

Draft
Site-Specific Safety and Health Plan Attachment
Remedial Investigation
Former Choccolocco Corridor Ranges: Former Range 40,
Parcel 94Q, and Range, Choccolocco Corridor, Parcel 146Q;
Former Range 41, Parcel 95Q and Impact Area, Choccolocco
Corridor, Parcel 131Q-X; Former Range 42, Parcel 96Q, Range,
Choccolocco Corridor, Parcel 145Q-X, and Impact Area,
Choccolocco Corridor, Parcel 148Q-X; and Former Range 43,
Parcel 97Q, Range, Choccolocco Corridor, Parcel 144Q-X, and
Impact Area, Choccolocco Corridor, Parcel 147Q-X
Fort McClellan
Calhoun County, Alabama

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

Prepared by:
Shaw Environmental, Inc.
312 Directors Drive
Knoxville, Tennessee 37923

Task Order CK10
Contract No. DACA21-96-D-0018
Shaw Project No. 796887

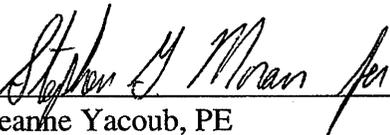
May 2003

The following site-specific safety and health plan (SSHP) has been designed for the methods presently contemplated by the company for execution of the proposed work. Therefore, the SSHP may not be appropriate if the work is not performed by or using the methods presently contemplated by the company. In addition, as the work is performed, conditions different from those anticipated may be encountered and the SSHP may have to be modified. Therefore, the company only makes representations or warranties as to the adequacy of this SSHP for currently anticipated activities and conditions.

This SSHP will be used in conjunction with the installation-wide sampling and analysis plan (SAP) and the installation-wide work plan (IT, 2002). The SAP includes the installation-wide safety and health plan, well installation and maintenance plan, investigation-derived waste (IDW) management plan, ordnance and explosives management plan, and quality assurance plan (QAP), Fort McClellan, Calhoun County, Alabama.

Site-Specific Safety and Health Plan Attachment Approval Fort McClellan, Calhoun County, Alabama

I have read and approve this site-specific safety and health plan attachment for the remedial investigation at the Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels, Fort McClellan, Alabama, with respect to project hazards, regulatory requirements, and Shaw procedures.

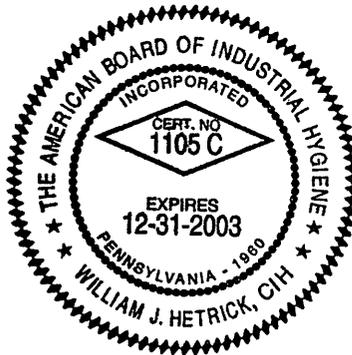


Jeanne Yacoub, PE
Shaw Project Manager

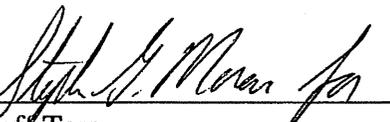
5/12/03
Date



William J. Hetrick, CIH
Shaw Health & Safety Manager



5/7/03
Date

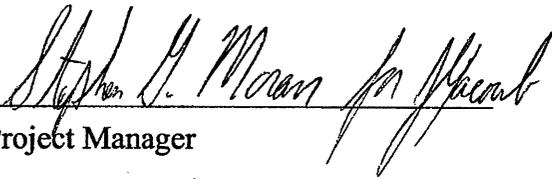


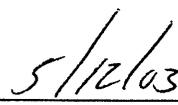
Jeff Tarr
Shaw Site Coordinator

5/12/03
Date

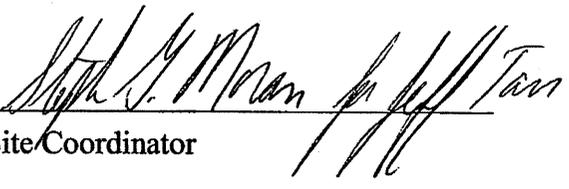
Acknowledgements

The approved version of this site-specific safety and health plan (SSHP) attachment for the remedial investigation at the Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels, Fort McClellan, Calhoun County, Alabama has been provided to the site coordinator. I acknowledge my responsibility to provide the site coordinator with the equipment, materials, and qualified personnel to implement fully all safety requirements in this SSHP attachment. I will formally review this plan with the health and safety staff every 6 months until project completion.


Project Manager


Date

I acknowledge receipt of this SSHP attachment from the project manager, and that it is my responsibility to explain its contents to all site personnel and cause these requirements to be fully implemented. Any change in conditions, scope of work, or other change that might affect worker safety requires me to notify the project manager and the health and safety manager.


Site Coordinator


Date

Fort McClellan Gate Hours

Galloway Gate	Galloway Road. Open 6 am to 6 pm Monday through Friday
Baltzell Gate	Baltzell Road. Open 24 hours daily, 7 days a week.

Fort McClellan Project Emergency Contacts

Range Control Office (Main Post).....	(256) 848-6772
Fire Department (off post)	911
Ambulance (off post)	911
Regional Medical Center	(256) 235-5121
DOD Guard Force (Mr. Bolton)	(256) 848-5680, 848-4732
Anniston Police Department	(256) 238-1800
Chemical Agent Emergencies.....	(256) 895-1598
(Mike Smith, CEHNC)	cell phone (256) 759-3931
UXO Emergencies	(256) 895-1598
(Mike Smith, CEHNC)	cell phone (256) 759-3931
UXO Nonemergencies/Reporting Only (Ronald Levy)	(256) 848-6853
National Response Center & Terrorist Hotline.....	(800) 424-8802
Poison Control Center.....	(800) 222-1222
EPA Region IV	(404) 562-8725
Ronald Levy, BRAC Environmental Coordinator, FTMC Transition Force	(256) 848-6853
Lisa Holstein, FTMC Transition Force.....	(256) 848-7455
Lee Coker, U.S. Army Corps of Engineers, Mobile District.....	(251) 690-3099
Phillip Stroud, Alabama Department of Environmental Management.....	(334) 270-5646
Doyle Brittain, EPA Region IV	(404) 562-8259
Ross McCollum, U.S. Army Corps of Engineers, Mobile District	(251) 690-3113
Mike Moore, Fort McClellan Safety Office	(256) 848-5433
Darryl Stabile, U.S. Army Corps of Engineers.....	(251) 690-2784
Jeanne Yacoub, Shaw Project Manager.....	(770) 663-1429
Jeff Tarr, Shaw Site Manager	(256) 848-3482, -3499
Bill Hetrick, Shaw H&S Manager	(865) 692-3571
Dr. Jerry H. Berke, Health Resources Occupational Physician.....	(800) 350-4511

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Attachment 1 – Evaluating OE/UXO/CWM in Support of HTRW Activities

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List of Acronyms

See Attachment 1 of the Site-Specific Field Sampling Plan for the list of Abbreviations and Acronyms.

1.0 Site Work Plan Summary

Project Objective. In accordance with Contract Number DACA21-96-D-0018, Task Order CK10, Shaw Environmental, Inc. (Shaw) formerly IT Corporation (IT) will conduct a remedial investigation (RI) at the Former Choccolocco Corridor Ranges: Former Range 40, Parcel 94Q, and Range, Choccolocco Corridor, Parcel 146Q; Former Range 41, Parcel 95Q and Impact Area, Choccolocco Corridor, Parcel 131Q-X; Former Range 42, Parcel 96Q, Range, Choccolocco Corridor, Parcel 145Q-X, and Impact Area, Choccolocco Corridor, Parcel 148Q-X; and Former Range 43, Parcel 97Q, Range, Choccolocco Corridor, Parcel 144Q-X, and Impact Area, Choccolocco Corridor, Parcel 147Q-X (Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels) at Fort McClellan (FTMC), Calhoun County, Alabama. The RI will determine the nature and extent of contamination resulting from former U.S. Army training activities that occurred at the sites. The purpose of this site-specific safety and health (SSHP) plan is to provide necessary safety and health requirements for the sampling activities proposed at Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels.

Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels, include the following four sets of ranges and parcels:

- Former Range 40, Parcel 94Q, and Range, Choccolocco Corridor, Parcel 146Q
- Former Range 41, Parcel 95Q and Impact Area, Parcel 131Q-X
- Former Range 42, Parcel 96Q; Range, Choccolocco Corridor, Parcel 145Q-X; and Impact Area, Choccolocco Corridor, Parcel 148Q-X
- Former Range 43, Parcel 97Q; Range, Choccolocco Corridor, Parcel 144Q-X; and Impact Area, Choccolocco Corridor, Parcel 147Q-X.

The objective of this investigation is to further characterize the potential contamination resulting from training activities that occurred at the site and to better define the extent of potential groundwater contamination observed during previous investigations. Shaw will collect samples to characterize the source, nature, and extent of contamination. The data collected will also be used to evaluate the level of risk to human health and the environment posed by releases of chemicals.

The scope of work for these RI activities will consist of a five-phase approach that includes the

1 following tasks:

- 2
- 3
- 4 1. X-ray fluorescence (XRF) survey of surface soil to determine locations of soil
- 5 borings and monitoring wells (approximately 700 locations).
- 6
- 7
- 8 2. Install 50 soil borings to collect one surface soil and two subsurface soil samples
- 9 (a total of 50 surface soil samples and 100 subsurface soil samples).
- 10
- 11
- 12 3. Collect surface soil samples from 50 locations for only surface soil, to be
- 13 determined based on XRF surface soil screening results.
- 14
- 15 4. Collect 25 groundwater samples from 10 proposed residuum monitoring wells and
- 16 15 existing monitoring wells.
- 17
- 18 5. Collect 30 surface water and 30 sediment samples.
- 19

20 XRF surface soil screening will be carried out in situ at approximately 450 locations within a
21 grid installed covering the area of investigation for Former Choccolocco Corridor Ranges,
22 Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels. Samples for XRF screening will be
23 collected at the grid line intersections or “grid nodes.” Additional XRF screening locations will
24 be selected in the area of investigation not covered by the grid to screen for other areas of
25 elevated lead concentrations. The purpose of the XRF surface soil screening will be to screen
26 the surface soils to identify areas potentially contaminated with lead. Soil borings and
27 monitoring wells will be installed using the XRF surface soil screening results to collect samples
28 for analysis to define the horizontal extent of the presence of lead.

29
30 A total of 50 soil borings will be installed at Former Choccolocco Corridor Ranges, Parcels 94Q,
31 95Q, 96Q, 97Q, and Associated Parcels to provide data to determine the vertical and horizontal
32 extent of potential contamination in soil. A total of 50 surface soil samples and 100 subsurface
33 soil samples will be collected from the 50 soil borings. XRF surface soil screening data may be
34 used to adjust the final locations of these selected soil borings. The selection of the intervals for
35 the discrete subsurface samples from these soil borings will be based on XRF screening of the
36 subsurface soil showing the highest lead concentrations.

37
38 Ten residuum monitoring wells are proposed at Former Choccolocco Corridor Ranges, Parcels
39 94Q, 95Q, 96Q, 97Q, and Associated Parcels to be installed to approximate depth of 50 feet.
40 The final location of the proposed residuum monitoring well locations will be determined based
41 on XRF surface soil screening results.

1
2 Twenty five groundwater samples will be collected from the monitoring wells in the vicinity of
3 Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels.
4 Groundwater samples will be collected from the 10 proposed and 15 existing monitoring wells.
5 Groundwater sample data will provide information on flow direction and water quality in the
6 residuum saturated zone. Groundwater elevation measurements in the monitoring wells will
7 provide local groundwater flow direction.

8
9 Thirty proposed surface water and sediment samples will be collected from intermittent stream
10 locations at Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated
11 Parcels.

12
13 At completion of the field activities and sample analysis, draft and final reports will be prepared
14 to summarize the results of the activities.

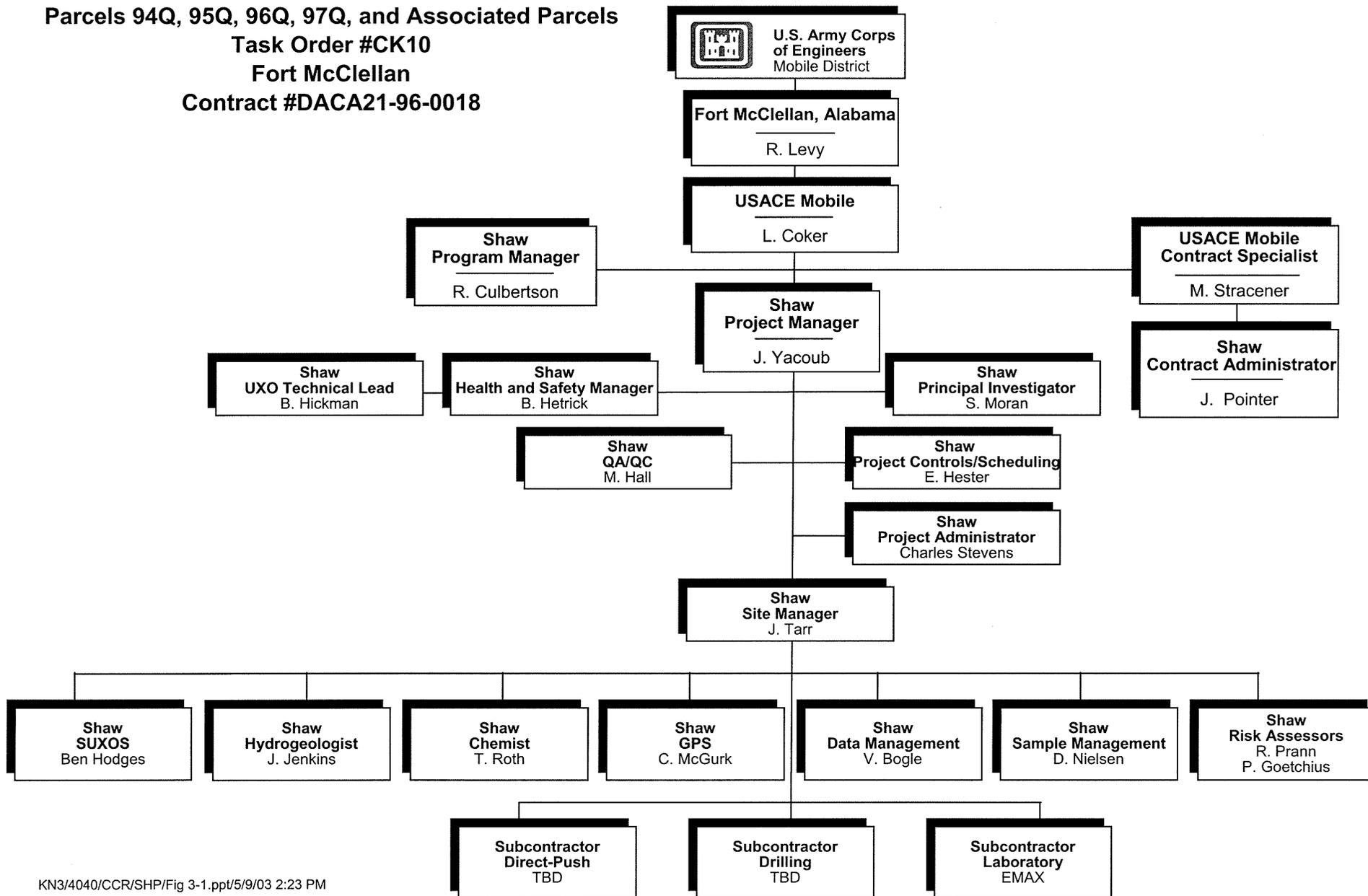
15
16 Foster Wheeler Environmental Corporation conducted an ordnance and explosives engineering
17 evaluation/cost analysis (EE/CA) investigation in 2002 and 2003. The purpose of the EE/CA
18 was to investigate the nature and extent of unexploded ordnance and ordnance and explosives
19 (UXO/OE) in Charlie Area (includes Choccolocco Corridor) on FTMC. Based on the results of
20 the field work, U.S. Army Corps of Engineers (USACE)-Huntsville Center has issued an internal
21 draft EE/CA report that states that neither UXO nor OE was found within Choccolocco Corridor.
22 Therefore, the USACE-Huntsville Center issued a memorandum, dated 20 March 2003, to
23 USACE-Mobile District stating that UXO avoidance is no longer needed for Choccolocco
24 Corridor of FTMC.

25
26 Attachment 1, Evaluating OE/UXO/CWM Hazards in Support of HTRW Activities, confirm that
27 the historical records available for the sites have been reviewed and that UXO support is no
28 longer required for site activities on Choccolocco Corridor. Additionally, based on all available
29 information, it is anticipated that the potential for chemical warfare agents is low, and no real
30 time air monitoring for chemical warfare materials will be required. A copy of the memorandum
31 by the USACE Huntsville Center stating the EE/CA findings is attached to the Evaluating
32 OE/UXO/CWM Hazards in Support of HTRW Activities form.

33
34 **Personnel Requirements.** Up to 15 employees are anticipated for this scope of work.
35 Figure 1-1 contains an organizational chart.

36

Figure 1-1
Organization Chart
Former Choccolocco Corridor Ranges,
Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Task Order #CK10
Fort McClellan
Contract #DACA21-96-0018



1 Note: All personnel on this site shall have received training, informational programs, and
2 medical surveillance as outlined in the installation-wide safety and health plan (SHP) for site
3 investigations at FTMC, and be familiar with the requirements of this SSHP. This SSHP must
4 be used in conjunction with the SHP, FTMC, Alabama.

5

2.0 Site Characterization and Analysis

2.1 Anticipated Hazards

The activity hazard analysis in Chapter 5.0 contains project-specific practices utilized to reduce or eliminate anticipated site hazards. The activity hazard analysis indicates specific chemical and physical hazards that may be present and encountered during each task from on-site operations. Below each task is a list of hazards and specific actions that will be taken to control the respective hazards. These control measures may include work practice controls, engineering controls, and/or use of appropriate personal protective equipment (PPE). Site control with the use of specific work zones (support zone, contamination reduction zone, and exclusion zone) is addressed in Chapter 7.0 of Appendix A of the IT, 2002, *Final Installation-Wide Sampling and Analysis Plan, Fort McClellan, Calhoun County, Alabama*.

Potential contaminants at Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels are primarily metals associated with former small arms live fire with lead anticipated to be the most significant.

Radiation hazards are not anticipated from previous site activities at Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels. However, the field screening to determine the horizontal extent of the presence of lead and in surface soil using the NITON XRF instrument requires general radiation awareness training. The XRF instrument contains cadmium ¹⁰⁹, americium ²⁴¹, and iron ⁵⁵ sealed radioactive sources. Operators of the XRF instrument shall be trained in the safe use of the instrument and follow all required manufacturers instructions. Leak detection testing within the last six months shall be performed on the XRF instrument and certificates of analysis included in the shipping container. Required licensing documentation and storage requirements shall be enforced. Exposure to radiation is related to three factors: time, distance and shielding. Human exposure to radiation is typically measured in rems, or in one-thousandths of a rem, called millirems (mR). The allowable limit in the U.S. for occupational exposure is 5,000 mR/year for a whole-body and 50,000 mR for shallow penetration of extremities. Exposure from a properly-used NITON will be less than 50 mR per year, even if the instrument is used 2,000 hours per year.

Table 2-1 contains the toxicological properties of chemicals anticipated to be present at the Former Choccolocco Corridor Ranges.

Table 2-1

**Toxicological and Physical Properties of Chemicals
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 1 of 4)

Substance [CAS]	IP ^a (eV)	Odor Threshold (ppm)	Route ^b	Symptoms of Exposure	Treatment	TWA ^c	STEL ^d	Source ^e	IDLH (NIOSH) ^f
Arsenic [7440-38-2]	NONE	NONE	Inh Ing Con	Cough, diarrhea, shortness of breath, vomiting, grey skin. Redness	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention	0.01 mg/m ³ 0.01 mg/m ³	.002 mg/m ³ (Ca)	PEL TLV REL	5 mg/m ³
Antimony [7440-36-0]	NONE	NONE	Inh Ing Con	Coughing, abdominal pain, burning sensation, vomiting, diarrhea,	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow : Immediate medical attention	0.5 mg/m ³ 0.5 mg/m ³ 0.5 mg/m ³		PEL TLV REL	50 mg/m ³
Barium [7440-39-3]	NONE	NONE	Inh Ing Con	Cough, sore throat Redness	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention	0.5 mg/m ³ 0.5 mg/m ³ 0.5 mg/m ³		PEL TLV REL	NA
Fuel oil (diesel oil, medium)	?	?	Ing Inh Con	Ingestion causes nausea, vomiting, and cramps; depres- sed central nervous system, headache, coma, death; pulmonary irritation; kidney and liver damage; aspiration causes severe lung irritation, coughing, gagging, dyspnea, substernal stress, pulmonary edema; bronchopneumonia; excited, then depressed, central nervous system.	Eye: Irrigate promptly Skin: Soap wash Breath: Respiratory support Swallow: Immediate medical attention Aspiration: Immediate medical attention	NONE		PEL TLV REL	

Table 2-1

**Toxicological and Physical Properties of Chemicals
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 2 of 4)

Substance [CAS]	IP ^a (eV)	Odor Threshold (ppm)	Route ^b	Symptoms of Exposure	Treatment	TWA ^c	STEL ^d	Source ^e	IDLH (NIOSH) ^f
Gasoline [8006-61-9]		0.3	Inh Ing Con	Intoxication, headaches, blurred vision, dizziness, nausea; eye, nose throat irritation; potential kidney and other cancers. Carcinogenic.	Eye: Irrigate immediately (15 min) Skin: Soap wash promptly Breath: Respiratory support Swallow: Immediate medical attention	- 300 ppm Ca, lowest feasible conc. (LOQ 15 ppm)	- 500 ppm	PEL TLV REL	1400 ppm (10% LEL)
Lead {7439-92-1}	N/A	N/A	Inh Ing Con	Lightheadedness; nausea, headache; numbness of the extremities, muscular weakness; irritation of the eyes and nose; dermatitis; chemical pneumonia; giddiness.	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention	0.05 mg/m ³ 0.05 mg/m ³ 0.1mg/m ³		PEL TLV REL	100 mg/m ³
Isopropyl alcohol (isopropanol) [67-63-0]	10.16	43¥200	Inh Ing Con	Mild irritation of the eyes, nose, and throat; drowsiness, dizziness, headache; dry, cracked skin.	Eye: Irrigate immediately Skin: Water flush Breath: Respiratory support Swallow: Immediate medical attention	400 ppm 200 ppm 400 ppm	400 ppm 500 ppm	PEL TLV REL	2,000 ppm
Motor Oil [NA]	?	?	Inh Ing	Irritated eyes, skin, respiratory system; usually only a problem if misted or ingested.	Eye: Irrigate immediately (15 min) Skin: Soap wash immediately Swallow: Immediate medical attention	NONE		PEL TLV REL	
Nitric acid [7697-37-2]	11.95	0.3¥1	Inh Ing Con	Irritated eyes, mucous membranes, and skin; delayed pulmonary edema, pneumonitis, bronchitis; dental erosion.	Eye: Irrigate immediately Skin: Water flush promptly Breath: Respiratory support Swallow: Immediate medical attention	2 ppm 2 ppm 2 ppm	- 4 ppm 4 ppm	PEL TLV REL	25ppm

Table 2-1

**Toxicological and Physical Properties of Chemicals
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 3 of 4)

Substance [CAS]	IP ^a (eV)	Odor Threshold (ppm)	Route ^b	Symptoms of Exposure	Treatment	TWA ^c	STEL ^d	Source ^e	IDLH (NIOSH) ^f
Nitroglycerin [55-63-0]	NA	NA	Inh Ing Con	Abdominal ramps, blue lips and fingernails, dizziness, headache, labored breathing	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention	- 0.46 mg/m ³ skin -	.2 mg/m ³ skin - 0.1 mg/m ³ skin	PEL TLV REL	75 mg/m ³
Portland cement [65997-15-1]	NA	NA	Inh	Fine gray powder that can be irritating if inhaled or in eyes.	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention	5 mg/m ³ respirable dust 15 mg/m ³ total dust 10 mg/m ³ 10 mg ³ / total dust 5 mg/m ³ respirable dust	- - -	PEL TLV REL	5000 mg/m ³
Sodium hydroxide [1310-73-2]	NA	NA	Inh Ing Con	Irritated nose; pneumonitis; burns eyes, and skin; temporary loss of hair.	Eye: Irrigate immediately Skin: Water flush immediately Breath: Respiratory support Swallow: Immediate medical attention	2 mg/m ³ - -	- C 2 mg/m ³ C 2 mg/m ³	PEL TLV REL	10 mg/m ³

IP = Ionization potential (electron volts).

^bRoute = Inh, Inhalation; Abs, Skin absorption; Ing, Ingestion; Con, Skin and/or eye contact.

^cTWA = Time-weighted average. The TWA concentration for a normal work day (usually 8 or 10 hours) and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day without adverse effect.

^dSTEL = Short-term exposure limit. A 15-minute TWA exposure that should not be exceeded at any time during a workday, even if the TWA is not exceeded.

^ePEL = Occupational Safety and Health Administration (OSHA) permissible exposure limit (29 CFR 1910.1000, Table Z).

AEL = Airborne Exposure Limit.

TLV = American Conference of Governmental Industrial Hygiene (ACGIH) threshold limit value—TWA.

REL = National Institute for Occupational Safety and Health (NIOSH) recommended exposure limit.

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Table 2-1

Toxicological and Physical Properties of Chemicals Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels Fort McClellan, Calhoun County, Alabama

(Page 4 of 4)

IDLH (NIOSH)—Immediately dangerous to life or health (NIOSH). Represents the maximum concentration from which, in the event of respirator failure, one could escape within 30 minutes without a respirator and without experiencing any escape-impairing or irreversible health effects.

NE = No evidence could be found for the existence of an IDLH (NIOSH Pocket Guide to Chemical Hazards, Pub. 1998).

C = Ceiling limit value which should not be exceeded at any time.

Ca = Carcinogen.

NA = Not applicable.

? = Unknown.

LEL = Lower explosive limits.

LC₅₀ = Lethal concentration for 50 percent of population tested.

LD₅₀ = Lethal dose for 50 percent of population tested.

NIC = Notice of intended change (ACGIH).

References:

American Conference of Governmental Industrial Hygienists Guide to Occupational Exposure Values, 1998, compiled by the American Conference of Governmental Industrial Hygienists.

Clayton, George D., Clayton, F. E., Patty's Industrial Hygiene and Toxicology, 3rd ed., John Wiley & Sons, New York.

Documentation of TLVs and BEIs, American Conference of Governmental Industrial Hygienists, 6th ed., 1998.

Lewis, Richard J., Sr., 1992, Sax's Dangerous Properties of Industrial Materials, 8th ed., Van Nostrand Reinhold, New York.

Micromedex Tomes Plus (R) System, 1992, Micromedex, Inc.

National Institute for Occupational Safety and Health Pocket Guide to Chemicals, Pub. 1998, National Institute for Occupational Safety and Health.

Odor Threshold for Chemicals with Established Occupational Health Standards, American Industrial Hygiene Association, 1989.

Respirator Selection Guide, 3M Occupational Health and Safety Division, 1993.

Workplace Environmental Exposure Levels, American Industrial Hygiene Association, 1992.

1 **2.2 General Site Information**

2
3 **Location of Site.** FTMC is located in the foothills of the Appalachian Mountains of
4 northeastern Alabama near the cities of Anniston and Weaver in Calhoun County. FTMC is
5 approximately 60 miles northeast of Birmingham, 75 miles northwest of Auburn and 95 miles
6 west of Atlanta, Georgia. FTMC consists of three main areas of government-owned and leased
7 properties: Main Post, Pelham Range and Choccolocco Corridor (lease terminated in May 1998).
8

9 **Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and**
10 **Associated Parcels: Site Description and History.** Former Range 40, Parcel 94Q,
11 Former Range 41, Parcel 95Q; Former Range 42, Parcel 96Q; Former Range 43, Parcel 97Q; and
12 Associated Parcels are located west of the Choccolocco Mountains in Choccolocco Corridor near
13 the eastern boundary of the Fort McClellan Main Post and were part of the Range 40 complex.
14 The Choccolocco Corridor was leased by the U.S. government from the State of Alabama from
15 1941 until 1998. The Choccolocco Corridor lease was terminated in May 1998, and the land is
16 currently managed by the Alabama Forestry Commission. The information presented on Former
17 Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels was
18 compiled from the *Final Environmental Baseline Survey, Fort McClellan, Alabama*, (EBS), the
19 *Archives Search Report, Fort McClellan, Anniston, Alabama* (ASR), and site walks conducted
20 by Shaw personnel in December 2001 and January 2002.

21
22 **Former Range 40, Parcel 94Q, and Range, Choccolocco Corridor, Parcel 146Q.**

23 Former Range 40, Parcel 94Q, and Range, Choccolocco Corridor, Parcel 146Q overlap; the area
24 of investigation for Parcels 94Q and 149Q includes approximately 125 acres. Former Range 40,
25 Parcel 94Q, is a former small arms range and is described in the ASR as 30 acres in size.
26

27 Interviews with former FTMC personnel indicated that Former Range 40, Parcel 94Q, was used
28 for small arms training during World War II, the Korean War, and the Vietnam War. The
29 direction of fire was reported to be to the west; however, the firing line identified by the EBS,
30 the dimensions of Range 40 in the ASR maps, and field observations during the site walks
31 suggest a northwesterly fire direction. Evidence of smoke training has also been observed in the
32 vicinity of this former range.
33

34 Site walks conducted by Shaw personnel in December 2001 and January 2002 found numerous
35 features, some of which appear to be range-related. The observed features included:
36

- 1 • A dismantled helicopter adjacent to the northwestern portion of the area of
2 investigation for Parcel 94Q.
- 3
- 4 • Coils of barbed (razor) wire.
- 5
- 6 • Several broken-down wooden signs.
- 7
- 8 • A deep pit with two large mounds nearby.
- 9
- 10 • Several swing-up targets with electrical conduit running to the
11 northwest/southeast.
- 12
- 13 • Several target mounds, a deep bunker, and electrical connections.
- 14
- 15 • A possible electrical connection for a pop-up target control.
- 16
- 17 • Stationary target.
- 18
- 19 • Shallow depressions, some with wooden debris.
- 20
- 21 • Several northeast/southwest-oriented low berms.
- 22

23 In addition to the above features, trees had been removed to address the southern pine beetle
24 infestation from several areas adjacent to the existing roads in the northwestern portion of the
25 area of investigation. A clear-cut area was also observed in the eastern portion of the area of
26 investigation for Parcel 94Q.

27
28 Range, Choccolocco Corridor, Parcel 146Q, identified in the EBS as approximately 102 acres in
29 size, is a presumed small arms range. This parcel overlaps with Parcel 94Q. A portion of the
30 southeastern corner of Parcel 146Q extends beyond the Fort McClellan Choccolocco Corridor
31 lease boundary to the south.

32
33 Parcel 146Q is presumed to be a small arms range because cratered impact areas were not
34 observed. Environmental Photographic Interpretation Center reports that this range appears to
35 be active in aerial photographs dated 1949, 1954, and 1972.

36
37 Site walks conducted by Shaw personnel in December 2001 and January 2002 within the area of
38 investigation for Parcel 146Q noted numerous features, some of which appear to be range-related
39 and described as follows:

- 40 • A number of circular depressions, some up to 10 feet wide and 5 feet deep
- 41

- 1 • A pole with dangling electrical wires
- 2 • An apparent target pit
- 3 • Several trenches in the southwestern portion of the parcel
- 4 • Several coils of barbed (razor) wire
- 5 • Half of a rusted drum just outside the southwestern parcel border.
- 6

7 **Former Range 41, Parcel 95Q and Impact Area, Choccolocco Corridor, Parcel**

8 **131Q-X.** The area of investigation for Parcels 95Q and 131Q-X is approximately 12 acres.
9 Former Range 41, Parcel 95Q, is 8.5 acres in size. There are conflicting reports of the dates of
10 use for Parcel 95Q, but the area was most likely active during the 1960s and 1970s. The history
11 of use for Former Range 41 is unclear. The range appeared on 1966 and 1971 historical maps,
12 which would coincide with reports from long-time FTMC personnel who indicate that this range
13 was a small arms range during the Vietnam era. Direction of fire is believed to have been toward
14 the west.

15
16 The ASR indicates that Former Range 41 was built during the Vietnam War, was listed as a
17 Battle Drill & Assault Range, probably did not include live fire, and was abandoned by 1974.
18 Expended M-16 rifle blanks, smoke grenades, and 40mm TP Grenade cases were found on this
19 range as indicated in the ASR.

20
21 Parcel 131Q-X is described as a former impact area within the Range 40 area. Parcel 131Q-X is
22 4.4 acres in size.

23
24 Site walks by Shaw personnel conducted in December 2001 and January 2002 at Former Range
25 41 revealed that the area appears to have been used for training. The most obvious feature noted
26 during the site walk was a large berm, possibly a backstop, situated along the southwest and west
27 parcel boundaries. The berm was observed to range from 10 to 30 feet in height. At the west
28 end of Former Range 41, two cleared areas were found in front of the berm. In the open areas,
29 vegetation was mostly young montane longleaf pine. Expended shell casings and evidence of
30 40mm grenade casings was found in these cleared areas. A depression (1 foot deep x 2 feet x 4
31 feet), a 55-gallon drum (used for small arms target practice), and expended flares were found to
32 the south of the berm, in the southeast corner of Parcel 95Q. An observation tower was noted to
33 the west of the road within Parcel 131Q-X. A depression (1 foot deep x 2 feet x 4 feet) was
34 found to the west of the observation tower. On the east side of the road, a 3 feet high berm was
35 found running in a northwest-southeast direction adjacent and parallel to a 4 feet deep ditch. The
36 fuselage of a helicopter was found to the west of Parcel 95Q; however, there was no evidence it
37 had been used as a target. Remnants of a building with exposed electrical wiring were observed

1 to the southeast of the parcels. It is possible that pop-up targets were controlled from this
2 location. Areas to the south and west of the parcels, partially bounded by dirt roads, show
3 evidence of having been recently logged.

4
5 **Former Range 42, Parcel 96Q; Range, Choccolocco Corridor, Parcel 145Q-X; and**
6 **Impact Area, Choccolocco Corridor, Parcel 148Q-X.**

7 The ASR states Former Range 42, Parcel 96Q was built during the Vietnam War era and was known as the Squad Defense Range.
8 However, some FTMC personnel remember the area being used during World War II and the
9 Korean War. According to the ASR, the range was abandoned by 1974. Former Range 42 is
10 23.8 acres according to the EBS (the ASR states the range was 6 acres) and was probably used
11 during the 1960s and 1970s. Parcel 145Q-X appears to be active in aerial photo composites
12 dated 1949, 1954, and 1972.

13
14 Range, Choccolocco Corridor, Parcel 145Q-X is 44.1 acres. The southern boundary of Parcel
15 145Q-X overlaps Former Range 41, Parcel 95Q. Large-caliber weapons are presumed to have
16 been fired at Parcel 145Q-X because cratered impact areas were identified within the range areas
17 (ESE, 1998). Parcel 145Q-X, identified by aerial photograph is located in the vicinity of the
18 Range 40 complex which was previously identified from maps. It is possible that the mapped
19 locations were planned locations which were subsequently constructed in a different orientation.

20
21 The EBS lists Impact Area, Choccolocco Corridor, Parcel 148Q-X, as an impact area that
22 occupies an area of 5.8 acres within Parcels 96Q and 145Q-X.

23
24 Shaw personnel conducting a site visit at Parcels 96Q, 145Q-X, and 148Q-X, in December 2001
25 concluded that this area had been used for military training. Several target bunkers for pop-up
26 targets were identified in the central portion of the range. Electrical system remnants and old
27 target structures were also noted in several places. An old electrical substation/building was
28 identified near the northern boundary of Parcel 96Q. Offensive firing pits and the main firing
29 line (east side of the range) were also identified. The main firing line was built up approximately
30 10 feet higher than the surrounding area, and remnants were seen of 2-foot wide by 3-foot long
31 by 6-foot deep shooting boxes built behind a bermed area. There was not any typical small arms
32 range debris (e.g., casings, bullets) identified in the Parcel 96Q area. Some expended flares,
33 empty drums, and empty cylinders were found next to a swampy area located in the eastern
34 portion of Parcel 145Q-X, outside of the area of Parcel 96Q. A trench and area of shallow
35 depressions were also found in this area.

1
2 **Former Range 43, Parcel 97Q; Range, Choccolocco Corridor, Parcel 144Q-X; and**
3 **Impact Area, Choccolocco Corridor, Parcel 147Q-X.** Former Range 43, Parcel 97Q, is
4 identified as a former small arms range. The EBS identifies Range 43 as approximately 4 acres
5 in size; however, in the ASR, Range 43 is reported as approximately 7 acres in size. The area of
6 investigation for Parcel 97Q will be expanded beyond the parcel boundaries identified in the
7 EBS, based upon the results of the site walk and review of aerial photographs. The area of
8 investigation for Parcel 97Q consists of approximately 9 acres.

9
10 Approximately two-thirds of Parcel 97Q is located within the boundaries of Range, Choccolocco
11 Corridor, Parcel 144Q-X. The Parcel 97Q range was previously designated as Range 43 and
12 Range 3, but the dimensions of these previous ranges are not documented in the EBS. Interviews
13 with long time FTMC personnel indicated that the Parcel 97Q range was used for small arms
14 training during World War II (WWII), the Korean War, and the Vietnam War. The direction of
15 fire was reported to be to the west, however the firing line identified by the EBS for this range
16 suggests a southwestern fire direction. Smoke training has also been observed in the vicinity of
17 this former range.

18
19 Site walks conducted at Parcel 97Q by Shaw personnel in December 2001 and January 2002
20 revealed several features that appear to be related to range-training activities. These features are
21 addressed in more detail in the following paragraphs.

22
23 A line of firing positions or target pits spaced at approximately 20-foot intervals, was observed
24 slightly to the east of Parcel 97Q. The approximate dimensions were 2 feet by 3 feet wide and 6
25 feet deep. The walls were supported by wooden framework. These features are presumed to
26 have been used as firing positions or target pits. The location of these features appears to be to
27 the east of the Parcel 97Q firing line identified in the EBS.

28
29 Numerous 5.56-mm blanks were observed by an overgrown road within the western area of
30 Parcel 97Q.

31
32 Numerous wood-framed target boxes were observed in the hillside southwest of the Parcel 97Q
33 boundary identified in the EBS. The target boxes appear to be linearly oriented in several
34 northwest/southeast trending lines.

35
36 An end of range sign (black and white diagonal) located approximately 550 feet southwest of the

1 western boundary of Parcel 97Q was identified in the EBS.

2
3 Range, Choccolocco Corridor, Parcel 144Q-X, is identified as a former range and is
4 approximately 19 acres in size. Parcel 144Q-X encompasses about two thirds of Parcel 97Q and
5 most of Impact Area, Choccolocco Corridor, Parcel 147Q-X. The presence of cratered impact
6 areas within the range area suggests that large caliber weapons may have been fired toward
7 Parcel 144Q-X. This range appears to be active in aerial photographs dated 1949, 1954, and
8 1972.

9
10 Site walks conducted by Shaw personnel Parcel 144Q-X in December 2001 and January 2002,
11 revealed the presence of several possible range-related features within the boundary of Parcel
12 144Q-X. One of these features is located within the boundaries of Parcel 147Q-X. Most of
13 Parcel 147Q-X is located within the boundaries of Parcel 144Q-X. The observed features are:

- 14
15 • An observation tower located in the east central portion of the parcel, near the
16 northwestern edge of Parcel 147Q-X.
- 17
18 • An airframe mock-up is located in the north central portion of Parcel 144Q-X on
19 the path of horse trail. The horse trail goes through the airframe. There are not
20 any bullet holes observed in the airframe, suggesting that it has not been used as a
21 target for range training.
- 22
23 • A series of firing positions or target pits located to the east of Parcel 97Q
24 (described above in the Parcel 97Q description).
- 25
26 • An area of depressions located in the northeastern area of Parcel 147Q-X. The
27 depressions were approximately 3 to 6 feet wide by 2 feet deep. An ammunition
28 box was present in the bottom of one depression. An expended 40-mm flare and
29 an expended pop flare were present near the depressions. It is speculated that these
30 depressions were used as foxholes for firing positions.

31
32 Impact Area, Parcel 147Q-X, is identified as a former impact area, approximately 3 acres in size.
33 It is not known which range is associated with this impact area. This parcel is located within the
34 boundaries of Parcel 144Q-X.

35
36 During the site walk, an area of depressions, approximately 3 to 6 feet wide and 2 feet deep in the
37 northeastern area of Parcel 147Q-X was observed. An ammunition box was present in the
38 bottom of one depression. An expended 40-mm flare and an expended pop flare were present
39 near the depressions. It is speculated that these depressions were used as firing points.

1 **Duration of Planned Employee Activity.** Employee activity duration is anticipated to be
2 less than three months.

3
4 **Pathways for Hazardous Substance Dispersion.** Possible pathways for hazardous
5 substances in the area are soils, sediments, surface water and groundwater.

3.0 Personal Protective Equipment

The work activities will begin in the following levels of protection. Also, a completed description of Level D, Modified Level D, and Level C PPE is provided.

Task	Initial Level of PPE
Equipment staging and XRF grid layout	Level D
Surveying	Level D
Utility clearance	Level D
Surface water, sediment, and XRF surface soil sampling	Level D ^a
Installation of groundwater monitoring wells	Modified Level D*
Soil boring subsurface soil sampling	Modified Level D*

*Initial level will be raised to Level C or higher if air monitoring results in the breathing zone (BZ) are greater than action levels.

^aChemical resistant Nitrile or latex gloves shall be worn during sample handling, collection and decontamination of small sampling tools.

Level D. The minimal level of protection that will be required of Shaw personnel at the site will be Level D. The following equipment will be used for Level D protection:

- Coveralls or work clothing
- Latex sample gloves are required for collecting samples
- Leather work gloves (when necessary)
- Steel-toed safety boots
- Safety glasses
- Hardhat
- Wear hearing protection (when working near/adjacent to operating equipment).

Modified Level D. The following equipment will be used for Level D-Modified protection:

- Permeable Tyvek, Kleenguard, or its equivalent
- Latex boot covers
- Nitrile, heavy work, or latex gloves
- Steel-toed safety boots
- Safety glasses

- 1 • Hardhat
2 • Hearing protection (when working near/adjacent to operating equipment).

3
4 Note: In addition to Modified Level D PPE, the operator of high-pressure water jetting
5 equipment (pressure washers), shall wear metatarsal guards for protection of the legs and feet and
6 a face shield for protection from splashes.

7
8 **Level C.** Level C protection will not be used unless air-monitoring data indicate the need for
9 upgrade; however, the equipment shall be readily available on site. The following equipment
10 will be used for Level C protection:

- 11
12 • National Institute of Occupational Safety and Health/Mine Safety and Health
13 Administration-approved full-face, air-purifying respirators equipped with organic
14 vapor/acid gas cartridge in combination with high-efficiency particulate air filter
15
16 • Hooded, Saran-coated Tyvek, taped at gloves, boots, and respirator
17
18 • Nitrile gloves (outer)
19
20 • Latex or lightweight nitrile gloves (inner)
21
22 • Neoprene steel-toed boots or polyvinyl chloride overbooties/steel-toed safety boots
23
24 • Hardhat
25
26 • Hearing protection (when working near/adjacent to operating equipment).

27
28 Note: In addition to Level C PPE, the operator of high-pressure water jetting equipment
29 (pressure washers), shall wear metatarsal guards for protection of the legs and feet and a face
30 shield for protection from splashes.

4.0 Site Monitoring

The environmental contaminant of concern resulting from former activities at Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels is lead.

Table 4-1 contains action levels for site monitoring at Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels.

Chemical. The site safety and health officer or task geologist shall perform air monitoring during the performance of site activities and ground intrusive operations. A calibrated photo ionization detector (i.e., Hnu DL-101 or equivalent) organic vapor analyzer will be utilized to monitor the sampling locations and BZs to determine if any organic material may be present that would necessitate upgrading of the protection level. A calibrated combustible gas/oxygen indicator will be utilized to monitor the borehole, work areas and BZs to determine if any combustible/flammable levels may be present that would necessitate evacuation of the work area. If site conditions become dusty a Miniram PDM-3 or equivalent aerosol monitor shall be used to monitor airborne respirable dust since lead is a potential concern. Table 4-2 contains the air monitoring frequency and location for site monitoring at Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels.

Table 4-1

**Action Levels
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and
Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 1 of 2)

When in Level C PPE

Analyte	Action Level ^a	Required Action ^b
VOCs (volatile organic compound)	≥ 10 ppm above background in breathing zone (BZ)	Stop work, evacuate work area, upgrade to Level B; Notify CIH
Dust	>2.5 mg/m ³ above background in BZ	Normal operations, initiate dust control to minimize migration.
LEL (lower explosive limit)	≤ 10 % LEL ≥ 10 % LEL	Normal operations Stop work, identify source

When in Level D Modified/D PPE

Analyte	Action Level ^a	Required Action ^b
VOCs	≥ 1 ppm above background in BZ	Stop activities, suspend work activities for 15 to 30 minutes, if readings are sustained then upgrade to Level C PPE; Notify CIH
Dust	≥ 0.5 mg/m ³ above background in BZ	Stop work, Initiate dust control, upgrade to Level C PPE if dust control is not effective; Notify CIH
LEL (lower explosive limit)	≤ 10 % LEL ≥ 10 % LEL	Normal operations Stop work, identify source. Monitor for VOC's

Table 4-1

**Action Levels
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and
Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 2 of 2)

When in Support Zone

Analyte	Action Level ^a	Required Action
VOCs	≥ 1 ppm above background in BZ	Evacuate support zone and re-establish perimeter of exclusion zone.
Dust	> 0.3 mg/m ³ above background in BZ	Stop work, Initiate dust control

^a Four instantaneous peaks in any 15-minute period or a sustained reading for 5 minutes in excess of the action level will trigger a response.

^b Contact with the H&S manager must be made prior to continuance of work. The H&S manager may then initiate perimeter/integrated air sampling along with additional engineering controls.

No one is permitted to downgrade levels of PPE without authorization from the H&S manager.

Table 4-2

**Air Monitoring Frequency and Location
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and
Associated Parcels
Fort McClellan, Calhoun County, Alabama**

Work Activity	Instrument	Frequency	Location
Staging equipment and XRG grid layout	OV Monitor Miniram	Initially for area As needed	Breathing zone (BZ) of employees
Sampling (surface soil and sediment)	OV Monitor Miniram	Periodically As needed	BZ of employees BZ of employees
XRF screening	Miniram	As needed	BZ of employees
Groundwater Monitoring Well Installation and Subsurface Soil Sampling	OV Monitor Miniram LEL/O ₂	Periodically As needed Periodically	BZ of employees BZ of employees Bore hole

OV = Organic vapor.

Miniram = Aerosol (dust) monitor

LEL/O₂ = Lower explosive limit/oxygen level

5.0 Activity Hazard Analysis

The attached activity hazard analysis (Table 5-1) is provided for the following activities:

- Equipment staging and XRF grid layout.
- Surveying.
- Groundwater sampling.
- Surface soil, surface water, and sediment sampling.
- Groundwater monitoring well installation and subsurface soil sampling.
- Moving and shipping collected samples.
- Disposal of investigative derived waste (forklift operations).
- High-pressure water jetting operations.

All injuries and illnesses must be immediately reported to the site manager or the site safety and health officer, who will then notify off-site personnel and organizations as necessary.

If hospital care must be provided, the victim shall be treated at Northeast Regional Medical Center. Directions to the hospital from the Former Choccolocco Corridor Ranges are provided in Figure 5-1.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 1 of 14)

Activity	Potential Hazards	Recommended Controls
Equipment staging and XRF grid layout	Slip, trip, and fall hazards	<ul style="list-style-type: none"> • Determine best access route before transporting equipment. • Practice good housekeeping; keep work area picked up and clean as feasible. • Continually inspect the work area for slip, trip, and fall hazards. • Look before you step; ensure safe and secure footing.
	Heavy lifting	<ul style="list-style-type: none"> • Use proper lifting techniques. Lifts greater than 60 pounds require assistance or mechanical equipment.
	Falling objects	<ul style="list-style-type: none"> • Stay alert and clear of materials suspended overhead; wear hard hat and steel-toed boots.
	Flying debris, dirt, dust, etc.	<ul style="list-style-type: none"> • Wear safety glasses/goggles; ensure that eye wash is in proper working condition.
	Pinch points	<ul style="list-style-type: none"> • Keep hands, fingers, and feet clear of moving/suspended materials and equipment. • Beware of contact points. • Stay alert at all times!
	Cuts/bruises	<ul style="list-style-type: none"> • Use cotton or leather work gloves for material handling.
	Bees, spiders, and snakes	<ul style="list-style-type: none"> • Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Ticks	<ul style="list-style-type: none"> • Wear light colored clothing (can see ticks better). • Mow vegetated and small brush areas. • Wear insect repellent. • Wear long sleeves and long pants. • Visually check oneself promptly and frequently after exiting the work area.
	Fire	<ul style="list-style-type: none"> • Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Hazard communication	<ul style="list-style-type: none"> • Label all containers as to contents and dispose of properly. • Ensure Material Safety Data Sheets (MSDS) are available for hazardous chemicals used on site.
	Noise	<ul style="list-style-type: none"> • Sound levels above 85 decibels (dBA) mandates hearing protection.
Lighting	<ul style="list-style-type: none"> • Adequate lighting will be provided to ensure a safe working environment. 	

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 2 of 14)

Activity	Potential Hazards	Recommended Controls
Equipment staging and XRF grid layout (continued)	Cold stress	<ul style="list-style-type: none"> • Workers should wear insulated clothing when temperatures drop below 40 degrees Fahrenheit (°F). • Drink warm beverages on breaks. Refrain from drinking caffeinated beverages. • Remove wet clothing promptly. • Take breaks in warm areas. • Reduce work periods as necessary. • Layer work clothing.
	Poison ivy/oak/sumac	<ul style="list-style-type: none"> • Avoid plant areas if possible. • Wear long sleeves and long pants. • Promptly wash clothing that has contacted poisonous plants. • Wash affected areas immediately with soap and water.
	Heat rash	<ul style="list-style-type: none"> • Keep the skin clean and dry. • Change perspiration-soaked clothing, as necessary. • Bathe at end of work shift or day. • Apply powder to affected area.
	Heat cramps	<ul style="list-style-type: none"> • Drink plenty of cool fluids even when not thirsty. • Provide cool fluid for work crews. • Move victim to shaded, cool area.
	Heat exhaustion	<ul style="list-style-type: none"> • Conduct physiological worker monitoring as needed (i.e., heart rate, oral temperature). • Set up work/rest periods. • Use the "buddy system." • Allow workers time to acclimate. • Have ice packs available for use. • Take frequent breaks.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 3 of 14)

Activity	Potential Hazards	Recommended Controls
Equipment staging and XRF grid layout (continued)	Heat stroke	<ul style="list-style-type: none"> • Evaluate possibility of night work. • Perform physiological monitoring on workers during breaks. • Wear body cooling devices.
	Contact with moving equipment/vehicles	<ul style="list-style-type: none"> • Work area will be barricaded/demarcated. • Equipment will be laid out in an area free of traffic flow. • Barricades shall be used on or around work areas when it is necessary to prevent the inadvertent intrusion of pedestrian traffic. • Barriers shall be used to protect workers from vehicular traffic. • Barriers shall be used to guard excavations adjacent to streets or roadways. • Flagging shall be used for the short term (less than 24 hours) to identify hazards until proper barricades or barriers are provided. • Heavy equipment shall have backup alarms.
	Forklift operations	<ul style="list-style-type: none"> • Use qualified and trained forklift operators. • The operator shall not exceed the load capacity rating for the forklift. • The load capacity shall be clearly visible on the forklift. • Forklift operators shall inform their supervisor of any prescribed medication that they are taking that would impair their judgement.
	Portable electric tools	<ul style="list-style-type: none"> • Portable electric tools that are unsafe due to faulty plugs, damaged cords, or other reasons, shall be tagged (do not use) and removed from service. • Portable electric tools and all cord and plug connected equipment shall be protected by a ground-fault circuit interrupter (GFCI) device. • Electrical tools shall be inspected daily prior to use.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

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Activity	Potential Hazards	Recommended Controls
Equipment staging and XRF grid layout (continued)	Extension cords	<ul style="list-style-type: none"> • Extension cords that have faulty plugs, damaged insulation, or are unsafe in any way shall be removed from service. • Cords shall be protected from damage from sharp edges, projections, pinch points (doorways), and vehicular traffic. • Cords shall be suspended with a nonconductive support (rope, plastic ties, etc.). • Cords shall be designed for hard duty. • Cords shall be inspected daily.
	Lightning strikes	<ul style="list-style-type: none"> • Whenever possible, halt activities and take cover. • If outdoors, stay low to the ground. • Limit the body surface area that is in contact with the ground (i.e., kneeling on one knee is better than laying on the ground). • Seek shelter in a building if possible. • Stay away from windows. • If available, crouch under a group of trees instead of one. • Keep all body parts in contact with the ground as close as possible. • Remain 6 feet away from tree trunk if seeking shelter beneath tree(s). • If in a group, keep 6 feet of distance between people.
	Thunderstorms, tornados	<ul style="list-style-type: none"> • Listen to radio or TV announcements for pending weather information. • Cease field activities during thunderstorm or tornado warnings. • Seek shelter. Do not try to outrun a tornado.
Surveying	Slip, trip, and fall hazards	<ul style="list-style-type: none"> • Site workers will be required to wear hard hat, safety glasses with side shields, work gloves, and steel-toe boots when working in the field. • Provide adequate lighting in all work areas. • Whenever possible, avoid routing cords and hoses across walking pathways. • Flag or cover inconspicuous holes to protect against falls. • Work areas will be kept clean and orderly. • Garbage and trash will be disposed of daily in approved refuse containers. • Tools and accessories will be properly maintained and stored. • Work areas and floors will be kept free of dirt, grease, and slippery materials.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

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Activity	Potential Hazards	Recommended Controls
Surveying (continued)	Traffic accidents	<ul style="list-style-type: none"> • Place physical barrier (i.e., barricades, fencing) around work areas regularly occupied by pedestrians. • If working adjacent to roadways, have workers wear fluorescent orange vests. • Use warning signs or lights to alert oncoming traffic. • Assign flag person(s) if necessary to direct local traffic. • Set up temporary parking locations outside the immediate work area. • Motor vehicle operators shall obey all posted traffic signs, signals, and speed limits. • Pedestrians have the right-of-way. • Wear seat belts when vehicles are in motion.
	Wildlife hazards	<ul style="list-style-type: none"> • Workers should be cautious when driving through the site in order to avoid encounters with passing animals.
	Biological hazards	<ul style="list-style-type: none"> • Walking through overgrown grass areas, watch for snakes (rattlesnakes, moccasins, copperheads).
	Ticks	<ul style="list-style-type: none"> • Wear light colored clothing (can see ticks better). • Mow vegetated and small brush areas. • Wear insect repellent. • Wear long sleeves and long pants. • Visually check oneself promptly and frequently after exiting the work area.
	Poison ivy/oak/sumac	<ul style="list-style-type: none"> • Avoid plant areas if possible. • Wear long sleeves and long pants. • Promptly wash clothing that has contacted poisonous plants. • Wash affected areas immediately with soap and water.
	UXO	<ul style="list-style-type: none"> • If UXO is encountered, cease all activities, mark the location, and notify the site manager.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 6 of 14)

Activity	Potential Hazards	Recommended Controls
Groundwater Sampling	Cross-contamination and contact with potentially contaminated materials	<ul style="list-style-type: none"> • Sampling technicians will wear proper protective clothing and equipment to safeguard against potential contamination. • Avoid skin contact with water. • Handle samples with care. • Only essential personnel will be in the work area. • Real-time air monitoring will take place before and during sampling activities. • All personnel will follow good hygiene practices. • Proper decontamination procedures will be followed. • All liquids and materials used for decontamination will be contained and disposed of in accordance with federal, state, and local regulations.
	Cut hazards	<ul style="list-style-type: none"> • Use care when handling glassware. • Wear adequate hand protection.
	Hazard communication	<ul style="list-style-type: none"> • MSDSs shall be obtained for chemicals brought on site. • Label all containers as to contents.
	Strains/sprains	<ul style="list-style-type: none"> • Use the proper tool for the job being performed. • Get assistance if needed. • Avoid twisting/turning while pulling on tools, moving equipment, etc.
	Spills/residual materials	<ul style="list-style-type: none"> • Absorbent material and containers will be kept available where leaks or spills may occur.
	Lighting	<ul style="list-style-type: none"> • Adequate lighting will be provided to ensure a safe working environment.
	Unattended worker	<ul style="list-style-type: none"> • Use "buddy system" - visual contact will be maintained with the sampling technician during sampling activities.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 7 of 14)

Activity	Potential Hazards	Recommended Controls
Surface soil XRF, surface water and sediment sampling	Cross-contamination and contact with potentially contaminated materials	<ul style="list-style-type: none"> • Stop immediately at any sign of obstruction. • Sampling technicians will wear proper protective clothing and equipment to safeguard against potential contamination. • Only essential personnel will be in the work area. • Real-time air monitoring will take place before and during sampling activities. • All personnel will follow good hygiene practices. • Proper decontamination procedures will be followed. • All liquids and materials used for decontamination will be contained and disposed of in accordance with federal, state, and local regulations.
	Cut hazards	<ul style="list-style-type: none"> • Use care when handling glassware. • Wear adequate hand protection.
	Slip, trip, and fall hazards	<ul style="list-style-type: none"> • Site workers will be required to wear hard hat, safety glasses with side shields, work gloves, and steel-toe/shank boots when working in the field. • Whenever possible, avoid routing cords and hoses across walking pathways. • Flag or cover inconspicuous holes to protect against falls.
	Bees, spiders, and snakes	<ul style="list-style-type: none"> • Workers shall inspect the work area carefully and avoid placing hands and feet into concealed areas. • Evaluate need for sensitive workers to have prescribed antibiotic or medicine to combat onset of symptoms.
	Poison ivy/oak/sumac	<ul style="list-style-type: none"> • Avoid plant areas if possible. • Wear long sleeves and long pants. • Promptly wash clothing that has contacted poisonous plants. • Wash affected areas immediately with soap and water.
	Cold stress	<ul style="list-style-type: none"> • Workers should wear insulated clothing when temperatures drop below 40°F. • Drink warm beverages on breaks. Refrain from drinking caffeinated beverages. • Remove wet clothing promptly. • Take breaks in warm areas. • Reduce work periods as necessary. • Layer work clothing.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 8 of 14)

Activity	Potential Hazards	Recommended Controls
Surface soil XRF, surface water and sediment sampling (continued)	Access/egress hazards	<ul style="list-style-type: none"> • Use qualified and trained bushhog operator. • Keep employees out of the bushhog work area. • Utilize good housekeeping practices. • Keep aisleways, pathways, and work areas free of obstruction. • Clean ice or snow off of walkways or work stations. • Use appropriate footwear for the task assigned.
	Heat rash	<ul style="list-style-type: none"> • Keep the skin clean and dry. • Change perspiration-soaked clothing, as necessary. • Bathe at end of work shift or day. • Apply powder to affected area.
	Heat cramps	<ul style="list-style-type: none"> • Drink plenty of cool fluids even when not thirsty. • Provide cool fluid for work crews. • Move victim to shaded, cool area.
	Heat exhaustion	<ul style="list-style-type: none"> • Conduct physiological worker monitoring as needed (i.e., heart rate, oral temperature). • Set up work/rest periods. • Use the buddy system. • Allow workers time to acclimate. • Have ice packs available for use. • Take frequent breaks.
	Heat stroke	<ul style="list-style-type: none"> • Evaluate possibility of night work. • Perform physiological monitoring on workers during breaks. • Wear body cooling devices.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 9 of 14)

Activity	Potential Hazards	Recommended Controls
Surface soil XRF, surface water and sediment sampling (continued)	Lightning strikes	<ul style="list-style-type: none"> • Whenever possible, halt activities and take cover. • If outdoors, stay low to the ground. • Limit the body surface area that is in contact with the ground (i.e., kneeling on one knee is better than laying on the ground). • Seek shelter in a building if possible. • Stay away from windows. • If available, crouch under a group of trees instead of one single tree. • If in a group, keep 6 feet of distance between people.
	UXO	<ul style="list-style-type: none"> • If UXO is encountered, cease all activities, mark the location, and notify the site manager and UXO specialist.
Moving and Shipping Collected Samples	Heavy lifting	<ul style="list-style-type: none"> • Use proper lifting techniques. Lifts greater than 60 pounds require assistance or mechanical equipment; size up the lift.
	Pinch points	<ul style="list-style-type: none"> • Keep hands, fingers, and feet clear of moving/suspended materials and equipment. • Beware of contact points. • Stay alert at all times!
	Cut hazards	<ul style="list-style-type: none"> • Wear adequate hand protection. Use care when handling glassware.
	Hazard communication	<ul style="list-style-type: none"> • Label all containers as to contents and associated hazards.
	Heavy lifting	<ul style="list-style-type: none"> • Use proper lifting techniques. Lifts greater than 60 pounds require assistance or mechanical equipment; size up the lift.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 10 of 14)

Activity	Potential Hazards	Recommended Controls
Material Storage	Flammable and combustible liquids	<ul style="list-style-type: none"> • Store in NO SMOKING AREA. • Fire extinguisher readily available. • Transfer only when properly grounded and bonded.
Disposal of Investigation-Derived Waste (IDW) (Forklift Operation)	Personnel injury, property damage, and/or equipment damage	<ul style="list-style-type: none"> • Use qualified and trained forklift operators. • The operator shall not exceed the load capacity rating for the forklift. • The load capacity shall be clearly visible on the forklift. • Forklift operators shall inform their supervisor of any prescribed medication that they are taking that would impair their judgement.
	Cross-contamination and contact with potentially contaminated materials	<ul style="list-style-type: none"> • Stop immediately at any sign of obstruction. • Sampling technicians will wear proper protective clothing and equipment to safeguard against potential contamination. • Only essential personnel will be in the work area. • Real-time air monitoring will take place before and during sampling activities. • All personnel will follow good hygiene practices. • Proper decontamination procedures will be followed. • All liquids and materials used for decontamination will be contained and disposed of in accordance with federal, state, and local regulations.
	Cut hazards	<ul style="list-style-type: none"> • Use care when handling glassware. • Wear adequate hand protection.
High-Pressure Water Jetting Operations	Heavy lifting	<ul style="list-style-type: none"> • Use proper lifting techniques. • Lifts greater than 60 pounds require assistance or mechanical equipment; size up the lift.
	Slip, trip, and fall hazards	<ul style="list-style-type: none"> • Good housekeeping shall be implemented. • The work area shall be kept clean as feasible. • Inspect the work area for slip, trip, and fall hazards.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 11 of 14)

Activity	Potential Hazards	Recommended Controls
High-Pressure Water Jetting Operations (continued)	Fueling	<ul style="list-style-type: none"> • Only approved safety cans shall be used to store fuel. • Do not refuel equipment while it is operating. • Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Faulty or damaged equipment	<ul style="list-style-type: none"> • Equipment shall be inspected before being placed into service and at the beginning of each shift. • Preventive maintenance procedures recommended by the manufacturer shall be followed. • A lockout/tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
	High-pressure water	<ul style="list-style-type: none"> • Jetting gun operator must wear appropriate PPE including hard hat, impact-resistant safety glasses with side shields, water-resistant clothing, metatarsal guards for feet and legs, and hearing protection (if appropriate). • One standby person shall be available within the vicinity of the pump during jetting operation. • The work area shall be isolated and adequate barriers will be used to warn other site personnel.
	Unqualified operators	<ul style="list-style-type: none"> • Only qualified and trained personnel are permitted to operate machinery and mechanized equipment associated with water jet cutting and cleaning.
	Out of control equipment	<ul style="list-style-type: none"> • No machinery or equipment is permitted to run unattended. • Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
	Noise	<ul style="list-style-type: none"> • Sound levels above 85 dBA mandates hearing protection by nearby site personnel.
	Activation during repairs	<ul style="list-style-type: none"> • All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
	Pinch points	<ul style="list-style-type: none"> • Keep feet and hands clear of moving/suspended materials and equipment. • Stay alert and clear of materials suspended .
	Falling objects	<ul style="list-style-type: none"> • Hard hats are required by site personnel. • Stay alert and clear of material suspended overhead.
	Flying debris	<ul style="list-style-type: none"> • Impact-resistant safety glasses with side shields are required.

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 12 of 14)

Activity	Potential Hazards	Recommended Controls
High-Pressure Water Jetting Operations (continued)	Contact with potentially contaminated materials	<ul style="list-style-type: none"> • All site personnel will wear the appropriate PPE.
Groundwater monitoring well installation and subsurface soil sampling	Overhead hazards	<ul style="list-style-type: none"> • Make sure no obstacles are within radius of boom. Always stay a safe distance from power lines.
	Faulty or damaged equipment being utilized to perform work	<ul style="list-style-type: none"> • All machinery or mechanized equipment will be inspected by a competent mechanic and be certified to be in safe operating condition. • Equipment will be inspected before being put to use and at the beginning of each shift. • Faulty/unsafe equipment will be tagged and if possible locked out. • Drill rigs shall be equipped with reverse signal alarm, backup warning lights, or the vehicle is backed up only when an observer signals it is safe to do so.
	Uneven terrain, poor ground support, inadequate clearances, contact with utilities	<ul style="list-style-type: none"> • Inspections or determinations of road conditions and structures shall be made in advance to ensure that clearances and load capacities are safe for the passage or placing of any machinery or equipment. • All mobile equipment and areas in which they are operated shall be adequately illuminated. • Aboveground and belowground utilities will be located prior to staging equipment. • Whenever the equipment is parked, the parking brake shall be set. • Equipment parked on inclines will have the wheels chocked. • Inspect brakes and tire pressure on drill rig before staging for work.
	Inexperienced operator	<ul style="list-style-type: none"> • Machinery and mechanized equipment shall be operated only by designated personnel. • Operators shall inform their supervisor(s) of any prescribed medication that they are taking that would impair their judgment.
	Jacks/outriggers	<ul style="list-style-type: none"> • Ensure proper footing and cribbing.
	Falling objects	<ul style="list-style-type: none"> • Remove unsecured tools and materials before raising or lowering the derrick. • Stay alert and clear of materials suspended overhead.
	Pinch points	<ul style="list-style-type: none"> • Keep feet and hands clear of moving/suspended materials and equipment. • Stay alert at all times!

Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 13 of 14)

Activity	Potential Hazards	Recommended Controls
Groundwater monitoring well installation and subsurface soil sampling (continued)	Fire	<ul style="list-style-type: none"> • Mechanized equipment shall be shut down prior to and during fueling operations. • Have fire extinguishers inspected and readily available.
	Fall hazards	<ul style="list-style-type: none"> • Personnel are not allowed to work off of machinery or use them as ladders. • Use fall protection when working above 6 feet.
	Contact with rotating or reciprocating machine parts	<ul style="list-style-type: none"> • Use machine guards; use long-handled shovels to remove auger cuttings. • Safe lockout procedures for maintenance work.
	Heavy lifting	<ul style="list-style-type: none"> • Use proper lifting techniques. Lifts greater than 60 pounds require assistance or mechanical equipment; size up the lift.
	Slip, trip, and fall hazards	<ul style="list-style-type: none"> • Practice good housekeeping, keep work area picked up and clean as feasible. • Continually inspect the work area for slip, trip, and fall hazards.
	Contact with potentially contaminated materials	<ul style="list-style-type: none"> • Real-time air monitoring will take place. If necessary, proper personal protective clothing and equipment will be utilized. • Stop immediately at any sign of obstruction. • Do not breathe air surrounding the boring unless necessary. • Upgrade to respirator if necessary. • Avoid skin contact with soil cuttings. Wear gloves. • Stay clear of moving parts of drill rig.
	Drum handling	<ul style="list-style-type: none"> • Be careful not to breathe air from around open drum any more than necessary. Monitor with photoionization detector/flame ionization detector (PID/FID) equipment and upgrade to respirator if necessary. • When filling a drum (with either soil or water), be careful not to make contact with the contained waste. Wear appropriate gloves. Make sure lid or bung of drum is secure. • If moving a drum unassisted, be sure to leverage properly, use proper lifting techniques, and wear safety glasses and steel-toed boots. • When using a drum dolly, make sure straps and lid catch are securely attached. Leverage properly when tilting drum. Be sure toes stay away from drum.

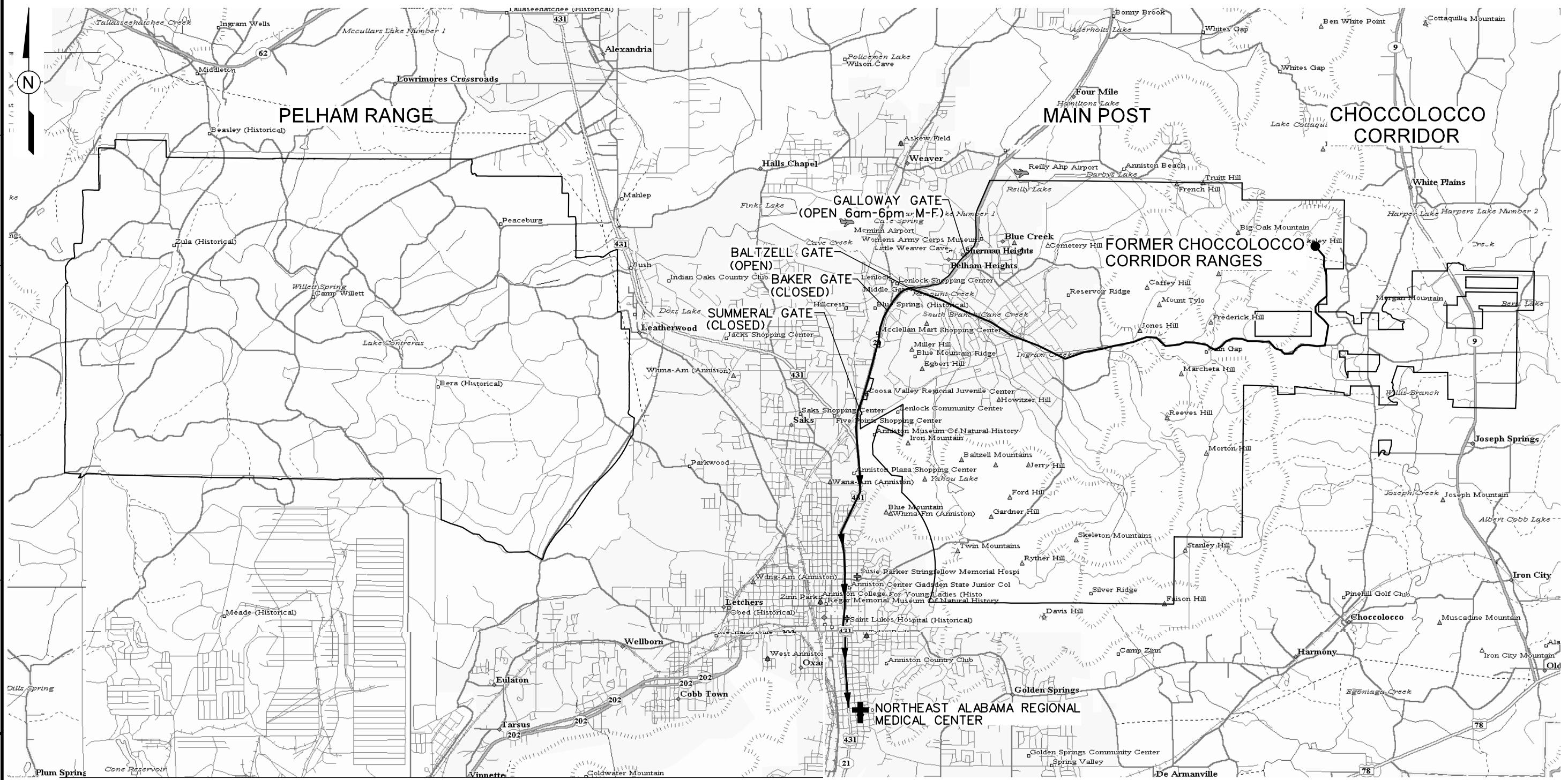
Table 5-1

**Activity Hazard Analysis
Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels
Fort McClellan, Calhoun County, Alabama**

(Page 14 of 14)

Activity	Potential Hazards	Recommended Controls
Groundwater monitoring well installation and subsurface soil sampling (continued)	UXO	<ul style="list-style-type: none">• If UXO is encountered, cease all activities, mark the location, and notify the site manager and UXO specialist immediately.

DWG. NO.: 796887es.745
 PROJ. NO.: 796887
 INITIATOR: J. RAGSDALE
 PROJ. MGR.: J. YACOUB
 DRAFT. CHK. BY:
 ENGR. CHK. BY: S. MORAN
 DATE LAST REV.:
 DRAWN BY:
 STARTING DATE: 04/28/03
 DRAWN BY: D. BOMAR
 04/28/03
 04:26:41 PM
 dbomar
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LEGEND:

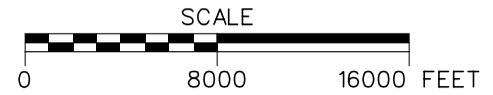
- ROUTE TO NORTHEAST ALABAMA REGIONAL MEDICAL CENTER
- U.S. HIGHWAY
- HOSPITALS
- INVESTIGATION SITE

DRIVING DIRECTIONS FROM BALTZELL GATE ROAD TO THE NORTHEAST ALABAMA MEDICAL CENTER

- LEAVING FORT MCCLELLAN ON BALTZELL GATE ROAD, TURN LEFT (SOUTH) ONTO AL HWY 21
- GO ~ 2.5 MILES WHERE AL HWY 21 MERGES WITH U.S. HWY 431 AND CONTINUE SOUTH
- CONTINUE SOUTH ON AL21/US431 FOR ~ 2.7 MILES
- TURN LEFT ONTO EAST 10th STREET
- GO ~ 0.2 MILE TO MEDICAL CENTER ON RIGHT
- NORTHEAST ALABAMA REGIONAL MEDICAL CENTER, 400 EAST 10th STREET
- PHONE NUMBER : (256) 235-5121

**FIGURE 5-1
HOSPITAL EMERGENCY ROUTE**

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



ATTACHMENT 1

**EVALUATING OE/UXO/CWM HAZARDS IN SUPPORT
OF HTRW ACTIVITIES**

Site Name: Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels

Job Number: 796887

Date: 4/11/03

Name of person completing form: John Ragsdale

Title: Plan Writer

Signature: John Ragsdale

1a. Have the historical records available for this HTRW site been reviewed? Yes No

If the answer to 1a. is yes, proceed to 1b.
 If the answer to 1a. is no, review site information prior to completing this form.

1b. Is there recent information (site walk, worker interviews, etc.) that indicates a potential OE/CWM hazard at this site? Yes No

Proceed to 2.

2. According to the records review, is this site known or suspected to have been used for:

	Yes	No
2a. Manufacturing, production, or shipping of conventional or chemical warfare materiel (CWM) OE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Live fire testing of any ordnance:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Conventional or CWM OE training:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Storage of conventional or CWM OE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Disposal or demilitarization of conventional or CWM OE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (specify):		

	Yes	No
2b. Manufacturing, production, or shipping of chemical agent:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Research or testing of chemical agent:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chemical agent related training:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Storage of chemical agent:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Disposal or demilitarization of chemical agent:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (specify):		

Any 2a question answered "YES" indicates UXO support is required for all site activities. If all 2a questions are answered "NO", UXO support may not be required. Refer to Installation-Wide Safety and Health Plan (SHP) for additional information concerning UXO support. Proceed to question 2b.

Any 2b question answered "YES" requires the remainder of this form to be completed. If all 2b questions are answered "NO", real-time monitoring for chemical agent will not be required and completing the remainder of this form is not required. Refer to SHP for additional information concerning agent monitoring.

Additional space for notes and explanations on page 4.
 Continue to page 2 of 4 -

Site Name: Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels

Job Number: 796887

Date: 4/11/03

3. For sites where the manufacturing, testing, storage, or disposal of CWM is suspected:	Yes	No
Is there evidence that the CWM is/was containerized in potentially unexploded ordnance:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there evidence that the CWM is/was containerized in nonexplosive containers:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there evidence that the CWM is open to the environment (i.e., in an open container or free liquid/solid in the soil/water):	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there evidence that the CWM hazard has been removed from the site or that the site has been decontaminated:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the site been previously monitored or sampled for chemical agent or agent breakdown products:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
For any "YES" above, was the agent or breakdown product identified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For any "Yes", list types of agent (mustard, lewisite, etc.) and the form (in ordnance, in drum, etc.) the CWM is expected to be found (or state "unknown"):

List agent breakdown products identified:

4. Defining the Potential for the Presence of CWM:	Agent Monitoring Requirements for Site Activities:
<p>4a. High Presence Potential – Definition: CWM is known or highly suspected to be present at the site in a condition (within ordnance and/or nonexplosive container, or in an uncontainerized form in sufficient volume that weathering of the product has not rendered it harmless) that will cause potential harm to personnel if it is encountered.</p>	<p>Mandatory personal and perimeter air monitoring using the DAAMS, MINICAMS, and RTAP collection/analysis methods with off-site surety laboratory confirmation of all environmental samples. Specific monitoring criteria (equipment types and sampling station placement, percentage of personnel monitored, etc.) to be established in the Site Specific Safety and Health Plan (SSHP).</p>
<p>4b. Moderate Presence Potential - Definition: CWM is suspected to have been present at the site, but has been previously removed and/or decontaminated, or has been open to the environment such that it is expected to have degraded and been rendered harmless.</p>	<p>The need for personal and perimeter air monitoring using the DAAMS, MINICAMS, and RTAP collection/analysis methods with off-site surety laboratory confirmation of all environmental samples will be reviewed on a site-by-site basis. Specific monitoring criteria (equipment types and sampling station placement, percentage of personnel monitored, etc.) to be established in the Site Specific Safety and Health Plan (SSHP).</p>
<p>4c. Low Presence Potential – Definition: No indications that CWM will be present in quantity or reactivity (in munitions, projectiles, drums, etc.).</p>	<p>No specific personal or area monitoring for chemical agents required beyond what is specified in the SHP.</p>

Site Name: Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels

Job Number: 796887

Date: 4/11/03

Based on the information available for this site, including information gathered during completion of this form, the potential for CWM to be present at this site, as defined above, is expected to be: **LOW**

Exceptions/Explanations:

5. Based on the information provided in questions 1 through 5, above, the following guidelines will be used for establishing PPE requirements for activities to be performed at this site; Specific details are provided in the SSHP:

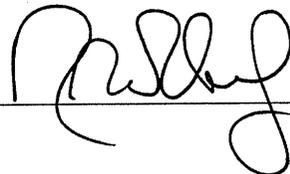
<p>5a. High Exposure Potential - High exposure potential is determined by evaluating the potential presence of CWM in conjunction with the task(s) to be performed, as well as the specific location and duration of the task(s).</p>	<p>Subject to review by the IT CIH, PPE for all personnel in the exclusion zone at a site identified as having a "High Exposure Potential" will be Level B (supplied air) or Level C (full-face respirator with HEPA/Acid Gas/OV cartridges w/ emergency egress hood) and chemically resistant coveralls. Specific PPE requirements are in the SSHP for this site.</p>
<p>5b. Moderate Exposure Potential - Moderate exposure potential is determined by evaluating the potential presence of CWM in conjunction with the task(s) to be performed, as well as the specific location and duration of the task(s).</p>	<p>Subject to review by the IT CIH, PPE for all personnel in the exclusion zone at a site identified as having a "Moderate Exposure Potential" will be Modified Level D (disposable coveralls and emergency egress hood) carried by all personnel. Specific PPE requirements are in the SSHP for this site.</p>
<p>5c. Low Exposure Potential - Low exposure potential is determined by evaluating the potential presence of CWM in conjunction with the task(s) to be performed, as well as the specific location and duration of the task(s).</p>	<p>Subject to review by the IT CIH, no additional PPE requirements above those stated in the SSHP are needed for sites identified as having "Low Exposure Potential." Specific PPE requirements are in the SSHP for this site.</p>

Based on all available information, the exposure potential at this site is considered to be: **LOW**

Exceptions/Explanations:

Review Signatures:

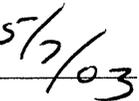
IT UXO Technical Manager



Date: 12 May 03 IT H&S Specialist



Date: 5/7/03



Site Name: Former Choccolocco Corridor Ranges, Parcels 94Q, 95Q, 96Q, 97Q, and Associated Parcels

Job Number: 796887

Date: 4/11/03

Additional Notes and Explanations:

Foster Wheeler Environmental Corporation conducted an ordnance and explosives engineering evaluation/cost analysis (EE/CA) investigation in 2002 and 2003. The purpose of the EE/CA was to investigate the nature and extent of unexploded ordnance and ordnance and explosives (UXO/OE) in Charlie Area (includes Choccolocco Corridor) on FTMC. Based on the results of the field work, USACE-Huntsville Center has issued an internal draft EE/CA report that states that neither UXO nor OE was found within Choccolocco Corridor. Therefore, the USACE-Huntsville Center issued a memorandum, dated 20 March 2003, to USACE-Mobile District stating that UXO avoidance is no longer needed for Choccolocco Corridor of FTMC. A copy of the memorandum by USACE-Huntsville Center is attached.



DEPARTMENT OF THE ARMY
HUNTSVILLE CENTER, CORPS OF ENGINEERS
P.O. BOX 1600
HUNTSVILLE, ALABAMA 35807-4301

REPLY TO
ATTENTION OF:

CEHNC-OE-DC

20 March 2003

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Mobile District, ATTN: Mr. Lee Coker (EN-GE), P. O. Box 2288, Mobile, Alabama 36628-0001

SUBJECT: Ordnance and Explosives EE/CA for Charlie Area of Fort McClellan

1. The fieldwork for the Ordnance and Explosives EE/CA for the Charlie Area of Fort McClellan has been completed. The "Draft Charlie EE/CA Report" has been published and there were no UXO found within the Choccolocco Corridor. The expectation is that the recommendations of the EE/CA Report will be No Further Action for this area.
2. It is our assessment that UXO Escort is no longer needed for the Choccolocco Corridor of Fort McClellan.
3. If you have any questions, please call Dan Copeland at 256-895-1567.

A handwritten signature in black ink, appearing to read "John C. Potter".

JOHN C. POTTER, Ph.D., P.E.
Chief, Design Center for
Ordnance and Explosives Directorate