.10E+00	ND						NR						NR					
Calcium	mg/kg	1.79E+04	1.72E+03	NA	NA	8.05E+03			YES			NR						NR					
Chromium	mg/kg	1.34E+02	3.70E+01	2.32E+01	4.00E-01	1.53E+01					YES	NR						NR					
Cobalt	mg/kg	7.10E+01	1.52E+01	4.68E+02	2.00E+01	ND						NR						NR					
Copper	mg/kg	2.40E+01	1.27E+01	3.13E+02	4.00E+01	3.60E+00						NR						NR					
Iron	mg/kg	5.63E+04	3.42E+04	2.34E+03	2.00E+02	6.73E+03				YES	YES	NR						NR					
Lead	mg/kg	8.30E+01	4.01E+01	4.00E+02	5.00E+01	6.50E+00	J					NR						NR					
Magnesium	mg/kg	9.60E+03	1.03E+03	NA	4.40E+05	1.52E+03			YES			NR						NR					
Manganese	mg/kg	6.85E+03	1.58E+03	3.63E+02	1.00E+02	2.86E+02					YES	NR						NR					
Mercury	mg/kg	3.20E-01	8.00E-02	2.33E+00	1.00E-01	ND						NR						NR					
Nickel	mg/kg	2.20E+01	1.03E+01	1.54E+02	3.00E+01	5.00E+00	B					NR						NR					
Potassium	mg/kg	6.01E+03	8.00E+02	NA	NA	ND						NR						NR					
Selenium	mg/kg	1.30E+00	4.80E-01	3.91E+01	8.10E-01	ND						NR						NR					
Sodium	mg/kg	5.63E+02	6.34E+02	NA	NA	ND						NR						NR					
Vanadium	mg/kg	1.58E+02	5.88E+01	5.31E+01	2.00E+00	1.12E+01					YES	NR						NR					
Zinc	mg/kg	2.09E+02	4.06E+01	2.34E+03	5.00E+01	6.40E+00	B					NR						NR					
VOLATILE ORGANIC COMPOUNDS																							
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						ND					
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						ND					
2-Butanone	mg/kg	NA	NA	4.66E+03	8.96E+01	ND						2.70E-02	J					2.80E-02					
Acetone	mg/kg	NA	NA	7.76E+02	2.50E+00	2.70E-01	J					3.50E-01	J					3.10E-01	J				
Bromomethane	mg/kg	NA	NA	1.09E+01	NA	ND						ND						ND					
Carbon disulfide	mg/kg	NA	NA	7.77E+02	9.00E-02	1.20E-02						ND						ND					
Chlorobenzene	mg/kg	NA	NA	1.55E+02	5.00E-02	ND						ND						ND					
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.00E+00	5.40E-03	B					ND						1.10E-03	J				
Naphthalene	mg/kg	NA	NA	1.55E+02	1.00E-01	2.40E-03	J					ND						ND					
Toluene	mg/kg	NA	NA	1.55E+03	5.00E-02	ND						2.10E-03	J					2.10E-03	J				
cis-1,2-Dichloroethene	mg/kg	NA	NA	7.77E+01	1.00E-01	ND						ND						ND					
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
p-Cymene	mg/kg	NA	NA	1.55E+03	NA	ND						ND						1.10E-03	J				

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP12						FTA-94-GP13						FTA-94-GP14					
Sample Number						EM0019						EMM0001						EMM0002					
Sample Date						21-Oct-98						6-Dec-00						6-Dec-00					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																							
2-Methylnaphthalene	mg/kg	NA	NA	1.55E+02	NA	ND						NR						NR					
Acenaphthene	mg/kg	NA	7.02E-01	4.63E+02	2.00E+01	ND						NR						NR					
Acenaphthylene	mg/kg	NA	8.91E-01	4.63E+02	6.82E+02	4.30E-01						NR						NR					
Anthracene	mg/kg	NA	9.35E-01	2.33E+03	1.00E-01	2.90E-01	J				YES	NR						NR					
Benzo(a)anthracene	mg/kg	NA	1.19E+00	8.51E-01	5.21E+00	8.50E-01						NR						NR					
Benzo(a)pyrene	mg/kg	NA	1.42E+00	8.51E-02	1.00E-01	1.10E+00				YES	YES	NR						NR					
Benzo(b)fluoranthene	mg/kg	NA	1.66E+00	8.51E-01	5.98E+01	1.20E+00				YES		NR						NR					
Benzo(ghi)perylene	mg/kg	NA	9.55E-01	2.32E+02	1.19E+02	2.90E-01	J					NR						NR					
Benzo(k)fluoranthene	mg/kg	NA	1.45E+00	8.51E+00	1.48E+02	1.30E+00	J					NR						NR					
Carbazole	mg/kg	NA	NA	3.11E+01	NA	1.50E-01	J					NR						NR					
Chrysene	mg/kg	NA	1.40E+00	8.61E+01	4.73E+00	1.00E+00						NR						NR					
Dibenz(a,h)anthracene	mg/kg	NA	7.20E-01	8.61E-02	1.84E+01	1.60E-01	J			YES		NR						NR					
Dibenzofuran	mg/kg	NA	NA	3.09E+01	NA	ND						NR						NR					
Fluoranthene	mg/kg	NA	2.03E+00	3.09E+02	1.00E-01	2.20E+00			YES		YES	NR						NR					
Fluorene	mg/kg	NA	6.67E-01	3.09E+02	1.22E+02	ND						NR						NR					
Indeno(1,2,3-cd)pyrene	mg/kg	NA	9.37E-01	8.51E-01	1.09E+02	3.10E-01	J					NR						NR					
Naphthalene	mg/kg	NA	3.30E-02	1.55E+02	1.00E-01	ND						NR						NR					
Phenanthrene	mg/kg	NA	1.08E+00	2.32E+03	1.00E-01	3.30E-01	J				YES	NR						NR					
Pyrene	mg/kg	NA	1.63E+00	2.33E+02	1.00E-01	2.10E+00			YES		YES	NR						NR					
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	9.30E-01	9.20E-02	B					NR						NR					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP15						FTA-94-GP16						FTA-94-GP17					
Sample Number						EMM0003						EMM0004						EMM0005					
Sample Date						6-Dec-00						6-Dec-00						6-Dec-00					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/kg	3.99E+04	1.63E+04	7.80E+03	5.00E+01	NR						NR						NR					
Arsenic	mg/kg	4.90E+01	1.37E+01	4.26E-01	1.00E+01	NR						NR						NR					
Barium	mg/kg	2.88E+02	1.24E+02	5.47E+02	1.65E+02	NR						NR						NR					
Beryllium	mg/kg	8.70E-01	8.00E-01	9.60E+00	1.10E+00	NR						NR						NR					
Calcium	mg/kg	1.79E+04	1.72E+03	NA	NA	NR						NR						NR					
Chromium	mg/kg	1.34E+02	3.70E+01	2.32E+01	4.00E-01	NR						NR						NR					
Cobalt	mg/kg	7.10E+01	1.52E+01	4.68E+02	2.00E+01	NR						NR						NR					
Copper	mg/kg	2.40E+01	1.27E+01	3.13E+02	4.00E+01	NR						NR						NR					
Iron	mg/kg	5.63E+04	3.42E+04	2.34E+03	2.00E+02	NR						NR						NR					
Lead	mg/kg	8.30E+01	4.01E+01	4.00E+02	5.00E+01	NR						NR						NR					
Magnesium	mg/kg	9.60E+03	1.03E+03	NA	4.40E+05	NR						NR						NR					
Manganese	mg/kg	6.85E+03	1.58E+03	3.63E+02	1.00E+02	NR						NR						NR					
Mercury	mg/kg	3.20E-01	8.00E-02	2.33E+00	1.00E-01	NR						NR						NR					
Nickel	mg/kg	2.20E+01	1.03E+01	1.54E+02	3.00E+01	NR						NR						NR					
Potassium	mg/kg	6.01E+03	8.00E+02	NA	NA	NR						NR						NR					
Selenium	mg/kg	1.30E+00	4.80E-01	3.91E+01	8.10E-01	NR						NR						NR					
Sodium	mg/kg	5.63E+02	6.34E+02	NA	NA	NR						NR						NR					
Vanadium	mg/kg	1.58E+02	5.88E+01	5.31E+01	2.00E+00	NR						NR						NR					
Zinc	mg/kg	2.09E+02	4.06E+01	2.34E+03	5.00E+01	NR						NR						NR					
VOLATILE ORGANIC COMPOUNDS																							
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						ND					
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND						ND					
2-Butanone	mg/kg	NA	NA	4.66E+03	8.96E+01	5.50E-02	J					6.30E-02	J					5.60E-02	J				
Acetone	mg/kg	NA	NA	7.76E+02	2.50E+00	4.60E-01	J					1.40E+00	J					4.00E-01	J				
Bromomethane	mg/kg	NA	NA	1.09E+01	NA	ND						ND						ND					
Carbon disulfide	mg/kg	NA	NA	7.77E+02	9.00E-02	ND						ND						ND					
Chlorobenzene	mg/kg	NA	NA	1.55E+02	5.00E-02	ND						ND						2.90E-03	J				
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.00E+00	ND						ND						1.80E-03	J				
Naphthalene	mg/kg	NA	NA	1.55E+02	1.00E-01	ND						ND						ND					
Toluene	mg/kg	NA	NA	1.55E+03	5.00E-02	4.60E-03	J					7.10E-03	J					4.40E-03	J				
cis-1,2-Dichloroethene	mg/kg	NA	NA	7.77E+01	1.00E-01	ND						ND						ND					
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
p-Cymene	mg/kg	NA	NA	1.55E+03	NA	ND						2.70E-02	J					6.40E-03	J				

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP15						FTA-94-GP16						FTA-94-GP17					
Sample Number						EMM0003						EMM0004						EMM0005					
Sample Date						6-Dec-00						6-Dec-00						6-Dec-00					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																							
2-Methylnaphthalene	mg/kg	NA	NA	1.55E+02	NA	NR						NR						NR					
Acenaphthene	mg/kg	NA	7.02E-01	4.63E+02	2.00E+01	NR						NR						NR					
Acenaphthylene	mg/kg	NA	8.91E-01	4.63E+02	6.82E+02	NR						NR						NR					
Anthracene	mg/kg	NA	9.35E-01	2.33E+03	1.00E-01	NR						NR						NR					
Benzo(a)anthracene	mg/kg	NA	1.19E+00	8.51E-01	5.21E+00	NR						NR						NR					
Benzo(a)pyrene	mg/kg	NA	1.42E+00	8.51E-02	1.00E-01	NR						NR						NR					
Benzo(b)fluoranthene	mg/kg	NA	1.66E+00	8.51E-01	5.98E+01	NR						NR						NR					
Benzo(ghi)perylene	mg/kg	NA	9.55E-01	2.32E+02	1.19E+02	NR						NR						NR					
Benzo(k)fluoranthene	mg/kg	NA	1.45E+00	8.51E+00	1.48E+02	NR						NR						NR					
Carbazole	mg/kg	NA	NA	3.11E+01	NA	NR						NR						NR					
Chrysene	mg/kg	NA	1.40E+00	8.61E+01	4.73E+00	NR						NR						NR					
Dibenz(a,h)anthracene	mg/kg	NA	7.20E-01	8.61E-02	1.84E+01	NR						NR						NR					
Dibenzofuran	mg/kg	NA	NA	3.09E+01	NA	NR						NR						NR					
Fluoranthene	mg/kg	NA	2.03E+00	3.09E+02	1.00E-01	NR						NR						NR					
Fluorene	mg/kg	NA	6.67E-01	3.09E+02	1.22E+02	NR						NR						NR					
Indeno(1,2,3-cd)pyrene	mg/kg	NA	9.37E-01	8.51E-01	1.09E+02	NR						NR						NR					
Naphthalene	mg/kg	NA	3.30E-02	1.55E+02	1.00E-01	NR						NR						NR					
Phenanthrene	mg/kg	NA	1.08E+00	2.32E+03	1.00E-01	NR						NR						NR					
Pyrene	mg/kg	NA	1.63E+00	2.33E+02	1.00E-01	NR						NR						NR					
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	9.30E-01	NR						NR						NR					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP18						FTA-94-GP19						FTA-94-MW13					
Sample Number						EMM0008						EMM0009						EMM0010					
Sample Date						6-Dec-00						13-Dec-00						25-Jun-01					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/kg	3.99E+04	1.63E+04	7.80E+03	5.00E+01	NR						NR						9.81E+03				YES	YES
Arsenic	mg/kg	4.90E+01	1.37E+01	4.26E-01	1.00E+01	NR						NR						5.02E+00				YES	
Barium	mg/kg	2.88E+02	1.24E+02	5.47E+02	1.65E+02	NR						NR						5.15E+01					
Beryllium	mg/kg	8.70E-01	8.00E-01	9.60E+00	1.10E+00	NR						NR						3.54E-01	B				
Calcium	mg/kg	1.79E+04	1.72E+03	NA	NA	NR						NR						7.23E+02	J				
Chromium	mg/kg	1.34E+02	3.70E+01	2.32E+01	4.00E-01	NR						NR						1.51E+01					YES
Cobalt	mg/kg	7.10E+01	1.52E+01	4.68E+02	2.00E+01	NR						NR						3.48E+00					
Copper	mg/kg	2.40E+01	1.27E+01	3.13E+02	4.00E+01	NR						NR						1.08E+01					
Iron	mg/kg	5.63E+04	3.42E+04	2.34E+03	2.00E+02	NR						NR						2.19E+04				YES	YES
Lead	mg/kg	8.30E+01	4.01E+01	4.00E+02	5.00E+01	NR						NR						7.34E+00					
Magnesium	mg/kg	9.60E+03	1.03E+03	NA	4.40E+05	NR						NR						4.41E+02					
Manganese	mg/kg	6.85E+03	1.58E+03	3.63E+02	1.00E+02	NR						NR						3.16E+02	J				YES
Mercury	mg/kg	3.20E-01	8.00E-02	2.33E+00	1.00E-01	NR						NR						7.10E-02	J				
Nickel	mg/kg	2.20E+01	1.03E+01	1.54E+02	3.00E+01	NR						NR						5.93E+00					
Potassium	mg/kg	6.01E+03	8.00E+02	NA	NA	NR						NR						2.98E+02	B				
Selenium	mg/kg	1.30E+00	4.80E-01	3.91E+01	8.10E-01	NR						NR						ND					
Sodium	mg/kg	5.63E+02	6.34E+02	NA	NA	NR						NR						6.21E+01	B				
Vanadium	mg/kg	1.58E+02	5.88E+01	5.31E+01	2.00E+00	NR						NR						2.63E+01					YES
Zinc	mg/kg	2.09E+02	4.06E+01	2.34E+03	5.00E+01	NR						NR						2.71E+01	J				
VOLATILE ORGANIC COMPOUNDS																							
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						2.50E-03	J					ND					
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND						ND					
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						9.90E-04	J					ND					
2-Butanone	mg/kg	NA	NA	4.66E+03	8.96E+01	3.90E-02	J					1.70E-02	J					8.30E-03	J				
Acetone	mg/kg	NA	NA	7.76E+02	2.50E+00	8.00E-01	J					1.20E-01	J					4.30E-02					
Bromomethane	mg/kg	NA	NA	1.09E+01	NA	ND						ND						ND					
Carbon disulfide	mg/kg	NA	NA	7.77E+02	9.00E-02	ND						ND						ND					
Chlorobenzene	mg/kg	NA	NA	1.55E+02	5.00E-02	ND						ND						ND					
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.00E+00	ND						1.80E-03	B					1.10E-03	B				
Naphthalene	mg/kg	NA	NA	1.55E+02	1.00E-01	ND						ND						ND					
Toluene	mg/kg	NA	NA	1.55E+03	5.00E-02	2.10E-03	J					6.60E-04	J					ND					
cis-1,2-Dichloroethene	mg/kg	NA	NA	7.77E+01	1.00E-01	ND						ND						ND					
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	5.00E-02	8.20E-04	J					ND						ND					
p-Cymene	mg/kg	NA	NA	1.55E+03	NA	ND						ND						ND					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-GP18						FTA-94-GP19						FTA-94-MW13					
Sample Number						EMM0008						EMM0009						EMM0010					
Sample Date						6-Dec-00						13-Dec-00						25-Jun-01					
Sample Depth (Feet)						0- 1						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																							
2-Methylnaphthalene	mg/kg	NA	NA	1.55E+02	NA	NR						NR						ND					
Acenaphthene	mg/kg	NA	7.02E-01	4.63E+02	2.00E+01	NR						NR						ND					
Acenaphthylene	mg/kg	NA	8.91E-01	4.63E+02	6.82E+02	NR						NR						ND					
Anthracene	mg/kg	NA	9.35E-01	2.33E+03	1.00E-01	NR						NR						ND					
Benzo(a)anthracene	mg/kg	NA	1.19E+00	8.51E-01	5.21E+00	NR						NR						ND					
Benzo(a)pyrene	mg/kg	NA	1.42E+00	8.51E-02	1.00E-01	NR						NR						ND					
Benzo(b)fluoranthene	mg/kg	NA	1.66E+00	8.51E-01	5.98E+01	NR						NR						ND					
Benzo(ghi)perylene	mg/kg	NA	9.55E-01	2.32E+02	1.19E+02	NR						NR						ND					
Benzo(k)fluoranthene	mg/kg	NA	1.45E+00	8.51E+00	1.48E+02	NR						NR						ND					
Carbazole	mg/kg	NA	NA	3.11E+01	NA	NR						NR						ND					
Chrysene	mg/kg	NA	1.40E+00	8.61E+01	4.73E+00	NR						NR						ND					
Dibenz(a,h)anthracene	mg/kg	NA	7.20E-01	8.61E-02	1.84E+01	NR						NR						ND					
Dibenzofuran	mg/kg	NA	NA	3.09E+01	NA	NR						NR						ND					
Fluoranthene	mg/kg	NA	2.03E+00	3.09E+02	1.00E-01	NR						NR						ND					
Fluorene	mg/kg	NA	6.67E-01	3.09E+02	1.22E+02	NR						NR						ND					
Indeno(1,2,3-cd)pyrene	mg/kg	NA	9.37E-01	8.51E-01	1.09E+02	NR						NR						ND					
Naphthalene	mg/kg	NA	3.30E-02	1.55E+02	1.00E-01	NR						NR						ND					
Phenanthrene	mg/kg	NA	1.08E+00	2.32E+03	1.00E-01	NR						NR						ND					
Pyrene	mg/kg	NA	1.63E+00	2.33E+02	1.00E-01	NR						NR						ND					
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	9.30E-01	NR						NR						ND					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-MW14						FTA-94-MW16					
Sample Number						EMM0012						EMM0014					
Sample Date						25-Jun-01						25-Jun-01					
Sample Depth (Feet)						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																	
Aluminum	mg/kg	3.99E+04	1.63E+04	7.80E+03	5.00E+01	1.64E+04			YES	YES	YES	6.38E+03					YES
Arsenic	mg/kg	4.90E+01	1.37E+01	4.26E-01	1.00E+01	5.30E+00				YES		4.26E+00				YES	
Barium	mg/kg	2.88E+02	1.24E+02	5.47E+02	1.65E+02	9.76E+01						2.20E+01					
Beryllium	mg/kg	8.70E-01	8.00E-01	9.60E+00	1.10E+00	7.10E-01	B					1.85E-01	B				
Calcium	mg/kg	1.79E+04	1.72E+03	NA	NA	4.61E+03	J		YES			1.56E+02	J				
Chromium	mg/kg	1.34E+02	3.70E+01	2.32E+01	4.00E-01	2.86E+01				YES	YES	1.67E+01	J				YES
Cobalt	mg/kg	7.10E+01	1.52E+01	4.68E+02	2.00E+01	7.78E+00						1.08E+00	B				
Copper	mg/kg	2.40E+01	1.27E+01	3.13E+02	4.00E+01	1.84E+01			YES			8.09E+00					
Iron	mg/kg	5.63E+04	3.42E+04	2.34E+03	2.00E+02	2.93E+04				YES	YES	1.88E+04				YES	YES
Lead	mg/kg	8.30E+01	4.01E+01	4.00E+02	5.00E+01	2.23E+01						8.31E+00					
Magnesium	mg/kg	9.60E+03	1.03E+03	NA	4.40E+05	1.56E+03			YES			2.57E+02					
Manganese	mg/kg	6.85E+03	1.58E+03	3.63E+02	1.00E+02	2.59E+02	J				YES	5.76E+01	J				
Mercury	mg/kg	3.20E-01	8.00E-02	2.33E+00	1.00E-01	ND						2.70E-02	J				
Nickel	mg/kg	2.20E+01	1.03E+01	1.54E+02	3.00E+01	8.53E+00						2.36E+00					
Potassium	mg/kg	6.01E+03	8.00E+02	NA	NA	7.86E+02						ND					
Selenium	mg/kg	1.30E+00	4.80E-01	3.91E+01	8.10E-01	ND						ND					
Sodium	mg/kg	5.63E+02	6.34E+02	NA	NA	8.42E+01	B					5.34E+01	B				
Vanadium	mg/kg	1.58E+02	5.88E+01	5.31E+01	2.00E+00	3.94E+01					YES	2.51E+01					YES
Zinc	mg/kg	2.09E+02	4.06E+01	2.34E+03	5.00E+01	5.92E+01	J		YES		YES	1.36E+01	J				
VOLATILE ORGANIC COMPOUNDS																	
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND					
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND					
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	1.00E-01	ND						ND					
2-Butanone	mg/kg	NA	NA	4.66E+03	8.96E+01	ND						ND					
Acetone	mg/kg	NA	NA	7.76E+02	2.50E+00	3.50E-02						1.00E-02	J				
Bromomethane	mg/kg	NA	NA	1.09E+01	NA	ND						ND					
Carbon disulfide	mg/kg	NA	NA	7.77E+02	9.00E-02	3.30E-03	J					ND					
Chlorobenzene	mg/kg	NA	NA	1.55E+02	5.00E-02	ND						ND					
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.00E+00	1.60E-03	B					1.60E-03	B				
Naphthalene	mg/kg	NA	NA	1.55E+02	1.00E-01	ND						ND					
Toluene	mg/kg	NA	NA	1.55E+03	5.00E-02	8.10E-04	J					5.80E-04	J				
cis-1,2-Dichloroethene	mg/kg	NA	NA	7.77E+01	1.00E-01	ND						ND					
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	5.00E-02	ND						ND					
p-Cymene	mg/kg	NA	NA	1.55E+03	NA	ND						ND					

Table 4-1

Surface and Depositional Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						FTA-94-MW14						FTA-94-MW16					
Sample Number						EMM0012						EMM0014					
Sample Date						25-Jun-01						25-Jun-01					
Sample Depth (Feet)						0- 1						0- 1					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																	
2-Methylnaphthalene	mg/kg	NA	NA	1.55E+02	NA	ND						ND					
Acenaphthene	mg/kg	NA	7.02E-01	4.63E+02	2.00E+01	ND						ND					
Acenaphthylene	mg/kg	NA	8.91E-01	4.63E+02	6.82E+02	ND						ND					
Anthracene	mg/kg	NA	9.35E-01	2.33E+03	1.00E-01	ND						ND					
Benzo(a)anthracene	mg/kg	NA	1.19E+00	8.51E-01	5.21E+00	ND						ND					
Benzo(a)pyrene	mg/kg	NA	1.42E+00	8.51E-02	1.00E-01	ND						ND					
Benzo(b)fluoranthene	mg/kg	NA	1.66E+00	8.51E-01	5.98E+01	ND						ND					
Benzo(ghi)perylene	mg/kg	NA	9.55E-01	2.32E+02	1.19E+02	ND						ND					
Benzo(k)fluoranthene	mg/kg	NA	1.45E+00	8.51E+00	1.48E+02	ND						ND					
Carbazole	mg/kg	NA	NA	3.11E+01	NA	ND						ND					
Chrysene	mg/kg	NA	1.40E+00	8.61E+01	4.73E+00	ND						ND					
Dibenz(a,h)anthracene	mg/kg	NA	7.20E-01	8.61E-02	1.84E+01	ND						ND					
Dibenzofuran	mg/kg	NA	NA	3.09E+01	NA	ND						ND					
Fluoranthene	mg/kg	NA	2.03E+00	3.09E+02	1.00E-01	1.90E-01	J				YES	ND					
Fluorene	mg/kg	NA	6.67E-01	3.09E+02	1.22E+02	ND						ND					
Indeno(1,2,3-cd)pyrene	mg/kg	NA	9.37E-01	8.51E-01	1.09E+02	ND						ND					
Naphthalene	mg/kg	NA	3.30E-02	1.55E+02	1.00E-01	ND						ND					
Phenanthrene	mg/kg	NA	1.08E+00	2.32E+03	1.00E-01	ND						ND					
Pyrene	mg/kg	NA	1.63E+00	2.33E+02	1.00E-01	ND						ND					
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	9.30E-01	ND						ND					

Analyses performed using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] UBR - Upper background range as given in Science Applications International Corporation (SAIC), 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998. For SVOCs, concentration listed is the background screening value for soils adjacent to asphalt as given in IT Corporation (IT), 2000, *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama*, July.

[c] Residential human health site-specific screening level (SSSL) and ecological screening value (ESV) as given in IT, 2000.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is an estimated concentration.

mg/kg - Milligrams per kilogram.

NA - Not available.

ND - Not detected.

NR - Not requested.

Qual - Data validation qualifier.

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-GP01					FTA-94-GP02					FTA-94-GP03					FTA-94-GP04				
Sample Number					EM0002					EM0004					EM0007					EM0008				
Sample Date					16-Oct-98					16-Oct-98					21-Oct-98					21-Oct-98				
Sample Depth (Feet)					5 - 8					1 - 5					0- 4					8 - 12				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																								
Aluminum	mg/kg	2.46E+04	1.36E+04	7.80E+03	1.61E+04			YES	YES	1.86E+04			YES	YES	9.47E+03				YES	1.21E+04				YES
Arsenic	mg/kg	3.80E+01	1.83E+01	4.26E-01	4.90E+00				YES	6.30E+00				YES	1.09E+01				YES	6.30E+00				YES
Barium	mg/kg	4.50E+03	2.34E+02	5.47E+02	1.16E+02					4.90E+01					ND					2.81E+01				
Beryllium	mg/kg	2.00E+00	8.60E-01	9.60E+00	1.40E+00			YES		1.40E+00			YES		7.30E-01					1.30E+00			YES	
Calcium	mg/kg	3.65E+03	6.37E+02	NA	7.30E+02			YES		ND					ND					1.46E+03			YES	
Chromium	mg/kg	5.50E+01	3.83E+01	2.32E+01	2.50E+01				YES	2.66E+01				YES	2.81E+01				YES	2.58E+01				YES
Cobalt	mg/kg	9.60E+01	1.75E+01	4.68E+02	2.09E+01			YES		2.55E+01			YES		6.20E+00					2.54E+01			YES	
Copper	mg/kg	6.10E+01	1.94E+01	3.13E+02	4.50E+01			YES		5.42E+01			YES		3.95E+01			YES		6.27E+01		YES	YES	
Iron	mg/kg	4.80E+04	4.48E+04	2.34E+03	3.60E+04				YES	3.98E+04				YES	4.87E+04		YES	YES	YES	3.85E+04				YES
Lead	mg/kg	5.00E+02	3.85E+01	4.00E+02	1.62E+01	J				2.06E+01	J				1.96E+01	J				2.85E+01	J			
Magnesium	mg/kg	5.94E+03	7.66E+02	NA	6.13E+03		YES	YES		5.97E+03		YES	YES		ND					ND				
Manganese	mg/kg	1.90E+04	1.36E+03	3.63E+02	1.30E+02					2.86E+02					1.23E+01					1.63E+02				
Mercury	mg/kg	1.20E-01	7.00E-02	2.33E+00	ND					4.60E-02					ND					5.30E-02				
Nickel	mg/kg	3.80E+01	1.29E+01	1.54E+02	3.75E+01			YES		4.34E+01		YES	YES		5.60E+00	B				1.68E+01			YES	
Potassium	mg/kg	6.15E+03	7.11E+02	NA	7.76E+02			YES		8.97E+02			YES		6.61E+02					8.69E+02			YES	
Selenium	mg/kg	5.50E-01	4.70E-01	3.91E+01	8.60E-01		YES	YES		1.20E+00		YES	YES		3.50E+00		YES	YES		1.70E+00		YES	YES	
Sodium	mg/kg	6.43E+02	7.02E+02	NA	ND					ND					ND					ND				
Vanadium	mg/kg	9.90E+01	6.49E+01	5.31E+01	ND					ND					1.88E+01					ND				
Zinc	mg/kg	8.90E+01	3.49E+01	2.34E+03	1.20E+02		YES	YES		1.19E+02		YES	YES		3.18E+01					8.92E+01		YES	YES	
VOLATILE ORGANIC COMPOUNDS																								
1,1,2,2-Tetrachloroethane	mg/kg	NA	NA	3.13E+00	ND					ND					ND					ND				
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	ND					ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					ND					ND				
2-Butanone	mg/kg	NA	NA	4.66E+03	ND					ND					ND					ND				
Acetone	mg/kg	NA	NA	7.76E+02	1.50E-02	B				1.50E-02	B				1.70E-02	B				2.20E-02	B			
Ethylbenzene	mg/kg	NA	NA	7.77E+02	ND					ND					ND					ND				
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.70E-03	B				3.10E-03	B				9.60E-03	B				8.60E-03	B			
Toluene	mg/kg	NA	NA	1.55E+03	ND					ND					ND					ND				
Trichloroethene	mg/kg	NA	NA	5.72E+01	ND					ND					ND					ND				
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	ND					ND					ND					ND				
n-Propylbenzene	mg/kg	NA	NA	7.77E+01	ND					ND					ND					ND				
p-Cymene	mg/kg	NA	NA	1.55E+03	ND					ND					ND					ND				

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-GP01					FTA-94-GP02					FTA-94-GP03					FTA-94-GP04				
Sample Number					EM0002					EM0004					EM0007					EM0008				
Sample Date					16-Oct-98					16-Oct-98					21-Oct-98					21-Oct-98				
Sample Depth (Feet)					5 - 8					1 - 5					0- 4					8 - 12				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
SEMIVOLATILE ORGANIC COMPOUNDS																								
Acenaphthylene	mg/kg	NA	NA	4.63E+02	ND					ND					ND					7.20E-02	J			
Benzo(a)anthracene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					6.70E-02	J			
Benzo(a)pyrene	mg/kg	NA	NA	8.51E-02	ND					ND					ND					1.60E-01	J			YES
Benzo(b)fluoranthene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					1.30E-01	J			
Benzo(ghi)perylene	mg/kg	NA	NA	2.32E+02	ND					ND					ND					1.40E-01	J			
Benzo(k)fluoranthene	mg/kg	NA	NA	8.51E+00	ND					ND					ND					1.70E-01	J			
Chrysene	mg/kg	NA	NA	8.61E+01	ND					ND					ND					8.50E-02	J			
Dibenz(a,h)anthracene	mg/kg	NA	NA	8.61E-02	ND					ND					ND					4.80E-02	J			
Fluoranthene	mg/kg	NA	NA	3.09E+02	ND					ND					ND					6.90E-02	J			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					1.10E-01	J			
Pyrene	mg/kg	NA	NA	2.33E+02	ND					ND					ND					9.30E-02	J			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	ND					ND					ND					7.10E-02	B			
POLYCHLORINATED BIPHENYLS																								
Aroclor 1254	mg/kg	NA	NA	2.93E-01	ND					ND					ND					7.70E-02				
Aroclor 1260	mg/kg	NA	NA	2.93E-01	ND					ND					ND					1.30E-01				

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-GP05					FTA-94-GP06					FTA-94-GP07					FTA-94-GP08				
Sample Number					EM0010					EM0011					EM0012					EM0014				
Sample Date					27-Oct-98					21-Oct-98					21-Oct-98					27-Oct-98				
Sample Depth (Feet)					24- 28					8 - 11					1 - 4					7 - 9				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																								
Aluminum	mg/kg	2.46E+04	1.36E+04	7.80E+03	6.60E+03					8.27E+03				YES	6.98E+03					1.09E+04				YES
Arsenic	mg/kg	3.80E+01	1.83E+01	4.26E-01	1.06E+01				YES	8.50E+00				YES	7.20E+00				YES	1.31E+01				YES
Barium	mg/kg	4.50E+03	2.34E+02	5.47E+02	6.62E+01					ND					6.56E+01					2.31E+01				
Beryllium	mg/kg	2.00E+00	8.60E-01	9.60E+00	1.60E+00			YES		ND					ND					ND				
Calcium	mg/kg	3.65E+03	6.37E+02	NA	3.66E+03		YES	YES		ND					6.11E+02					6.03E+02				
Chromium	mg/kg	5.50E+01	3.83E+01	2.32E+01	1.12E+01					1.71E+01					2.26E+01					3.35E+01				YES
Cobalt	mg/kg	9.60E+01	1.75E+01	4.68E+02	1.36E+01					8.10E+00					1.03E+01					7.20E+00				
Copper	mg/kg	6.10E+01	1.94E+01	3.13E+02	1.69E+01					1.06E+01					9.50E+00					1.89E+01				
Iron	mg/kg	4.80E+04	4.48E+04	2.34E+03	2.51E+04				YES	3.28E+04				YES	3.18E+04				YES	4.66E+04			YES	YES
Lead	mg/kg	5.00E+02	3.85E+01	4.00E+02	1.70E+01					8.80E+00	J				2.19E+01	J				1.17E+01				
Magnesium	mg/kg	5.94E+03	7.66E+02	NA	ND					ND					ND					ND				
Manganese	mg/kg	1.90E+04	1.36E+03	3.63E+02	6.12E+02				YES	7.55E+01					3.57E+02					1.84E+02				
Mercury	mg/kg	1.20E-01	7.00E-02	2.33E+00	1.30E-01		YES	YES		4.10E-02					6.00E-02					1.10E-01			YES	
Nickel	mg/kg	3.80E+01	1.29E+01	1.54E+02	1.37E+01			YES		ND					4.60E+00	B				4.90E+00				
Potassium	mg/kg	6.15E+03	7.11E+02	NA	ND					ND					ND					ND				
Selenium	mg/kg	5.50E-01	4.70E-01	3.91E+01	ND					9.30E-01		YES	YES		1.00E+00		YES	YES		1.80E+00		YES	YES	
Sodium	mg/kg	6.43E+02	7.02E+02	NA	ND					ND					ND					ND				
Vanadium	mg/kg	9.90E+01	6.49E+01	5.31E+01	ND					ND					1.24E+01					2.50E+01				
Zinc	mg/kg	8.90E+01	3.49E+01	2.34E+03	3.59E+01			YES		1.30E+01	B				1.92E+01	B				2.32E+01	B			
VOLATILE ORGANIC COMPOUNDS																								
1,1,2,2-Tetrachloroethane	mg/kg	NA	NA	3.13E+00	ND					ND					4.40E-03	J				ND				
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					4.30E-02					ND				
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	ND					ND					2.30E-02					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					1.10E-02					ND				
2-Butanone	mg/kg	NA	NA	4.66E+03	ND					ND					6.50E-03	J				ND				
Acetone	mg/kg	NA	NA	7.76E+02	1.80E-02	B				1.40E-02	B				1.60E-01	J				6.10E-02	J			
Ethylbenzene	mg/kg	NA	NA	7.77E+02	ND					ND					1.20E-02					ND				
Methylene chloride	mg/kg	NA	NA	8.41E+01	4.60E-03	B				8.50E-03	B				8.20E-03	B				4.80E-03	B			
Toluene	mg/kg	NA	NA	1.55E+03	ND					ND					2.10E-02					ND				
Trichloroethene	mg/kg	NA	NA	5.72E+01	1.80E-03	J				ND					1.90E-03	J				ND				
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	ND					ND					6.30E-02					ND				
n-Propylbenzene	mg/kg	NA	NA	7.77E+01	ND					ND					4.40E-03	J				ND				
p-Cymene	mg/kg	NA	NA	1.55E+03	ND					ND					3.10E-02					ND				

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-GP05					FTA-94-GP06					FTA-94-GP07					FTA-94-GP08				
Sample Number					EM0010					EM0011					EM0012					EM0014				
Sample Date					27-Oct-98					21-Oct-98					21-Oct-98					27-Oct-98				
Sample Depth (Feet)					24- 28					8 - 11					1 - 4					7 - 9				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
SEMIVOLATILE ORGANIC COMPOUNDS																								
Acenaphthylene	mg/kg	NA	NA	4.63E+02	ND					ND					ND					ND				
Benzo(a)anthracene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					ND				
Benzo(a)pyrene	mg/kg	NA	NA	8.51E-02	ND					ND					ND					ND				
Benzo(b)fluoranthene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					ND				
Benzo(ghi)perylene	mg/kg	NA	NA	2.32E+02	ND					ND					3.70E-02	J				ND				
Benzo(k)fluoranthene	mg/kg	NA	NA	8.51E+00	ND					ND					ND					ND				
Chrysene	mg/kg	NA	NA	8.61E+01	ND					ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	NA	NA	8.61E-02	ND					ND					ND					ND				
Fluoranthene	mg/kg	NA	NA	3.09E+02	ND					ND					ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					ND				
Pyrene	mg/kg	NA	NA	2.33E+02	ND					ND					ND					ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	4.90E-02	J				9.10E-02	B				7.40E-02	B				8.10E-02	J			
POLYCHLORINATED BIPHENYLS																								
Aroclor 1254	mg/kg	NA	NA	2.93E-01	ND					ND					ND					ND				
Aroclor 1260	mg/kg	NA	NA	2.93E-01	ND					ND					ND					ND				

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-GP09					FTA-94-GP10					FTA-94-GP11					FTA-94-GP12				
Sample Number					EM0015					EM0016					EM0018					EM0020				
Sample Date					21-Oct-98					21-Oct-98					21-Oct-98					21-Oct-98				
Sample Depth (Feet)					8 - 12					8 - 12					4 - 8					8 - 10				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																								
Aluminum	mg/kg	2.46E+04	1.36E+04	7.80E+03	9.69E+03				YES	1.32E+04				YES	1.18E+04				YES	9.43E+03				YES
Arsenic	mg/kg	3.80E+01	1.83E+01	4.26E-01	1.31E+01				YES	6.50E+00				YES	9.30E+00				YES	6.70E+00				YES
Barium	mg/kg	4.50E+03	2.34E+02	5.47E+02	3.25E+01					6.92E+01					2.76E+01					ND				
Beryllium	mg/kg	2.00E+00	8.60E-01	9.60E+00	5.70E-01					ND					1.30E+00			YES		ND				
Calcium	mg/kg	3.65E+03	6.37E+02	NA	ND					ND					ND					ND				
Chromium	mg/kg	5.50E+01	3.83E+01	2.32E+01	2.41E+01				YES	1.49E+01					2.69E+01				YES	3.05E+01				YES
Cobalt	mg/kg	9.60E+01	1.75E+01	4.68E+02	1.28E+01					1.57E+01					6.80E+00					8.80E+00				
Copper	mg/kg	6.10E+01	1.94E+01	3.13E+02	1.76E+01					1.12E+01					5.48E+01			YES		3.02E+01			YES	
Iron	mg/kg	4.80E+04	4.48E+04	2.34E+03	3.80E+04				YES	2.37E+04				YES	4.63E+04			YES	YES	5.41E+04		YES	YES	YES
Lead	mg/kg	5.00E+02	3.85E+01	4.00E+02	1.51E+01	J				2.51E+01	J				4.07E+01	J		YES		1.05E+01	J			
Magnesium	mg/kg	5.94E+03	7.66E+02	NA	ND					ND					ND					ND				
Manganese	mg/kg	1.90E+04	1.36E+03	3.63E+02	8.70E+02				YES	2.87E+03			YES	YES	6.90E+00					4.14E+01				
Mercury	mg/kg	1.20E-01	7.00E-02	2.33E+00	4.50E-02					6.50E-02					ND					4.00E-02				
Nickel	mg/kg	3.80E+01	1.29E+01	1.54E+02	1.15E+01					6.70E+00					ND					8.30E+00				
Potassium	mg/kg	6.15E+03	7.11E+02	NA	ND					ND					7.09E+02					ND				
Selenium	mg/kg	5.50E-01	4.70E-01	3.91E+01	8.00E-01		YES	YES		ND					2.20E+00		YES	YES		1.50E+00		YES	YES	
Sodium	mg/kg	6.43E+02	7.02E+02	NA	ND					ND					ND					ND				
Vanadium	mg/kg	9.90E+01	6.49E+01	5.31E+01	1.09E+01					2.20E+01					ND					ND				
Zinc	mg/kg	8.90E+01	3.49E+01	2.34E+03	2.92E+01	B				2.03E+01	B				3.09E+01	B				4.97E+01			YES	
VOLATILE ORGANIC COMPOUNDS																								
1,1,2,2-Tetrachloroethane	mg/kg	NA	NA	3.13E+00	ND					ND					ND					ND				
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	ND					ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					ND					ND				
2-Butanone	mg/kg	NA	NA	4.66E+03	ND					ND					ND					ND				
Acetone	mg/kg	NA	NA	7.76E+02	3.80E-02	B				2.40E-02	B				1.20E-02	B				2.70E-02	B			
Ethylbenzene	mg/kg	NA	NA	7.77E+02	ND					ND					ND					ND				
Methylene chloride	mg/kg	NA	NA	8.41E+01	1.10E-02	B				7.80E-03	B				6.50E-03	B				7.30E-03	B			
Toluene	mg/kg	NA	NA	1.55E+03	ND					ND					ND					ND				
Trichloroethene	mg/kg	NA	NA	5.72E+01	ND					ND					ND					ND				
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	ND					ND					ND					ND				
n-Propylbenzene	mg/kg	NA	NA	7.77E+01	ND					ND					ND					ND				
p-Cymene	mg/kg	NA	NA	1.55E+03	ND					ND					ND					ND				

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-GP09					FTA-94-GP10					FTA-94-GP11					FTA-94-GP12				
Sample Number					EM0015					EM0016					EM0018					EM0020				
Sample Date					21-Oct-98					21-Oct-98					21-Oct-98					21-Oct-98				
Sample Depth (Feet)					8 - 12					8 - 12					4 - 8					8 - 10				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
SEMIVOLATILE ORGANIC COMPOUNDS																								
Acenaphthylene	mg/kg	NA	NA	4.63E+02	ND					ND					ND					ND				
Benzo(a)anthracene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					ND				
Benzo(a)pyrene	mg/kg	NA	NA	8.51E-02	ND					ND					ND					ND				
Benzo(b)fluoranthene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					ND				
Benzo(ghi)perylene	mg/kg	NA	NA	2.32E+02	ND					ND					ND					ND				
Benzo(k)fluoranthene	mg/kg	NA	NA	8.51E+00	ND					ND					ND					ND				
Chrysene	mg/kg	NA	NA	8.61E+01	ND					ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	NA	NA	8.61E-02	ND					ND					ND					ND				
Fluoranthene	mg/kg	NA	NA	3.09E+02	ND					ND					ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	8.51E-01	ND					ND					ND					ND				
Pyrene	mg/kg	NA	NA	2.33E+02	ND					ND					ND					ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	ND					7.60E-02	B				6.90E-02	B				8.50E-02	B			
POLYCHLORINATED BIPHENYLS																								
Aroclor 1254	mg/kg	NA	NA	2.93E-01	ND					ND					ND					ND				
Aroclor 1260	mg/kg	NA	NA	2.93E-01	ND					ND					ND					ND				

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-MW13					FTA-94-MW14					FTA-94-MW16				
Sample Number					EMM0011					EMM0013					EMM0016				
Sample Date					25-Jun-01					25-Jun-01					25-Jun-01				
Sample Depth (Feet)					2 - 4					2 - 4					2 - 4				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																			
Aluminum	mg/kg	2.46E+04	1.36E+04	7.80E+03	1.21E+04				YES	1.36E+04			YES	YES	1.52E+04			YES	YES
Arsenic	mg/kg	3.80E+01	1.83E+01	4.26E-01	5.99E+00				YES	7.63E+00				YES	7.63E+00				YES
Barium	mg/kg	4.50E+03	2.34E+02	5.47E+02	4.12E+01					6.37E+01					6.94E+01				
Beryllium	mg/kg	2.00E+00	8.60E-01	9.60E+00	7.57E-01	B				6.53E-01	B				1.47E+00			YES	
Calcium	mg/kg	3.65E+03	6.37E+02	NA	1.21E+02	J				3.43E+02	J				2.53E+03	J		YES	
Chromium	mg/kg	5.50E+01	3.83E+01	2.32E+01	1.79E+01					1.50E+01					2.90E+01				YES
Cobalt	mg/kg	9.60E+01	1.75E+01	4.68E+02	3.67E+00					9.30E+00					5.33E+00				
Copper	mg/kg	6.10E+01	1.94E+01	3.13E+02	1.98E+01			YES		1.90E+01					1.85E+01				
Iron	mg/kg	4.80E+04	4.48E+04	2.34E+03	3.61E+04				YES	3.05E+04				YES	3.24E+04				YES
Lead	mg/kg	5.00E+02	3.85E+01	4.00E+02	1.30E+01					3.04E+01					1.61E+01				
Magnesium	mg/kg	5.94E+03	7.66E+02	NA	4.11E+02					7.16E+02					3.22E+03			YES	
Manganese	mg/kg	1.90E+04	1.36E+03	3.63E+02	2.15E+02	J				2.74E+02	J				1.83E+02	J			
Mercury	mg/kg	1.20E-01	7.00E-02	2.33E+00	6.90E-02	J				8.60E-02	J		YES		4.10E-02	J			
Nickel	mg/kg	3.80E+01	1.29E+01	1.54E+02	9.50E+00					1.12E+01					1.56E+01			YES	
Potassium	mg/kg	6.15E+03	7.11E+02	NA	6.57E+02	B				9.31E+02			YES		4.29E+02	B			
Selenium	mg/kg	5.50E-01	4.70E-01	3.91E+01	ND					ND					ND				
Sodium	mg/kg	6.43E+02	7.02E+02	NA	7.57E+01	B				6.48E+01	B				8.90E+01	B			
Vanadium	mg/kg	9.90E+01	6.49E+01	5.31E+01	2.88E+01					2.81E+01					3.02E+01				
Zinc	mg/kg	8.90E+01	3.49E+01	2.34E+03	2.80E+01	J				2.31E+01	J				4.32E+01	J		YES	
VOLATILE ORGANIC COMPOUNDS																			
1,1,2,2-Tetrachloroethane	mg/kg	NA	NA	3.13E+00	ND					ND					ND				
1,2,4-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	NA	1.55E+04	ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	NA	3.88E+02	ND					ND					ND				
2-Butanone	mg/kg	NA	NA	4.66E+03	ND					ND					ND				
Acetone	mg/kg	NA	NA	7.76E+02	ND					ND					7.30E-03	J			
Ethylbenzene	mg/kg	NA	NA	7.77E+02	ND					ND					ND				
Methylene chloride	mg/kg	NA	NA	8.41E+01	2.70E-03	B				1.90E-03	B				1.80E-03	B			
Toluene	mg/kg	NA	NA	1.55E+03	6.00E-04	J				7.00E-04	J				5.10E-04	J			
Trichloroethene	mg/kg	NA	NA	5.72E+01	ND					ND					ND				
m,p-Xylenes	mg/kg	NA	NA	1.55E+04	ND					ND					ND				
n-Propylbenzene	mg/kg	NA	NA	7.77E+01	ND					ND					ND				
p-Cymene	mg/kg	NA	NA	1.55E+03	ND					ND					ND				

Table 4-2

Subsurface Soil Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-MW13					FTA-94-MW14					FTA-94-MW16				
Sample Number					EMM0011					EMM0013					EMM0016				
Sample Date					25-Jun-01					25-Jun-01					25-Jun-01				
Sample Depth (Feet)					2 - 4					2 - 4					2 - 4				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	NA	4.63E+02	ND					ND					ND				
Benzo(a)anthracene	mg/kg	NA	NA	8.51E-01	ND					ND					ND				
Benzo(a)pyrene	mg/kg	NA	NA	8.51E-02	ND					ND					ND				
Benzo(b)fluoranthene	mg/kg	NA	NA	8.51E-01	ND					ND					ND				
Benzo(ghi)perylene	mg/kg	NA	NA	2.32E+02	ND					ND					ND				
Benzo(k)fluoranthene	mg/kg	NA	NA	8.51E+00	ND					ND					ND				
Chrysene	mg/kg	NA	NA	8.61E+01	ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	NA	NA	8.61E-02	ND					ND					ND				
Fluoranthene	mg/kg	NA	NA	3.09E+02	ND					ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	8.51E-01	ND					ND					ND				
Pyrene	mg/kg	NA	NA	2.33E+02	ND					ND					ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	4.52E+01	ND					ND					ND				
POLYCHLORINATED BIPHENYLS																			
Aroclor 1254	mg/kg	NA	NA	2.93E-01	ND					ND					ND				
Aroclor 1260	mg/kg	NA	NA	2.93E-01	ND					ND					ND				

Analyses performed using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] UBR - Upper background range as given in Science Applications International Corporation (SAIC), 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998.

[c] Residential human health site-specific screening level (SSSL) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama*, July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is an estimated concentration.

mg/kg - Milligrams per kilogram.

NA - Not available.

ND - Not detected.

NR - Not requested.

Qual - Data validation qualifier.

Table 4-3

Groundwater Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-GP02					FTA-94-GP05					FTA-94-GP11					FTA-94-MW01				
Sample Number					EM3001					EM3002					EM3006					EM3007				
Sample Date					28-Jan-99					29-Oct-98					1-Feb-99					16-Nov-98				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																								
Aluminum	mg/L	9.60E+00	2.34E+00	1.56E+00	3.59E-01					6.75E-01					2.90E+01	J	YES	YES	YES	9.72E-01				
Arsenic	mg/L	2.24E-01	1.78E-02	4.40E-05	6.40E-03	J			YES	ND					9.90E-03	J			YES	ND				
Barium	mg/L	4.01E-01	1.27E-01	1.10E-01	2.76E-01			YES	YES	ND					1.28E+00	J	YES	YES	YES	ND				
Beryllium	mg/L	2.40E-03	1.25E-03	3.13E-03	ND					ND					1.80E-03	B		YES		ND				
Calcium	mg/L	4.52E+02	5.65E+01	NA	8.24E+01			YES		1.12E+02			YES		5.44E+01					9.05E+01			YES	
Chromium	mg/L	NA	NA	4.69E-03	ND					ND					4.60E-02	J			YES	ND				
Cobalt	mg/L	2.50E-02	2.34E-02	9.39E-02	7.60E-03	J				ND					1.74E-02	J				ND				
Copper	mg/L	2.35E-01	2.55E-02	6.26E-02	ND					ND					4.58E-02	J		YES		ND				
Iron	mg/L	2.58E+01	7.04E+00	4.69E-01	2.90E+00				YES	1.02E+00				YES	4.32E+01	J	YES	YES	YES	1.19E+00				YES
Lead	mg/L	2.70E-02	8.00E-03	1.50E-02	2.90E-03	J				ND					2.26E-02	J		YES	YES	ND				
Magnesium	mg/L	1.49E+02	2.13E+01	NA	2.88E+01			YES		5.07E+00					3.55E+01	J		YES		5.52E+00				
Manganese	mg/L	5.82E+00	5.81E-01	7.35E-02	1.48E-01				YES	7.11E-02					5.08E-01	J			YES	4.60E-02				
Mercury	mg/L	NA	NA	4.69E-04	4.80E-05	J				ND					1.30E-04	J				ND				
Nickel	mg/L	NA	NA	3.13E-02	ND					ND					5.67E-02	J			YES	ND				
Potassium	mg/L	6.85E+01	7.20E+00	NA	9.48E+00			YES		ND					1.60E+01	J		YES		ND				
Sodium	mg/L	6.47E+01	1.48E+01	NA	9.30E+00					ND					1.17E+01	J				ND				
Thallium	mg/L	5.30E-03	1.46E-03	1.01E-04	ND					ND					5.40E-03	B	YES	YES	YES	ND				
Vanadium	mg/L	1.10E-02	1.70E-02	1.10E-02	ND					ND					5.14E-02	J	YES	YES	YES	ND				
Zinc	mg/L	1.16E+00	2.20E-01	4.69E-01	ND					ND					9.24E-02	J				ND				
VOLATILE ORGANIC COMPOUNDS																								
2-Butanone	mg/L	NA	NA	7.14E-01	ND					ND					ND									
Acetone	mg/L	NA	NA	1.56E-01	ND					ND					ND					ND				
Benzene	mg/L	NA	NA	1.41E-03	ND					ND					ND					ND				
Chlorobenzene	mg/L	NA	NA	1.62E-02	ND					ND					ND					3.40E-03				
Chloroform	mg/L	NA	NA	1.15E-03	ND					ND					ND					ND				
Chloromethane	mg/L	NA	NA	3.93E-03	ND					ND					ND					ND				
Methylene chloride	mg/L	NA	NA	7.85E-03	ND					ND					1.60E-03	B				ND				
Tetrachloroethene	mg/L	NA	NA	1.26E-03	ND					1.90E-04	J				ND					ND				
Trichloroethene	mg/L	NA	NA	4.51E-03	ND					7.60E-03				YES	ND					2.50E-02				YES
Vinyl chloride	mg/L	NA	NA	3.20E-05	ND					ND					ND					9.20E-04	J			YES
cis-1,2-Dichloroethene	mg/L	NA	NA	1.55E-02	ND					ND					ND					6.90E-03				
p-Cymene	mg/L	NA	NA	2.26E-01	ND					ND					ND					ND				
trans-1,2-Dichloroethene	mg/L	NA	NA	3.07E-02	ND					ND					ND					9.70E-04	J			
SEMIVOLATILE ORGANIC COMPOUNDS																								
Phenol	mg/L	NA	NA	9.31E-01	ND					3.80E-03	B				ND					1.60E-03	B			
bis(2-Ethylhexyl)phthalate	mg/L	NA	NA	4.31E-03	ND					1.30E-03	J				ND					ND				

Table 4-3

Groundwater Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location / Sample Number / Sample Date					FTA-94-MW01 / EMM3001 / 1-Dec-00					FTA-94-MW02 / EMM3002 / 29-Nov-00					FTA-94-MW03 / EMM3003 / 29-Nov-00					FTA-94-MW04 / EMM3006 / 4-Dec-00				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																								
Aluminum	mg/L	9.60E+00	2.34E+00	1.56E+00	NR					NR					NR					NR				
Arsenic	mg/L	2.24E-01	1.78E-02	4.40E-05	NR					NR					NR					NR				
Barium	mg/L	4.01E-01	1.27E-01	1.10E-01	NR					NR					NR					NR				
Beryllium	mg/L	2.40E-03	1.25E-03	3.13E-03	NR					NR					NR					NR				
Calcium	mg/L	4.52E+02	5.65E+01	NA	NR					NR					NR					NR				
Chromium	mg/L	NA	NA	4.69E-03	NR					NR					NR					NR				
Cobalt	mg/L	2.50E-02	2.34E-02	9.39E-02	NR					NR					NR					NR				
Copper	mg/L	2.35E-01	2.55E-02	6.26E-02	NR					NR					NR					NR				
Iron	mg/L	2.58E+01	7.04E+00	4.69E-01	NR					NR					NR					NR				
Lead	mg/L	2.70E-02	8.00E-03	1.50E-02	NR					NR					NR					NR				
Magnesium	mg/L	1.49E+02	2.13E+01	NA	NR					NR					NR					NR				
Manganese	mg/L	5.82E+00	5.81E-01	7.35E-02	NR					NR					NR					NR				
Mercury	mg/L	NA	NA	4.69E-04	NR					NR					NR					NR				
Nickel	mg/L	NA	NA	3.13E-02	NR					NR					NR					NR				
Potassium	mg/L	6.85E+01	7.20E+00	NA	NR					NR					NR					NR				
Sodium	mg/L	6.47E+01	1.48E+01	NA	NR					NR					NR					NR				
Thallium	mg/L	5.30E-03	1.46E-03	1.01E-04	NR					NR					NR					NR				
Vanadium	mg/L	1.10E-02	1.70E-02	1.10E-02	NR					NR					NR					NR				
Zinc	mg/L	1.16E+00	2.20E-01	4.69E-01	NR					NR					NR					NR				
VOLATILE ORGANIC COMPOUNDS																								
2-Butanone	mg/L	NA	NA	7.14E-01	ND					ND					ND					ND				
Acetone	mg/L	NA	NA	1.56E-01	ND					ND					ND					ND				
Benzene	mg/L	NA	NA	1.41E-03	ND					ND					ND					ND				
Chlorobenzene	mg/L	NA	NA	1.62E-02	1.60E-02					ND					ND					ND				
Chloroform	mg/L	NA	NA	1.15E-03	ND					ND					ND					ND				
Chloromethane	mg/L	NA	NA	3.93E-03	ND					ND					ND					ND				
Methylene chloride	mg/L	NA	NA	7.85E-03	ND					ND					ND					ND				
Tetrachloroethene	mg/L	NA	NA	1.26E-03	ND					ND					ND					ND				
Trichloroethene	mg/L	NA	NA	4.51E-03	5.30E-02				YES	ND					2.50E-03	J				ND				
Vinyl chloride	mg/L	NA	NA	3.20E-05	1.40E-02				YES	ND					ND					ND				
cis-1,2-Dichloroethene	mg/L	NA	NA	1.55E-02	2.10E-02				YES	ND					ND					ND				
p-Cymene	mg/L	NA	NA	2.26E-01	ND					ND					ND					ND				
trans-1,2-Dichloroethene	mg/L	NA	NA	3.07E-02	4.60E-03	J				ND					ND					ND				
SEMIVOLATILE ORGANIC COMPOUNDS																								
Phenol	mg/L	NA	NA	9.31E-01	NR					NR					NR					NR				
bis(2-Ethylhexyl)phthalate	mg/L	NA	NA	4.31E-03	NR					NR					NR					NR				

Table 4-3

Groundwater Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location / Sample Number / Sample Date					FTA-94-MW05 / EMM3007 / 30-Nov-00					FTA-94-MW06 / EMM3008 / 30-May-01					FTA-94-MW07 / EMM3009 / 4-Dec-00					FTA-94-MW08 / EMM3010 / 22-Feb-01				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																								
Aluminum	mg/L	9.60E+00	2.34E+00	1.56E+00	NR					NR					NR					NR				
Arsenic	mg/L	2.24E-01	1.78E-02	4.40E-05	NR					NR					NR					NR				
Barium	mg/L	4.01E-01	1.27E-01	1.10E-01	NR					NR					NR					NR				
Beryllium	mg/L	2.40E-03	1.25E-03	3.13E-03	NR					NR					NR					NR				
Calcium	mg/L	4.52E+02	5.65E+01	NA	NR					NR					NR					NR				
Chromium	mg/L	NA	NA	4.69E-03	NR					NR					NR					NR				
Cobalt	mg/L	2.50E-02	2.34E-02	9.39E-02	NR					NR					NR					NR				
Copper	mg/L	2.35E-01	2.55E-02	6.26E-02	NR					NR					NR					NR				
Iron	mg/L	2.58E+01	7.04E+00	4.69E-01	NR					NR					NR					NR				
Lead	mg/L	2.70E-02	8.00E-03	1.50E-02	NR					NR					NR					NR				
Magnesium	mg/L	1.49E+02	2.13E+01	NA	NR					NR					NR					NR				
Manganese	mg/L	5.82E+00	5.81E-01	7.35E-02	NR					NR					NR					NR				
Mercury	mg/L	NA	NA	4.69E-04	NR					NR					NR					NR				
Nickel	mg/L	NA	NA	3.13E-02	NR					NR					NR					NR				
Potassium	mg/L	6.85E+01	7.20E+00	NA	NR					NR					NR					NR				
Sodium	mg/L	6.47E+01	1.48E+01	NA	NR					NR					NR					NR				
Thallium	mg/L	5.30E-03	1.46E-03	1.01E-04	NR					NR					NR					NR				
Vanadium	mg/L	1.10E-02	1.70E-02	1.10E-02	NR					NR					NR					NR				
Zinc	mg/L	1.16E+00	2.20E-01	4.69E-01	NR					NR					NR					NR				
VOLATILE ORGANIC COMPOUNDS																								
2-Butanone	mg/L	NA	NA	7.14E-01	ND					ND					ND					ND				
Acetone	mg/L	NA	NA	1.56E-01	ND					ND					ND					ND				
Benzene	mg/L	NA	NA	1.41E-03	ND					ND					ND					ND				
Chlorobenzene	mg/L	NA	NA	1.62E-02	ND					ND					ND					ND				
Chloroform	mg/L	NA	NA	1.15E-03	ND					ND					ND					ND				
Chloromethane	mg/L	NA	NA	3.93E-03	ND					ND					ND					ND				
Methylene chloride	mg/L	NA	NA	7.85E-03	ND					1.90E-03	J				ND					ND				
Tetrachloroethene	mg/L	NA	NA	1.26E-03	ND					ND					ND					ND				
Trichloroethene	mg/L	NA	NA	4.51E-03	ND					ND					1.50E-03	J				ND				
Vinyl chloride	mg/L	NA	NA	3.20E-05	ND					ND					ND					ND				
cis-1,2-Dichloroethene	mg/L	NA	NA	1.55E-02	ND					ND					ND					ND				
p-Cymene	mg/L	NA	NA	2.26E-01	ND					ND					7.40E-03					ND				
trans-1,2-Dichloroethene	mg/L	NA	NA	3.07E-02	ND					ND					ND					ND				
SEMIVOLATILE ORGANIC COMPOUNDS																								
Phenol	mg/L	NA	NA	9.31E-01	NR					NR					NR					NR				
bis(2-Ethylhexyl)phthalate	mg/L	NA	NA	4.31E-03	NR					NR					NR					NR				

Table 4-3

Groundwater Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-94-MW09					FTA-94-MW10					FTA-94-MW11					FTA-94-MW12				
Sample Number					EMM3011					EMM3012					EMM3013					EMM3014				
Sample Date					4-Dec-00					30-Nov-00					18-Dec-00					24-May-01				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																								
Aluminum	mg/L	9.60E+00	2.34E+00	1.56E+00	NR					NR					NR					NR				
Arsenic	mg/L	2.24E-01	1.78E-02	4.40E-05	NR					NR					NR					NR				
Barium	mg/L	4.01E-01	1.27E-01	1.10E-01	NR					NR					NR					NR				
Beryllium	mg/L	2.40E-03	1.25E-03	3.13E-03	NR					NR					NR					NR				
Calcium	mg/L	4.52E+02	5.65E+01	NA	NR					NR					NR					NR				
Chromium	mg/L	NA	NA	4.69E-03	NR					NR					NR					NR				
Cobalt	mg/L	2.50E-02	2.34E-02	9.39E-02	NR					NR					NR					NR				
Copper	mg/L	2.35E-01	2.55E-02	6.26E-02	NR					NR					NR					NR				
Iron	mg/L	2.58E+01	7.04E+00	4.69E-01	NR					NR					NR					NR				
Lead	mg/L	2.70E-02	8.00E-03	1.50E-02	NR					NR					NR					NR				
Magnesium	mg/L	1.49E+02	2.13E+01	NA	NR					NR					NR					NR				
Manganese	mg/L	5.82E+00	5.81E-01	7.35E-02	NR					NR					NR					NR				
Mercury	mg/L	NA	NA	4.69E-04	NR					NR					NR					NR				
Nickel	mg/L	NA	NA	3.13E-02	NR					NR					NR					NR				
Potassium	mg/L	6.85E+01	7.20E+00	NA	NR					NR					NR					NR				
Sodium	mg/L	6.47E+01	1.48E+01	NA	NR					NR					NR					NR				
Thallium	mg/L	5.30E-03	1.46E-03	1.01E-04	NR					NR					NR					NR				
Vanadium	mg/L	1.10E-02	1.70E-02	1.10E-02	NR					NR					NR					NR				
Zinc	mg/L	1.16E+00	2.20E-01	4.69E-01	NR					NR					NR					NR				
VOLATILE ORGANIC COMPOUNDS																								
2-Butanone	mg/L	NA	NA	7.14E-01	ND					ND					ND					ND				
Acetone	mg/L	NA	NA	1.56E-01	ND					ND					ND					1.40E-02	J			
Benzene	mg/L	NA	NA	1.41E-03	ND					ND					ND					ND				
Chlorobenzene	mg/L	NA	NA	1.62E-02	ND					ND					3.00E-01				YES	ND				
Chloroform	mg/L	NA	NA	1.15E-03	ND					ND					ND					ND				
Chloromethane	mg/L	NA	NA	3.93E-03	ND					ND					ND					ND				
Methylene chloride	mg/L	NA	NA	7.85E-03	ND					ND					ND					ND				
Tetrachloroethene	mg/L	NA	NA	1.26E-03	ND					ND					ND					ND				
Trichloroethene	mg/L	NA	NA	4.51E-03	ND					ND					7.50E-02				YES	ND				
Vinyl chloride	mg/L	NA	NA	3.20E-05	ND					ND					2.50E-02				YES	ND				
cis-1,2-Dichloroethene	mg/L	NA	NA	1.55E-02	ND					ND					3.70E-02				YES	ND				
p-Cymene	mg/L	NA	NA	2.26E-01	ND					ND					ND					ND				
trans-1,2-Dichloroethene	mg/L	NA	NA	3.07E-02	ND					ND					8.30E-03					ND				
SEMIVOLATILE ORGANIC COMPOUNDS																								
Phenol	mg/L	NA	NA	9.31E-01	NR					NR					NR					NR				
bis(2-Ethylhexyl)phthalate	mg/L	NA	NA	4.31E-03	NR					NR					NR					NR				

Table 4-3

Groundwater Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date					FTA-94-MW13 EMM3015 18-Jul-01					FTA-94-MW13 EMM3015R 15-Oct-01					FTA-94-MW14 EMM3016 24-Jul-01				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS																			
Aluminum	mg/L	9.60E+00	2.34E+00	1.56E+00	NR					NR					NR				
Arsenic	mg/L	2.24E-01	1.78E-02	4.40E-05	NR					NR					NR				
Barium	mg/L	4.01E-01	1.27E-01	1.10E-01	NR					NR					NR				
Beryllium	mg/L	2.40E-03	1.25E-03	3.13E-03	NR					NR					NR				
Calcium	mg/L	4.52E+02	5.65E+01	NA	NR					NR					NR				
Chromium	mg/L	NA	NA	4.69E-03	NR					NR					NR				
Cobalt	mg/L	2.50E-02	2.34E-02	9.39E-02	NR					NR					NR				
Copper	mg/L	2.35E-01	2.55E-02	6.26E-02	NR					NR					NR				
Iron	mg/L	2.58E+01	7.04E+00	4.69E-01	NR					NR					NR				
Lead	mg/L	2.70E-02	8.00E-03	1.50E-02	NR					NR					NR				
Magnesium	mg/L	1.49E+02	2.13E+01	NA	NR					NR					NR				
Manganese	mg/L	5.82E+00	5.81E-01	7.35E-02	NR					NR					NR				
Mercury	mg/L	NA	NA	4.69E-04	NR					NR					NR				
Nickel	mg/L	NA	NA	3.13E-02	NR					NR					NR				
Potassium	mg/L	6.85E+01	7.20E+00	NA	NR					NR					NR				
Sodium	mg/L	6.47E+01	1.48E+01	NA	NR					NR					NR				
Thallium	mg/L	5.30E-03	1.46E-03	1.01E-04	NR					NR					NR				
Vanadium	mg/L	1.10E-02	1.70E-02	1.10E-02	NR					NR					NR				
Zinc	mg/L	1.16E+00	2.20E-01	4.69E-01	NR					NR					NR				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/L	NA	NA	7.14E-01	ND					8.60E-04	nv				ND				
Acetone	mg/L	NA	NA	1.56E-01	ND					3.00E-03	nv				ND				
Benzene	mg/L	NA	NA	1.41E-03	ND					ND					1.70E-03				YES
Chlorobenzene	mg/L	NA	NA	1.62E-02	ND					ND					ND				
Chloroform	mg/L	NA	NA	1.15E-03	ND					ND					ND				
Chloromethane	mg/L	NA	NA	3.93E-03	ND					6.90E-04	nv				ND				
Methylene chloride	mg/L	NA	NA	7.85E-03	ND					ND					ND				
Tetrachloroethene	mg/L	NA	NA	1.26E-03	ND					ND					ND				
Trichloroethene	mg/L	NA	NA	4.51E-03	7.00E-03				YES	4.80E-03	nv			YES	9.20E-04	J			
Vinyl chloride	mg/L	NA	NA	3.20E-05	ND					ND					ND				
cis-1,2-Dichloroethene	mg/L	NA	NA	1.55E-02	6.00E-04	J				4.60E-04	nv				ND				
p-Cymene	mg/L	NA	NA	2.26E-01	ND					ND					ND				
trans-1,2-Dichloroethene	mg/L	NA	NA	3.07E-02	ND					ND					ND				
SEMIVOLATILE ORGANIC COMPOUNDS																			
Phenol	mg/L	NA	NA	9.31E-01	NR					NR					NR				
bis(2-Ethylhexyl)phthalate	mg/L	NA	NA	4.31E-03	NR					NR					NR				

Table 4-3

Groundwater Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date					FTA-94-MW15 EMM3018 20-Jul-01					FTA-94-MW16 EMM3019 19-Jul-01				
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	Result	Qual	>UBR	>BKG	>SSSL	Result	Qual	>UBR	>BKG	>SSSL
METALS														
Aluminum	mg/L	9.60E+00	2.34E+00	1.56E+00	NR					NR				
Arsenic	mg/L	2.24E-01	1.78E-02	4.40E-05	NR					NR				
Barium	mg/L	4.01E-01	1.27E-01	1.10E-01	NR					NR				
Beryllium	mg/L	2.40E-03	1.25E-03	3.13E-03	NR					NR				
Calcium	mg/L	4.52E+02	5.65E+01	NA	NR					NR				
Chromium	mg/L	NA	NA	4.69E-03	NR					NR				
Cobalt	mg/L	2.50E-02	2.34E-02	9.39E-02	NR					NR				
Copper	mg/L	2.35E-01	2.55E-02	6.26E-02	NR					NR				
Iron	mg/L	2.58E+01	7.04E+00	4.69E-01	NR					NR				
Lead	mg/L	2.70E-02	8.00E-03	1.50E-02	NR					NR				
Magnesium	mg/L	1.49E+02	2.13E+01	NA	NR					NR				
Manganese	mg/L	5.82E+00	5.81E-01	7.35E-02	NR					NR				
Mercury	mg/L	NA	NA	4.69E-04	NR					NR				
Nickel	mg/L	NA	NA	3.13E-02	NR					NR				
Potassium	mg/L	6.85E+01	7.20E+00	NA	NR					NR				
Sodium	mg/L	6.47E+01	1.48E+01	NA	NR					NR				
Thallium	mg/L	5.30E-03	1.46E-03	1.01E-04	NR					NR				
Vanadium	mg/L	1.10E-02	1.70E-02	1.10E-02	NR					NR				
Zinc	mg/L	1.16E+00	2.20E-01	4.69E-01	NR					NR				
VOLATILE ORGANIC COMPOUNDS														
2-Butanone	mg/L	NA	NA	7.14E-01	ND					ND				
Acetone	mg/L	NA	NA	1.56E-01	ND					ND				
Benzene	mg/L	NA	NA	1.41E-03	ND					ND				
Chlorobenzene	mg/L	NA	NA	1.62E-02	ND					ND				
Chloroform	mg/L	NA	NA	1.15E-03	2.80E-04	J				ND				
Chloromethane	mg/L	NA	NA	3.93E-03	ND					ND				
Methylene chloride	mg/L	NA	NA	7.85E-03	ND					ND				
Tetrachloroethene	mg/L	NA	NA	1.26E-03	ND					ND				
Trichloroethene	mg/L	NA	NA	4.51E-03	ND					ND				
Vinyl chloride	mg/L	NA	NA	3.20E-05	ND					ND				
cis-1,2-Dichloroethene	mg/L	NA	NA	1.55E-02	ND					ND				
p-Cymene	mg/L	NA	NA	2.26E-01	ND					ND				
trans-1,2-Dichloroethene	mg/L	NA	NA	3.07E-02	ND					ND				
SEMIVOLATILE ORGANIC COMPOUNDS														
Phenol	mg/L	NA	NA	9.31E-01	NR					NR				
bis(2-Ethylhexyl)phthalate	mg/L	NA	NA	4.31E-03	NR					NR				

Table 4-3

Groundwater Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Analyses performed using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] UBR - Upper background range as given in Science Applications International Corporation (SAIC), 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998.

[c] Residential human health site-specific screening level (SSSL) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama*, July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is an estimated concentration.

mg/L - Milligrams per liter.

NA - Not available.

ND - Not detected.

NR - Not requested.

nv - Not validated.

Qual - Data validation qualifier.

Table 4-4

Surface Water Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

(Page 1 of 2)

Sample Location						WS-94-SW/SD01						WS-94-SW/SD02						WS-94-SW/SD03					
Sample Number						WS2009						WS2010						EMM2001					
Sample Date						20-Oct-98						20-Oct-98						7-Dec-00					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/L	4.78E+01	5.26E+00	1.53E+01	8.70E-02	3.71E-01					YES	ND						NR					
Calcium	mg/L	6.41E+01	2.52E+01	NA	1.16E+02	5.38E+01			YES			6.96E+01		YES	YES			NR					
Iron	mg/L	2.32E+02	1.96E+01	4.70E+00	1.00E+00	4.95E-01						ND						NR					
Magnesium	mg/L	2.44E+01	1.10E+01	NA	8.20E+01	7.84E+00						8.75E+00						NR					
Manganese	mg/L	6.06E+00	5.65E-01	6.40E-01	8.00E-02	3.72E-01					YES	2.34E-02						NR					
VOLATILE ORGANIC COMPOUNDS																							
Acetone	mg/L	NA	NA	1.57E+00	7.80E+01	1.60E-03	B					2.10E-03	B					ND					
Chloroform	mg/L	NA	NA	1.69E-01	2.89E-01	2.30E-04	B					ND						ND					
Methylene chloride	mg/L	NA	NA	1.42E-01	1.93E+00	ND						ND						ND					
Trichloroethene	mg/L	NA	NA	8.80E-02	2.19E+01	2.30E-04	J					ND						ND					
SEMIVOLATILE ORGANIC COMPOUNDS																							
Phenol	mg/L	NA	NA	9.06E+00	2.56E-01	4.50E-03	B					3.80E-03	B					NR					

Table 4-4

Surface Water Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date						WS-94-SW/SD04 EMM2002 7-Dec-00						WS-94-SW/SD05 EMM2003 7-Dec-00					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																	
Aluminum	mg/L	4.78E+01	5.26E+00	1.53E+01	8.70E-02	NR						NR					
Calcium	mg/L	6.41E+01	2.52E+01	NA	1.16E+02	NR						NR					
Iron	mg/L	2.32E+02	1.96E+01	4.70E+00	1.00E+00	NR						NR					
Magnesium	mg/L	2.44E+01	1.10E+01	NA	8.20E+01	NR						NR					
Manganese	mg/L	6.06E+00	5.65E-01	6.40E-01	8.00E-02	NR						NR					
VOLATILE ORGANIC COMPOUNDS																	
Acetone	mg/L	NA	NA	1.57E+00	7.80E+01	ND						ND					
Chloroform	mg/L	NA	NA	1.69E-01	2.89E-01	ND						ND					
Methylene chloride	mg/L	NA	NA	1.42E-01	1.93E+00	ND						1.50E-03	J				
Trichloroethene	mg/L	NA	NA	8.80E-02	2.19E+01	ND						ND					
SEMIVOLATILE ORGANIC COMPOUNDS																	
Phenol	mg/L	NA	NA	9.06E+00	2.56E-01	NR						NR					

Analyses performed using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] UBR - Upper background range as given in Science Applications International Corporation (SAIC), 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998.

[c] Recreational site user site-specific screening level (SSSL) and ecological screening value (ESV) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama,* July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is an estimated concentration.

mg/L - Milligrams per liter.

NA - Not available.

ND - Not detected.

NR - Not requested.

Qual - Data validation qualifier.

Table 4-5

Sediment Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location						WS94-SW/SD01						WS94-SW/SD02						WS-94-SW/SD03					
Sample Number						WS1009						WS1010						EMM1001					
Sample Date						20-Oct-98						20-Oct-98						7-Dec-00					
Sample Depth (Feet)						0- 0.5						0- 0.5						0- 0.5					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																							
Aluminum	mg/kg	1.74E+04	8.59E+03	1.15E+06	NA	2.70E+03						3.06E+03						NR					
Arsenic	mg/kg	2.00E+01	1.13E+01	5.58E+01	7.24E+00	7.70E+00					YES	5.40E+00						NR					
Barium	mg/kg	2.72E+02	9.89E+01	8.36E+04	NA	6.55E+01						3.15E+01						NR					
Beryllium	mg/kg	1.20E+00	9.70E-01	1.50E+02	NA	1.00E+00			YES			7.30E-01						NR					
Calcium	mg/kg	2.81E+03	1.11E+03	NA	NA	1.77E+03			YES			1.13E+03			YES			NR					
Chromium	mg/kg	6.30E+01	3.12E+01	2.79E+03	5.23E+01	2.09E+01						1.82E+01						NR					
Cobalt	mg/kg	2.20E+01	1.10E+01	6.72E+04	5.00E+01	1.19E+01			YES			1.00E+01						NR					
Copper	mg/kg	5.90E+01	1.71E+01	4.74E+04	1.87E+01	1.10E+01						1.15E+01						NR					
Iron	mg/kg	5.75E+04	3.53E+04	3.59E+05	NA	2.92E+04						2.17E+04						NR					
Lead	mg/kg	1.10E+02	3.78E+01	4.00E+02	3.02E+01	1.59E+01						1.49E+01						NR					
Magnesium	mg/kg	3.27E+03	9.06E+02	NA	NA	ND						7.78E+02						NR					
Manganese	mg/kg	2.05E+03	7.12E+02	4.38E+04	NA	6.78E+02						4.81E+02						NR					
Nickel	mg/kg	3.30E+01	1.30E+01	1.76E+04	1.59E+01	8.60E+00						2.00E+01			YES		YES	NR					
Selenium	mg/kg	1.90E+00	7.20E-01	5.96E+03	NA	8.20E-01			YES			ND						NR					
Zinc	mg/kg	1.11E+02	5.27E+01	3.44E+05	1.24E+02	2.89E+01	B					3.39E+01						NR					
VOLATILE ORGANIC COMPOUNDS																							
2-Butanone	mg/kg	NA	NA	6.23E+05	1.37E-01	ND						ND						3.00E-02	J				
Acetone	mg/kg	NA	NA	1.03E+05	4.53E-01	5.50E-02	B					6.60E-02	B					1.30E-01	J				
Carbon disulfide	mg/kg	NA	NA	1.04E+05	1.34E-01	ND						ND						2.50E-03	J				
Methylene chloride	mg/kg	NA	NA	9.84E+03	1.26E+00	1.00E-02	B					9.30E-03	B					1.40E-03	J				
Toluene	mg/kg	NA	NA	2.11E+05	6.70E-01	ND						ND						9.50E-04	J				
m,p-Xylenes	mg/kg	NA	NA	2.11E+06	2.50E-02	ND						ND						4.30E-04	J				
p-Cymene	mg/kg	NA	NA	2.08E+05	NA	ND						ND						1.60E-03	J				
SEMIVOLATILE ORGANIC COMPOUNDS																							
Acenaphthylene	mg/kg	NA	NA	5.59E+04	3.30E-01	ND						1.00E-01	J					NR					
Anthracene	mg/kg	NA	NA	2.99E+05	3.30E-01	ND						1.90E-01	J					NR					
Benzo(a)anthracene	mg/kg	NA	NA	8.93E+01	3.30E-01	ND						5.60E-01					YES	NR					
Benzo(a)pyrene	mg/kg	NA	NA	8.93E+00	3.30E-01	ND						4.40E-01					YES	NR					
Benzo(b)fluoranthene	mg/kg	NA	NA	8.93E+01	6.55E-01	ND						3.70E-01	J					NR					
Benzo(ghi)perylene	mg/kg	NA	NA	2.79E+04	6.55E-01	ND						1.90E-01	J					NR					
Benzo(k)fluoranthene	mg/kg	NA	NA	8.93E+02	6.55E-01	ND						6.30E-01	J					NR					
Carbazole	mg/kg	NA	NA	3.26E+03	NA	ND						6.20E-02	J					NR					
Chrysene	mg/kg	NA	NA	9.79E+03	3.30E-01	ND						5.40E-01					YES	NR					
Dibenz(a,h)anthracene	mg/kg	NA	NA	9.79E+00	3.30E-01	ND						1.10E-01	J					NR					
Fluoranthene	mg/kg	NA	NA	3.73E+04	3.30E-01	ND						1.30E+00					YES	NR					
Fluorene	mg/kg	NA	NA	3.73E+04	3.30E-01	ND						4.10E-02	J					NR					
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	8.93E+01	6.55E-01	ND						2.10E-01	J					NR					
Phenanthrene	mg/kg	NA	NA	2.79E+05	3.30E-01	ND						7.50E-01					YES	NR					
Pyrene	mg/kg	NA	NA	3.06E+04	3.30E-01	ND						9.20E-01					YES	NR					
TOTAL ORGANIC CARBON																							
Total Organic Carbon	mg/kg	NA	NA	NA	NA	1.15E+03						2.95E+03						NR					

Table 4-5

Sediment Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)						WS-94-SW/SD04 EMM1002 7-Dec-00 0- 0.5						WS-94-SW/SD05 EMM1003 7-Dec-00 0- 0.5					
Parameter	Units	UBR[a]	BKG[b]	SSSL[c]	ESV[c]	Result	Qual	>UBR	>BKG	>SSSL	>ESV	Result	Qual	>UBR	>BKG	>SSSL	>ESV
METALS																	
Aluminum	mg/kg	1.74E+04	8.59E+03	1.15E+06	NA	NR						NR					
Arsenic	mg/kg	2.00E+01	1.13E+01	5.58E+01	7.24E+00	NR						NR					
Barium	mg/kg	2.72E+02	9.89E+01	8.36E+04	NA	NR						NR					
Beryllium	mg/kg	1.20E+00	9.70E-01	1.50E+02	NA	NR						NR					
Calcium	mg/kg	2.81E+03	1.11E+03	NA	NA	NR						NR					
Chromium	mg/kg	6.30E+01	3.12E+01	2.79E+03	5.23E+01	NR						NR					
Cobalt	mg/kg	2.20E+01	1.10E+01	6.72E+04	5.00E+01	NR						NR					
Copper	mg/kg	5.90E+01	1.71E+01	4.74E+04	1.87E+01	NR						NR					
Iron	mg/kg	5.75E+04	3.53E+04	3.59E+05	NA	NR						NR					
Lead	mg/kg	1.10E+02	3.78E+01	4.00E+02	3.02E+01	NR						NR					
Magnesium	mg/kg	3.27E+03	9.06E+02	NA	NA	NR						NR					
Manganese	mg/kg	2.05E+03	7.12E+02	4.38E+04	NA	NR						NR					
Nickel	mg/kg	3.30E+01	1.30E+01	1.76E+04	1.59E+01	NR						NR					
Selenium	mg/kg	1.90E+00	7.20E-01	5.96E+03	NA	NR						NR					
Zinc	mg/kg	1.11E+02	5.27E+01	3.44E+05	1.24E+02	NR						NR					
VOLATILE ORGANIC COMPOUNDS																	
2-Butanone	mg/kg	NA	NA	6.23E+05	1.37E-01	ND						ND					
Acetone	mg/kg	NA	NA	1.03E+05	4.53E-01	2.30E-01	J					2.20E-01	J				
Carbon disulfide	mg/kg	NA	NA	1.04E+05	1.34E-01	ND						ND					
Methylene chloride	mg/kg	NA	NA	9.84E+03	1.26E+00	1.40E-03	J					ND					
Toluene	mg/kg	NA	NA	2.11E+05	6.70E-01	7.10E-03						ND					
m,p-Xylenes	mg/kg	NA	NA	2.11E+06	2.50E-02	ND						ND					
p-Cymene	mg/kg	NA	NA	2.08E+05	NA	1.10E-02						ND					
SEMIVOLATILE ORGANIC COMPOUNDS																	
Acenaphthylene	mg/kg	NA	NA	5.59E+04	3.30E-01	NR						NR					
Anthracene	mg/kg	NA	NA	2.99E+05	3.30E-01	NR						NR					
Benzo(a)anthracene	mg/kg	NA	NA	8.93E+01	3.30E-01	NR						NR					
Benzo(a)pyrene	mg/kg	NA	NA	8.93E+00	3.30E-01	NR						NR					
Benzo(b)fluoranthene	mg/kg	NA	NA	8.93E+01	6.55E-01	NR						NR					
Benzo(ghi)perylene	mg/kg	NA	NA	2.79E+04	6.55E-01	NR						NR					
Benzo(k)fluoranthene	mg/kg	NA	NA	8.93E+02	6.55E-01	NR						NR					
Carbazole	mg/kg	NA	NA	3.26E+03	NA	NR						NR					
Chrysene	mg/kg	NA	NA	9.79E+03	3.30E-01	NR						NR					
Dibenz(a,h)anthracene	mg/kg	NA	NA	9.79E+00	3.30E-01	NR						NR					
Fluoranthene	mg/kg	NA	NA	3.73E+04	3.30E-01	NR						NR					
Fluorene	mg/kg	NA	NA	3.73E+04	3.30E-01	NR						NR					
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	8.93E+01	6.55E-01	NR						NR					
Phenanthrene	mg/kg	NA	NA	2.79E+05	3.30E-01	NR						NR					
Pyrene	mg/kg	NA	NA	3.06E+04	3.30E-01	NR						NR					
TOTAL ORGANIC CARBON																	
Total Organic Carbon	mg/kg	NA	NA	NA	NA	NR						NR					

Table 4-5

Sediment Analytical Results
Former Chemical Laundry and Motor Pool Area 1500, Parcel 94(7)
Fort McClellan, Calhoun County, Alabama

Analyses performed using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] UBR - Upper background range as given in Sciehce Applications International Corporation (SAIC), 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998.

[c] Recreational site user site-specific screening level (SSSL) and ecological screening value (ESV) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama*, July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is an estimated concentration.

mg/kg - Milligrams per kilogram.

NA - Not available.

ND - Not detected.

NR - Not requested.

Qual - Data validation qualifier.

(FTA-94-DEP03 and FTA-94-GP01), cobalt (FTA-94-GP05), copper (FTA-94-GP05), iron (FTA-94-GP05 and FTA-94-GP08), lead (FTA-94-DEP03), manganese (FTA-94-GP01), mercury (four locations), selenium (seven locations), and zinc (five locations). With the exception of the beryllium, copper, and selenium results, the concentrations of the metals that exceeded ESVs and their respective background concentrations were within the range of background values (Appendix K). However, the statistical and geochemical evaluation of metals in soil determined that beryllium, copper, and selenium are present at naturally occurring levels (Appendix L).

Volatile Organic Compounds. All of the surface and depositional soil samples were analyzed for VOCs. Fourteen VOCs were detected in surface and depositional soil samples collected at the site. VOC concentrations in the samples ranged from 0.00058 to 1.4 milligrams per kilogram (mg/kg) and were below SSSLs and ESVs.

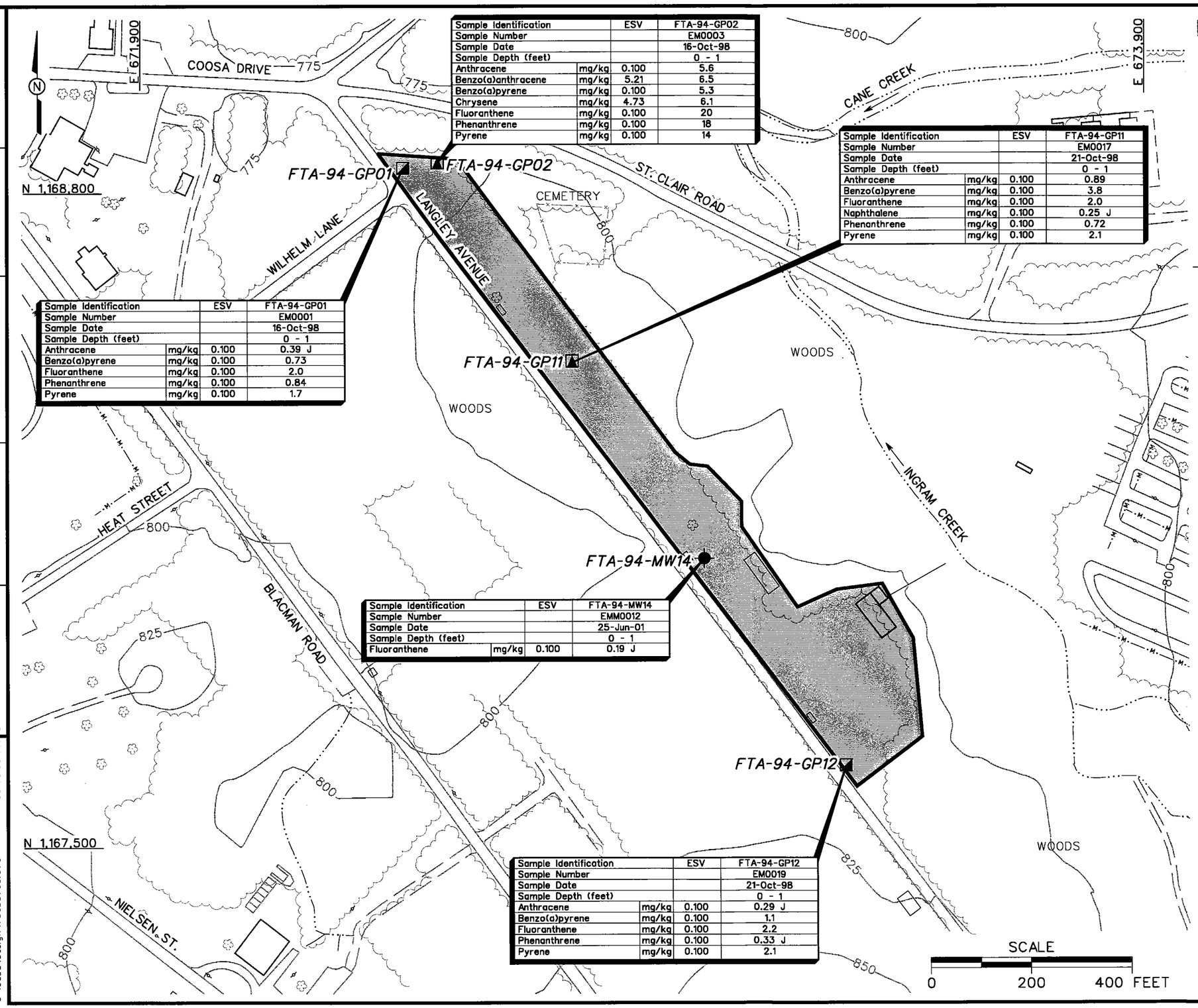
Semivolatile Organic Compounds. Thirteen surface and depositional soil samples were analyzed for SVOCs. Twenty SVOCs, including 17 PAH compounds, were detected in soil samples collected at the site. SVOC concentrations in the samples ranged from 0.035 to 20 mg/kg. The concentrations of five PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene) exceeded their respective SSSLs and PAH background values at three sample locations (FTA-94-DEP01, FTA-94-GP02, and FTA-94-GP11).

Eight PAHs were detected in surface and depositional soil samples at concentrations exceeding ESVs and their respective background concentrations: anthracene (at FTA-94-GP02), benzo(a)anthracene (FTA-94-GP02), benzo(a)pyrene (three locations), chrysene (FTA-94-DEP01 and FTA-94-GP02), fluoranthene (three locations), naphthalene (FTA-94-GP11), phenanthrene (FTA-94-DEP01 and FTA-94-GP02), and pyrene (five locations). Figures 4-3 and 4-4 present SVOCs exceeding ESVs in surface and depositional soil.

Polychlorinated Biphenyls. Thirteen surface and depositional soil samples were analyzed for PCBs. PCBs were not detected in any of the samples.

4.2.2 Subsurface Soil Analytical Results

Fifteen subsurface soil samples were collected for chemical analysis at the Former Motor Pool Area 1500, Parcel 94(7). Subsurface soil samples were collected at depths greater than 1 foot



Sample Identification		ESV	FTA-94-GP01
Sample Number			EM0001
Sample Date			16-Oct-98
Sample Depth (feet)			0 - 1
Anthracene	mg/kg	0.100	0.39 J
Benzo(a)pyrene	mg/kg	0.100	0.73
Fluoranthene	mg/kg	0.100	2.0
Phenanthrene	mg/kg	0.100	0.84
Pyrene	mg/kg	0.100	1.7

Sample Identification		ESV	FTA-94-GP02
Sample Number			EM0003
Sample Date			16-Oct-98
Sample Depth (feet)			0 - 1
Anthracene	mg/kg	0.100	5.6
Benzo(a)anthracene	mg/kg	5.21	6.5
Benzo(a)pyrene	mg/kg	0.100	5.3
Chrysene	mg/kg	4.73	6.1
Fluoranthene	mg/kg	0.100	20
Phenanthrene	mg/kg	0.100	18
Pyrene	mg/kg	0.100	14

Sample Identification		ESV	FTA-94-GP11
Sample Number			EM0017
Sample Date			21-Oct-98
Sample Depth (feet)			0 - 1
Anthracene	mg/kg	0.100	0.89
Benzo(a)pyrene	mg/kg	0.100	3.8
Fluoranthene	mg/kg	0.100	2.0
Naphthalene	mg/kg	0.100	0.25 J
Phenanthrene	mg/kg	0.100	0.72
Pyrene	mg/kg	0.100	2.1

Sample Identification		ESV	FTA-94-MW14
Sample Number			EMM0012
Sample Date			25-Jun-01
Sample Depth (feet)			0 - 1
Fluoranthene	mg/kg	0.100	0.19 J

Sample Identification		ESV	FTA-94-GP12
Sample Number			EM0019
Sample Date			21-Oct-98
Sample Depth (feet)			0 - 1
Anthracene	mg/kg	0.100	0.29 J
Benzo(a)pyrene	mg/kg	0.100	1.1
Fluoranthene	mg/kg	0.100	2.2
Phenanthrene	mg/kg	0.100	0.33 J
Pyrene	mg/kg	0.100	2.1

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- GROUNDWATER, SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- BEDROCK MONITORING WELL / GROUNDWATER, SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- J ESTIMATED CONCENTRATION
- ESV ECOLOGICAL SCREENING VALUE
- SVOC SEMIVOLATILE ORGANIC COMPOUND
- mg/kg MILLIGRAMS PER KILOGRAM

FIGURE 4-3
SVOCs EXCEEDING ESVs
IN SURFACE SOIL
FORMER CHEMICAL LAUNDRY
AND 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

DRAFT. CHCK. BY: | INITIATOR: L. O'HARE | DWG. NO.: ...\796887es.373
ENGR. CHCK. BY: S. MORAN | PROJ. MGR.: J. YACOUB | PROJ. NO.: 796887
STARTING DATE: 03/13/02 | DATE LAST REV.:
DRAWN BY: D. BOMAR | DRAWN BY:
05/02/02 09:49:39 AM
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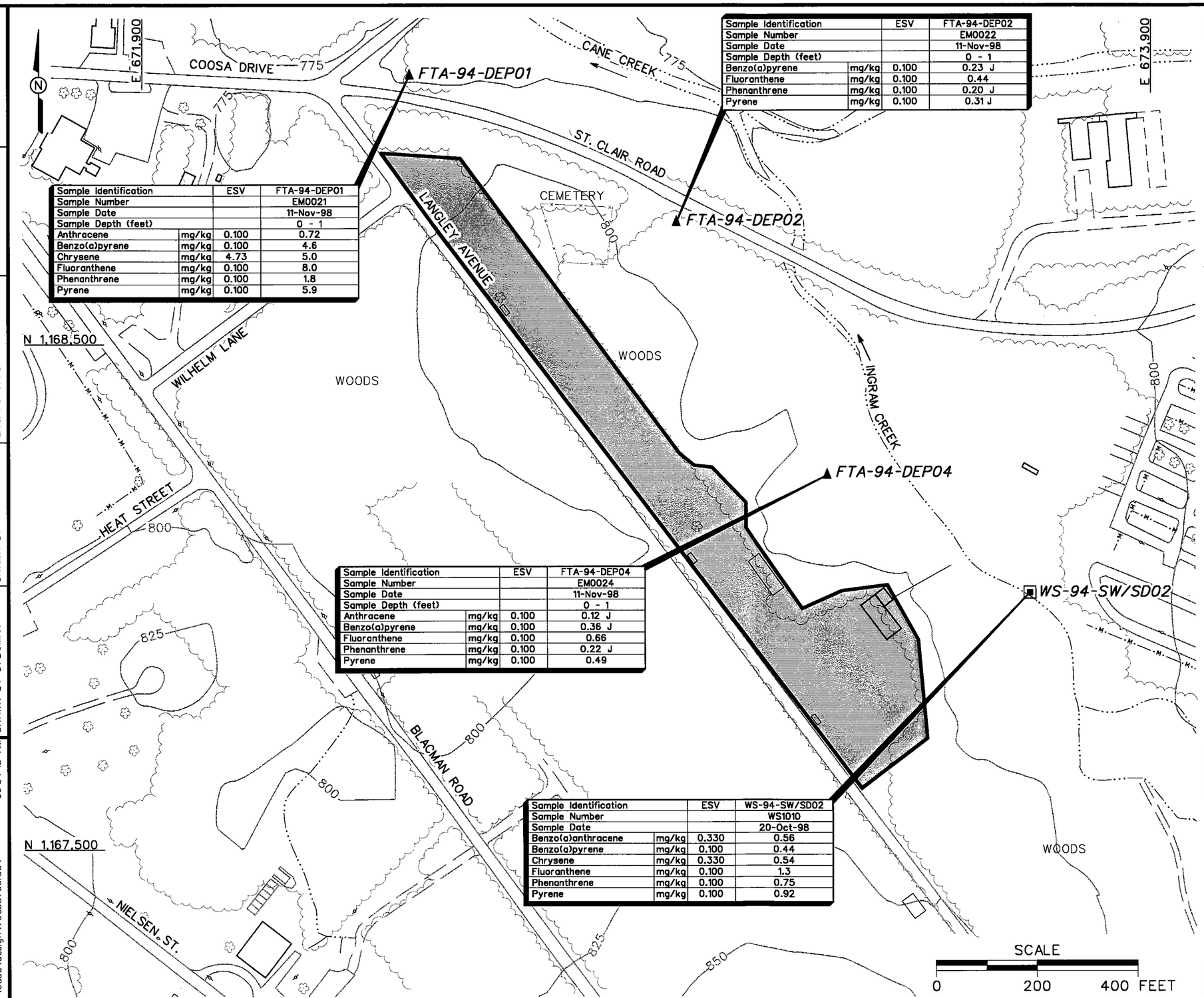

Sample Identification		ESV	FTA-94-DEP01
Sample Number			EM0021
Sample Date			11-Nov-98
Sample Depth (feet)			0 - 1
Anthracene	mg/kg	0.100	0.72
Benzo(a)pyrene	mg/kg	0.100	4.6
Chrysene	mg/kg	4.73	5.0
Fluoranthene	mg/kg	0.100	8.0
Phenanthrene	mg/kg	0.100	1.8
Pyrene	mg/kg	0.100	5.9

Sample Identification		ESV	FTA-94-DEP02
Sample Number			EM0022
Sample Date			11-Nov-98
Sample Depth (feet)			0 - 1
Benzo(a)pyrene	mg/kg	0.100	0.23 J
Fluoranthene	mg/kg	0.100	0.44
Phenanthrene	mg/kg	0.100	0.20 J
Pyrene	mg/kg	0.100	0.31 J

Sample Identification		ESV	FTA-94-DEP04
Sample Number			EM0024
Sample Date			11-Nov-98
Sample Depth (feet)			0 - 1
Anthracene	mg/kg	0.100	0.12 J
Benzo(a)pyrene	mg/kg	0.100	0.36 J
Fluoranthene	mg/kg	0.100	0.66
Phenanthrene	mg/kg	0.100	0.22 J
Pyrene	mg/kg	0.100	0.49

Sample Identification		ESV	WS-94-SW/SD02
Sample Number			WS1010
Sample Date			20-Oct-98
Benzo(a)anthracene	mg/kg	0.330	0.56
Benzo(a)pyrene	mg/kg	0.100	0.44
Chrysene	mg/kg	0.330	0.54
Fluoranthene	mg/kg	0.100	1.3
Phenanthrene	mg/kg	0.100	0.75
Pyrene	mg/kg	0.100	0.92

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- DEPOSITIONAL SOIL SAMPLE LOCATION
- J — ESTIMATED CONCENTRATION
- ESV — ECOLOGICAL SCREENING VALUE
- SVOC — SEMIVOLATILE ORGANIC COMPOUND
- mg/kg — MILLIGRAMS PER KILOGRAM

FIGURE 4-4
SVOCs EXCEEDING ESVs IN DEPOSITIONAL SOIL AND SEDIMENT FORMER CHEMICAL LAUNDRY AND 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

DRAFT. CHCK. BY: | ENGR. CHCK. BY: S. MORAN | INITIATOR: L. O'HARE | PROJ. MGR.: J. YACOUB | DWG. NO.: ...\796887es.354 | PROJ. NO.: 796887
STARTING DATE: 03/13/02 | DATE LAST REV.: | DRAWN BY: D. BOMAR | DRAWN BY:
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bgs at the locations shown on Figure 2-2. Analytical results were compared to residential human health SSSLs and metals background screening values, as presented in Table 4-2.

Metals. Nineteen metals were detected in subsurface soil samples collected at the site. The concentrations of five metals (aluminum, arsenic, chromium, iron, and manganese) exceeded SSSLs. Of these metals, three were detected at concentrations also exceeding their respective background concentrations: aluminum (at four locations), iron (at four locations), and manganese (FTA-94-GP10). With the exception of two iron results (at FTA-94-GP03 and FTA-94-GP12), these metals results were within the range of the background values (Appendix K). However, the statistical and geochemical evaluation of metals in soil determined that the iron concentrations are consistent with naturally occurring levels (Appendix L).

Volatile Organic Compounds. Thirteen VOCs were detected in subsurface soil samples collected at the site. The methylene chloride results and a majority of the acetone results were flagged with a "B" data qualifier, indicating that these compounds were also detected in an associated laboratory or field blank sample. In addition, acetone and methylene chloride were the only VOCs detected in 10 of the 15 subsurface soil samples. Each of the detected VOCs was present in the sample collected at FTA-94-GP07. VOC concentrations in the subsurface soil samples ranged from 0.00051 to 0.16 mg/kg and were below their respective SSSLs.

Semivolatile Organic Compounds. Twelve SVOCs, including eleven PAH compounds, were detected in subsurface soil samples collected at the site. With the exception of bis(2-ethylhexyl)phthalate, which was detected in eight samples, the SVOCs were detected in one subsurface soil sample (FTA-94-GP04). SVOC concentrations in the subsurface soil samples ranged from 0.037 to 0.17 mg/kg.

Only one PAH compound (benzo[a]pyrene [0.16 mg/kg]) exceeded its SSSL (0.085 mg/kg); however, the result was flagged with a "J" data qualifier, signifying that the compound was positively identified but the concentration was estimated.

Polychlorinated Biphenyls. Two PCBs, Aroclor 1254 and Aroclor 1260, were detected in one subsurface soil sample collected at the site. Both PCBs were detected in the subsurface soil sample collected at FTA-94-GP04 at concentrations below their respective SSSLs.

4.2.3 Groundwater Analytical Results

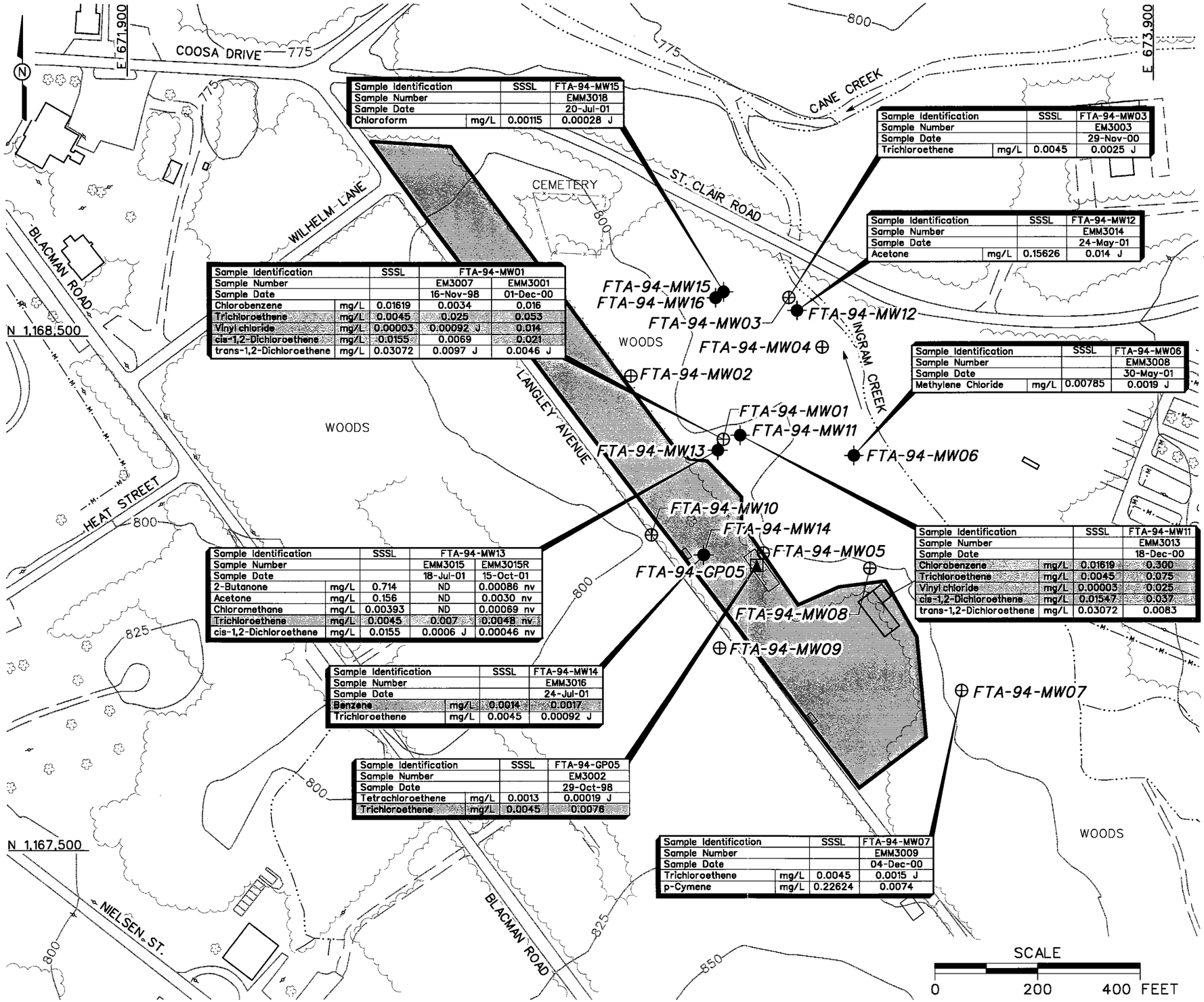
A total of 21 groundwater samples were collected from 19 monitoring wells at the Former Motor Pool Area 1500, Parcel 94(7) at the locations shown on Figure 2-2. Analytical results were compared to residential human health SSSLs and metals background screening values, as presented in Table 4-3.

Metals. Four groundwater samples (locations FTA-94-GP02, FTA-94-GP05, FTA-94-GP11, and FTA-94-MW01) were analyzed for metals. A total of 19 metals were detected in the groundwater samples. The concentrations of six metals (aluminum, barium, iron, lead, thallium, and vanadium) exceeded their respective SSSLs and background concentrations (note: background concentrations were not available for chromium and nickel). With the exception of the aluminum, barium, iron, thallium, and vanadium results in one sample (FTA-94-GP11), these metals concentrations were within the range of background values. It should be noted that the sample collected at FTA-94-GP11 was moderately turbid (170 NTUs), which may have caused the elevated metals results. The statistical and geochemical evaluation of metals in groundwater determined that these metals are present at naturally occurring levels (Appendix L).

Volatile Organic Compounds. All of the groundwater samples collected at the site were analyzed for VOCs. A total of thirteen VOCs were detected in the samples. VOCs were not detected in eight of the samples; and acetone or methylene chloride, both of which are common laboratory contaminants, were the only detected VOCs in three additional samples. VOC concentrations in the groundwater samples ranged from 0.00019 to 0.3 milligrams per liter (mg/L). The concentrations of five VOCs exceeded their respective SSSLs:

- Benzene (0.0017 mg/L) in one well (FTA-94-MW14)
- Chlorobenzene (0.3 mg/L) in one well (FTA-94-MW11)
- Cis-1,2-dichloroethene (DCE) (0.021 and 0.037 mg/L) in two wells (FTA-94-MW01 and FTA-94-MW11)
- Trichloroethene (TCE) (0.0048 to 0.075 mg/L) in four wells
- Vinyl chloride (0.00092 to 0.025 mg/L) in two wells (FTA-94-MW01 and FTA-94-MW11).

VOC concentrations in groundwater are presented on Figure 4-5. Isopleth maps (Figures 4-6 through 4-9) were constructed to illustrate the lateral extent of VOCs in groundwater at the site.



Sample Identification		SSSL	FTA-94-MW15
Sample Number			EMM3018
Sample Date			20-Jul-01
Chloroform	mg/L	0.00115	0.00028 J

Sample Identification		SSSL	FTA-94-MW03
Sample Number			EM3003
Sample Date			29-Nov-00
Trichloroethene	mg/L	0.0045	0.0025 J

Sample Identification		SSSL	FTA-94-MW12
Sample Number			EMM3014
Sample Date			24-May-01
Acetone	mg/L	0.15626	0.014 J

Sample Identification		SSSL	FTA-94-MW01	
Sample Number			EM3007	EMM3001
Sample Date			16-Nov-98	01-Dec-00
Chlorobenzene	mg/L	0.01619	0.0034	0.016
Trichloroethene	mg/L	0.0045	0.025	0.053
Vinyl chloride	mg/L	0.00003	0.00092 J	0.014
cis-1,2-Dichloroethene	mg/L	0.0155	0.0069	0.021
trans-1,2-Dichloroethene	mg/L	0.03072	0.0097 J	0.0046 J

Sample Identification		SSSL	FTA-94-MW06
Sample Number			EMM3008
Sample Date			30-May-01
Methylene Chloride	mg/L	0.00785	0.0019 J

Sample Identification		SSSL	FTA-94-MW11
Sample Number			EMM3013
Sample Date			18-Dec-00
Chlorobenzene	mg/L	0.01619	0.300
Trichloroethene	mg/L	0.0045	0.075
Vinyl chloride	mg/L	0.00003	0.025
cis-1,2-Dichloroethene	mg/L	0.01547	0.037
trans-1,2-Dichloroethene	mg/L	0.03072	0.0083

Sample Identification		SSSL	FTA-94-MW13	
Sample Number			EMM3015	EMM3015R
Sample Date			18-Jul-01	15-Oct-01
2-Butanone	mg/L	0.714	ND	0.00086 nv
Acetone	mg/L	0.156	ND	0.0030 nv
Chloromethane	mg/L	0.00393	ND	0.00069 nv
Trichloroethene	mg/L	0.0045	0.007	0.0048 nv
cis-1,2-Dichloroethene	mg/L	0.0155	0.0006 J	0.00046 nv

Sample Identification		SSSL	FTA-94-MW14
Sample Number			EMM3016
Sample Date			24-Jul-01
Benzene	mg/L	0.0014	0.0017
Trichloroethene	mg/L	0.0045	0.00092 J

Sample Identification		SSSL	FTA-94-GP05
Sample Number			EM3002
Sample Date			29-Oct-98
Tetrachloroethene	mg/L	0.0013	0.00019 J
Trichloroethene	mg/L	0.0045	0.0076

Sample Identification		SSSL	FTA-94-MW07
Sample Number			EMM3009
Sample Date			04-Dec-00
Trichloroethene	mg/L	0.0045	0.0015 J
p-Cymene	mg/L	0.22624	0.0074

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- BEDROCK MONITORING WELL LOCATION
- RESIDUUM MONITORING WELL LOCATION
- GROUNDWATER, SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- J — ESTIMATED CONCENTRATION
- SSSL — SITE-SPECIFIC SCREENING LEVEL
- VOC — VOLATILE ORGANIC COMPOUND
- mg/L — MILLIGRAMS PER LITER
- ND — NOT DETECTED
- nv — NOT VALIDATED
- CONCENTRATION EXCEEDS SSSL

NOTE:

1. "B"-FLAGGED DATA NOT SHOWN.

FIGURE 4-5
VOC CONCENTRATIONS IN GROUNDWATER
FORMER CHEMICAL LAUNDRY AND 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

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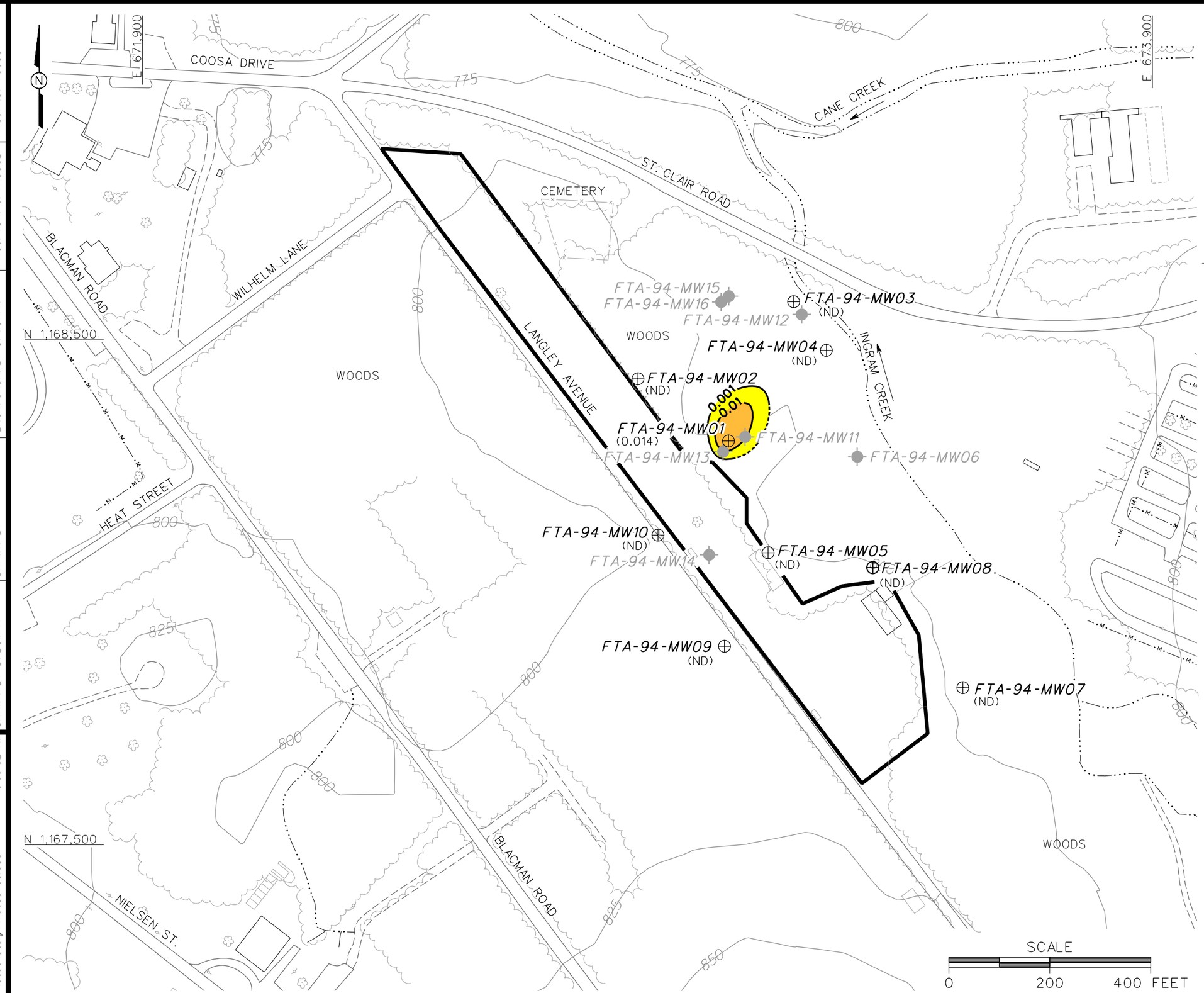

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- BEDROCK MONITORING WELL LOCATION
- RESIDUUM MONITORING WELL LOCATION
- 0.01 — VINYL CHLORIDE CONCENTRATION (mg/L) (DASHED WHERE INFERRED)
- (0.014) — CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- (ND) — NOT DETECTED

FIGURE 4-6
VINYL CHLORIDE ISOPLETH MAP
RESIDUUM MONITORING WELLS
FORMER CHEMICAL LAUNDRY
AND MOTOR POOL AREA 1500
PARCEL 94(7)

U. S. ARMY CORPS OF ENGINEERS
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DRAWN BY: D. BOMAR
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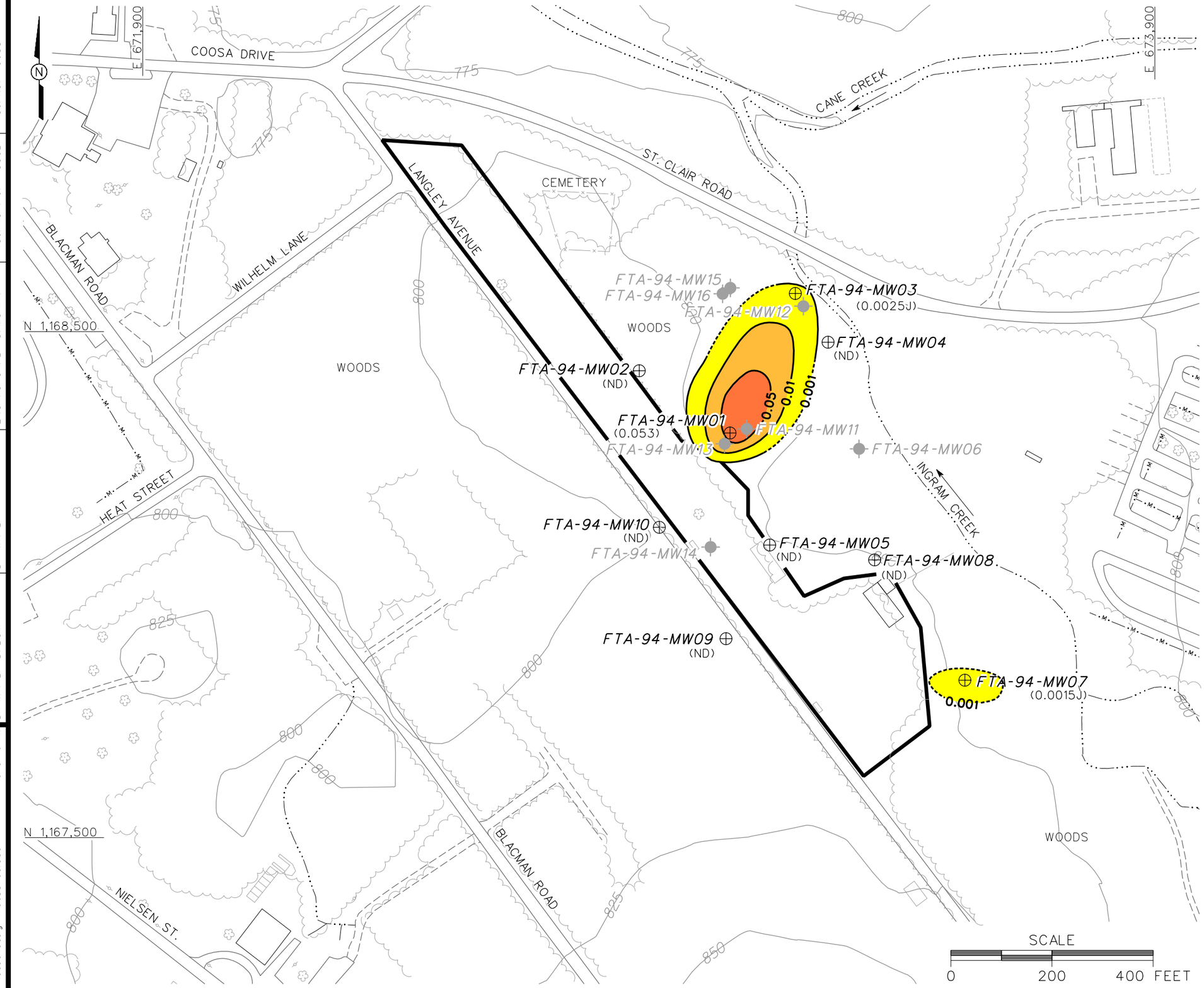

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- BEDROCK MONITORING WELL LOCATION
- RESIDUUM MONITORING WELL LOCATION
- 0.05 — TRICHLOROETHENE CONCENTRATION (mg/L) (DASHED WHERE INFERRED)
- (0.053) — CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- (ND) — NOT DETECTED
- J — ESTIMATED CONCENTRATION

FIGURE 4-7
TRICHLOROETHENE ISOPLETH MAP
RESIDUUM MONITORING WELLS
FORMER CHEMICAL LAUNDRY
AND MOTOR POOL AREA 1500
PARCEL 94(7)

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FORT McCLELLAN
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Contract No. DACA21-96-D-0018

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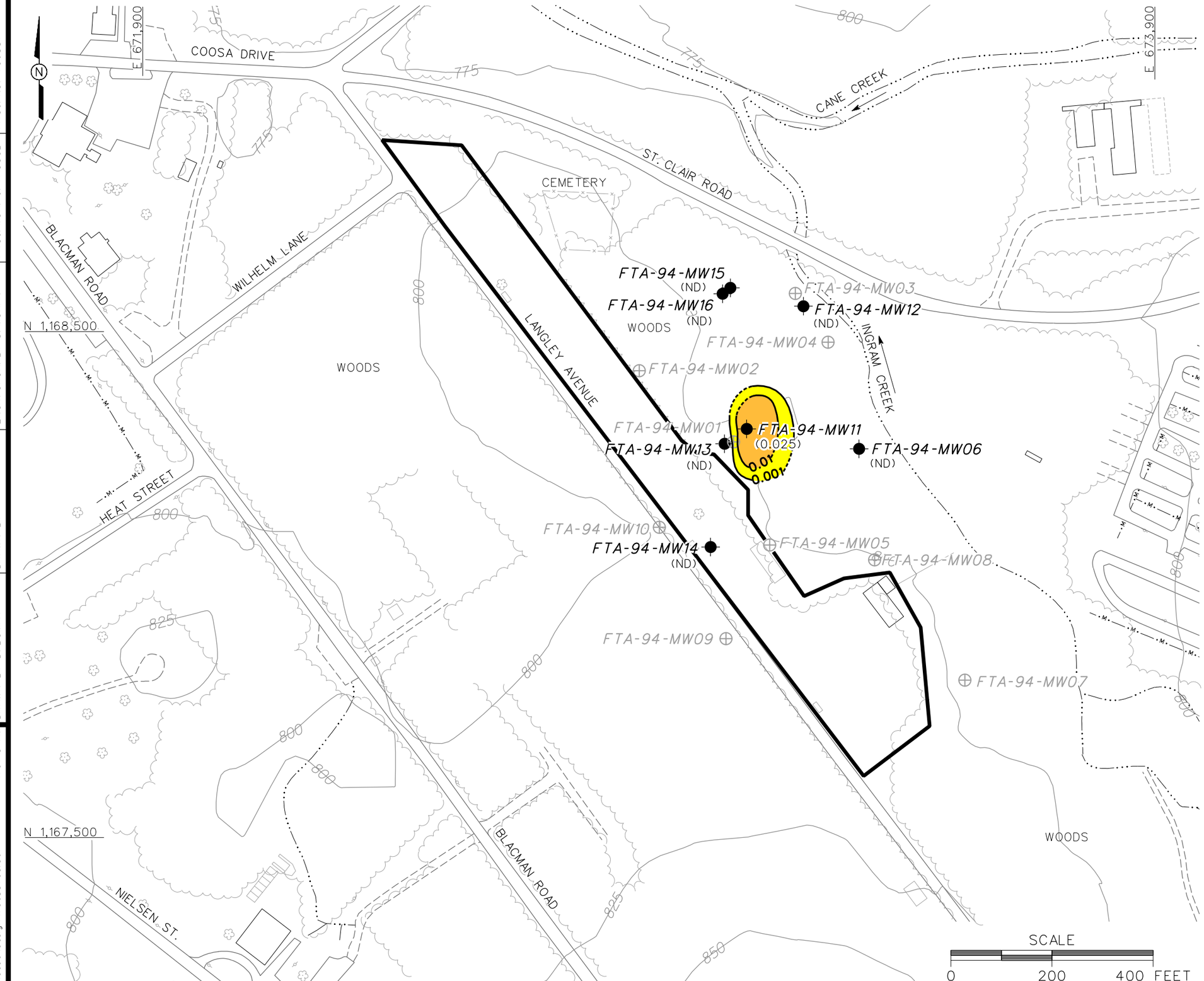

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- BEDROCK MONITORING WELL LOCATION
- RESIDUUM MONITORING WELL LOCATION
- 0.1 — VINYL CHLORIDE CONCENTRATION (mg/L) (DASHED WHERE INFERRED)
- (0.025) — CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- (ND) — NOT DETECTED

SCALE

0 200 400 FEET

FIGURE 4-8
VINYL CHLORIDE ISOPLETH MAP
BEDROCK MONITORING WELLS
FORMER CHEMICAL LAUNDRY
AND MOTOR POOL AREA 1500
PARCEL 94(7)

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Contract No. DACA21-96-D-0018

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STARTING DATE: 03/21/02 DRAWN BY: D. BOMAR
INITIATOR: L. O'HARE PROJ. MGR.: J. YACOUB
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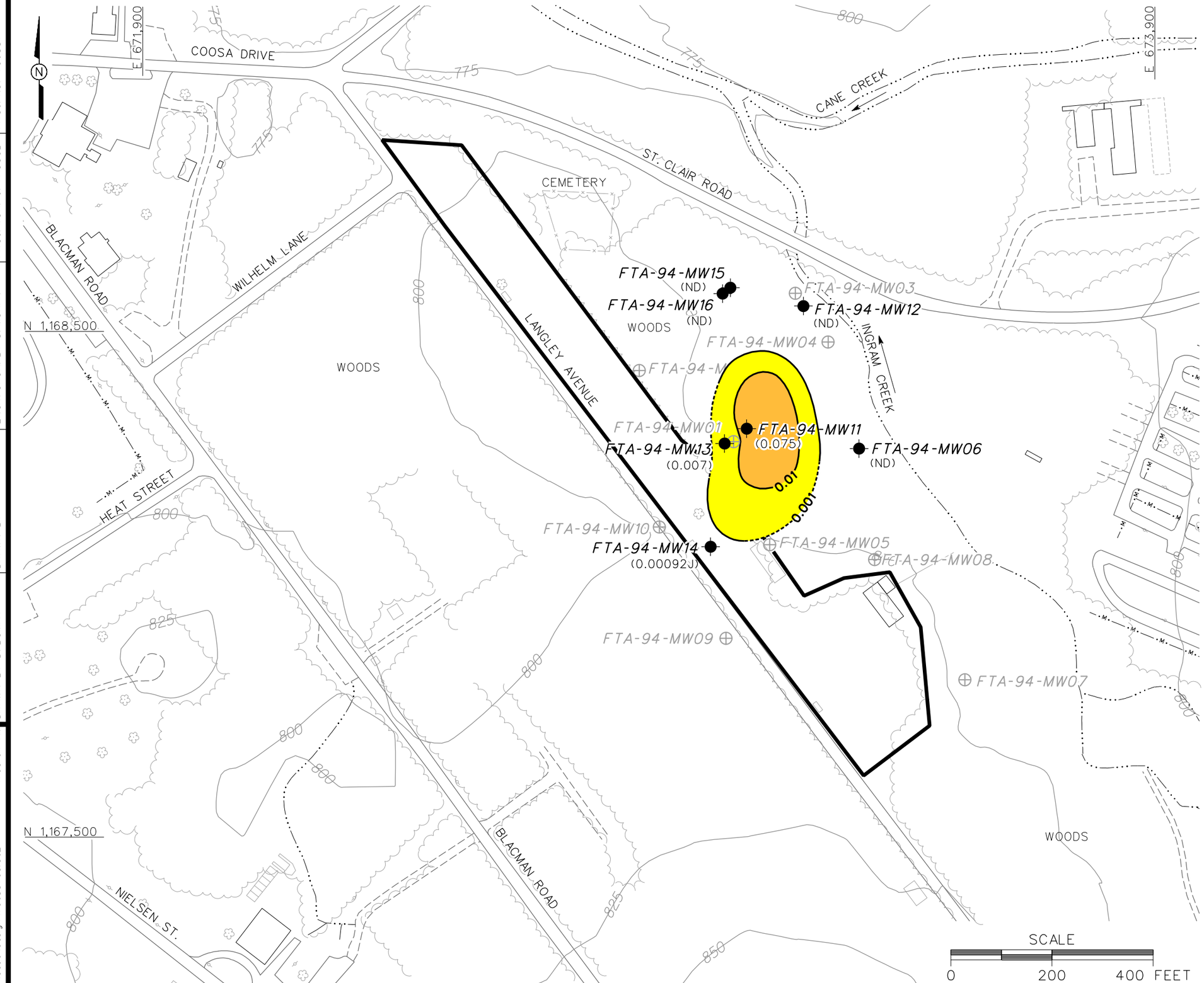

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- BEDROCK MONITORING WELL LOCATION
- RESIDUUM MONITORING WELL LOCATION
- 0.01 — TRICHLOROETHENE CONCENTRATION (mg/L) (DASHED WHERE INFERRED)
- (0.075) — CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- (ND) — NOT DETECTED
- J — ESTIMATED CONCENTRATION

SCALE

0 200 400 FEET

FIGURE 4-9
TRICHLOROETHENE ISOPLETH MAP
BEDROCK MONITORING WELLS
FORMER CHEMICAL LAUNDRY
AND MOTOR POOL AREA 1500
PARCEL 94(7)

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MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

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INITIATOR: L. O'HARE | PROJ. MGR.: J. YACOUB
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Figures 4-6 and 4-7 show the concentrations of vinyl chloride and TCE, respectively, in residuum groundwater; Figures 4-8 and 4-9 show the distribution of vinyl chloride and TCE, in the bedrock aquifer. Contamination in the groundwater appears to be primarily centered in the area around monitoring well FTA-94-MW01 for the residuum and FTA-94-MW11 for the bedrock. The occurrence of vinyl chloride and cis-1,2-DCE, both degradation products of TCE, is restricted to these two wells (Figure 4-5). Isopleth maps showing total VOCs in residuum groundwater (Figure 4-10) and bedrock groundwater (Figure 4-11) include relatively low detections of "J"-qualified data for chloroform (FTA-94-MW15), methylene chloride (FTA-94-MW06), and TCE (FTA-94-MW03) and extend the area of apparent contamination to the north and east.

Semivolatile Organic Compounds. Four groundwater samples (locations FTA-94-GP02, FTA-94-GP05, FTA-94-GP11, and FTA-94-MW01) were analyzed for SVOCs. Two SVOCs, phenol (two samples) and bis(2-ethylhexyl)phthalate (one sample), were detected in the samples at concentrations below SSSLs.

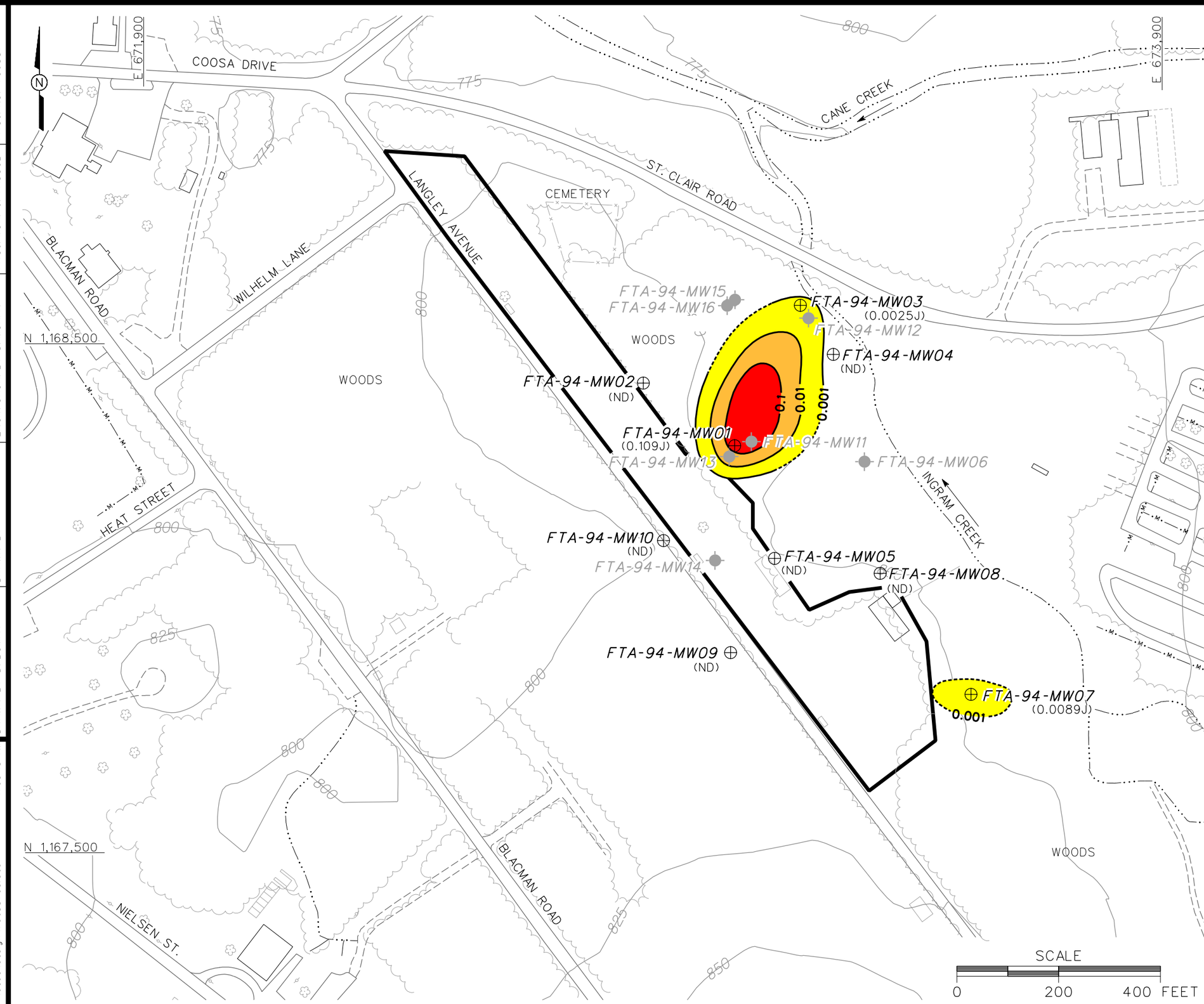
Polychlorinated Biphenyls. Four groundwater samples (locations FTA-94-GP02, FTA-94-GP05, FTA-94-GP11, and FTA-94-MW01) were analyzed for PCBs. PCBs were not detected in groundwater at the site.

4.2.4 Surface Water Analytical Results

Five surface water samples were collected for chemical analysis at the Former Motor Pool Area 1500, Parcel 94(7), at the locations shown on Figure 2-2. Analytical results were compared to recreational site user human health SSSLs, ESVs, and metals background screening values, as presented in Table 4-4.

Metals. Two surface water samples (locations WS-94-SW/SD01 and WS-94-SW/SD02) were analyzed for metals. A total of five metals were detected in the samples at concentrations below SSSLs. Aluminum and manganese exceeded their respective ESVs in one sample but were below background concentrations.

Volatile Organic Compounds. All of the surface water samples were analyzed for VOCs. A total of four VOCs (acetone, chloroform, methylene chloride, and TCE) were detected in three of the samples. VOC concentrations in the surface water samples ranged from 0.00023 to 0.0021 mg/L and were below SSSLs and ESVs.



LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- BEDROCK MONITORING WELL LOCATION
- RESIDUUM MONITORING WELL LOCATION
- 0.1 — TOTAL VOC CONCENTRATION (mg/L) (DASHED WHERE INFERRED)
- (0.109) — CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- (ND) — NOT DETECTED
- J — ESTIMATED CONCENTRATION

FIGURE 4-10
TOTAL VOCs ISOPLETH MAP
RESIDUUM MONITORING WELLS
FORMER CHEMICAL LAUNDRY
AND MOTOR POOL AREA 1500
PARCEL 94(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
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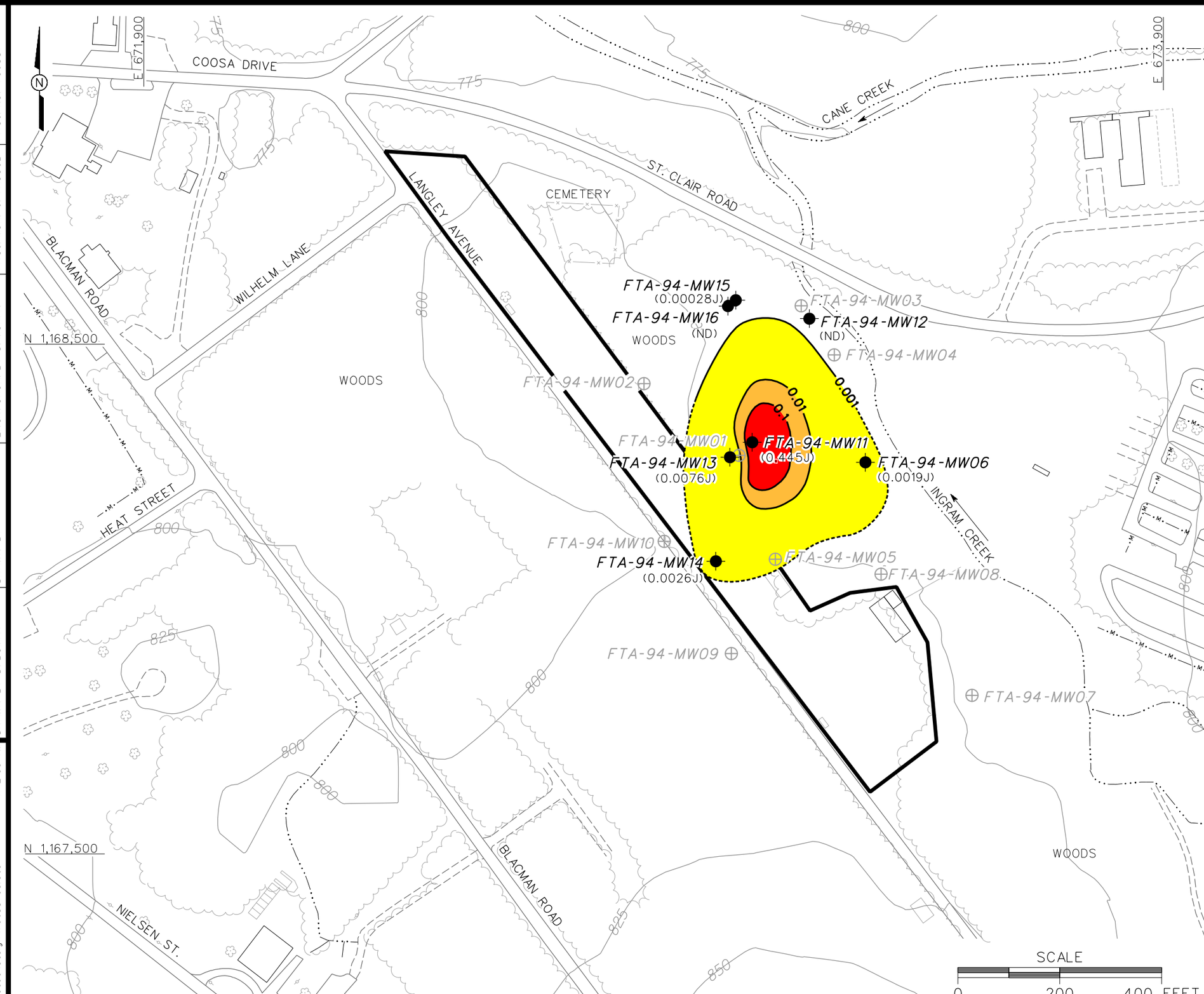

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- CULVERT WITH HEADWALL
- SURFACE DRAINAGE / CREEK
- FENCE
- UTILITY POLE
- BEDROCK MONITORING WELL LOCATION
- RESIDUUM MONITORING WELL LOCATION
- 0.1 — TOTAL VOC CONCENTRATION (mg/L) (DASHED WHERE INFERRED)
- (0.445) — CONCENTRATION IN MILLIGRAMS PER LITER (mg/L)
- (ND) — NOT DETECTED
- J — ESTIMATED CONCENTRATION

NOTE:

1. TOTAL VOC CONCENTRATION EXCLUDES COMMON LAB CONTAMINANT ACETONE.

FIGURE 4-11
TOTAL VOCs ISOPLETH MAP
BEDROCK MONITORING WELLS
FORMER CHEMICAL LAUNDRY
AND 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

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PROJ. MGR.: J. YACOUB
DWG. NO.: ...\796887es.363
PROJ. NO.: 796887

Semivolatile Orangic Compounds. Two surface water samples (WS-94-SW/SD01 and WS-94-SW/SD02) were analyzed for SVOCs. Phenol was the only SVOC detected in the samples. The phenol results were below the SSSL and ESV.

Polychlorinated Biphenyls. Two surface water samples (WS-94-SW/SD01 and WS-94-SW/SD02) were analyzed for PCBs. PCBs were not detected in surface water at the site.

4.2.5 Sediment Analytical Results

Five sediment samples were collected for chemical analysis at the Former Motor Pool Area 1500, Parcel 94(7), at the locations shown on Figure 2-2. Analytical results were compared to recreational site user human health SSSLs, ESVs, and metals background screening values, as presented in Table 4-5.

Metals. Two of the sediment samples (locations WS-94-SW/SD01 and WS-94-SW/SD02) were analyzed for metals. A total of 15 metals were detected in the sediment samples. The detected metals were below their respective SSSLs. The concentrations of two metals (arsenic and nickel) exceeded ESVs in one sample each. The arsenic result was below its background concentration. The nickel result (20 mg/kg) exceeded its background concentration (13 mg/kg) but was within its upper background range (33 mg/kg).

Volatile Organic Compounds. All of the sediment samples were analyzed for VOCs. A total of seven VOCs (2-butanone, acetone, carbon disulfide, methylene chloride, toluene, m,p-xylenes, and p-cymene) were detected in the sediment samples. The VOC results were below SSSLs and ESVs.

Semivolatile Organic Compounds. Two of the sediment samples (locations FTA-94-WS94-SW/SD01 and FTA-94-WS94-SW/SD02) were analyzed for SVOCs. Fifteen SVOCs, including 14 PAH compounds, were detected in one of the samples (WS-94-SW/SD02). SVOC concentrations in the sediment sample ranged from 0.041 to 1.3 mg/kg.

The SVOC concentrations in the sediment sample were below SSSLs. The concentrations of six PAHs (benzo[a]anthracene, benzo[a]pyrene, chrysene, fluoranthene, phenanthrene, and pyrene) exceeded their respective ESVs. SVOCs exceeding ESVs in sediment are presented on Figure 4-4.

Polychlorinated Biphenyls. Two sediment samples (locations WS-94-SW/SD01 and WS-94-SW/SD02) were analyzed for PCBs. PCBs were not detected in sediment at the site.

Total Organic Carbon. Two sediment samples (locations WS-94-SW/SD01 and WS-94-SW/SD02) were analyzed for TOC. The TOC concentrations in the samples were 1,150 mg/kg and 2,950 mg/kg, as summarized in Appendix I.

Grain Size. Two sediment samples (locations WS-94-SW/SD01 and WS-94-SW/SD02) were analyzed for grain size. The results of grain size analysis are included in Appendix I.

4.3 Sources of Contamination

The primary sources of contamination at Parcel 94(7) were the chemical laundry and impregnation plants formerly located at the site. These processes used chlorinated solvents and other chlorinated materials (e.g., oil, wax) to launder and treat military garments to render them impermeable to CWM. It is possible that these materials (or rinse solutions containing these materials) were discharged either directly to the ground surface or into the sanitary sewer system where they later entered the environment. Because the chemical laundry operations were discontinued many years ago and the buildings have been removed, the current conditions are believed to reflect releases incidental to historical Army operations. An active source of contamination is not present.

The source of benzene in monitoring well FTA-94-MW14 is a probable UST location associated with a gas station (Building 1594A, Parcel 134[7]) previously located at the site. Exploratory trenching and excavation, however, confirmed that no USTs are present at Parcel 134(7). Therefore, the current conditions reflect releases incidental to historical Army operations. An active source of contamination is not present.