5.0 Summary of Analytical Results

The results of the chemical analysis of samples collected at the Range 30 Firing Line Area indicate that metals, VOCs, herbicides, and pesticides were detected in site media. In addition, one explosive compound was detected in one groundwater sample. To evaluate whether the detected constituents present an unacceptable risk to human health and the environment, analytical results were compared to the human health SSSLs and ESVs for FTMC. The SSSLs and ESVs were developed for human health and ecological risk evaluations as part of the ongoing SIs being performed under the BRAC Environmental Restoration Program at FTMC.

Metals concentrations exceeding the SSSLs and ESVs were subsequently compared to metals background screening values to determine if the metals concentrations are within natural background concentrations (SAIC, 1998). Site metals data were further evaluated using statistical and geochemical methods to determine if the metals were site related (Appendix H).

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

5.1 Surface and Depositional Soil Analytical Results

Thirty-nine surface soil samples and one depositional soil sample were collected for chemical analysis at the Range 30 Firing Line Area. Surface and depositional soil samples were collected from the uppermost foot of soil at the locations shown on Figure 3-1. Analytical results were compared to residential human health SSSLs, ESVs, and metals background screening values, as presented in Table 5-1.

Metals. Nineteen metals were detected in the surface and depositional soil samples collected at the site. The concentrations of six metals (aluminum, arsenic, chromium, iron, manganese, and vanadium) exceeded SSSLs. Of these metals, aluminum, chromium, iron, manganese and vanadium also exceeded their respective background concentrations in one or more samples:

- Aluminum (16,400 to 34,300 mg/kg) exceeded its SSSL (7,803 mg/kg) and background (16,306 mg/kg) at 22 sample locations.

- Chromium (51 mg/kg) exceeded its SSSL (23.2 mg/kg) and background (37 mg/kg) at sample location HR-106Q-DEP01.

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-102Q-GP01 QF0001 19-Feb-02 0- 1					HR-102Q-GP02 QF0003 19-Feb-02 0- 1					HR-102Q-MW01 QF0005 19-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	1.46E+04			YES	YES	1.53E+04			YES	YES	1.92E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.88E+00			YES		4.08E+00			YES		4.09E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	3.39E+01	J				9.23E+01	J				5.75E+01	J			
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					7.36E-01	J				4.77E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	9.23E+02	J				7.55E+02	J				5.01E+02	J			
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.03E+01	J			YES	1.18E+01	J			YES	1.17E+01	J			YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	2.44E+00					6.09E+00					5.05E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	7.73E+00					1.05E+01					9.13E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.46E+04			YES	YES	1.18E+04			YES	YES	1.47E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.41E+01					2.77E+01					1.43E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	4.63E+02	J				5.84E+02	J				6.54E+02	J			
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	1.41E+02	J			YES	1.33E+03	J		YES	YES	2.63E+02	J			YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	3.21E-02	J				5.29E-02	J				5.17E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	4.52E+00					7.56E+00					7.06E+00				
Potassium	mg/kg	8.00E+02	NA	NA	5.48E+02	J				6.20E+02					6.60E+02				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	5.50E-01	B	YES			ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	3.35E+01	J				3.70E+01	J				3.90E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	2.02E+01	J			YES	2.16E+01	J			YES	2.56E+01	J			YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.06E+01	J				3.08E+01	J				2.04E+01	J			
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-106Q-DEP01 PR0019 12-Mar-02 0- 1					HR-106Q-GP01 PR0001 21-Feb-02 0- 1					HR-106Q-GP02 PR0003 21-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	5.58E+03				YES	1.64E+04		YES	YES	YES	1.90E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.25E+00			YES		4.03E+00			YES		4.15E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	2.06E+01					5.65E+01					8.90E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	4.54E-01	J				4.88E-01	J				5.99E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	1.83E+02					1.50E+02					5.07E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	5.10E+01		YES	YES	YES	1.26E+01				YES	1.20E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	6.31E+00					5.49E+00					6.18E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	6.25E+00					9.89E+00					1.07E+01				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.77E+04			YES	YES	1.25E+04			YES	YES	1.35E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	2.04E+01					2.38E+01					2.21E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	2.10E+02					5.36E+02					6.66E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	5.09E+02			YES	YES	4.42E+02			YES	YES	7.44E+02			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	3.53E-02	J				4.47E-02	J				6.29E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	3.60E+00					6.02E+00					7.59E+00				
Potassium	mg/kg	8.00E+02	NA	NA	2.76E+02	J				6.04E+02					7.96E+02				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	ND					5.03E+01	J				5.40E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.85E+01				YES	2.29E+01				YES	2.50E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.53E+01					2.05E+01					2.76E+01				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					1.30E-02	J			
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					1.60E-01	B			
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					ND				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					ND				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					1.30E-03	J			YES

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-106Q-GP03 PR0006 21-Feb-02 0- 1					HR-106Q-GP04 PR0009 21-Feb-02 0- 1					HR-106Q-GP05 PR0011 21-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	2.26E+04		YES	YES	YES	1.88E+04		YES	YES	YES	2.09E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	4.77E+00			YES		4.73E+00			YES		4.52E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	8.54E+01					8.03E+01					8.41E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	5.99E-01	J				6.43E-01	J				6.02E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	2.55E+02					2.00E+02					3.67E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.42E+01				YES	3.30E+01			YES	YES	1.65E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	6.21E+00					6.22E+00					6.42E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	1.14E+01					9.70E+00					9.99E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.56E+04			YES	YES	1.42E+04			YES	YES	1.49E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.72E+01					2.21E+01					1.75E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	7.16E+02					5.97E+02					6.84E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	5.69E+02			YES	YES	9.65E+02			YES	YES	5.07E+02			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	6.53E-02	J				3.20E-02	J				4.98E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	8.82E+00					7.74E+00					9.09E+00				
Potassium	mg/kg	8.00E+02	NA	NA	8.34E+02		YES			6.95E+02					7.31E+02				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	4.92E+01	J				4.94E+01	J				5.22E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	2.91E+01				YES	2.60E+01				YES	2.77E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.79E+01					3.00E+01					2.79E+01				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-106Q-GP06 PR0013 25-Jan-02 0- 1					HR-106Q-GP07 PR0015 31-Jan-02 0- 1					HR-106Q-MW01 PR0017 25-Jan-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	2.79E+04		YES	YES	YES	1.09E+04			YES	YES	1.90E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	6.05E+00			YES		3.38E+00			YES		4.55E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	7.80E+01					7.85E+01					1.20E+02				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	6.78E-01	J				4.71E-01	J				7.75E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	2.33E+02					2.71E+02					3.96E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	2.39E+01			YES	YES	1.03E+01				YES	1.10E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	5.12E+00					5.08E+00					7.99E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	1.86E+01		YES			7.02E+00					7.46E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	2.45E+04			YES	YES	1.08E+04			YES	YES	1.47E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.24E+01					2.47E+01					2.12E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	1.06E+03		YES			3.38E+02					5.01E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	2.30E+02				YES	9.52E+02			YES	YES	1.69E+03		YES	YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	6.18E-02	J				6.34E-02	J				7.94E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	1.14E+01		YES			5.23E+00					8.98E+00				
Potassium	mg/kg	8.00E+02	NA	NA	1.34E+03		YES			3.61E+02	J				5.20E+02	J			
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	6.45E-01	J	YES			ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	6.09E+01	J				6.09E+01	J				5.79E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	4.38E+01				YES	1.85E+01				YES	2.60E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	3.73E+01					2.48E+01					2.19E+01				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP01 PQ0001 28-Jan-02 0- 1					HR-88Q-GP02 PQ0003 14-Feb-02 0- 1					HR-88Q-GP03 PQ0006 31-Jan-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	2.82E+04		YES	YES	YES	7.23E+03				YES	1.16E+04			YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	5.79E+00			YES		2.35E+00			YES		2.98E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	6.23E+01					5.64E+01					9.93E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	5.09E-01	J				ND					6.07E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	5.16E+02					4.10E+02					4.66E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.78E+01				YES	5.71E+00				YES	1.12E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	4.50E+00					3.11E+00	B				4.82E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	1.33E+01		YES			3.82E+00					6.35E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.95E+04			YES	YES	7.14E+03			YES	YES	8.28E+03	J		YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.38E+01					1.13E+01					8.98E+01		YES		YES
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	9.37E+02					2.44E+02					3.91E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	1.48E+02				YES	3.66E+02			YES	YES	9.82E+02			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	1.52E-01		YES		YES	3.29E-02	J				ND				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	1.07E+01		YES			3.11E+00					4.78E+00				
Potassium	mg/kg	8.00E+02	NA	NA	8.85E+02		YES			2.50E+02	J				5.19E+02	J			
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	5.16E+01	J				2.89E+01	J				4.86E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	3.66E+01				YES	1.20E+01				YES	1.57E+01	J			YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.72E+01					1.01E+01	B				3.30E+01	J			
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP04 PQ0008 31-Jan-02 0- 1					HR-88Q-GP05 PQ0010 31-Jan-02 0- 1					HR-88Q-GP06 PQ0012 14-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	2.00E+04		YES	YES	YES	1.86E+04		YES	YES	YES	1.07E+04			YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	4.87E+00			YES		4.30E+00			YES		3.65E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	7.90E+01					1.06E+02					4.17E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	5.84E-01	J				7.08E-01	J				ND				
Calcium	mg/kg	1.72E+03	NA	NA	9.93E+02					2.91E+02					1.66E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.52E+01				YES	1.28E+01				YES	1.25E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	6.40E+00					6.88E+00					2.75E+00	B			
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	8.69E+00					9.25E+00					6.62E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.53E+04	J		YES	YES	1.39E+04	J		YES	YES	1.36E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.82E+01					2.99E+01					1.18E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	6.27E+02					5.99E+02					2.98E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	5.25E+02			YES	YES	1.02E+03			YES	YES	3.34E+02				YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	4.08E-02	J				4.99E-02	J				5.07E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	8.11E+00					7.21E+00					4.12E+00				
Potassium	mg/kg	8.00E+02	NA	NA	6.65E+02					7.33E+02					5.45E+02	J			
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	4.26E+01	J				5.35E+01	J				3.86E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	2.74E+01	J			YES	2.55E+01	J			YES	2.14E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.00E+01	J				2.13E+01	J				1.27E+01	B			
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	2.30E-02					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	2.00E-01					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	3.20E-03	B				NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	ND					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	ND					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	ND					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP07 PQ0014 14-Feb-02 0- 1					HR-88Q-GP08 PQ0015 4-Feb-02 0- 1					HR-88Q-GP09 PQ0017 25-Jan-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	9.25E+03			YES	YES	3.30E+04		YES	YES	YES	1.87E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.19E+00			YES		6.07E+00			YES		3.91E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	4.66E+01					7.60E+01					3.87E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					6.68E-01	J				4.32E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	1.51E+02					5.48E+02					6.10E+01	J			
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	6.56E+00				YES	2.15E+01				YES	1.70E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	3.51E+00	B				4.86E+00					2.72E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	5.24E+00					1.46E+01		YES			1.01E+01				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	9.39E+03			YES	YES	2.09E+04			YES	YES	1.78E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	2.00E+01					1.90E+01					9.80E+00				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	2.52E+02					1.25E+03		YES			5.97E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	5.06E+02			YES	YES	1.71E+02				YES	7.10E+01				
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	5.10E-02	J				1.19E-01	J	YES		YES	8.05E-02	J	YES		
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	4.10E+00					1.24E+01		YES			5.90E+00				
Potassium	mg/kg	8.00E+02	NA	NA	3.51E+02	J				1.34E+03		YES			8.68E+02		YES		
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	3.34E+01	J				5.97E+01	J				3.74E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.56E+01				YES	4.11E+01				YES	2.98E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.36E+01	B				4.00E+01					1.92E+01				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					ND					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					8.40E-02					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					ND					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					ND					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					ND					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					ND					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP10 PQ0019 18-Feb-02 0- 1					HR-88Q-GP11 PQ0022 18-Feb-02 0- 1					HR-88Q-GP12 PQ0024 4-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	1.14E+04			YES	YES	1.18E+04			YES	YES	2.04E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.68E+00			YES		4.11E+00			YES		3.85E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	3.91E+01					3.28E+01					9.64E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					ND					7.09E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	5.74E+02					1.56E+02					1.40E+03				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	8.22E+00				YES	1.18E+01				YES	1.23E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	3.65E+00	B				2.12E+00	B				6.65E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	6.55E+00					7.06E+00					8.00E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.19E+04			YES	YES	1.40E+04			YES	YES	1.13E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.43E+01					1.41E+01					2.68E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	4.35E+02					3.00E+02					9.75E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	2.05E+02				YES	1.72E+02				YES	1.60E+03		YES	YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	8.66E-02	J	YES			1.01E-01	J	YES		YES	6.23E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	4.58E+00					4.31E+00					8.74E+00				
Potassium	mg/kg	8.00E+02	NA	NA	4.36E+02	J				3.69E+02	J				7.08E+02				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	3.99E+01	J				3.09E+01	J				4.90E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.93E+01				YES	2.20E+01				YES	2.28E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.41E+01	B				1.42E+01	B				3.60E+01				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					2.10E-02				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					2.70E-01				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					5.30E-03				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					ND				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					ND				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP13 PQ0026 18-Feb-02 0- 1					HR-88Q-GP14 PQ0029 18-Feb-02 0- 1					HR-88Q-GP15 PQ0030 18-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	9.64E+03			YES	YES	7.53E+03				YES	1.37E+04			YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.46E+00			YES		3.25E+00			YES		4.51E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	9.03E+01					7.14E+01					5.24E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	4.65E-01	J				ND					4.11E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	8.40E+02					9.62E+02					5.75E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	6.85E+00				YES	1.02E+01				YES	1.11E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	4.22E+00	B				3.69E+00	B				2.82E+00	B			
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	1.27E+01					9.58E+00					7.97E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	8.96E+03			YES	YES	8.18E+03			YES	YES	1.43E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	2.88E+01					3.00E+01					1.56E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	4.15E+02					3.48E+02					4.69E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	8.07E+02			YES	YES	7.29E+02			YES	YES	2.59E+02				YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	4.19E-02	J				1.01E-01	J	YES		YES	5.47E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	4.50E+00					3.87E+00					5.20E+00				
Potassium	mg/kg	8.00E+02	NA	NA	5.99E+02	J				3.95E+02	J				4.72E+02	J			
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	4.21E+01	J				4.45E+01	J				4.62E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.51E+01				YES	1.34E+01				YES	2.39E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.49E+01	J				4.35E+01	J	YES			1.87E+01	J			
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP16 PQ0032 19-Feb-02 0- 1					HR-88Q-GP17 PQ0034 4-Feb-02 0- 1					HR-88Q-GP18 PQ0036 14-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	1.70E+04		YES	YES	YES	2.68E+04		YES	YES	YES	1.39E+04			YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	4.75E+00			YES		5.78E+00			YES		3.67E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	2.24E+02		YES		YES	1.52E+02		YES			7.42E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	1.17E+00	J	YES		YES	9.48E-01	J	YES			6.27E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	7.64E+02					5.46E+02					6.68E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	8.36E+00				YES	1.75E+01				YES	6.40E+00				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	6.26E+00					8.15E+00					7.23E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	7.43E+00					1.30E+01		YES			6.13E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	9.53E+03			YES	YES	1.62E+04			YES	YES	1.17E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	2.38E+01					2.51E+01					1.83E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	5.61E+02					9.45E+02					4.87E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	2.58E+03		YES	YES	YES	1.49E+03			YES	YES	1.61E+03		YES	YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	ND					3.85E-02	J				6.48E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	6.74E+00					1.13E+01		YES			6.69E+00				
Potassium	mg/kg	8.00E+02	NA	NA	5.89E+02	J				1.15E+03		YES			5.30E+02	J			
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	4.52E+01	J				5.43E+01	J				4.24E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.83E+01				YES	3.23E+01				YES	1.97E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.09E+01					5.40E+01		YES		YES	1.55E+01	J			
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					2.20E-02					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					2.10E-01					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					ND					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					ND					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					ND					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					ND					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP19 PQ0037 31-Jan-02 0- 1					HR-88Q-GP20 PQ0039 18-Feb-02 0- 1					HR-88Q-GP21 PQ0040 19-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	1.73E+04		YES	YES	YES	1.22E+04			YES	YES	1.82E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.40E+00			YES		4.13E+00			YES		4.06E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	1.58E+02		YES			7.53E+01					7.51E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	9.23E-01	J	YES			4.70E-01	J				6.09E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	3.36E+02					2.81E+02					1.45E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	8.33E+00				YES	1.11E+01				YES	1.20E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	6.20E+00					5.42E+00					5.54E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	6.93E+00					6.27E+00					7.74E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.01E+04	J		YES	YES	1.26E+04			YES	YES	1.27E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.96E+01					2.23E+01					1.81E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	5.06E+02					3.29E+02					5.41E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	2.00E+03		YES	YES	YES	7.74E+02			YES	YES	8.41E+02			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	4.06E-02	J				4.37E-02	J				3.83E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	6.88E+00					5.52E+00					7.68E+00				
Potassium	mg/kg	8.00E+02	NA	NA	5.73E+02	J				4.68E+02	J				6.02E+02				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	5.06E+01	J				5.05E+01	J				3.90E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.91E+01	J			YES	2.07E+01				YES	2.34E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.78E+01	J				1.45E+01	B				2.29E+01				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP22 PQ0041 19-Feb-02 0- 1					HR-88Q-GP23 PQ0043 19-Feb-02 0- 1					HR-88Q-GP24 PQ0046 19-Feb-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	5.70E+03				YES	2.13E+04		YES	YES	YES	3.43E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	1.66E+00			YES		4.75E+00			YES		1.24E+01			YES	YES
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	2.11E+01					6.43E+01					1.03E+02				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					4.77E-01	J				1.10E+00	J	YES		YES
Calcium	mg/kg	1.72E+03	NA	NA	1.17E+02					6.40E+02					8.36E+02				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	4.88E+00				YES	1.68E+01				YES	2.64E+01			YES	YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	1.28E+00	J				5.48E+00					7.55E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	3.72E+00					9.71E+00					7.50E+01		YES		YES
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	5.33E+03			YES	YES	1.57E+04			YES	YES	3.87E+04		YES	YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	9.64E+00					1.58E+01					3.08E+02		YES		YES
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	2.10E+02					8.05E+02					9.63E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	9.88E+01					3.36E+02				YES	9.94E+02			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	4.08E-02	J				4.07E-02	J				1.10E-01	J	YES		YES
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	1.56E+00	B				8.37E+00					1.94E+01		YES		
Potassium	mg/kg	8.00E+02	NA	NA	3.36E+02	J				8.92E+02		YES			1.09E+03		YES		
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	3.19E+01	J				4.35E+01	J				4.81E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	9.57E+00				YES	2.93E+01				YES	5.99E+01		YES	YES	YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.10E+01					2.48E+01					6.12E+01		YES		YES
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR					NR				
HERBICIDES																			
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR					NR				
PESTICIDES																			
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR					NR				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-GP25 PQ0048 19-Feb-02 0- 1					HR-88Q-MW01 PQ0050 24-Jan-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS														
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	2.04E+04		YES	YES	YES	1.59E+04			YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	4.52E+00			YES		3.77E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	6.65E+01					5.38E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	5.05E-01	J				4.14E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	1.37E+03					2.04E+02	J			
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.93E+01				YES	1.14E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	4.25E+00					3.70E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	1.14E+01					2.81E+01		YES		
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.60E+04			YES	YES	1.24E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.51E+01					2.17E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	7.87E+02					5.51E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	3.33E+02				YES	3.09E+02				YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	5.38E-02	J				4.62E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	7.29E+00					6.15E+00				
Potassium	mg/kg	8.00E+02	NA	NA	9.00E+02		YES			6.71E+02				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	3.74E+01	J				6.21E+01	B			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	2.91E+01				YES	2.28E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.79E+01					3.95E+01	J			
VOLATILE ORGANIC COMPOUNDS														
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					8.20E-02	J			
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					1.90E-03	B			
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					ND				
HERBICIDES														
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					6.30E-01	J			YES
PESTICIDES														
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					ND				

Table 5-1

Surface and Depositional Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-MW02 PQ0052 24-Jan-02 0- 1					HR-88Q-MW03 PQ0054 24-Jan-02 0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS														
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	1.36E+04			YES	YES	1.86E+04		YES	YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.64E+00			YES		4.34E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	9.98E+01					1.37E+02		YES		
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	6.25E-01	J				7.04E-01	J			
Calcium	mg/kg	1.72E+03	NA	NA	1.99E+03	J	YES			3.06E+02	J			
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	8.84E+00				YES	1.10E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	5.53E+00					6.33E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	9.16E+00					9.09E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	9.14E+03			YES	YES	1.08E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	2.05E+01					2.30E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	7.93E+02					6.74E+02				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	1.31E+03			YES	YES	1.01E+03			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	ND					4.03E-02	J			
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	6.60E+00					7.73E+00				
Potassium	mg/kg	8.00E+02	NA	NA	6.53E+02					7.85E+02				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	6.74E+01	J				6.31E+01	J			
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.71E+01				YES	2.24E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	2.38E+01	J				2.72E+01	J			
VOLATILE ORGANIC COMPOUNDS														
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	NR					NR				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	NR					NR				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	NR					NR				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	NR					NR				
HERBICIDES														
MCPP	mg/kg	NA	7.77E+00	1.00E-01	NR					NR				
PESTICIDES														
Endrin	mg/kg	NA	2.32E+00	1.00E-03	NR					NR				

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

[a] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] Residential human health site-specific screening level (SSSL) and ecological screening value (ESV) as given in IT, 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.
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 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-102Q-GP01 QF0002 19-Feb-02 3-4				HR-102Q-GP02 QF0004 19-Feb-02 2.5- 3				HR-102Q-MW01 QF0006 19-Feb-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	2.18E+04		YES	YES	2.47E+04		YES	YES	1.75E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	4.14E+00			YES	1.70E+01			YES	3.70E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	4.21E+01	J			7.62E+01	J			4.63E+01	J		
Beryllium	mg/kg	8.60E-01	9.60E+00	4.05E-01	J			1.11E+00	J	YES		4.52E-01	J		
Calcium	mg/kg	6.37E+02	NA	7.55E+01	J			3.21E+02	J			6.16E+02	J		
Chromium	mg/kg	3.83E+01	2.32E+01	1.28E+01	J			4.39E+01	J	YES	YES	1.85E+01	J		
Cobalt	mg/kg	1.75E+01	4.68E+02	2.92E+00				2.45E+01		YES		2.12E+00	J		
Copper	mg/kg	1.94E+01	3.13E+02	1.01E+01				1.88E+01				1.08E+01			
Iron	mg/kg	4.48E+04	2.34E+03	1.60E+04			YES	4.12E+04			YES	2.10E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	1.10E+01				5.09E+01		YES		8.20E+00			
Magnesium	mg/kg	7.66E+02	NA	6.87E+02	J			7.35E+02	J			6.43E+02	J		
Manganese	mg/kg	1.36E+03	3.63E+02	8.60E+01	J			2.41E+03	J	YES	YES	6.51E+01	J		
Mercury	mg/kg	7.00E-02	2.33E+00	3.84E-02	J			7.07E-02	J	YES		ND			
Nickel	mg/kg	1.29E+01	1.54E+02	8.33E+00				1.18E+01				5.06E+00			
Potassium	mg/kg	7.11E+02	NA	5.61E+02	J			7.51E+02		YES		1.13E+03		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				6.74E-01	J	YES		6.44E-01	J	YES	
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	3.74E+01	J			4.45E+01	J			4.17E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	2.77E+01	J			5.65E+01	J		YES	3.14E+01	J		
Zinc	mg/kg	3.49E+01	2.34E+03	2.79E+01	J			4.52E+01	J	YES		2.01E+01	J		
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				NR				NR			
Acetone	mg/kg	NA	7.76E+02	NR				NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	NR				NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				NR				NR			
Endrin	mg/kg	NA	2.32E+00	NR				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	NR				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-106Q-GP01 PR0002 21-Feb-02 3-4				HR-106Q-GP02 PR0005 21-Feb-02 3-4				HR-106Q-GP03 PR0008 21-Feb-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	2.53E+04		YES	YES	1.35E+04			YES	2.02E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	5.63E+00			YES	3.66E+00			YES	3.88E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	3.38E+02		YES		4.52E+01				7.17E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	1.70E+00		YES		ND				4.35E-01	J		
Calcium	mg/kg	6.37E+02	NA	5.96E+02				8.68E+01	J			2.42E+02			
Chromium	mg/kg	3.83E+01	2.32E+01	1.05E+01				1.36E+01				1.73E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	8.03E+00				2.04E+00	J			4.08E+00			
Copper	mg/kg	1.94E+01	3.13E+02	1.04E+01				1.05E+01				1.03E+01			
Iron	mg/kg	4.48E+04	2.34E+03	1.27E+04			YES	1.79E+04			YES	1.62E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	2.08E+01				7.79E+00				1.13E+01			
Magnesium	mg/kg	7.66E+02	NA	7.11E+02				4.06E+02				7.87E+02		YES	
Manganese	mg/kg	1.36E+03	3.63E+02	4.05E+03		YES	YES	5.94E+01				1.95E+02			
Mercury	mg/kg	7.00E-02	2.33E+00	3.57E-02	J			ND				3.85E-02	J		
Nickel	mg/kg	1.29E+01	1.54E+02	9.94E+00				4.29E+00				7.50E+00			
Potassium	mg/kg	7.11E+02	NA	7.56E+02		YES		8.74E+02		YES		9.37E+02		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	6.19E+01	J			5.25E+01	J			4.50E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	2.44E+01				2.58E+01				2.79E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	2.29E+01				1.63E+01				2.15E+01			
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				ND				NR			
Acetone	mg/kg	NA	7.76E+02	NR				ND				NR			
Methylene chloride	mg/kg	NA	8.41E+01	NR				ND				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				ND				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				ND				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				1.40E-03	J			NR			
Endrin	mg/kg	NA	2.32E+00	NR				6.10E-04	J			NR			
alpha-BHC	mg/kg	NA	1.00E-01	NR				3.30E-04	J			NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-106Q-GP04 PR0010 21-Feb-02 3-4				HR-106Q-GP05 PR0012 21-Feb-02 3-4				HR-106Q-GP06 PR0014 25-Jan-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	3.04E+04		YES	YES	2.09E+04		YES	YES	2.17E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	4.58E+00			YES	4.85E+00			YES	5.57E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	5.90E+01				4.81E+01				5.89E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	5.53E-01	J			5.05E-01	J			4.57E-01	J		
Calcium	mg/kg	6.37E+02	NA	1.13E+02	J			6.44E+01	J			2.68E+02			
Chromium	mg/kg	3.83E+01	2.32E+01	1.29E+01				2.18E+01				1.98E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	7.69E+00				2.26E+00	J			3.51E+00			
Copper	mg/kg	1.94E+01	3.13E+02	1.17E+01				1.31E+01				1.32E+01			
Iron	mg/kg	4.48E+04	2.34E+03	1.87E+04			YES	2.18E+04			YES	2.30E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	1.84E+01				9.28E+00				1.01E+01			
Magnesium	mg/kg	7.66E+02	NA	8.94E+02		YES		6.30E+02				7.56E+02			
Manganese	mg/kg	1.36E+03	3.63E+02	9.83E+02			YES	7.49E+01				1.37E+02			
Mercury	mg/kg	7.00E-02	2.33E+00	1.11E-01	J	YES		4.44E-02	J			1.03E-01	J	YES	
Nickel	mg/kg	1.29E+01	1.54E+02	1.25E+01				8.01E+00				7.62E+00			
Potassium	mg/kg	7.11E+02	NA	8.55E+02		YES		1.54E+03		YES		9.00E+02		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	5.76E+01	J			4.55E+01	J			4.89E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	3.45E+01				3.41E+01				3.84E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	3.01E+01				2.29E+01				2.56E+01			
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				NR				NR			
Acetone	mg/kg	NA	7.76E+02	NR				NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	NR				NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				NR				NR			
Endrin	mg/kg	NA	2.32E+00	NR				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	NR				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-106Q-GP07 PR0016 31-Jan-02 3-4				HR-106Q-MW01 PR0018 25-Jan-02 3-4				HR-88Q-GP01 PQ0002 28-Jan-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	2.12E+04		YES	YES	2.05E+04		YES	YES	2.00E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	5.81E+00	J	YES	YES	ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	4.36E+00			YES	5.07E+00			YES	3.94E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	3.52E+01				3.47E+01				3.72E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	ND				ND				4.16E-01	J		
Calcium	mg/kg	6.37E+02	NA	2.62E+02				8.76E+01	J			1.73E+02			
Chromium	mg/kg	3.83E+01	2.32E+01	1.60E+01				1.61E+01				1.86E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	8.96E+00				3.71E+00				2.87E+00			
Copper	mg/kg	1.94E+01	3.13E+02	9.77E+00				1.03E+01				1.27E+01			
Iron	mg/kg	4.48E+04	2.34E+03	2.00E+04			YES	2.07E+04			YES	1.94E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	1.48E+01				1.18E+01				9.64E+00			
Magnesium	mg/kg	7.66E+02	NA	6.74E+02				5.87E+02				6.77E+02			
Manganese	mg/kg	1.36E+03	3.63E+02	3.36E+02				1.72E+02				7.89E+01			
Mercury	mg/kg	7.00E-02	2.33E+00	1.20E-01	J	YES		1.28E-01		YES		9.22E-02	J	YES	
Nickel	mg/kg	1.29E+01	1.54E+02	1.07E+01				8.95E+00				6.63E+00			
Potassium	mg/kg	7.11E+02	NA	5.31E+02	J			5.36E+02	J			9.69E+02		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				6.32E-01	J	YES	
Silver	mg/kg	2.40E-01	3.91E+01	1.38E+00	J	YES		ND				ND			
Sodium	mg/kg	7.02E+02	NA	5.37E+01	J			5.79E+01	J			6.00E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	3.42E+01				3.43E+01				3.21E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	2.11E+01				2.13E+01				2.20E+01			
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				NR				NR			
Acetone	mg/kg	NA	7.76E+02	NR				NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	NR				NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				NR				NR			
Endrin	mg/kg	NA	2.32E+00	NR				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	NR				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-88Q-GP02 PQ0004 14-Feb-02 3-4				HR-88Q-GP03 PQ0007 31-Jan-02 3-4				HR-88Q-GP04 PQ0009 31-Jan-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	1.15E+04			YES	2.15E+04		YES	YES	2.06E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	2.95E+00			YES	5.07E+00			YES	5.35E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	1.97E+01				4.36E+01				3.64E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	ND				ND				4.33E-01	J		
Calcium	mg/kg	6.37E+02	NA	1.50E+02				3.27E+02				1.69E+02			
Chromium	mg/kg	3.83E+01	2.32E+01	1.08E+01				1.79E+01				1.88E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	1.48E+00	B			4.88E+00				4.26E+00			
Copper	mg/kg	1.94E+01	3.13E+02	6.13E+00				1.11E+01				1.22E+01			
Iron	mg/kg	4.48E+04	2.34E+03	1.41E+04			YES	2.09E+04	J		YES	2.11E+04	J		YES
Lead	mg/kg	3.85E+01	4.00E+02	8.34E+00				1.17E+01				1.18E+01			
Magnesium	mg/kg	7.66E+02	NA	3.71E+02				7.49E+02				6.10E+02			
Manganese	mg/kg	1.36E+03	3.63E+02	8.11E+01				1.67E+02				1.18E+02			
Mercury	mg/kg	7.00E-02	2.33E+00	6.76E-02	J			4.09E-02	J			9.28E-02	J	YES	
Nickel	mg/kg	1.29E+01	1.54E+02	3.97E+00				7.55E+00				8.84E+00			
Potassium	mg/kg	7.11E+02	NA	4.67E+02	J			8.36E+02		YES		7.23E+02		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	3.45E+01	J			4.62E+01	J			4.26E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	2.27E+01				3.61E+01	J			3.20E+01	J		
Zinc	mg/kg	3.49E+01	2.34E+03	1.13E+01	B			2.24E+01	J			2.28E+01	J		
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				NR				ND			
Acetone	mg/kg	NA	7.76E+02	NR				NR				2.70E-02			
Methylene chloride	mg/kg	NA	8.41E+01	NR				NR				1.70E-03	B		
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				NR				1.50E-03	J		
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				NR				ND			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				NR				ND			
Endrin	mg/kg	NA	2.32E+00	NR				NR				ND			
alpha-BHC	mg/kg	NA	1.00E-01	NR				NR				ND			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-88Q-GP05 PQ0011 31-Jan-02 3-4				HR-88Q-GP06 PQ0013 14-Feb-02 3-4				HR-88Q-GP08 PQ0016 4-Feb-02 3- 3.5			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	1.96E+04		YES	YES	1.16E+04			YES	2.71E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	5.41E+00			YES	3.93E+00			YES	5.66E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	5.06E+01				2.51E+01				5.83E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	5.20E-01	J			ND				5.78E-01	J		
Calcium	mg/kg	6.37E+02	NA	2.66E+02				2.89E+01	B			9.31E+01	J		
Chromium	mg/kg	3.83E+01	2.32E+01	2.68E+01			YES	9.44E+00				1.72E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	2.91E+00				ND				2.77E+00			
Copper	mg/kg	1.94E+01	3.13E+02	1.25E+01				1.06E+01				1.65E+01			
Iron	mg/kg	4.48E+04	2.34E+03	2.38E+04	J		YES	1.84E+04			YES	2.14E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	9.65E+00				7.37E+00				1.21E+01			
Magnesium	mg/kg	7.66E+02	NA	6.99E+02				3.09E+02				9.84E+02		YES	
Manganese	mg/kg	1.36E+03	3.63E+02	1.12E+02				6.38E+01				1.21E+02			
Mercury	mg/kg	7.00E-02	2.33E+00	5.67E-02	J			5.92E-02	J			4.82E-02	J		
Nickel	mg/kg	1.29E+01	1.54E+02	6.22E+00				3.60E+00				1.01E+01			
Potassium	mg/kg	7.11E+02	NA	1.38E+03		YES		8.35E+02		YES		1.57E+03		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	4.84E+01	J			3.76E+01	J			5.74E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	3.73E+01	J			2.39E+01				3.86E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	2.37E+01	J			1.34E+01	B			3.07E+01			
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				NR				ND			
Acetone	mg/kg	NA	7.76E+02	NR				NR				2.30E-02	J		
Methylene chloride	mg/kg	NA	8.41E+01	NR				NR				ND			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				NR				ND			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				NR				ND			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				NR				ND			
Endrin	mg/kg	NA	2.32E+00	NR				NR				ND			
alpha-BHC	mg/kg	NA	1.00E-01	NR				NR				ND			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-88Q-GP09 PQ0018 25-Jan-02 3-4				HR-88Q-GP10 PQ0021 18-Feb-02 3-4				HR-88Q-GP11 PQ0023 18-Feb-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	1.80E+04		YES	YES	1.27E+04			YES	1.24E+04			YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	4.11E+00			YES	4.58E+00			YES	4.15E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	3.91E+01				3.02E+01				4.14E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	4.58E-01	J			ND				4.28E-01	J		
Calcium	mg/kg	6.37E+02	NA	4.13E+01	J			3.68E+01	B			2.04E+02			
Chromium	mg/kg	3.83E+01	2.32E+01	1.51E+01				1.06E+01				1.44E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	2.24E+00	J			1.48E+00	B			4.87E+00			
Copper	mg/kg	1.94E+01	3.13E+02	1.37E+01				1.13E+01				5.98E+00			
Iron	mg/kg	4.48E+04	2.34E+03	2.03E+04			YES	2.06E+04			YES	1.46E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	9.54E+00				7.70E+00				1.19E+01			
Magnesium	mg/kg	7.66E+02	NA	5.57E+02				3.34E+02				3.37E+02			
Manganese	mg/kg	1.36E+03	3.63E+02	6.15E+01				6.46E+01				1.89E+02			
Mercury	mg/kg	7.00E-02	2.33E+00	4.87E-02	J			7.87E-02	J	YES		7.95E-02	J	YES	
Nickel	mg/kg	1.29E+01	1.54E+02	4.97E+00				4.02E+00				4.46E+00			
Potassium	mg/kg	7.11E+02	NA	1.19E+03		YES		8.82E+02		YES		3.10E+02	J		
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	5.68E+01	J			3.90E+01	J			4.40E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	3.03E+01				2.61E+01				2.28E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	1.85E+01				1.56E+01	J			1.21E+01	B		
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				NR				NR			
Acetone	mg/kg	NA	7.76E+02	NR				NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	NR				NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				NR				NR			
Endrin	mg/kg	NA	2.32E+00	NR				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	NR				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-88Q-GP12 PQ0025 4-Feb-02 3-4				HR-88Q-GP13 PQ0028 18-Feb-02 3-4				HR-88Q-GP16 PQ0033 19-Feb-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	3.23E+04		YES	YES	1.25E+04			YES	2.30E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	4.36E+00			YES	3.58E+00			YES	4.32E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	6.58E+01				7.50E+01				5.91E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	7.07E-01	J			4.94E-01	J			4.38E-01	J		
Calcium	mg/kg	6.37E+02	NA	1.44E+02				4.20E+02				1.06E+02	J		
Chromium	mg/kg	3.83E+01	2.32E+01	1.40E+01				1.36E+01				1.14E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	7.85E+00				4.69E+00	B			7.73E+00			
Copper	mg/kg	1.94E+01	3.13E+02	1.17E+01				6.04E+00				1.08E+01			
Iron	mg/kg	4.48E+04	2.34E+03	1.63E+04			YES	1.20E+04			YES	1.60E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	1.83E+01				1.27E+01				1.77E+01			
Magnesium	mg/kg	7.66E+02	NA	9.92E+02		YES		3.95E+02				8.22E+02		YES	
Manganese	mg/kg	1.36E+03	3.63E+02	1.29E+03			YES	5.62E+02			YES	1.00E+03			YES
Mercury	mg/kg	7.00E-02	2.33E+00	7.42E-02	J	YES		3.58E-02	J			3.66E-02	J		
Nickel	mg/kg	1.29E+01	1.54E+02	1.27E+01				5.73E+00				9.24E+00			
Potassium	mg/kg	7.11E+02	NA	9.45E+02		YES		4.79E+02	J			8.48E+02		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	5.82E+01	J			4.16E+01	J			4.37E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	3.20E+01				1.91E+01				3.00E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	2.93E+01				1.38E+01	B			2.53E+01			
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	ND				NR				NR			
Acetone	mg/kg	NA	7.76E+02	1.00E-01				NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	ND				NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	ND				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	ND				NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	ND				NR				NR			
Endrin	mg/kg	NA	2.32E+00	ND				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	ND				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-88Q-GP17 PQ0035 4-Feb-02 3-4				HR-88Q-GP19 PQ0038 31-Jan-02 3-4				HR-88Q-GP22 PQ0042 19-Feb-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	2.49E+04		YES	YES	2.49E+04		YES	YES	1.37E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	4.11E+00			YES	4.96E+00			YES	3.58E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	2.03E+02				5.01E+01				3.43E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	1.08E+00	J	YES		5.41E-01	J			4.23E-01	J		
Calcium	mg/kg	6.37E+02	NA	3.86E+02				2.43E+02				2.58E+01	J		
Chromium	mg/kg	3.83E+01	2.32E+01	1.44E+01				1.51E+01				1.53E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	6.00E+00				7.14E+00				2.25E+00	J		
Copper	mg/kg	1.94E+01	3.13E+02	1.05E+01				1.07E+01				1.04E+01			
Iron	mg/kg	4.48E+04	2.34E+03	1.28E+04			YES	1.81E+04	J		YES	1.79E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	1.63E+01				1.61E+01				8.61E+00			
Magnesium	mg/kg	7.66E+02	NA	8.43E+02		YES		8.78E+02		YES		4.13E+02			
Manganese	mg/kg	1.36E+03	3.63E+02	1.51E+03		YES	YES	4.60E+02			YES	5.62E+01			
Mercury	mg/kg	7.00E-02	2.33E+00	ND				1.03E-01	J	YES		4.87E-02	J		
Nickel	mg/kg	1.29E+01	1.54E+02	1.06E+01				1.08E+01				4.48E+00			
Potassium	mg/kg	7.11E+02	NA	9.88E+02		YES		8.01E+02		YES		1.18E+03		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	5.87E+01	J			5.24E+01	J			4.35E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	2.62E+01				3.32E+01	J			2.63E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	2.56E+01				2.56E+01	J			1.63E+01			
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	1.70E-02	J			NR				NR			
Acetone	mg/kg	NA	7.76E+02	1.10E-01				NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	ND				NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	ND				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	ND				NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	ND				NR				NR			
Endrin	mg/kg	NA	2.32E+00	ND				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	ND				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-88Q-GP23 PQ0044 19-Feb-02 3-4				HR-88Q-GP24 PQ0047 19-Feb-02 3-4				HR-88Q-GP25 PQ0049 19-Feb-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	1.78E+04		YES	YES	2.43E+04		YES	YES	2.96E+03			
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	5.67E+00			YES	3.79E+00			YES	1.21E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	5.05E+01				1.03E+02				1.68E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	5.26E-01	J			4.80E-01	J			ND			
Calcium	mg/kg	6.37E+02	NA	5.62E+01	J			4.14E+02				4.60E+01	J		
Chromium	mg/kg	3.83E+01	2.32E+01	3.94E+01	J	YES	YES	1.53E+01				6.06E+00			
Cobalt	mg/kg	1.75E+01	4.68E+02	2.67E+00				6.16E+00				ND			
Copper	mg/kg	1.94E+01	3.13E+02	1.21E+01				1.08E+01				2.54E+00			
Iron	mg/kg	4.48E+04	2.34E+03	2.43E+04			YES	1.62E+04			YES	3.17E+03			YES
Lead	mg/kg	3.85E+01	4.00E+02	1.07E+01				1.82E+01				6.16E+00			
Magnesium	mg/kg	7.66E+02	NA	5.81E+02				8.19E+02		YES		1.15E+02			
Manganese	mg/kg	1.36E+03	3.63E+02	7.74E+01				6.12E+02			YES	5.35E+01			
Mercury	mg/kg	7.00E-02	2.33E+00	3.55E-02	J			6.16E-02	J			ND			
Nickel	mg/kg	1.29E+01	1.54E+02	6.07E+00				9.03E+00				1.46E+00	B		
Potassium	mg/kg	7.11E+02	NA	1.39E+03		YES		7.86E+02		YES		1.37E+02	J		
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	4.00E+01	J			4.03E+01	J			ND			
Vanadium	mg/kg	6.49E+01	5.31E+01	3.86E+01				3.25E+01				5.17E+00			
Zinc	mg/kg	3.49E+01	2.34E+03	2.17E+01				2.68E+01				1.14E+01			
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	NR				NR				NR			
Acetone	mg/kg	NA	7.76E+02	NR				NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	NR				NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	NR				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	NR				NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	NR				NR				NR			
Endrin	mg/kg	NA	2.32E+00	NR				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	NR				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Areas, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)				HR-88Q-MW01 PQ0051 24-Jan-02 3-4				HR-88Q-MW02 PQ0053 24-Jan-02 3-4				HR-88Q-MW03 PQ0055 24-Jan-02 3-4			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/kg	1.36E+04	7.80E+03	8.36E+03			YES	2.50E+04		YES	YES	2.33E+04		YES	YES
Antimony	mg/kg	1.31E+00	3.11E+00	ND				ND				ND			
Arsenic	mg/kg	1.83E+01	4.26E-01	2.57E+00			YES	4.79E+00			YES	4.73E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	6.42E+01				8.07E+01				1.59E+02			
Beryllium	mg/kg	8.60E-01	9.60E+00	ND				5.87E-01	J			5.22E-01	J		
Calcium	mg/kg	6.37E+02	NA	1.96E+02	J			4.38E+02	J			4.14E+02	J		
Chromium	mg/kg	3.83E+01	2.32E+01	1.01E+01				1.61E+01				1.69E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	3.52E+00				6.70E+00				6.29E+00			
Copper	mg/kg	1.94E+01	3.13E+02	6.72E+00				9.95E+00				9.80E+00			
Iron	mg/kg	4.48E+04	2.34E+03	7.95E+03			YES	1.56E+04			YES	1.61E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	1.08E+01				1.54E+01				1.36E+01			
Magnesium	mg/kg	7.66E+02	NA	2.52E+02				9.78E+02		YES		8.58E+02		YES	
Manganese	mg/kg	1.36E+03	3.63E+02	5.56E+02			YES	7.04E+02			YES	3.05E+02			
Mercury	mg/kg	7.00E-02	2.33E+00	ND				5.64E-02	J			5.73E-02	J		
Nickel	mg/kg	1.29E+01	1.54E+02	3.53E+00	B			1.07E+01			-	9.85E+00			
Potassium	mg/kg	7.11E+02	NA	2.96E+02	J			1.04E+03		YES		9.85E+02		YES	
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND			
Silver	mg/kg	2.40E-01	3.91E+01	ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	5.36E+01	J			6.20E+01	J			6.53E+01	J		
Vanadium	mg/kg	6.49E+01	5.31E+01	1.23E+01				3.16E+01				3.17E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	2.74E+01	J			2.64E+01	J			2.55E+01	J		
VOLATILE ORGANIC COMPOUNDS															
2-Butanone	mg/kg	NA	4.66E+03	ND				NR				NR			
Acetone	mg/kg	NA	7.76E+02	1.10E-01	J			NR				NR			
Methylene chloride	mg/kg	NA	8.41E+01	1.70E-03	B			NR				NR			
Trichlorofluoromethane	mg/kg	NA	2.33E+03	ND				NR				NR			
HERBICIDES															
2,4-DB	mg/kg	NA	6.22E+01	8.80E-03	J			NR				NR			
PESTICIDES															
Dieldrin	mg/kg	NA	3.88E-02	ND				NR				NR			
Endrin	mg/kg	NA	2.32E+00	ND				NR				NR			
alpha-BHC	mg/kg	NA	1.00E-01	ND				NR				NR			

Table 5-2

Subsurface Soil Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

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

[a] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] 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.
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 5-3

Groundwater Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

(Page 1 of 2)

Sample Location Sample Number Sample Date				HR-102Q-MW01 QF3001 25-Mar-02				HR-106Q-MW01 PR3001 19-Mar-02				HR-88Q-MW01 PQ3001 27-Mar-02			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/L	2.34E+00	1.56E+00	2.01E-01				3.17E-01	B			1.18E-01	J		
Barium	mg/L	1.27E-01	1.10E-01	1.34E-02				1.48E-02				1.28E-02	B		
Calcium	mg/L	5.65E+01	NA	2.05E+00				3.39E+01	B			1.60E+01	B		
Iron	mg/L	7.04E+00	4.69E-01	2.73E-01	J			5.02E-01	J		YES	2.07E-01	J		
Magnesium	mg/L	2.13E+01	NA	1.01E+00				2.07E+01				8.11E+00	B		
Manganese	mg/L	5.81E-01	7.35E-02	2.59E-01			YES	4.41E-02	J			2.27E-01			YES
Potassium	mg/L	7.20E+00	NA	8.59E-01	J			9.31E-01	J			8.74E-01	B		
Selenium	mg/L	NA	7.82E-03	ND				ND				2.79E-03	J		
Sodium	mg/L	1.48E+01	NA	1.72E+00				1.24E+00				3.58E+00	B		
EXPLOSIVES															
2-Nitrotoluene	mg/L	NA	1.53E-02	ND				ND				ND			

Table 5-3

Groundwater Analytical Results
Range 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date				HR-88Q-MW02 PQ3002 18-Mar-02				HR-88Q-MW03 PQ3003 15-Mar-02			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS											
Aluminum	mg/L	2.34E+00	1.56E+00	8.98E-02	B			ND			
Barium	mg/L	1.27E-01	1.10E-01	2.13E-02				1.76E-02			
Calcium	mg/L	5.65E+01	NA	3.18E+01				1.75E+00	B		
Iron	mg/L	7.04E+00	4.69E-01	2.13E-01	J			1.56E-02	J		
Magnesium	mg/L	2.13E+01	NA	1.86E+01				8.10E-01	B		
Manganese	mg/L	5.81E-01	7.35E-02	5.78E-02	J			3.17E-01			YES
Potassium	mg/L	7.20E+00	NA	1.09E+00	J			1.56E+00	B		
Selenium	mg/L	NA	7.82E-03	ND				ND			
Sodium	mg/L	1.48E+01	NA	1.06E+00				7.59E-01	B		
EXPLOSIVES											
2-Nitrotoluene	mg/L	NA	1.53E-02	ND				2.70E-04	J		

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

[a] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] 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.
J - Compound was positively identified; reported value is an estimated concentration.
mg/L - Milligrams per liter.
NA - Not available.
ND - Not detected.
Qual - Data validation qualifier.

Table 5-4

Surface Water Analytical Results
Ragne 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date					HR-88Q-SW/SD01 PQ2001 12-Mar-02					HR-88Q-SW/SD02 PQ2003 12-Mar-02				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS														
Aluminum	mg/L	5.26E+00	1.53E+01	8.70E-02	8.21E+00		YES		YES	5.39E+00		YES		YES
Arsenic	mg/L	2.17E-03	7.30E-04	1.90E-01	2.57E-03	J	YES	YES		2.48E-03	J	YES	YES	
Barium	mg/L	7.54E-02	1.10E+00	3.90E-03	4.59E-02				YES	1.63E-02				YES
Calcium	mg/L	2.52E+01	NA	1.16E+02	2.53E+00					1.14E+00				
Chromium	mg/L	1.11E-02	4.08E-02	1.10E-02	1.13E-02	J	YES		YES	ND				
Copper	mg/L	1.27E-02	6.23E-01	6.54E-03	2.70E-02		YES		YES	ND				
Iron	mg/L	1.96E+01	4.70E+00	1.00E+00	1.50E+01			YES	YES	4.04E+00				YES
Lead	mg/L	8.67E-03	1.50E-02	1.32E-03	5.80E-02		YES	YES	YES	3.13E-03	J			YES
Magnesium	mg/L	1.10E+01	NA	8.20E+01	1.48E+00					8.23E-01	J			
Manganese	mg/L	5.65E-01	6.40E-01	8.00E-02	3.73E-01				YES	5.14E-02	J			
Potassium	mg/L	2.56E+00	NA	5.30E+01	2.91E+00	J	YES			2.15E+00	J			
Sodium	mg/L	3.44E+00	NA	6.80E+02	6.91E-01	J				4.91E-01	J			
Thallium	mg/L	2.49E-03	1.02E-03	4.00E-03	ND					6.92E-03	J	YES	YES	YES
Vanadium	mg/L	1.52E-02	7.90E-02	1.90E-02	2.45E-02		YES		YES	8.26E-03	J			
Zinc	mg/L	4.04E-02	4.65E+00	5.89E-02	8.43E-02	J	YES		YES	ND				
VOLATILE ORGANIC COMPOUNDS														
Acetone	mg/L	NA	1.57E+00	7.80E+01	NR					5.60E-03	J			
Methylene chloride	mg/L	NA	1.42E-01	1.93E+00	NR					1.10E-03	B			
PESTICIDES														
alpha-BHC	mg/L	NA	1.55E-04	5.00E+00	NR					2.10E-05	J			
beta-BHC	mg/L	NA	5.35E-04	5.00E+01	NR					8.50E-05	J			

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

[a] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] 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.
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 5-5

Sediment Analytical Results
Ragne 30 Firing Line Area, Parcels 88Q, 102Q, and 106Q-X
Fort McClellan, Calhoun County, Alabama

Sample Location Sample Number Sample Date Sample Depth (Feet)					HR-88Q-SW/SD01 PQ1001 12-Mar-02 0- 0.5					HR-88Q-SW/SD02 PQ1003 12-Mar-02 0- 0.5				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS														
Aluminum	mg/kg	8.59E+03	1.15E+06	NA	1.23E+04		YES			1.07E+04		YES		
Arsenic	mg/kg	1.13E+01	5.58E+01	7.24E+00	6.08E+00					4.31E+00				
Barium	mg/kg	9.89E+01	8.36E+04	NA	3.51E+01	J				2.55E+01				
Beryllium	mg/kg	9.70E-01	1.50E+02	NA	4.36E-01	J				5.49E-01	J			
Calcium	mg/kg	1.11E+03	NA	NA	3.17E+02	J				1.87E+02				
Chromium	mg/kg	3.12E+01	2.79E+03	5.23E+01	1.87E+01	J				2.08E+01				
Cobalt	mg/kg	1.10E+01	6.72E+04	5.00E+01	4.60E+00					2.76E+00				
Copper	mg/kg	1.71E+01	4.74E+04	1.87E+01	1.02E+01					9.18E+00				
Iron	mg/kg	3.53E+04	3.59E+05	NA	1.86E+04					1.75E+04				
Lead	mg/kg	3.78E+01	4.00E+02	3.02E+01	2.33E+01					1.22E+01				
Magnesium	mg/kg	9.06E+02	NA	NA	5.15E+02					4.28E+02				
Manganese	mg/kg	7.12E+02	4.38E+04	NA	3.56E+02	J				1.39E+02				
Mercury	mg/kg	1.10E-01	2.99E+02	1.30E-01	4.05E-02	J				ND				
Nickel	mg/kg	1.30E+01	1.76E+04	1.59E+01	6.04E+00					5.65E+00				
Potassium	mg/kg	1.01E+03	NA	NA	5.21E+02	J				6.09E+02	J			
Selenium	mg/kg	7.20E-01	5.96E+03	NA	6.56E-01	J				6.19E-01	J			
Vanadium	mg/kg	4.09E+01	4.83E+03	NA	2.71E+01					2.39E+01				
Zinc	mg/kg	5.27E+01	3.44E+05	1.24E+02	2.32E+01	J				2.24E+01				
TOTAL ORGANIC CARBON														
Total Organic Carbon	mg/kg	NA	NA	NA	9.54E+01					4.90E+01				
VOLATILE ORGANIC COMPOUNDS														
2-Butanone	mg/kg	NA	6.23E+05	1.37E-01	NR					1.10E-02	J			
Acetone	mg/kg	NA	1.03E+05	4.53E-01	NR					2.30E-01	J			
p-Cymene	mg/kg	NA	2.08E+05	NA	NR					2.10E-02				

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

[a] BKG - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in SAIC, 1998, *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] 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.

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.

- Iron (38,700 mg/kg) exceeded its SSSL (2,345 mg/kg) and background (34,154 mg/kg) at sample location HR-88Q-GP24.

- Manganese (1,600 to 2,580 mg/kg) exceeded its SSSL (363 mg/kg) and background at five sample locations (HR-88Q-GP12, HR-88Q-GP16, HR-88Q-GP18, HR-88Q-GP19, and HR-106Q-MW01).

- Vanadium (59.9 mg/kg) exceeded its SSSL (53.1 mg/kg) and background (58.8 mg/kg) at sample location HR-88Q-GP24.

The concentrations of twelve metals (aluminum, arsenic, barium, beryllium, chromium, copper, iron, lead, manganese, mercury, vanadium, and zinc) exceeded ESVs. With the exception of arsenic, these metals also exceeded their respective background concentrations in one or more samples:

- Aluminum (16,400 to 34,300 mg/kg) exceeded its ESV (50 mg/kg) and background (16,306 mg/kg) at 22 sample locations.

- Barium (224 mg/kg) exceeded its ESV (165 mg/kg) and background (124 mg/kg) at sample location HR-88Q-GP16.

- Beryllium (1.1 and 1.2 mg/kg) exceeded its ESV (1.1 mg/kg) and background (0.8 mg/kg) at sample locations HR-88Q-GP16 and HR-88Q-GP24.

- Chromium (51 mg/kg) exceeded its ESV (0.4 mg/kg) and background (37 mg/kg) at sample location HR-106Q-DEP01.

- Copper (75 mg/kg) exceeded its ESV (40 mg/kg) and background (12.7 mg/kg) at sample location HR-88Q-GP24.

- Iron (38,700 mg/kg) exceeded its ESV (200 mg/kg) and background (34,154 mg/kg) at sample location HR-88Q-GP24.

- Lead (90 and 308 mg/kg) exceeded its ESV (50 mg/kg) and background (40 mg/kg) at sample locations HR-88Q-GP03 and HR-88Q-GP24.

- Manganese (1,600 to 2,580 mg/kg) exceeded its ESV (100 mg/kg) and background (1,579 mg/kg) at five sample locations (HR-88Q-GP12, HR-88Q-GP16, HR-88Q-GP18, HR-88Q-GP19, and HR-106Q-MW01).

- Mercury (0.10 to 0.15 mg/kg) exceeded its ESV (0.10 mg/kg) and background (0.08 mg/kg) at five sample locations (HR-88Q-GP01, HR-88Q-GP08, HR-88Q-GP11, HR-88Q-GP14, and HR-88Q-GP24).

- Vanadium (59.9 mg/kg) exceeded its ESV (2.0 mg/kg) and background (58.8 mg/kg) at sample location HR-88Q-GP24.

- Zinc (54 and 61 mg/kg) exceeded its ESV (50 mg/kg) and background (40.6 mg/kg) at sample locations HR-88Q-GP17 and HR-88Q-GP24.

Volatile Organic Compounds. Six surface soil sample locations were analyzed for VOCs: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. A total of four VOCs (2-butanone, acetone, methylene chloride, and toluene) were detected in the samples. The methylene chloride results were all flagged with a "B" data qualifier, indicating that it was also identified in an associated blank. All results were below SSSLs and ESVs.

Semivolatile Organic Compounds. Six surface soil sample locations were analyzed for SVOCs: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. SVOCs were not detected in the samples.

Herbicides. Six surface soil sample locations were analyzed for herbicides: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. MCPP was detected in one sample (HR-88Q-MW01) at a concentration (0.63 mg/kg) exceeding its ESV (0.1 mg/kg), but below its SSSL. The MCPP result was flagged with a "J" data qualifier, indicating that the herbicide was positively identified, but that the concentration was estimated.

Pesticides. Six surface soil sample locations were analyzed for pesticides: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. Endrin was detected in one sample (HR-106Q-GP02) at a concentration (0.0013 mg/kg) marginally exceeding its ESV (0.001 mg/kg), but below its SSSL. The endrin result was flagged with a "J" data qualifier, indicating that the pesticide was positively identified, but that the concentration was estimated.

Explosives. Explosives were not detected in the surface and depositional soil samples.

5.2 Subsurface Soil Analytical Results

Thirty-three subsurface soil samples were collected for chemical analysis at the Range 30 Firing Line Area. Subsurface soil samples were collected at a depth of 3 to 4 feet bgs at the locations shown on Figure 3-1. Analytical results were compared to residential human health SSSLs and metals background concentrations, as presented in Table 5-2.

Metals. Twenty-one metals were detected in subsurface soil samples collected at the site. The concentrations of seven metals (aluminum, antimony, arsenic, chromium, iron, manganese, and

vanadium) exceeded SSSLs. Of these metals, the concentrations of aluminum, antimony, chromium, and manganese also exceeded their respective background concentrations:

- Aluminum (13,700 to 32,300 mg/kg) exceeded its SSSL (7,803 mg/kg) and background (13,591 mg/kg) at 25 sample locations.

- Antimony (5.81 mg/kg) exceeded its SSSL (3.11 mg/kg) and background (1.31 mg/kg) at sample location HR-106Q-GP07.

- Chromium (39.4 and 43.9 mg/kg) exceeded its SSSL (23.2 mg/kg) and background (38.3 mg/kg) at sample locations HR-88Q-GP23 and HR-106Q-GP02.

- Manganese (1,510 to 4,050 mg/kg) exceeded its SSSL (363 mg/kg) and background (1,355 mg/kg) at three sample locations (HR-88Q-GP17, HR-102Q-GP02, and HR-106Q-GP01).

Volatile Organic Compounds. Six subsurface soil sample locations were analyzed for VOCs: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. A total of four VOCs (2-butanone, acetone, methylene chloride, and trichlorofluoromethane) were detected in the samples. All results were below SSSLs.

Semivolatile Organic Compounds. Six subsurface soil sample locations were analyzed for SVOCs: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. SVOCs were not detected in the samples.

Herbicides. Six subsurface soil sample locations were analyzed for herbicides: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. The herbicide 2,4-DB was detected in one of the samples at a concentration below its SSSL.

Pesticides. Six subsurface soil sample locations were analyzed for pesticides: HR-88Q-GP04, HR-88Q-GP08, HR-88Q-GP12, HR-88Q-GP17, HR-88Q-MW01, and HR-106Q-GP02. Three pesticides (dieldrin, endrin, and alpha-hexachlorocyclohexane [BHC]) were detected in one of the samples at concentrations below SSSLs.

Explosives. Explosives were not detected in the subsurface soil samples.

5.3 Groundwater Analytical Results

Five groundwater samples were collected for chemical analysis at the Range 30 Firing Line Area at the locations shown on Figure 3-1. Analytical results were compared to residential human health SSSLs and metals background concentrations, as presented in Table 5-3.

Metals. Nine metals were detected in groundwater samples collected at the site. The concentrations of two metals (iron and manganese) exceeded SSSLs but were below their respective background concentrations.

Volatile Organic Compounds. One groundwater sample (location HR-106Q-MW01) was analyzed for VOCs. VOCs were not detected in the sample.

Semivolatile Organic Compounds. One groundwater sample (location HR-106Q-MW01) was analyzed for SVOCs. SVOCs were not detected in the sample.

Herbicides. One groundwater sample (location HR-106Q-MW01) was analyzed for herbicides. Herbicides were not detected in the sample.

Pesticides. One groundwater sample (location HR-106Q-MW01) was analyzed for pesticides. Pesticides were not detected in the sample.

Explosives. The explosive compound 2-nitrotoluene was detected in one groundwater sample (location HR-88Q-MW03) at a concentration below its SSSL.

5.4 Surface Water Analytical Results

Two surface water samples were collected for chemical analysis at the Range 30 Firing Line Area at the locations shown on Figure 3-1. Analytical results were compared to recreational site user human health SSSLs, ESVs, and metals background concentrations, as presented in Table 5-4. It should be noted that the assumptions for residential and recreational site user exposure to surface water are identical.

Metals. Fifteen metals were detected in surface water samples collected at the site. The concentrations of three metals (arsenic, lead, and thallium) exceeded their respective SSSLs and background concentrations. The concentrations of seven metals (aluminum, chromium, copper, lead, thallium, vanadium, and zinc) exceeded their respective ESVs and background concentrations.

Volatile Organic Compounds. One surface water sample (location HR-88Q-SW/SD02) was analyzed for VOCs. Two VOCs (acetone and methylene chloride) were detected in the sample at concentrations below SSSLs and ESVs.

Semivolatile Organic Compounds. One surface water sample (location HR-88Q-SW/SD02) was analyzed for SVOCs. SVOCs were not detected in the sample.

Herbicides. One surface water sample (location HR-88Q-SW/SD02) was analyzed for herbicides. Herbicides were not detected in the sample.

Pesticides. One surface water sample (location HR-88Q-SW/SD02) was analyzed for pesticides. Two pesticides (alpha-BHC and beta-BHC) were detected in the sample at concentrations below SSSLs and ESVs.

Explosives. Explosives were not detected in the surface water samples.

5.5 Sediment Analytical Results

Two sediment samples were collected for chemical analysis at the Range 30 Firing Line Area at the locations shown on Figure 3-1. Analytical results were compared to recreational site user human health SSSLs, ESVs, and metals background concentrations, as presented in Table 5-5. It should be noted that the assumptions for residential and recreational site user exposure to sediment are identical.

Metals. Eighteen metals were detected in sediment samples collected at the site. All concentrations were below SSSLs and ESVs.

Volatile Organic Compounds. One sediment sample (location HR-88Q-SW/SD02) was analyzed for VOCs. Three VOCs (2-butanone, acetone, and p-cymene) were detected in the sample at concentrations below SSSLs and ESVs.

Semivolatile Organic Compounds. One sediment sample (location HR-88Q-SW/SD02) was analyzed for SVOCs. SVOCs were not detected in the sample.

Herbicides. One sediment sample (location HR-88Q-SW/SD02) was analyzed for herbicides. Herbicides were not detected in the sample.

Pesticides. One sediment sample (location HR-88Q-SW/SD02) was analyzed for pesticides. Pesticides were not detected in the sample.

Explosives. Explosives were not detected in the sediment samples.

Total Organic Carbon. The total organic carbon concentrations in the sediment samples were 95.4 mg/kg and 49.9 mg/kg, as summarized in Appendix F.

Grain Size. The results of the grain size analysis for the sediment samples are included in Appendix F.

5.6 Statistical and Geochemical Evaluations of Site Metals Data

Site metals data were further evaluated using statistical and geochemical methods to determine if the metals detected in site media are site related. This multi-tiered approach is described in the Shaw technical memorandum "Selecting Site-Related Chemicals for Human Health and Ecological Risk Assessments for FTMC: Revision 2" (Shaw, 2003). The statistical and geochemical evaluations (Appendix H) determined that the metals detected in site media were naturally occurring except for the following metals that may be indicative of site-related contamination:

- Copper (75 and 28.1 mg/kg) at two surface soil sample locations (HR-88Q-GP24 and HR-88Q-MW01)
- Lead (308 and 89.8 mg/kg) at two surface soil sample locations (HR-88Q-GP24 and HR-88Q-GP03)
- Lead (0.058 mg/L) at one surface water sample location (HR-88Q-SW/SD01).