

Final
Site-Specific Work Plan
M1.01 Parcel & M3 Miscellaneous Property
Ordnance and Explosives Response
Fort McClellan, Alabama

Task Order 0015
Contract Number DACA87-99-D-0010



Contracting Agency:
U.S. Army Corps of Engineers Engineering and Support Center
Huntsville, Alabama

Geographical Corps District:
US Army Corps of Engineers, Mobile District

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McClellan, Alabama
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LIST OF ACRONYMS

AEDA	Ammunition, Explosives and Other Dangerous Articles
AHAs	Activity Hazard Analyses
AR	Army Regulation
ARARs	Applicable and Relevant and Appropriate Requirements
BRAC	Base Realignment and Closure
CD-ROM	Compact Disc – Read Only Memory
CD-RW	Compact Disc – Rewritable
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CWM	Chemical Warfare Materiel
DERP	Defense Environmental Restoration Program
DGPS	Differential Global Positioning System
DID	Data Item Description
DoD	Department of Defense
EE/CA	Engineering Evaluation/Cost Analysis
EHS	Environmental Health and Safety
EM	Electromagnetic
EOD	Explosive Ordnance Disposal
EODT	Explosive Ordnance Disposal Technologies, Inc.
ER	Engineer Regulation
ESS	Explosive Safety submission
FAR	Federal Acquisition Regulations
HTRW	Hazardous, Toxic, and Radioactive Waste
JPA	Joint Powers Authority
mm	millimeter
MPM	Most Probable Munition
msl	Mean Sea Level
NCP	National Contingency Plan
NCR	Nonconformance Report
NTCRA	Non-Time Critical Removal Action
OE	Ordnance and Explosives
OEW	Ordnance and Explosive Waste
PESM	Project Environmental and Safety Manager
PE	Professional Engineer
PM	Project Manager
QA	Quality Assurance
QC	Quality Control
RCP	Regulatory Compliance Plan
RLS	Registered Land Surveyor
RMP	Risk Management Plan
SOP	Standard Operating Procedure
SOW	Statement of Work
SSHPP	Site-Specific Safety and Health Plan

SWWP	Site Wide Work Plan
SUXOS	Senior UXO Supervisor
TBC	To Be Considered
TIP	Task Initiation Procedure
TM	Technical Manual
TO	Task Order
USAESCH	US Army Engineering & Support Center, Huntsville
UXO	Unexploded Ordnance
UXOQCS	UXO Quality Control Specialist
UXOSO	UXO Site Safety and Health Officer

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1.0 INTRODUCTION

1.1 GENERAL

1.1.1 This is a site-specific work plan prepared for the execution of Task Order (TO) 0015, Ordnance and Explosives (OE) Removal Action for the M1.01 Parcel and M3 Miscellaneous Property. This work is being carried out as a component of contract DACA87-99-D-0010, Ordnance and Explosives Response at Fort McClellan, Alabama.

1.1.2 This Work Plan is being prepared under the Defense Environmental Restoration Program (DERP) for Base Realignment and Closure (BRAC), which was established as part of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), more widely known as "Superfund". Public law requires that government facilities subject to closure and subsequent reuse be subject to remediation under CERCLA for Non-Time Critical Removal Actions (NTCRA). Activities conducted in support of this project will be conducted in a manner consistent with CERCLA and the National Contingency Plan (NCP).

1.1.3 The proposed M1.01 Parcel is adjacent to the Summerall Road Extension and is broken into 2 separate tracts with the M3 Miscellaneous Property making up a third area (see Figure 1-1). The three areas are located on the northern most end of the proposed Eastern Bypass and consist of approximately 97 acres with no known impact areas.

1.1.4 There are two tracts of property, which divide the M1.01 and M3 Miscellaneous Property; these are the Eastern Bypass right-of-way and the Summerall Road Extension. A one-foot clearance was previously performed on the Summerall Extension and the Eastern Bypass by Explosive Ordnance Disposal Technologies, Inc. (EODT). A General Site Wide Work Plan (SWWP) was prepared for execution of OE response projects at Fort McClellan, this site specific work plan is an extension of the SWWP.

1.1.5 Review comments and responses will be included as Appendix A in the final submittal of this work plan.

1.2 OBJECTIVE

1.2.1 The objective of this Task Order is to perform a removal action for all OE (Unexploded Ordnance (UXO) and inert ordnance) to a depth of 12 inches below grade. This clearance is a final removal action prior to transfer of the M1.01 Parcel and M3 Miscellaneous Property. A Transition Team is now in place to facilitate cleanup of Fort McClellan properties for eventual transfer to the Joint Powers Authority (JPA) who will transfer the property to private ownership or facilitate transfer to other government entities.

1.3 SITE LOCATION

1.3.1 Fort McClellan is located northeast of the City of Anniston, Calhoun County, Alabama. To the west are the areas known as Weaver and Blue Mountain. To the North is the City of Jacksonville. The Talladega Forest is to the east of the post. Figure 1-1 shows the location of the M1.01 Parcel and M3 Miscellaneous Property OE Removal Area.

1.4 SITE HISTORY

1.4.1 Fort McClellan has been used for artillery training of troops and the National Guard as early as 1912 to early WW II. In 1951, Fort McClellan became the site of the Chemical Corps Training Command. In 1962, the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency moved to Fort McClellan. In 1973, the Chemical Corps School along with the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency closed. In 1979, the U.S. Army Chemical Corps School re-established along with a training Brigade for Basic Training.

1.4.2 Fort McClellan was recommended for closure in BRAC 95, and the Base was closed in September 1999. At this time, local, state, and federal interests are deciding the future use of Fort McClellan. A Transition Team is now in place to facilitate cleanup of Fort McClellan properties for eventual transfer to the JPA, who will transfer the property to private ownership or facilitate the transfer to other government entities.

1.4.3 Several previous site investigations in and around the Eastern Bypass have indicated the presence of training, practice or expended OE items within the M1.01 area. The middle section of the Eastern Bypass right-of-way, which encompasses known impact areas, is currently undergoing a removal action. The activities outlined in paragraph 1.4.1 have contributed to the potential of OE items being found within the M1.01 Property. This data is from the Final Engineering Evaluation/Cost Analysis prepared by Foster Wheeler Environmental dated 14 December 2001. EODT has completed a surface clearance to 1 foot in the entire Eastern Bypass right-of-way in support of pre-construction activities.

1.5 TOPOGRAPHY

1.5.1 The surface topography of Fort McClellan varies greatly over its entire area. Within the M1.01 Parcel removal area, the surface topography is less variable. Most of the surface terrain is relatively flat to moderately sloping hills. The overall elevation of the parcel and the associated areas ranges from approximately 750 to 800 feet above mean sea level (msl), with the highest elevation near the eastern end of the removal area.

1.6 CLIMATE

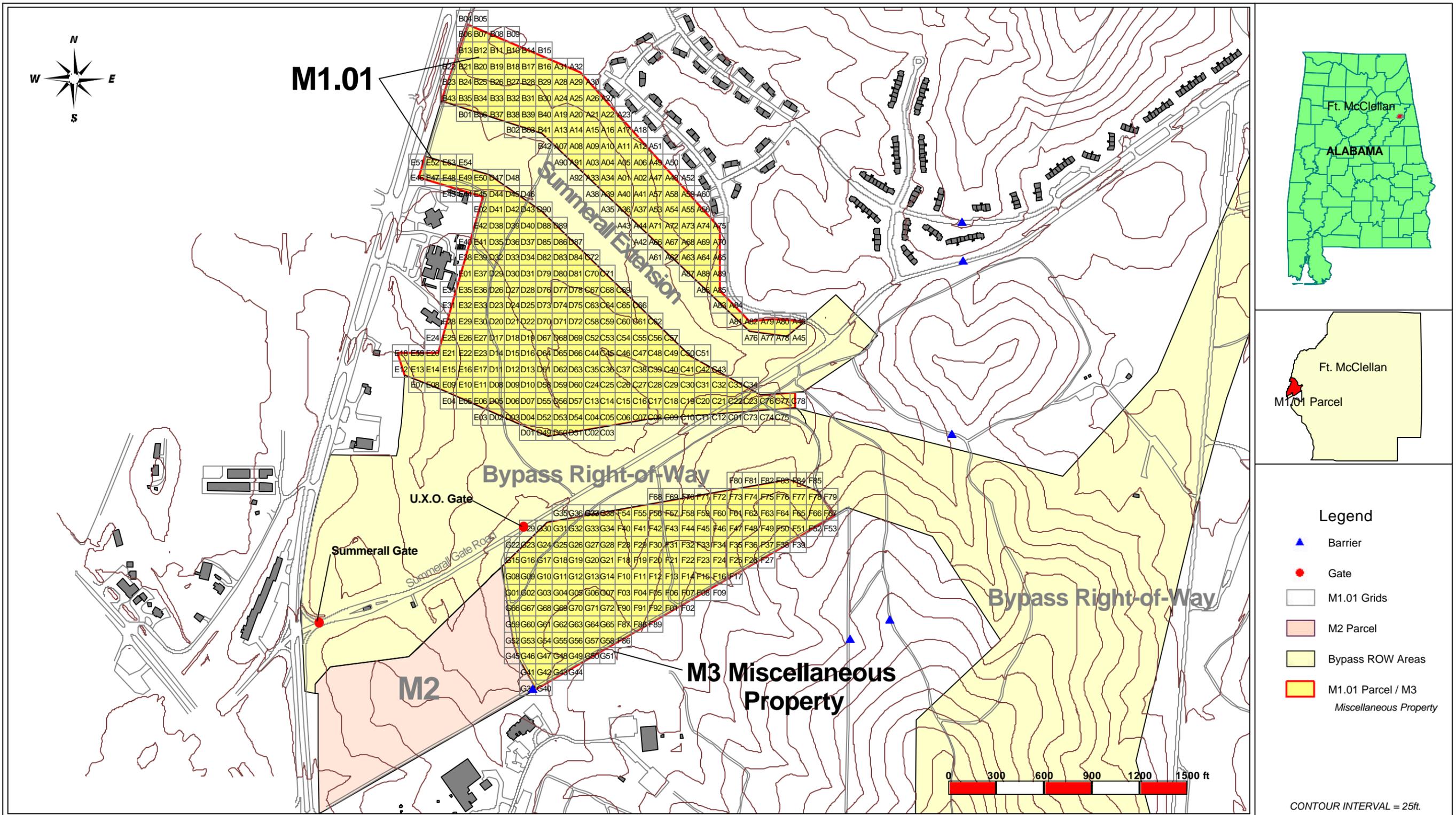
1.6.1 Fort McClellan is situated in a temperate, humid climate. Summers are hot and long, and winters are usually short and mild to moderately cold. The climate is influenced by frontal systems moving from northwest to southeast, and temperatures change rapidly from warm to cool due to the inflow of northern air. The average annual

temperature is 63 degrees Fahrenheit (°F). Summer temperatures usually reach 90°F or higher about 70 days per year, but temperatures above 100°F are rare. Freezing temperatures are common but are usually of short duration. The first frost may arrive by late October. At Anniston, the average date of the first 32°F temperature is November 6, and the last is March 30. This provides a growing season of 221 days. Snowfall averages 0.5 to 1 inch. On rare occasions, several inches of snow accumulate from a single storm (ESE, 1997).

1.6.2 The average annual rainfall is approximately 53 inches and is well distributed throughout the year. The more intense rains usually occur during the warmer months, and some flooding occurs nearly every year. Approximately 80 percent of the flood-producing storms are of the frontal type and occur in the winter and spring, lasting from 2 to 4 days each. Summer storms are usually thunderstorms with intense precipitation over small areas, and these sometimes result in serious local floods. Occasionally, several wet years or dry years occur in series. Annual rainfall records indicate no characteristic order or pattern (ESE, 1997).

1.6.3 Winds in the Fort McClellan area are seldom strong and frequently blow down the valley from the northeast. However, there is no truly persistent wind direction. Normally, only light breezes or calm prevail, except during passages of cyclonic disturbances, when destructive local wind storms develop, some into tornadoes, with winds of 100 miles per hour or more (ESE, 1997).

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FOSTER WHEELER ENVIRONMENTAL CORPORATION
 Fort McClellan, Alabama
 FM: WWM

U.S. Army Engineering and Support Center
 Huntsville, Alabama
 Contract DACA 87-99-D-0010
 Delivery Order 0015

FIGURE 1-1
M1.01 Parcel Site Map
 M1.01 Parcel Work Plan

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2.0 TECHNICAL MANAGEMENT PLAN

2.1 GENERAL

2.1.1 In accordance with US Army Engineering & Support Center, Huntsville (USAESCH) Data Item Description (DID) OE-005-02, Technical Management Plan, the following items have been addressed and are included within Section 2.0 - Technical Management Plan of the SWWP:

1. Identification of guidance, regulations, or other policy under which the OE operations will be conducted (SWWP – paragraph 2.1.1 to paragraph 2.1.5);
2. Discussion, assumptions, and procedures to be followed relating to the discovery of Chemical Warfare Material (CWM) on a conventional ordnance site (SWWP – paragraph 2.1.6);
3. Procedures to be followed in the event unexploded ordnance (UXO) cannot be destroyed onsite, if planned (SWWP – paragraph 2.1.7); and
4. Procedures to follow if an unidentified UXO is located (SWWP – paragraph 2.1.7).

2.1.2 A Regulatory Compliance Plan (RCP) for OE response activities at Fort McClellan is presented in Section 2.1 - Regulatory Compliance, of the SWWP. The plan discusses potential Applicable and Relevant and Appropriate Requirements (ARARs) and requirements to be considered (TBC) for the investigation and management of OE at Fort McClellan.

2.1.3 This OE removal action will be performed in a manner consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 104, and the National Contingency Plan (NCP) Sections 300.120(c) and 300.400(e). No Federal, State or Local permits should be required for any access or remedial action taken on this site for the activities within this statement of work. The applicable provisions of 29 Code of Federal Regulations (CFR) 1910.120 shall apply.

2.2 TECHNICAL SCOPE

2.2.1 The Statement of Work (SOW) supplied for this Task Order consists of:

1. Task 1 - Preparation of Site Specific Work Plan and Conventional Explosives Safety Submission;
2. Task 2 - Location Surveys, Site Preparation and Mapping;
3. Task 3 - Vegetation Removal;
4. Task 4 - Unexploded Ordnance Removal;
5. Task 5 - Final Disposition of Ammunition, Explosives, and Other Dangerous Articles (AEDA)/Range Residue;
6. Task 6 - Prepare and submit Site Specific Removal Report; and
7. Task 7 - Meetings.

2.2.2 In accordance with USAESCH DID OE-005-01, Type II Work Plan, a copy of the Statement of Work is contained at Appendix B – Statement of Work.

2.3 APPROACH

The following approach is proposed in order to satisfy the intent of the Statement of Work:

2.3.1 Task 1 – Prepare Site Specific Work Plan (SSWP) and Conventional Explosives Safety Submission (ESS)

2.3.1.1 Site Specific Work Plan. This SSWP for the M1.01 Parcel and M3 Miscellaneous Property shall include site specific details as required by USAESCH DID OE-005-1, Type II Work Plan that are not covered by the SWWP for Fort McClellan. No site work will commence until approval of this SSWP.

2.3.1.2 Conventional Explosives Safety Submission. The ESS is a separate document that is being prepared in accordance with USAESCH DID OE-060, Conventional Explosives Safety Submission. The SSWP and the ESS will be submitted together. Tasks 1 through 3 can begin prior to approval of the ESS, although OE removal operations under Task 4 will not begin until the ESS has received final approval.

2.3.1.3 The Task Order Manager is primarily responsible for the preparation of the SSWP and ESS with input and review from the appropriate subject matter experts. The Draft SSWP and Draft ESS shall be submitted within 2 days after award of the Task Order. After a 30-day concurrent review period by the appropriate reviewers, the Task Order Manager will complete the Draft-Final SSWP and ESS within 2 workdays of receiving the comments. The Final SSWP and Final ESS shall have corrections made within 2 days of receipt of the comments and be submitted.

2.3.2 Task 2 – Location Surveys, Site Preparation, and Mapping

2.3.2.1 Foster Wheeler Environmental or an approved sub-contractor shall perform all processes under this task in accordance with the Statement of Work and USAESCH DID OE-005-7, Location Surveys and Mapping Plan.

2.3.2.2 Boundary Delineation. As a first step in this task, a data file of the State Plane co-ordinates of the boundary of the M1.01 Parcel and M3 Miscellaneous Property will be prepared in accordance with the locations shown in the Final Action Memorandum and the M1.01 Engineering Evaluation/Cost Analysis (EE/CA) prepared by Foster Wheeler Environmental. A sub-contract Registered Land Surveyor (RLS) shall set out this boundary utilizing this data file with a precision-surveying instrument. Distinctively marked wooden stakes at a spacing of two hundred foot or as required will be placed to delineate the investigation boundary. Site maps are provided as Appendix C.

2.3.2.3 Grid Setout. In order to set out the 100' x 100' grid corners for the intrusive investigation, Task 3 will be carried out first. After the investigation area is progressively cleared of brush and debris, a Grid Setout Team shall setout the grid corners utilizing precision surveying methods to closer than one foot.

2.3.2.4 Exclusion zone boundary barricade and gate locations will be identified and barricades or gates will be erected. These barricades or gates will be permanently located, thereby restricting access to the M1.01 Parcel and M3 Miscellaneous Property during intrusive operations. This will allow Foster Wheeler Environmental to have sole access to the area. Gates will remain locked and under the control of Foster Wheeler Environmental during working hours.

2.3.2.5 Task Deliverables. The following items shall be supplied to the Contracting Officer as part of the task:

1. A tabulated list of the respective grid corners for all grids being cleared in the areas described in the Statement of Work; and
2. Electronic and hard copies of all drawing files used for and developed as part of the removal action. These will meet the requirements listed in the Statement of Work.

2.3.3 **Task 3 – Vegetation Removal**

2.3.3.1 Foster Wheeler Environmental or sub-contractor personnel shall carry out vegetation clearance by mechanical and/or manual means. The protocol for vegetation removal is anomaly avoidance. A separate surface clearance is not planned due to the area being designated only as a training area not an impact area. The Most Probable Munition (MPM) is a M15 WP Grenade, which does not require shielding of mechanical equipment. Manual clearance will require one UXO Technician III per six workers. If required, trees up to 6 inches in diameter will be removed. Lateral branches and other impediments to ordnance clearance operations shall be removed to approximately 6 feet above grade to allow unimpeded access to all areas.

2.3.3.2 Quality Control (QC) processes to be carried out in this task are explained in further detail in Chapter 11 – Quality Control Plan.

2.3.4 **Task 4 – Unexploded Ordnance Removal**

2.3.4.1 Foster Wheeler Environmental or an approved sub-contractor shall furnish all necessary personnel and equipment to locate and perform a clearance, to 12 inches below grade, of all OE and inert ordnance in accordance with the SWWP and this Site Specific Work Plan. Only USAESCH approved UXO personnel shall perform UXO procedures in accordance with DID OE-025, Personnel/Work Standards and EP 385-1-95a, Basic Safety Concepts and Considerations for Ordnance and Explosives Operations. All access /excavation/detonation holes made during this task shall be back filled to grade at the conclusion of QC activities for that area.

2.3.4.2 Unexploded Ordnance Removal. Foster Wheeler Environmental or its approved sub-contractor will provide the necessary personnel and equipment in order to carry out the intrusive investigation of the M1.01 Parcel and M3 Miscellaneous Property. The Intrusive Teams shall be equipped with hand tools to excavate any target anomalies detected down to a depth of 12 inches below grade. The 100' x 100' grids shall be

delineated with string lines into approximately 5 foot wide lanes, which shall be systematically searched with magnetometers and/or detectors including but not limited to Schonstedt, White's Spectrum XLT, Vallon, MagnaTrac, and/or other approved instrument. In the instance where an item with an explosive hazard is found, the excavation below it will be cleared to depth. The team leader shall directly supervise all team members and shall maintain a detailed log.

2.3.4.3 In the instance where anomalies are located underneath tree stumps, manual excavation methods will be utilized to dig down beside the anomaly and then access will be gained from the side. Although not expected, in instances where target sized anomalies are found to be in grown within a tree stump, consultation with the on-site USAESCH Safety Specialist will be carried out to ascertain the most appropriate access method.

2.3.5 **Task 5 – Final Disposition of AEDA/Range Residue**

2.3.5.1 All recovered OE shall be disposed of daily in accordance with Technical Manual (TM) 60A-1-1-31, General Information for Explosive Ordnance Disposal (EOD) Procedures unless an exception is approved by the on-site USAESCH Safety Specialist. All explosives for disposal operations will be stored under Task Order 0009. As outlined in Chapter 3 - Explosives Management Plan, Foster Wheeler Environmental shall provide demolition materials for disposal of OE in accordance with USAESCH DID OE-005-03. These shall be stored in the approved Foster Wheeler Environmental storage location. Inert ordnance items shall be vented in accordance with the provisions of Department of Defense (DoD) 4160.21-M-1, Defense Demilitarization Manual. Two weeks after the completion of fieldwork, Foster Wheeler Environmental will provide the Contracting Officer with an Ordnance Filler Report in accordance with USAESCH DID OE-090, Ordnance Filler Report to assess possible damage to environmental media.

2.3.5.2 Accounting for UXO Items/Components Found. Foster Wheeler Environmental shall maintain as part of its database, a detailed accounting of all UXO items/components encountered on the project site. This accounting shall be in accordance with USAESCH DID OE-090, Ordnance Filler Report.

2.3.5.3 Turn in of Inert Ordnance and Metallic Debris. Foster Wheeler Environmental shall furnish all necessary personnel and equipment to segregate, inspect and turn in all recovered scrap metal/range residue to the Fort McClellan Scrap Holding Area. Foster Wheeler Environmental is the operator of the Fort McClellan Scrap Holding Area. The metal scrap will be later processed for recycling in accordance with DoD 4160.21-M, Defense Demilitarization Manual. The methodology to accomplish this task is contained in Section 2.9, OE and Non-OE Scrap Procedures in the SWWP. The processing of this scrap will be carried out under a separate task order.

2.3.5.4 Perform Quality Control. Quality Control will be conducted on both processes and products within the Task Order in accordance with USAESCH DID OE-005-11. The basis of the Quality Control Plan is a three-phase control process consisting of preparatory, initial, and follow-up inspection/audits to ensure processes are in control and

opportunities for improving processes are captured and implemented. Further detail on Quality Control is contained within Chapter 11 – Quality Control Plan.

2.3.6 Task 6 – Prepare and Submit Site Specific Removal Report

2.3.6.1 In accordance with the Statement of Work, three weeks after completion of all fieldwork, a Draft Removal Report will be submitted to USAESCH. One week after the receipt of USAESCH comments on this document, the Draft Final Removal Report will be submitted. The Final Removal Report shall be submitted a week after comments on the Draft Final Removal Report have been received.

2.3.6.2 USAESCH has requested that Foster Wheeler Environmental provide all maps and photos on Compact Disc – Read Only Memory (CD-ROM) for the Draft, Draft Final and Final Removal Reports. Only the Final Removal Report shall have four copies with both hardcopy and electronic versions of anomaly maps and photos. The digital maps, photos and any raw data that is submitted on CD-ROM will be provided only once with the Draft Removal Report. The disk will be labeled as attachments to the Final Report and will not be resubmitted with the Draft Final and Final Removal Report.

2.3.7 Task 7 – Meetings

2.3.7.1 Foster Wheeler Environmental Task Order Manager will participate in two on-site meetings. More meetings will constitute a change to this work plan and a Field Change Request will be submitted to USAESCH.

2.4 PERSONNEL

2.4.1 UXO Personnel and Qualifications

2.4.1.1 All individuals executing UXO procedures or UXO-related procedures will be qualified UXO personnel and meet or exceed the USAESCH DID OE 025, Personnel/Work Standards. These personnel will be US citizens who have graduated from the US Army Bomb Disposal School, Aberdeen, Maryland, or the US Naval Explosive Ordnance Disposal (EOD) School, Indian Head, Maryland or Eglin Air Force Base, Florida or an DoD approved UXO training facility. UXO personnel resumes and appropriate training certificates will be provided to USAESCH for approval prior to field tasks commencing.

2.4.2 Key Personnel Responsibilities

2.4.2.1 All field teams shall follow the procedures outlined within this Work Plan. The UXO teams will consist of a qualified UXO Supervisor and UXO Technicians approved by USAESCH. Qualification certificates are maintained on file at the corporate office and will also be maintained on-site in the office trailer. The key personnel in this Task Order are:

2.4.2.2 Project Manager. The site wide Project Manager is Mr. Arthur Holcomb, Professional Engineer (PE), Certified Industrial Hygienist (CIH) (see Appendix D for resume). His responsibilities are detailed in Section 2.2.1 – SWWP.

2.4.2.3 Task Order Manager. The Task Order Manager is Mr. Greg Williams (see Appendix D for resume). His responsibilities include: co-ordination with the Foster Wheeler Environmental Project Manager in developing project scope and costs, detailed work order specifications and schedules and identification of project personnel to be utilized in accomplishing the Statement of Work. Procurement and management of subcontractors is also the responsibility of the TO Manager. The TO Manager is responsible for the completion of all major deliverables. The TO Manager will also approve charges by field and office personnel, compare ongoing project cost and schedule performance to the baseline cost/schedule, and bring any significant variance to the attention of the Foster Wheeler Environmental Project Manager (PM), who will communicate impacts to the USAESCH PM as necessary. The TO Manager will identify if a change in scope is necessary to meet technical requirements, and will discuss potential changes in scope with the Foster Wheeler Environmental PM, and with the USAESCH PM as necessary.

2.4.2.4 Senior UXO Supervisor (SUXOS). The M1.01 Parcel and M3 Miscellaneous Property SUXOS shall report to and assist the Foster Wheeler Environmental Ft. McClellan Site Manager/SUXOS in the function of his responsibilities relating to this Task Order. Responsibilities are detailed in Section 2.2.1.2 – SWWP.

2.4.2.5 UXO Site Safety and Health Officer (UXOSO). The UXOSO for this Task Order will be a USAESCH and Foster Wheeler Environmental approved UXOSO. He will work for and report to the Site UXOSO.

2.4.3 Composition of Teams

2.4.3.1 The following is the composition of the teams involved in the Task Order. Team composition will in all cases be in accordance with USAESCH DID OE-025, Personnel/Work Standards. All UXO Technician III will report directly to the M1.01 Parcel and M3 Miscellaneous Property SUXOS.

2.4.3.2 Site Preparation Escort. This team will monitor and provide liaison for brush removal operations. The Team Leader will be a UXO Technician III as required to monitor and provide liaison to brush removal personnel and machinery from sub-contractor(s) depending on the final composition of the brush removal work force. In accordance with USAESCH guidance, a single UXO Technician III per 6 workers has been programmed for manual brush clearance during the conduct of this Task Order.

2.4.3.3 Survey Escort. A UXO Technician III or II will supervise the setout of the property boundary and the 100' x 100' grid corners by each Foster Wheeler Environmental sub-contractor survey team. The Team Leader will be a UXO Technician III, with one UXO Technician II or I as required.

2.4.3.4 Intrusive Teams. These teams will intrusively investigate the M1.01 Parcel and M3 Miscellaneous Property. Each team shall consist of a UXO Technician III and up to six UXO Technician II or I. Each UXO Technician I must work with a UXO

Technician II in accordance with the DID OE-025. They shall be equipped with standard search and dig equipment.

2.4.3.5 Quality Control. The Quality Control Team will consist of one USAESCH approved UXO Quality Control Specialist (UXOQCS), who will work for and report to the Site UXOQCS.

2.5 MOBILIZATION PLAN

2.5.1 Foster Wheeler Environmental is already established on the site with field office and storage facilities. Further project specific personnel and equipment will be mobilized in accordance with the SWWP – Section 2.3 - Mobilization Plan. For this Task Order, one portable site trailer will be included for the duration of the Task Order.

2.6 SITE PREPARATION ACTIVITIES

Upon completion of mobilization activities, Foster Wheeler Environmental will commence site preparation. Site preparation activities will be performed as described below.

2.6.1 Brush Clearance

2.6.1.1 The M1.01 Parcel and M3 Miscellaneous Property is heavily vegetated with trees, bushes, vines, and kudzu plants. Lateral branches and other vegetation will be removed to 6 foot above grade where required for personnel access.

2.6.1.2 Vegetation removal will not include any tree greater than 6 inches in diameter, and when possible no trees will be removed, regardless of size. Clearing will be performed in accordance with Chapter 12 - Environmental Protection Plan.

2.6.1.3 It is proposed to use two different methods to accomplish the brush clearance task in this Task Order. Use of approved mechanical equipment and the more traditional manual method. In accordance with USAESCH guidance, a single escort consisting of a UXO Technician III per six workers will provide UXO avoidance, roving monitoring and liaison between the sub-contract brush clearance crews when using the manual method. If a mechanical method is used, one UXO Technician III will provide anomaly avoidance and liaison for the sub-contractor.

2.6.1.4 A UXO Technician III will act as Site Preparation Team Leader and will report directly to the M1.01 Parcel and M3 Miscellaneous Property SUXOS. Any OE encountered during site preparation activity will be marked with red pin flags, a preliminary assessment will be made and the item reported to the M1.01 Parcel and M3 Miscellaneous Property SUXOS. The team leader will determine the necessity of evacuating the brush clearing crew while awaiting the arrival of the SUXOS. The SUXOS will verify the identity of the item and determine if operations can continue or if the site will be evacuated until the item is disposed of. The item will be disposed of immediately or at the end of the day's operation in accordance with the disposal procedures referenced in Section 2.6.5 of this Chapter.

2.6.2 Location Surveys

2.6.2.1 Foster Wheeler Environmental will sub-contract out the boundary delineation/confirmation and the grid setout. At all points where wooden stakes or posts are to be driven into the soil or where survey corners are to be located, a magnetometer check of that point will be accomplished prior to their emplacement. If at any time the magnetometer indicates a positive reading, another location free of anomalies shall be selected for placement of the marker. Survey and boundary stake installations are the only intrusive activities (sub-surface) authorized during Location Activities.

2.6.3 Sampling Procedures

2.6.3.1 Not applicable.

2.6.4 OE Operations

2.6.4.1 Detailed procedures for reporting and disposition of UXO, including responsibilities of personnel, overall safety precautions, UXO identification, transportation, safe holding areas, operations in populated/sensitive areas, all demolition, post demolition operations and any required engineering controls for intrusive operations and intentional detonations are contained in Attachment 2-1- SWWP.

2.6.4.2 Detailed procedures for managing, reporting, venting, and disposing of OE scrap and non-OE scrap are contained in Section 2.9 - SWWP.

2.7 DATA MANAGEMENT

2.7.1 In order to reduce the volume of paperwork utilized in the Task Order, and as a consequence, reduce the size of the Removal Report, field data collection devices will be used. This gives the advantage of providing data in both electronic and hardcopy as required with minimal post-processing. The UXO Data Specialist and Database Manager will be responsible for direct data management within this Task Order. The following protocols will be used in each work phase:

- | | | |
|----|-----------------------|--|
| 1. | Boundary Delineation. | Electronic field log book; |
| 2. | Brush Clearance. | Electronic field log book; |
| 3. | Grid Setout. | Electronic field logbook and grid corner locations on flash cards for use in Differential Global Positioning System (DGPS) hardware; |
| 4. | OE Removal. | Electronic field log book and details of anomalies on flash card for QC and Ordnance Filler Report; |
| 5. | Quality Control. | Electronic field log book and details of all process and product QC. |

2.8 DATA BACKUP

2.8.1 The Database Manager will back data up every day. 8 millimeter (mm) tape drives connected to the existing Foster Wheeler Environmental network will be utilized to backup data. Compact Disc – Rewritable (CD-RW) drives will also be used where applicable.

3.0 EXPLOSIVES MANAGEMENT PLAN

3.1 GENERAL

3.1.1 See Section 3.0 - Explosives Management Plan of the SWWP. An Explosives Management Plan was prepared in accordance with USAESCH DID OE-005-03, Explosives Management Plan, Federal Acquisition Regulation (FAR) 45.5, ATFP 5400.7, DoD 6055.9-STD, Army Regulation (AR) 190-11, DOT Regulations, and Alabama Explosive Safety Act of 1993. The local Explosive Management Plan (Appendix H) has been developed and will be used for storage and management of explosives at Foster Wheeler Environmental approved storage location.

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4.0 EXPLOSIVES SITING PLAN

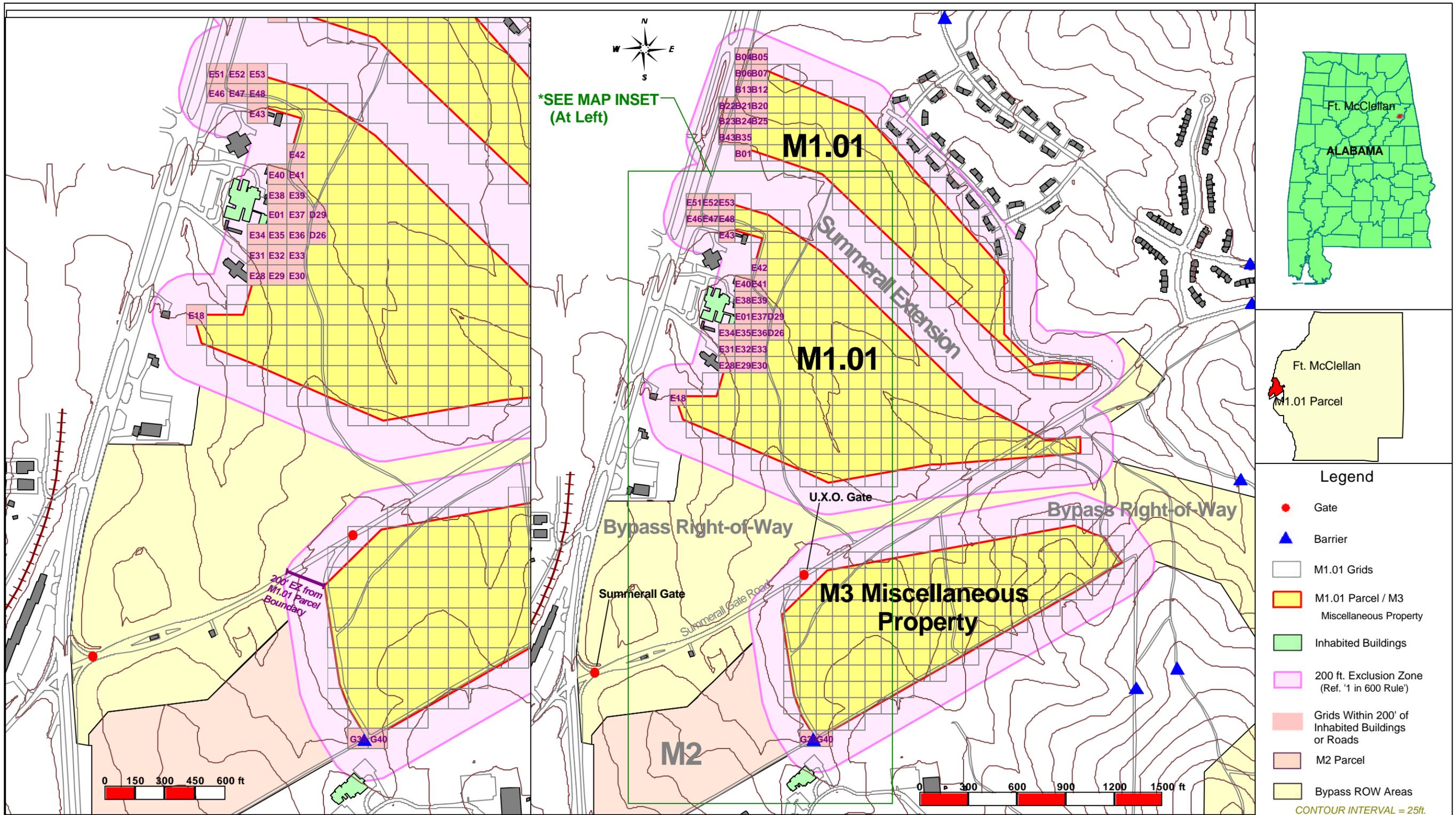
4.1 GENERAL

4.1.1 An Explosives Siting Plan was prepared in accordance with USAESCH DID OE-005-4, Explosives Siting Plan. See Section 4 - Explosives Siting Plan, in the SWWP. Figure 1-1, shows the location of planned OE operations within this Task Order.

4.1.2 The Most Probable Munition (MPM) for this OE Removal is the M15 WP Grenade. This item of ordnance has an exclusion zone radius approved by the USAESCH of 517 feet. A one fragment in 600 square feet rule has been granted by USAESCH Safety and is included as Attachment G. This ruling will reduce the exclusion zone radius to 60 feet. This item was selected as the most appropriate after review of the M1.01 Parcel EE/CA.

4.1.3 The 60-foot exclusion crosses the property boundary at the southern and western side of the M1.01 Parcel and M3 Miscellaneous Property. Figure 4-1 shows the areas where the 60-foot exclusion zone will encumber the property outside the boundaries. As required these areas will use evacuation of the personnel or engineering controls for all intrusive operations conducted. Appendix I is the Minimum Separations Distance Calculations for intentional and unintentional detonations. During venting or disposal operations engineering controls, i.e. sandbags will be used in accordance with USAESCH procedures.

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FOSTER WHEELER ENVIRONMENTAL CORPORATION
 Fort McClellan, Alabama
 FM: WWM

U.S. Army Engineering and
 Support Center
 Huntsville, Alabama
 Contract DACA 87-99-D-0010
 Delivery Order 0015

FIGURE 4-1
Exclusion Zone and
Inhabited Building Location
 M1.01 Parcel Work Plan

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5.0 GEOPHYSICAL MANAGEMENT PLAN

5.1 GENERAL

5.1.1 A Geophysical Management Plan is not applicable for this Task Order.

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6.0 SITE SAFETY AND HEALTH PLAN

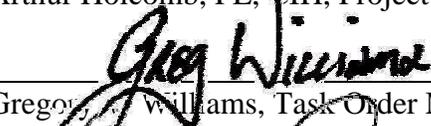
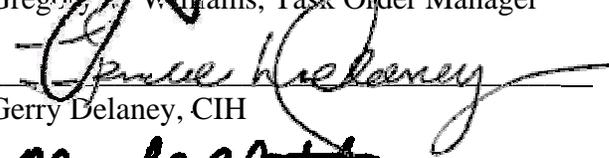
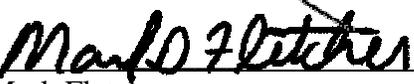
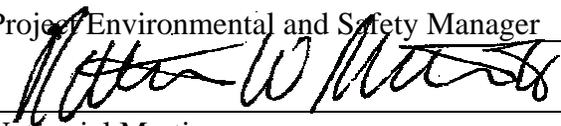
6.1 GENERAL

6.1.1 Safety and health guidelines are discussed in Section 6.0 of the SWWP. This plan contains information that is specific to the M1.01 Parcel and M3 Miscellaneous Property OE Removal Area and supplements the SWWP referenced above.

6.2 INTRODUCTION

6.2.1 This Site-Specific Safety and Health Plan (SSHP) has been prepared to address the hazards associated with characterization activities within this Task Order at Fort McClellan in Anniston, Alabama. This SSHP will be used in combination with the Site-Wide SSHP, and both plans will be available to workers during activities in the M1.01 Parcel and M3 Miscellaneous Property OE Removal Area. By their signatures, the undersigned certify that this SSHP will be utilized for the protection of the health and safety of workers during work tasks.

APPROVALS:

 _____ Arthur Holcomb, PE, CIH, Project Manager	_____ 2/21/02 Date
 _____ Gregory Williams, Task Order Manager	_____ 2/21/02 Date
 _____ Gerry Delaney, CIH	_____ 2/21/02 Date
 _____ Mark Fletcher Project Environmental and Safety Manager	_____ 2/21/02 Date
 _____ Nathaniel Martin Site UXO Safety Officer	_____ 2/21/02 Date

6.3 SCOPE AND APPLICABILITY

6.3.1 This SSHP has been prepared in conformance with the Foster Wheeler Environmental, Health and Safety programs, policies and procedures; the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1; and the U.S. Army Corps of Engineers Safety and Occupational Health Document Requirements for Hazardous, Toxic and Radioactive Waste (HTRW) and Ordnance and Explosive Waste (OEW) Activities, Engineer Regulation (ER) 385-1-92.

6.3.2 The content of this SSHP may change or undergo revision based upon additional information made available to safety and health personnel, monitoring results, or changes in the technical statement of work. Any changes proposed must be reviewed by the Foster Wheeler Environmental UXOSO and are subject to the approval of the Foster Wheeler Environmental Project Environmental and Safety Manager (PESM). Changes are also subject to the approval of the U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville (USAESCH). The Field Change Request Form, provided in Attachment 6-1 of the SWWP, will be used to initiate such changes.

6.3.3 The protection of site workers and environmental safety and health are major concerns during site operations. The purpose of this plan is to ensure safe and healthful working conditions within this Task Order. The safety and health organization and procedures contained in this SSHP have been established based upon an analysis of the potential hazards, and personnel protection measures have been chosen based on these risks.

6.3.4 Compliance with this SSHP is required for all Foster Wheeler Environmental employees and their contractors, subcontractors, and visitors who may participate in activities within this Task Order. Refusal or failure to comply with the SSHP or violation of any safety procedures by field personnel and/or subcontractors may result in their immediate removal from the site following consultation with the Foster Wheeler Environmental PESM and the Project Manager (PM).

6.3.5 This SSHP addresses the following activities:

1. Mobilization/demobilization;
2. Site Preparation;
3. Vegetation Removal;
4. OE Removal;
5. Disposition of Ammunition, AEDA/Range Residue.

6.4 STAFF ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES

The responsibilities of the project staff are described in the following paragraphs:

6.4.1 Project Manager (PM)

6.4.1.1 The Project Manager is Mr. Arthur Holcomb. It is the responsibility of the Project Manager to:

1. Ensure that full corporate resources are made available to the program, as needed;
2. Serve, as necessary, as an intermediary between the USAESCH Contracting Officer (CO) and Foster Wheeler Environmental's Corporate Management; and
3. Assist the Task Order Manager in problem resolution/corrective action implementation.

6.4.2 Task Order Manager

6.4.2.1 The Task Order Manager is Greg Williams; it is the responsibility of the Task Order Manager to:

1. Provide the major point of control to ensure that the program's technical, financial and scheduling objectives are achieved;
2. Ensure implementation of this program through coordination with the responsible Project Environmental Safety Manager (PESM);
3. Conduct inspections jointly with the UXOSO;
4. Participate in major incident investigations;
5. Ensure the SSHP has all of the required approvals before any site work is conducted;
6. Ensure that the PESH or UXO Site Safety and Health Officer (UXOSO) is informed of project changes which require modifications of the site safety plan;
7. Assume overall project responsibility for Project Health and Safety; and
8. Ensure that adequate resources are provided to the field staff to carry out their responsibilities.

6.4.3 Project Environmental and Safety Manager (PESM)

6.4.3.1 The Project Environmental and Safety Manager (PESM) is Mark Fletcher. The responsibilities of the PESH are outlined and described in Section 6.2.2 of the SWWP.

6.4.4 Certified Industrial Hygienist (CIH)

6.4.4.1 The Certified Industrial Hygienist (CIH) is Gerry Delaney. The responsibilities of the CIH are the same as those of the PESH as described in section 6.2.2 of the SWWP except that the CIH reviews and approves this SSHP.

6.4.5 Site Senior UXO Supervisor (SUXOS)

6.4.5.1 The Site Senior UXO Supervisor (SUXOS) will be USAESCH approved. The responsibilities of the SUXOS are outlined and described in Section 6.2.3 of the SWWP.

6.4.6 Site UXO Safety Officer (UXOSO)

6.4.6.1 The Site Wide UXO Safety Officer (UXOSO) will be USAESCH approved. The responsibilities of the UXOSO are outlined and described in Section 6.2.4 of the SWWP.

6.4.7 Field Crew Personnel

6.4.7.1 Field crew personnel include all other persons entering the site for the purpose of assisting in the completion of the project. This includes, but is not limited to geophysicists, client representatives, subcontractors, regulatory personnel, and site

workers. The responsibility of all field crew personnel are outlined and described in Section 6.2.5 of the SWWP.

6.5 SOURCE AND NATURE OF CONTAMINATION

6.5.1 The data presented was obtained during previous archival research, response investigations, and remedial designs. The suspected types of OE associated with the M1.01 Parcel and M3 Miscellaneous Property OE Removal Area are presented in Table 6-1. The locations are depicted graphically in Figure 5 – OE and OE Scrap Found During Previous Investigations and Clearance Actions. The previous investigations conducted indicate that it was used as a training area only.

Table 6 -1 Ordnance and Explosives (OE) and OE Scrap Found In and Adjacent to the M1.01 Parcel		
Item Description (number found)	Depth, inches	Location
M2 Parcel Removal Action		
OE Items:		
3" live flame thrower cartridge	2	Grid B07
WP hand grenade, fuzed (UXO)	0	Grid G16/G17
OE scrap:		
3.5 inch empty rocket motor	3	Grid F14/F15
M15 WP grenade, expended	2	Grid F14/F15
M15 WP grenade, fragments	2	Grid E16
Rifle grenade illum, expended	1	Grid C13
M15 fuze and WP grenade, expended	1	Grid C14
Rifle grenade tail boom	4	Grid F16/F17
Smoke grenade, expended	0	Grid F16/F17
Rifle grenade, smoke, expended	30 ²	Grid F16/F17
Rifle grenade, smoke, tail boom (2)	1	Grid F16/F17
Rifle grenade, tail boom (2)	2	Grid B15
Fuze M15 top of grenade WP, expended (2)	0	Grid D15/D16
Surface flare, expended	1	Grid D07
Rifle flare, expended (2)	6	Grid A13
Rifle flare, expended	0	Grid A14
Top of grenade, WP	3	Grid A15
Expended slap flare	1	Grid D06

Table 6 -1 Ordnance and Explosives (OE) and OE Scrap Found In and Adjacent to the M1.01 Parcel		
Item Description (number found)	Depth, inches	Location
Tail fin assembly	1	Grid E04
Rifle grenade adapter	0	Grid F16
M-1 anti-tank mine, practice	0	Grid F16
Training grenade, empty	0	Grid B07
Eastern Bypass EE/CA		
OE Items:		
M1 Practice Mine Activator (UXO)	2	Area 5
OE Scrap:		
2.36 inch rockets, practice (6)	12, 4	Area 4
Slap flares, expended (2)	12, 4	Area 4
MK II hand grenade, practice (2)	2, 0	Area 4
Ground signal flare, expended	1	Area 4
60mm Mortar, practice (3), M69	4, 3	Area 5
Rifle smoke grenade, expended (2)	2	Area 5
M8 Practice Mine	3	Area 1
Rifle smoke grenade, expended (2)	2	Area 1
Trip flare, expended	6	Area 1
Eastern Bypass Construction Support Clearance to One Foot		
OE Items:		
None reported.		
OE Scrap:		
60mm mortar, practice, M69	0 – 12	Grid 11
60mm mortar, practice., M69	0 – 12	Grid 23
60mm mortar, practice, M69	0 – 12	Grid 24
60mm mortar, practice, M69 (2)	0 – 12	Grid 25
60mm mortar, practice, M69	0 – 12	Grid 41
60mm mortar, practice, M69	0 – 12	Grid 42
60mm mortar, practice, M69 (2)	0 – 12	Grid 59
60mm mortar, practice, M69 (2)	0 – 12	Grid 73

**Table 6 -1
Ordnance and Explosives (OE) and OE Scrap Found In and
Adjacent to the M1.01 Parcel**

Item Description (number found)	Depth, inches	Location
60mm mortar, practice, M69 (2)	0 – 12	Grid 78
60mm mortar, practice, M69 (2)	0 – 12	Grid 98
60mm mortar, practice, M69 (2)	0 – 12	Grid 115
60mm mortar, practice, M69	0 – 12	Grid 209
60mm mortar, practice, M69 (2)	0 – 12	Grid 221
60mm mortar, practice, M69	0 – 12	Grid 9156
81mm mortar practice, M68	0 – 12	Grid 9085
3 inch Stokes mortar	0 – 12	Grid 194
37mm APT	6	Grid 231
2.36 inch rocket, practice (3)	0 – 12	Grid 211
2.36 inch rocket, practice (4)	0 – 12	Grid 219
2.36 inch rocket, practice (4)	0 – 12	Grid 220
2.36 inch rocket, practice (5)	0 – 12	Grid 228
2.36 inch rocket, practice	0 – 12	Grid 235
2.36 inch rocket, practice	0 – 12	Grid 236
2.36 inch rocket, practice (2)	0 – 12	Grid 247
2.36 inch rocket, practice	0 – 12	Grid 9136
2.36 inch rocket, practice	0 – 12	Grid 9157
2.36 inch rocket, motor	0 – 12	Grid 133
2.36 inch rocket, motor	0 – 12	Grid 221
2.36 inch rocket, motor	0 – 12	Grid 321
2.36 inch rocket, motor	0 – 12	Grid 322
2.36 inch rocket, motor (2)	0 – 12	Grid 9181
Slap flare, expended	0 – 12	Grid 133
Trip flare	0 – 12	Grid 175
M-12 practice mine	0 – 12	Grid 186
Grenade, hand, practice, MK 2	0 – 12	Grid 9052
Grenade, hand, practice, MK 2 (2)	0 – 12	Grid 9078
Grenade, training, M-69	0 – 12	Grid 115
Grenade, smoke, M-18 (4)	0 – 12	Grid 191
Fuze, hand grenade, expended	0 – 12	Grid 9046

Table 6 -1 Ordnance and Explosives (OE) and OE Scrap Found In and Adjacent to the M1.01 Parcel		
Item Description (number found)	Depth, inches	Location
Rifle grenade, expended, M-9 (2)	0 – 12	Grid 169
Rifle grenade, expended, M-9 (2)	0 – 12	Grid 184
Rifle grenade, expended, M-9 (2)	0 – 12	Grid 194
Rifle grenade, expended, M-9 (2)	0 – 12	Grid 195
Rifle grenade, expended, M-9	0 – 12	Grid 235
Rifle grenade, expended, M-11	0 – 12	Grid 174
Rifle grenade, expended, M-11	0 – 12	Grid 192
Rifle grenade, smoke, expended	0 – 12	Grid 9003
Rifle grenade, smoke, tail boom (2)	0 – 12	Grid 9085
Rifle grenade, illumination, expended	0 – 12	Grid 9004
Rifle grenade, illumination, expended (2)	0 – 12	Grid 9007
Rifle grenade, illumination, expended	0 – 12	Grid 9033
Rifle grenade, illumination, expended	0 – 12	Grid 9034
Rifle grenade, illumination, expended (2)	0 – 12	Grid 9049

6.6 HAZARD ANALYSIS AND RISK ASSESSMENT

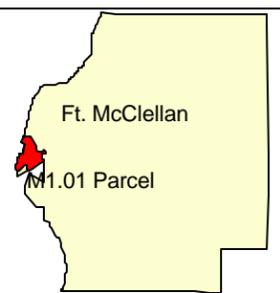
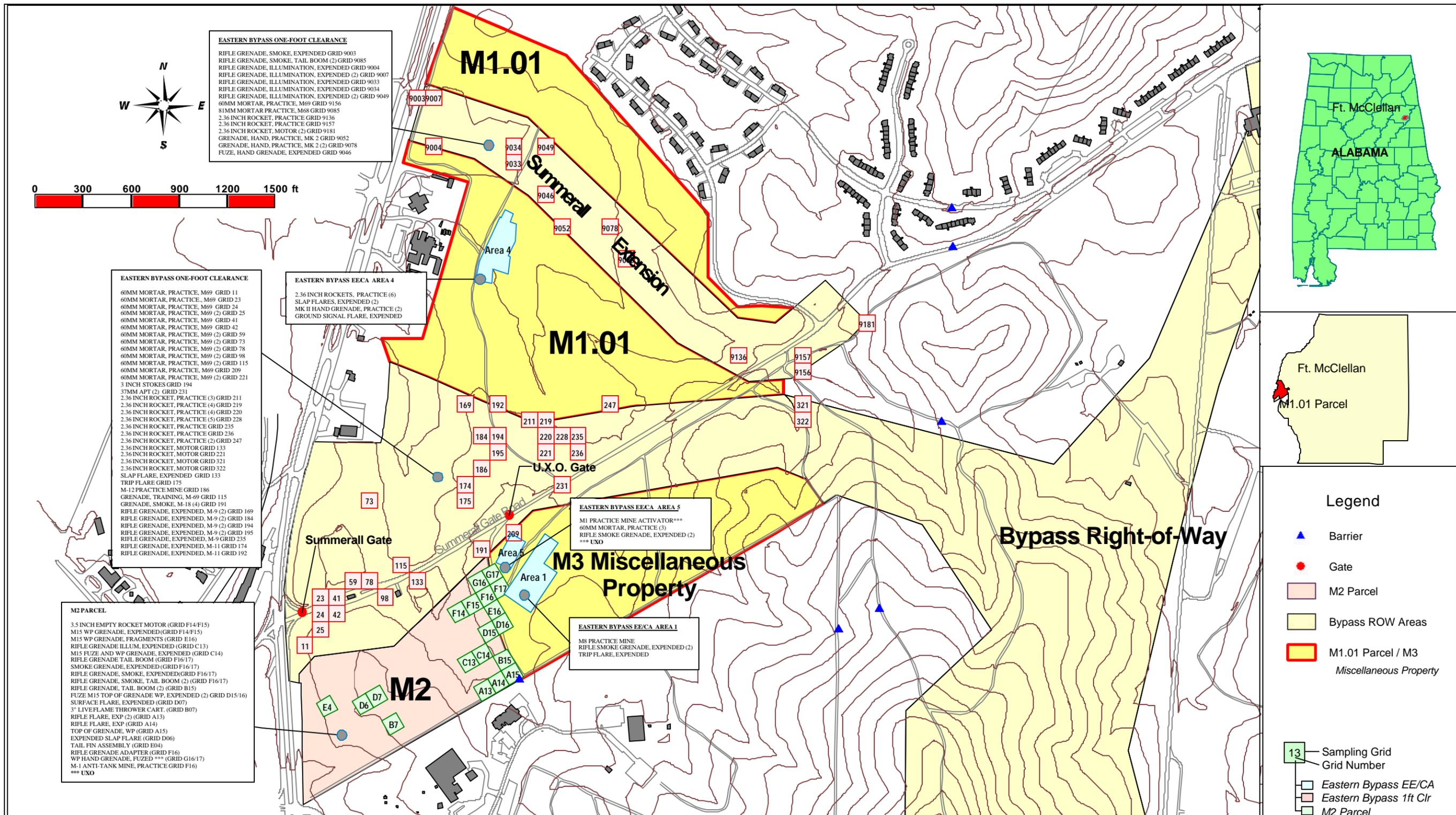
6.6.1 This section presents an assessment of the potential hazards associated with the site activities including chemical hazards (CWM and OE), physical hazards, and biological hazards.

6.6.2 Chemical Hazards

6.6.2.1 It is not anticipated that CWM will be encountered during the M1.01 Parcel and M3 Miscellaneous Property OE Removal Area. It is possible that lead could be encountered since there has been small arms and ammunition use at the base, however this has largely been ruled out by the EE/CA completed by Foster Wheeler Environmental. It is not likely to present any significant occupational exposure as a result of any planned activities.

6.6.2.2 In the event of CWM discovery all personnel will evacuate the area immediately in an upwind direction. The SUXOS will notify Foster Wheeler Environmental Site Office and the USAESCH Safety Representative. Field UXO personnel will evacuate upwind to a safe distance and standby the area until response elements arrive on scene or until directed by the USAESCH safety representative. The

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- Legend**
- ▲ Barrier
 - Gate
 - M2 Parcel
 - Bypass ROW Areas
 - M1.01 Parcel / M3 Miscellaneous Property
 - 13 Sampling Grid Grid Number
 - Eastern Bypass EE/CA
 - Eastern Bypass 1ft Clr
 - M2 Parcel

FW
FOSTER WHEELER ENVIRONMENTAL CORPORATION
 Huntsville, Alabama

U.S. Army Engineering and Support Center
 Huntsville, Alabama

Contract DACA 87-99-D-0010 Delivery Order 0015

FIGURE 6-1
OE and OE Scrap Found During Previous Investigations and Clearance Actions

M1.01 Parcel Work Plan

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Foster Wheeler Environmental Site Office will notify the Ft. McClellan Transition Force Operations and other personnel listed on Table 6-2 and request disposition instructions.

**Table 6-2
Emergency Telephone Numbers**

Contact	Firm or Agency	Telephone Number
Emergencies	Calhoun County Emergency Services	911
Police	Anniston Police Dept.	(256) 238-1800
Fire	Anniston Fire Dept.	(256) 231-7644
Ambulance	Anniston EMS	(256) 237-8572
Hospital	Stringfellow Memorial	(256) 235-8900
HAZMAT Response	Anniston Police Dept.	(256) 237-3541
BRAC Environmental Coordinator, Mr. Ronald Levy	Fort McClellan	(256) 848-6853
Fort McClellan Transition Force Operations		256-848-5680
Project Manager, Mr. Arthur Holcomb	Foster Wheeler Environmental Corporation	(256) 820-7904
TO Manager, Mr. Greg Williams.	Foster Wheeler Environmental Corporation	(256) 820-7904
Mr. Gerry Delany, CIH	Foster Wheeler Environmental Corporation	(256) 430-3702
PESM, Mr. Mark Fletcher	Foster Wheeler Environmental Corporation	(256) 430-3622
Project Manager, Mr. Daniel Copeland	USAESCH	(256) 895-1468
Poison Control Center		(800) 462-0800
Chemtrec		(800) 424-9300
National Response Center		(800) 424-8802

6.6.3 Physical Hazards

6.6.3.1 The principal safety hazards, including physical hazards, are discussed in the Activity Hazard Analysis (AHA) located in Attachment 6-1 for the different phases of the project. In addition to the AHAs, standing work rules and other safety procedures are described in Section 6.15 of the SWWP.

6.6.3.2 Heat Stress. Potential hazards posed by heat stress and the recommended and/or required measures to control these hazards are described in Section 6.14.1.1 of the SWWP.

6.6.3.3 UXO/Explosives. The M1.01 Parcel and M3 Miscellaneous Property OE Removal Area may contain Ordnance and Explosives (OE). Only UXO trained personnel are authorized to handle OE material. The recommended and/or required measures to control these hazards are described in Section 6.4.2.2 of the SWWP.

6.6.3.4 Cold Stress. Potential hazards posed by cold stress and the recommended and/or required measures to control these hazards are described in Section 6.14.1.2 of the SWWP.

6.6.3.5 Equipment Safety. Potential hazards posed by heavy equipment operations and the recommended and/or required measures to control these hazards are described in Section 6.15.2 of the SWWP.

6.6.3.6 Hand and Power Tools. Potential hazards posed by the use of hand and portable power tools and the recommended and/or required measures to control these hazards are described in Section 6.15.9 of the SWWP. Safety measures for the use of these tools used for clearing and grubbing are as follows:

6.6.3.6.1 Chain Saws

1. The engine shall be started and operated only when all co-workers are clear of the saw;
2. The operator will shut off the saw when carrying it over slippery surfaces, through heavy brush, and when adjacent to personnel; the saw may be carried running (idle speed) for short distances (less than 50 feet) as long as it is carried to prevent contact with the chain or muffler;
3. The engine shall be stopped for all cleaning, refueling, adjustments and repairs to the saw or motor, except where manufacturer's procedures require otherwise;
4. All chain saws shall have an automatic chain brake or kick back device;
5. The idle speed shall be adjusted so that the chain does not move when the engine is idling;
6. The operator will hold the saw with both hands during all cutting operations;
7. Face shields, safety glasses, long-sleeved shirts, safety chaps, steel toe safety boots, gloves, and hearing protection will be worn by operators during use; and
8. A chain saw must never be used to cut above the shoulder height.

6.6.3.6.2 Chopping Tools

1. Chopping tools that have loose or cracked heads or splintered handles shall not be used;
2. Chopping tools shall be swung away from the feet, legs, and body, using the minimum power practical for control; and
3. Chopping tools shall not be driven as wedges or used to drive metal wedges.

6.7 BRUSH CLEARING AND GRUBBING OPERATIONS

6.7.1 Clearing and grubbing operations pose many potential hazards. These hazards include, but are not limited to being struck by falling debris, damaging equipment, tools,

and injuring personnel. All clearing and grubbing activities shall be conducted in accordance with EM 385-1-1, Section 31, Tree Maintenance and Removal and ANSI Z133.1-1994, Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush – Safety Requirements. These requirements include, but are not limited to, the following:

6.7.2 Tree Felling

1. Ensure footing before starting to cut, clear away brush and other materials that might interfere with cutting operation;
2. A notch and back cut shall be used in felling trees over 5 inches in diameter, no tree shall be felled by “slicing” or “ripping “ cuts;
3. The employee shall work from the up hill side when ever possible;
4. The work area shall be cleared to permit safe working conditions;
5. Persons shall be kept back from the butt of a tree that is starting to fall.

6.7.3 Brush Removal and Chipping

1. Rotary drum and disk-type tree or brush chippers not equipped with a mechanical in-feed system shall be equipped with an in-feed hopper not less than 85 in. (the sum of the horizontal distance from the chipper blade out along the center of the chute to the end of the chute and the vertical distance from the chute down to the ground) and shall have sufficient height on its side members to prevent personnel from contacting the blades or knives of the machine during normal operations.
2. Rotary drum and disk-type tree or brush chippers not equipped with a mechanical in-feed system shall have a flexible anti-kickback device installed in the in-feed hopper for the purpose of protecting the operator and other persons in the machine area from the hazards of flying chips and debris.
3. Disk-type tree or brush chippers equipped with a mechanical in-feed system shall have a quick stop and reversing device on the in-feed: the activating mechanism for the quick stop and reversing device shall be located across from the top, along each side of, and as close as possible to the feed end of the in-feed hopper and within easy reach of the operator.
4. The feed chute or feed table of a chipper shall have sufficient height on its side members to prevent operator contact with the blades or knives during normal operation. Brush chippers shall be equipped with an exhaust chute of sufficient length or design to prevent contact with the blade.
5. All workers feeding brush into chippers shall wear eye protection. Workers feeding the chipper shall not wear loose hair or clothing, gauntlet-type gloves, rings and watches.
6. Employees shall never place hands, arms, feet, legs or any other part of the body on the feed table when the chipper is in operation or the rotor is turning; push sticks – of material which can be consumed by the chipper – shall be used.
7. Brush chippers should be fed from the side of the feed table centerline, and the operator shall immediately turn away from the feed table when the brush is taken into the rotor or feed rollers.

6.7.4 Heavy Equipment

6.7.4.1 Heavy Equipment. Potential hazards posed by the use of heavy equipment and the recommended and/or required measures to control these hazards are described here and in Section 6.15.2 of the SWWP.

1. All personnel shall be physically, medically, and emotionally qualified for performing the duties to which they are assigned. Some factors to be considered in making work assignments are strength, endurance, agility, coordination, and visual and hearing acuity.
2. At no time while on duty may employees use or be under the influence of alcohol, narcotics, intoxicants, or similar mind-altering substances. Employees found under the influence of or consuming such substances will be immediately removed from the job site.
3. Operators of any equipment or vehicle shall be able to read and understand the signs, signals, and operating instructions in use.
4. Operators of mobile construction equipment shall not be permitted to exceed 10 hours of duty time in any 24-hour period, including time worked at another occupation, without an interval of eight consecutive hours of rest.
5. Equipment shall be inspected daily prior to beginning work.

6.8 BIOLOGICAL HAZARDS

6.8.1 The principal safety hazards, including biological hazards, are discussed in the Activity Hazard Analysis (AHA) in the SWWP for the different phases of the project. In addition to the AHA's, standing work rules and other safety procedures associated with biological hazards are described in Section 6.4.3 of the SWWP.

6.9 TRAINING

6.9.1 This information is reviewed in the SWWP - Section 6.5.

6.10 PERSONAL PROTECTIVE EQUIPMENT

6.10.1 This information is reviewed in the SWWP - Section 6.6.

6.11 MEDICAL SURVEILLANCE

6.11.1 This information is reviewed in the SWWP - Section 6.7.

6.12 ENVIRONMENTAL AND PERSONNEL MONITORING

6.12.1 It is not anticipated that field activities will encounter situations that would require air monitoring. If air monitoring is required, the work will be conducted in accordance with 29 CFR 1910.120; the SWWP - Section 6.8, and the Foster Wheeler

Environmental's Environmental Health and Safety (EHS) References. Site/ task specific procedures will be included in the SSHP Addendum.

6.13 SITE CONTROL

6.13.1 This information is reviewed in the SWWP - Section 6.9.

6.14 PERSONNEL AND EQUIPMENT DECONTAMINATION

6.14.1 This information is reviewed in the SWWP - Section 6.10.

6.15 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES (ON-SITE AND OFF-SITE)

6.15.1 This information is reviewed in the Final General Site-Wide Plan, Section 6.12.

6.16 CONFINED SPACE ENTRY

6.16.1 It is not anticipated that field activities will encounter situations that would warrant confined space entry. If confined space entry is required, the work will be conducted in accordance with 29 CFR 1910.146 and the Foster Wheeler Environmental EHS References. Site/ task specific procedures will be included in the SSHP Addendum.

6.17 SPILL CONTAINMENT

6.17.1 If spill containment is required, the work will be conducted in accordance with 29 CFR 1910.120, SWWP - Sections 6.12.14 and 6.12.15, and the Foster Wheeler Environmental Health and Safety manual.

6.18 HEAT/ COLD STRESS MONITORING

6.18.1 This information is reviewed in the SWWP - Section 6.14.

6.19 STANDARD OPERATING PROCEDURES, ENGINEERING CONTROLS, AND WORK PRACTICES

6.19.1 Hazards due to normal site activities can be reduced by using common sense and following safe practices. Running and horseplay are expressly forbidden. Additional information on specific procedures and work practices such as heavy equipment operations, excavations, fire prevention and protection, the buddy system, hand and power tools and safe lifting practices can be found in the Site Wide Work Plan (SWWP), Section 6.15 and the Activity Hazard Analysis found in Attachment 6-11 of the SWWP.

6.20 LOGS, REPORTS, AND RECORD KEEPING

6.20.1 This information is reviewed in the SWWP - Section 6.16.

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Attachment 6-1
Activity Hazard Analysis

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Fort McClellan
Final Site-Specific Work Plan
M1.01 Parcel & M3 Miscellaneous Property

ACTIVITY HAZARD ANALYSIS

Location: Fort McClellan, Anniston, Alabama

Project: M1.01 Removal Action
 Activity: Mobilization /Demobilization

MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS	ANALYZED BY/ DATE
1. Mobilization/ demobilization of equipment and supplies.	1. Back Injuries 2. Heavy Equipment Operation	1. Site personnel will be instructed on proper lifting techniques; mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available. 2. Follow procedures in Section 6.15.2 of the General Site-Wide Work Plan, equipment will have rollover protective structures and seat belts; operators shall wear seat belts when operating equipment; do not operate equipment on grades which exceed manufacturer's recommendations; equipment will have guards, canopies or grills to protect from flying objects; ground personnel will stay clear of all suspended loads; all slings chains and ropes will be rated for the load in which it is expected to lift; spills and absorbent materials will be readily available; drip pans, polyethylene sheeting or other means will be used for secondary containment; eye contact with operators will be made before approaching equipment; equipment will not be approached on blind sides; avoid equipment swing areas; know hand signals; all equipment will be equipped with backup alarms, and all equipment will be outfitted with fire extinguishers.	
	3. Temperature Extremes	3. Site personnel will be trained about signs and symptoms of heat and cold stress; FWENC Program EHS 4-6 will be followed.	
	4. Slips/Trips/Falls	4. Maintain work areas safe and orderly; unloading areas should be on even terrain; watch for uneven terrain, stumps, and vegetation in walk areas; mark tripping hazards and repair if possible.	
	5. Vehicular Traffic	5. Spotters will be used when backing up trucks and heavy equipment; trucks and heavy equipment will be equipped with back up alarms; traffic cones/vests will be used when working in public traffic areas.	
	6. Overhead Hazards	6. Personnel will be required to wear hard hats.	
	7. Dropped Objects	7. Safety toe boots will be worn.	
	8. Noise	8. Hearing protection with a noise reduction rating capable of maintaining personal exposure below 85 dBA (ear muffs or plugs) will be worn as needed during heavy equipment operations; all equipment will be equipped with manufacturer's required mufflers.	
	9. Eye Injuries	9. Safety glasses will be worn during all field activities including escort, data acquisition, reacquire, and intrusive activities. A portable eye wash station will be located adjacent to work activities.	
	10. Sharp Objects	10. Cut resistant work gloves will be worn; All hand and power tools will be maintained in safe condition; first aid kits will be available by work area.	
	11. Fire	11. 10 lb. BC type fire extinguisher will be located adjacent to work area; all gasoline-powered equipment will be grounded.	
	12. Spills	12. Spill and absorbent materials will be readily available. All waste materials generated will be contained in 55-gallon drums.	
	13. Biological Hazards	13. Follow procedures outlined in Section 6.4.3 of the General Site-Wide Work Plan.	

Fort McClellan
Final Site-Specific Work Plan
M1.01 Parcel & M3 Miscellaneous Property

Location: Fort McClellan, Anniston, Alabama

Project: M1.01 Removal Action
 Activity: Mobilization / Demobilization

<p>EQUIPMENT USED</p> <ol style="list-style-type: none"> 1. Level D PPE 2. First Aid Kits 3. Portable Eyewash 4. Fire Extinguishers 5. Heavy Equipment 6. Hand and Power Tools 	<p>INSPECTION REQUIREMENTS</p> <ol style="list-style-type: none"> 1. Pre-use inspection 2. Inspect first aid kits monthly. 3. Inspect portable eyewash monthly 4. Inspect fire extinguishers monthly 5. Conduct pre-use inspections 6. Conduct pre-use inspections 	<p>TRAINING REQUIREMENTS</p> <ol style="list-style-type: none"> 1. Personnel have read and comply with SSHP 2. Site-specific training 3. At least 2 individuals on-site will have current CPR and First Aid training 4. Instruct personnel on proper use of fire extinguishers 5. Competent operators will be used 6. Instruct personnel on proper use of hand and power tools 	<p>14. The proper tools will be used for each task, all tools will be inspected before each use, damaged tools will be removed from service, and tools will be used in accordance with manufacturer's instructions.</p>
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ACTIVITY HAZARD ANALYSIS

Project: M1.01 Removal Action Activity: Survey study areas, establish corners and boundaries		Location: Fort McClellan, Anniston, Alabama	
MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS	ANALYZED BY/ DATE
1. Conventional survey of study areas, establish corners and bounds.	1. Exposure to OE/chemical hazards	1. Wear Level D PPE consisting of safety glasses (ANSI Z87.1), leather gloves; follow procedures in the UXO/OE Operational Plan; practice contamination avoidance; follow good personal hygiene practices.	
	2. Back Injuries	2. Site personnel will be instructed on proper lifting techniques; Mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available.	
	3. Temperature Extremes	3. Site personnel will be trained about signs and symptoms of heat and cold stress; FWENC Program EHS 4-6 will be followed.	
	4. Slips/Trips/Falls	4. Maintain work areas safe and orderly; unloading areas should be on even terrain; watch for uneven terrain, stumps, and vegetation in walk areas; mark tripping hazards and repair if possible.	
	5. Dropped Objects	5. Safety toe boots will be worn. UXO Escort Personnel shall have no metal parts in or on their footwear; 385-1-1 Section 5.A.08.C	
	6. Hand and Power Tools	6. The proper tools will be used for each task, all tools will be inspected before each use, damaged tools will be removed from service, and tools will be used in accordance with manufacturer's instructions.	
	7. Eye Injuries	7. Safety glasses will be worn. A portable eye wash station will be located adjacent to work activities.	
	8. Sharp Objects	8. Cut resistant work gloves will be worn; All hand and power tools will be maintained in safe condition; first aid kits will be available by work area.	
	9. Biological Hazards	9. Follow control measures outlined in Section 6.4.3 of the General Site-Wide Work Plan. If poisonous plants are present, PPE will be upgraded to include tyvek and gloves.	
EQUIPMENT USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS	
1. Level D PPE 2. First Aid Kits 3. Portable Eyewash 4. Fire Extinguishers 5. Conventional Survey Equipment 6. Hand and Power Tools	1. Pre-use inspection 2. Inspect first aid kits monthly. 3. Inspect portable eyewash monthly 4. Inspect fire extinguishers monthly 5. Conduct pre-use inspections 6. Conduct pre-use inspections	1. Personnel have read and comply with SSHP 2. Site specific training 3. At least 2 individuals on-site will have current CPR and First Aid training 4. Instruct personnel on proper use of fire extinguishers 5. Competent operators will be used 6. Instruct personnel on proper use of hand and power tools	

Fort McClellan
Final Site-Specific Work Plan
M1.01 Parcel & M3 Miscellaneous Property

ACTIVITY HAZARD ANALYSIS

Project: M1.01 Removal Action Activity: Brush clearance		Location: Fort McClellan, Anniston, Alabama	
MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS	ANALYZED BY / DATE
1. Mobilize Equipment, Supplies	1. Back Injuries	1. Site personnel will be instructed on proper lifting techniques; mechanical devices should be used to reduce manual handling of materials; use tandem lifting.	
2. Use of Chain Saw, Machete, Bush Hog, and Chipper	2. Hand injuries/foot injuries/cut by 3. Struck by flying debris	2. Personnel shall wear proper PPE when operating chain saw, and chipper (i.e. standard Level D PPE with ear muffs, mesh face shield, <i>Keplar chaps</i> (when operating chain saw), steel or Safety toe boots, hard hat (ANSI Z89.1) and leather work gloves); Only qualified personnel shall operate chain saw and chipper 3. Qualified personnel shall be instructed on proper use of power/mechanical cutting/chipping devices. Chipper shall have feed neutral safety bar. Chipper and bar shall be inspected daily to ensure proper function. Debris shall be fed to chipper in correct manner according to manufacturer's specifications. Chipper shall be properly de-energized and locked-out prior to maintenance/repair/clearing of stuck debris; safety glasses worn; face guard. All personnel will stay out of the area of the expulsion of wood chips from the chipper chute. This area will be demarcated prior to chipping operation, only one person shall be designated as "feeder" operator for the chipper-this person is the operator and all personnel will defer to him on the operation of the chipper, during chipping. The "feeder" will feed the wood into the chipper as it is given to him by the other personnel, ensuring that no branches get caught on his clothing or other encumbrances and checking the feed material to ensure no nails metal or stone are introduced into the chipper	
	4. Heavy Equipment (rollers, struck by or against)	4. A small tractor and a Brush hog or similar equipment will be used on the M1.01 OE Removal Action. Equipment will have rollover protective structures and seat belts. Operators shall wear seat belts when operating equipment. Do not operate equipment on grades that exceed manufacturer's recommendations. Equipment will have guards, canopies or grills to protect from flying objects. Ground personnel will stay clear of all suspended loads. All slings chains and ropes will be rated for the load in which it is expected to lift. Spills and absorbent materials will be readily available. Drip pans, polyethylene sheeting or other means will be used for secondary containment. Eye contact with operators will be made before approaching equipment. Equipment will not be approached on blind sides. Avoid equipment swing areas. Know hand signals. All equipment will be equipped with backup alarms and fire extinguishers. Personnel shall stand clear of tip areas of heavy equipment on site particularly when operating in uneven terrain.	
	5. Noise	5. Hearing protection with a noise reduction rating capable of maintaining personal exposure below 85 dBA (ear muffs or plugs) will be worn as needed during heavy equipment operations and during power tool use; all equipment will be equipped with manufacturer's required mufflers.	
	6. Biological hazards	6. All Poison Ivy sensitive personnel will wear Poison Ivy Skin Protectant Block prior to beginning initial brush cutting and then as needed. Any personnel who come in contact with poison ivy will use Poison Ivy wash to cleanse the affected area. All work areas will be checked prior to work activities and periodically during the cleaning for any signs of bees or wasps. If bee or wasp nests are found workers will spray the	

Fort McClellan
Final Site-Specific Work Plan
M1.01 Parcel & M3 Miscellaneous Property

Project: M1.01 Removal Action Activity: Brush clearance		Location: Fort McClellan, Anniston, Alabama	
MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS	ANALYZED BY / DATE
		area with bee and wasp killer before proceeding. If bee or wasp nests are not found workers will proceed with caution while looking for ground wasp nests or nests high in the trees.	
7. Burns-Fire/Explosion		7. Personnel will not attempt to service any piece of equipment until it has sufficiently cooled down. Personnel will be aware of mufflers and other hot parts of equipment while operating the equipment. Personnel will be aware that cutting wood with a dull chain saw blade may cause heat production in the wood and could lead to a fire or damage of the equipment. No personnel will fuel any piece of equipment while it is running. Personnel will use only DOT approved gas cans and metal funnel when fueling the equipment. All equipment will be "grounded" when it is being fueled. Personnel will ensure no fuel is spilled during refueling operations. Personnel will check work area prior to leaving the site to ensure no brush is smoldering. A 10 LB BC Fire Extinguisher will be maintained in the work area. Personnel will ensure not to handle or remove any hoses on the chipper as these may be high pressure hoses and the coolant in them will be hot.	
8. Caught in		8. Properly functioning safety devices/guards will be maintained on all equipment. Loose clothing will be kept away from all operating equipment. Personnel will never try to dislodge anything stuck in running equipment, without first shutting down the equipment and personnel will be aware of stored energy in that equipment that could become activated when something stuck is removed. For Chipper operation: All personnel associated with the chipping operation will read the owner's manual prior to operation. The "feeder" operator of the chipper will stay to one side of the chipper inlet and shall release (put in neutral the feed control (emergency shut off) bar as soon as the log/wood is chipped. The chipper will be shut off and the key removed whenever it is not in operation and at the end of the day's activities. All personnel working around the chipper will not wear any loose fitting/hanging clothing and will remove all jewelry prior to chipper operation.	
9. Eye Injuries		9. All personnel engaged in tree and brush trimming operations will wear face shield and safety glasses. A portable eye wash station will be located adjacent to work activities.	
10. Spills		10. Spill and absorbent materials will be readily available; all waste materials generated will be contained in 55-gallon drums.	
11. Hand and Power Tools		11. The proper tools will be used for each task, all tools will be inspected before each use, damaged tools will be removed from service, and tools will be used in accordance with manufacturer's instructions.	

EQUIPMENT USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
1. Level D PPE 2. First Aid Kits 3. Portable Eyewash 4. Fire Extinguishers 5. Heavy Equipment 6. Hand and Power Tools	1. Pre-use inspection 2. Inspect first aid kits monthly. 3. Inspect portable eyewash monthly 4. Inspect fire extinguishers monthly 5. Conduct pre-use inspections 6. Conduct pre-use inspections	1. Personnel have read and comply with SSHP 2. Site specific training 3. At least 2 individuals on-site will have current CPR and First Aid training 4. Instruct personnel on proper use of fire extinguishers 5. Competent operators will be used 6. Instruct personnel on proper use of hand and power tools

ACTIVITY HAZARD ANALYSIS

Project: M1.01 Removal Action Activity: Excavate Anomalies		Location: Fort McClellan, Anniston, Alabama	
MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS	ANALYZED BY / DATE
1. Excavation of magnetic anomalies in study areas.	<ol style="list-style-type: none"> Exposure to OE/chemical hazards Back Injuries Temperature Extremes Slips/Trips/Falls Overhead Hazards Dropped Objects Eye Injuries Sharp Objects Fire Spills Hand Tools Biological Hazards 	<ol style="list-style-type: none"> Wear Level D PPE consisting of safety glasses (ANSI Z87.1), leather gloves; follow procedures in the UXO/OE Operational Plan; practice contamination avoidance; follow good personal hygiene practices. Site personnel will be instructed on proper lifting techniques; Mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available. Site personnel will be trained about signs and symptoms of heat and cold stress; FWENC Program EHS 4-6 will be followed. Maintain work areas safe and orderly; unloading areas should be on even terrain; watch for uneven terrain, stumps, and vegetation in walk areas; mark tripping hazards and repair if possible. Personnel will be required to wear hard hats. UXO Sweep Personnel shall have no metal parts in or on their footwear; 385-1-1 Section 5.A.08.C Safety toe boots will be worn. Safety glasses will be worn. A portable eye wash station will be located adjacent to work activities. Cut resistant work gloves will be worn; All hand and power tools will be maintained in safe condition; first aid kits will be available by work area. 10 lb. BC type fire extinguisher will be located adjacent to work area; all gasoline powered equipment will be grounded. Spill and absorbent materials will be readily available; all waste materials generated will be contained in 55-gallon drums. The proper tools will be used for each task, all tools will be inspected before each use, damaged tools will be removed from service, and tools will be used in accordance with manufacturer's instructions. Follow control measures outlined in Section 6.4.3 of the General Site-Wide Work Plan. If poisonous plants are present, PPE will be upgraded to include tyvek and gloves. 	
EQUIPMENT USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS	
<ol style="list-style-type: none"> Level D PPE First Aid Kits Portable Eyewash Fire Extinguishers Heavy Equipment Hand and Power Tools 	<ol style="list-style-type: none"> Pre-use inspection Monthly inspections will be performed on first aid kits. Portable eye wash will be inspected monthly. Monthly inspections will be performed on fire extinguishers Conduct pre-use inspections 	<ol style="list-style-type: none"> Personnel have read and comply with SSHP Site specific training At least 2 individuals on-site will have current CPR and First Aid training Instruct personnel on proper use of fire extinguishers Competent operators will be used Instruct personnel in proper use of hand and power tools 	

ACTIVITY HAZARD ANALYSIS

Project: M1.01 Removal Action Activity: Decontaminate heavy equipment		Location: Fort McClellan, Anniston, Alabama	
MAJOR STEPS	POTENTIAL HAZARDS	PROTECTIVE MEASURES/CONTROLS	ANALYZED BY / DATE
1. Steam clean heavy equipment and accessories	1. Back Injuries	1. Site personnel will be instructed on proper lifting techniques; mechanical devices should be used to reduce manual handling of materials; team lifting should be utilized if mechanical devices are not available.	
	2. Slips/Trips/Falls	2. Maintain work areas safe and orderly; unloading areas should be on even terrain; mark and repair if possible tripping hazards.	
	3. Vehicular Traffic	3. Spotters will be used when backing up trucks and heavy equipment and moving equipment. When working on or near roadways, the area will be clearly marked with traffic cones or high visibility fencing. Workers will wear high-visibility, traffic, safety vests. Work done in the roadway proper will be limited. Coordinate with facility personnel if road closings are necessary.	
	4. Overhead Hazards	4. Personnel will be required to wear hard hats that meet ANSI Standard Z89.1. All ground personnel will stay clear of suspended loads and equipment swing areas. All equipment will be provided with guards, canopies or grills to protect the operator from falling or flying objects. All overhead hazards will be identified prior to commencing work operations.	
	5. Dropped Objects	5. During site activities where dropped objects are a hazard wear Safety toe boots meeting ANSI Standard Z41. UXO Sweep/Escort Personnel shall have no metal parts in or on their footwear. 385-1-1 Section 5.A.08.C	
	6. Steam/Heat/Splashing	6. Use face shield and safety glasses or goggles; stay out of the splash/steam radius; do not direct steam at anyone; do not hold objects with your foot and steam area near it; ensure that direction of spray minimizes spread of constituents of concern; use shielding as necessary, personnel will be trained on the proper operation of pressure washer, pressure washer wand will be equipped with a dead man's switch.	
	7. Pinch/Cut/Smash	7. Use hand tools properly and wear appropriate protective equipment, cut resistant work gloves will be worn when dealing with sharp objects; all hand and power tools will be maintained in safe condition; guards will be kept in place while using hand and power tools.	
	8. Temperature Extremes	8. Drink plenty of fluids; train personnel of signs/symptoms of heat/cold stress; monitor air temperatures when extreme weather conditions are present; stay in visual and verbal contact with your buddy; and use Temperature Extremes program EHS 4-6.	
	9. Hand and Power Tools	9. Daily inspections will be performed; remove broken or damaged tools from service; use the tool for its intended purpose; and use in accordance with manufacturer's instructions.	
	10. Eye Injuries	10. Face shields and safety glasses meeting ANSI Standard Z87 will be worn.	
		11. Heavy Equipment Operation	11. Equipment will have seat belts; operators shall wear seat belts when

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Final Site-Specific Work Plan
M1.01 Parcel & M3 Miscellaneous Property

Location: Fort McClellan, Anniston, Alabama	
Project: M1.01 Removal Action Activity: Decontaminate heavy equipment	ANALYZED BY / DATE
MAJOR STEPS	POTENTIAL HAZARDS
PROTECTIVE MEASURES/CONTROLS	ANALYZED BY / DATE
	operating equipment; do not operate equipment on grades which exceed manufacturer's recommendations; equipment will have guards, canopies or grills to protect from flying objects; ground personnel will stay clear of all suspended loads; spill and absorbent materials will be readily available; drip pans, polyethylene sheeting or other means will be used for secondary containment; ground personnel will stay out of the swing radius; eye contact with operators will be made before approaching equipment; equipment will not be approached on blind sides; all equipment will be equipped with backup alarms.
12. Struck by/Burns	12. Personnel operating the pressure washer will use the lowest effective pressure and temperature settings on the pressure washer. Pressure washer spray/stream will not be aimed at people. Personnel using pressure washer will not use hands, feet or knees to brace or hold material to be pressure washed. Pressure washer will not be used to clean personnel boots. Thermal/insulated boots may be used during pressure washing operations.
EQUIPMENT USED	INSPECTION REQUIREMENTS
1. Heavy equipment 2. Pressure washer 3. Appropriate PPE	1. Initial inspection of heavy equipment will be performed upon arriving on-site. 2. Pressure washers will be inspected daily, prior to each day's use. 3. PPE will be inspected before and after each use.
EQUIPMENT USED	TRAINING REQUIREMENTS
	1. Personnel have read and will comply with SSHP. 2. Personnel will receive Site specific training. 3. Only qualified operators can operate heavy equipment or vehicles. 4. Personnel will have knowledge of proper use of pressure washer. 5. At least 2 individuals on-site will have current CPR and first aid training.

7.0 LOCATION SURVEYS AND MAPPING PLAN

7.1 GENERAL

7.1.1 A Location Surveys and Mapping Plan was prepared in accordance with USAESCH DID OE-005-7, Location Surveys and Mapping Plan. See Section 7 - Location Surveys and Mapping Plan, in the SWWP for further detail.

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8.0 WORK, DATA, AND COST MANAGEMENT PLAN

8.1 GENERAL

8.1.1 The purpose of this Work, Data, and Cost Management Plan is to ensure the effective management of allocated funds, manpower, and equipment. This plan describes the resources and tools Foster Wheeler Environmental will use to manage the project to ensure effective delivery of the required scope of services.

8.1.2 The Task Order Manager manages the day to day operation of the project and reports directly to the Foster Wheeler Environmental Project Manager. After the preparation of the work plan and associated documents, the Task Order Manager is responsible for the implementation, conduct, change management and closeout of the project. The following is a synopsis of the Project Management Approach that will be undertaken by the Task Order Manager on this task.

8.2 PROJECT MANAGEMENT APPROACH

8.2.1 The Task Order Manager in conjunction with the appropriate members of the project team will review the following areas periodically to ensure that the objectives stated in the Statement of Work are carried out. This program management approach is designed to ensure that controls are in place to ensure timely performance of the SOW and the use of correct procedures.

1. Work Plan. This Work Plan will be reviewed as required to ensure that the approaches and procedures utilized in this Task Order continue to provide the best product and outcomes possible. Any required changes to the workplan will be discussed with the appropriate personnel and a Change Request will be initiated and revisions shall be distributed upon approval.
2. Environmental Health & Safety. The Task Order Manager, the UXO Safety Officer and other key project staff shall regularly review the EHS aspects of the project. Information on EHS issues will be communicated daily to all personnel during the morning safety brief.
3. Risk Awareness and Management. Foster Wheeler Environmental maintains a rigorous approach to Risk Awareness and Management both through extensive higher management and executive reviews and also through the Foster Wheeler Environmental Task Initiation Procedure (TIP) and subsequent Risk Management Plan (RMP). The TIP and RMP are internal documents reviewed by several specialists within the corporation and are required to be reviewed and updated as conditions change or new situations arise.
4. Status and Monitoring. Status and Monitoring shall be carried out by managers at all levels during this Task Order. The basis of this plan is a Microsoft Access database designed to provide information on the critical drivers of the task. This information ranges from which grids have had brush clearance carried out to the details of the anomalies identified during the final grid Quality Control phase of

- the project. Team separation distances and exclusion zones shall also be managed with this information.
5. Project Controls. Project Controls encompasses the schedule and financial facets of the Task Order. The Assistant Project Manager/Project Controls Engineer shall assist the Task Order Manager in monitoring financial and schedule information for inclusion into project management decisions and periodic reports (weekly and monthly).
 6. Procurement. The Task Order Manager is responsible for initiating procurement of all personnel, equipment and services and will monitor the conduct of sub-contracts and payment details. Close interaction with Foster Wheeler Environmental sub-contract and procurement specialists shall be maintained.
 7. Quality. In conjunction with the UXO Quality Control Specialist, periodic reviews shall be carried out on the QC aspects of the Task Order. Further details are contained in Chapter 11 – Quality Control.
 8. Staffing and Resource Management. The Task Order Manager in conjunction with the SUXOS shall periodically review staffing and resource issues on the project and plan the efficient mobilization and demobilization of staff and resources and replacement/rotation where applicable.
 9. Cash Management. The Task Order Manager in conjunction with the Services Cost Engineer and Project Controls Engineer shall prepare and issue invoices monthly to USAESCH for services performed under the project. Payment of invoices for services and sub-contractors shall also be managed.
 10. Communications. The effectiveness of the communications equipment and written and verbal communications internally and with USAESCH shall be reviewed.
 11. Document Control. The Task Order Manager shall be primarily responsible for the preparation, review, amendment and issue of all documents including the Explosives Safety Submission (ESS), Work plan, notifications, weekly reports, monthly reports and the Removal Report.

9.0 PROPERTY MANAGEMENT PLAN

9.1 GENERAL

9.1.1 A Property Management Plan was prepared in accordance with USAESCH DID OE-005-9, Property Management Plan. See Section 9 - Property Management Plan in the SWWP.

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10.0 SAMPLING AND ANALYSIS PLAN

10.1 GENERAL

10.1.1 A Sampling and Analysis Plan is not applicable for this Task Order.

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11.0 QUALITY CONTROL PLAN

11.1 GENERAL

11.1.1 This Quality Control Plan has been prepared in accordance with the SOW and contract specifications. All QC documentation will be submitted as part of or as supporting documentation for the final report. All QC records and documentation will be kept on site and made available for government inspection upon request.

11.2 DUTIES AND RESPONSIBILITIES

11.2.1 Site Quality Control Manager. The Site Quality Control Manager is responsible for:

1. Implementing the quality control plan;
2. Conducting quality control indoctrination training for project personnel;
3. Initiating QC surveillance and audit consistent with project QC plan and program QC policies and procedures;
4. Recommending changes to the Quality Control Plan;
5. Providing weekly project QC update to project/task order manager;
6. Directly communicating with client Quality Assurance (QA) project oversight;
7. Directing and supervising the activities of personnel assisting in the performance of surveillance and inspection activity;
8. Completing reports and other documentation;
9. Implementing the three phase control process;
10. Maintaining a log of activities; and
11. Issuing stop work request when conditions warrant.

11.2.2 UXO Quality Control Specialist. The UXO Quality Control Specialist is responsible for:

1. Conducting audit and surveillance activity;
2. Completing forms and other documentation;
3. Conducting preparatory, initial, and follow-up inspections;
4. Maintaining log of activities; and
5. Other duties as directed by the site QC manager.

11.3 AUDIT PROCEDURES

11.3.1 Quality Control

11.3.2 Quality Control is conducted using a three-phase control process; preparatory, initial, and follow-up inspection/audits to ensure processes are in control and opportunities for improving processes are captured and implemented. Personnel

conducting Quality Control have stop-work authority and are organizationally independent from the processes.

11.3.2 Preparatory Phase

11.3.2.1 A preparatory phase inspection will be performed prior to beginning each definable feature of work. The purpose of this inspection will be to review applicable specifications and verify that the necessary resources, conditions, and controls are in place and compliant before the start of work activities. The personnel responsible for the work activity are responsible for ensuring that:

1. Appropriate plans and procedures are developed and approved;
2. Personnel required for the activity are identified and positions filled;
3. Training requirements are identified and training complete;
4. Preliminary work and coordination has been completed; and
5. Equipment and materials required to perform the work has been identified and is available.

11.3.2.2 The following QC actions are performed by the QC Staff for each preparatory phase inspection:

1. Verify that appropriate plans and procedures are developed, approved and are available;
2. Verify personnel identified are available and meet the requirements/qualifications for the position or waivers obtained from the client;
3. Verify that the required training has been performed
4. Verify identified equipment is available, functional, and appropriate for the job;
5. Verify that the preliminary work and coordination have been accomplished
6. Verify that level of quality expected is understood;
7. Verify Work Plan and applicable Standard Operating Procedures (SOPs) have been reviewed and understood by the workers; and
8. Brief process improvement program.

11.3.2.3 The specific QC activities performed during the preparatory phase, and results of those activities, will be documented on the QC Surveillance Report, which will be attached to the Daily Quality Control Report.

11.3.2.4 Discrepancies between existing conditions and approved plans/ procedures will be resolved and corrective actions taken for unsatisfactory and nonconforming conditions identified during a preparatory phase inspection.

11.3.2.5 The UXOSO will discuss job hazards with site personnel and verify that the necessary safety measures are in place and ready for use.

11.3.3 Initial Phase Inspection

11.3.3.1 An initial phase inspection will be performed the first time a definable feature of work is performed. The purpose of the inspection will be to check the preliminary work for the compliance with procedures and contract specifications. Another aim is to establish the acceptable level of workmanship, check safety compliance, review the preparatory phase inspection, and check for omissions and resolve differences of interpretation.

11.3.3.2 The following will be performed for each definable feature of work:

1. Deficiencies identified during the preparatory phase have been corrected;
2. Requirements of quality of workmanship will be established;
3. Completion of readiness review actions verified;
4. Differences of interpretation will be resolved;
5. Work Plan and applicable documents reviewed to ensure that the requirements are being met; and
6. Performance of work will be observed and adequacy of work verified.

11.3.3.3 Discrepancies between site practices and approved plans/procedures will be resolved. The Site QC Manager or his designee, prior to granting approval to proceed will verify corrective actions for unsatisfactory conditions or practices.

11.3.3.4 The specific QC activities performed during the initial phase, and results of those activities, will be documented on a QC Surveillance Report and attached to the Daily Quality Control Report.

11.3.4 Follow-up Phase Inspection (Surveillance)

11.3.4.1 The follow-up phase inspection is performed on a scheduled and unscheduled basis. The purpose of the inspection is to ensure a level of continuous compliance and workmanship. The Site QC Manager is responsible for on-site monitoring of the practices and operations taking place and verification of continued compliance with the specifications and requirements of the statement of work and approved SOPs. The following will be performed for each definable feature of work:

1. Inspections/surveillance to ensure that the work is in compliance with the statement of work and work plans;
2. Inspections/surveillance to ensure the required level of workmanship is maintained;
3. Inspections/surveillance to ensure each project log book is properly filled out and maintained;
4. Inspections/surveillance to ensure data management system is properly tracked and backed up; and

11.3.4.2 Follow-up results either negative or positive will be documented on a Surveillance Report and attached to the Daily Quality Control Report.

11.4 ACCEPTANCE INSPECTION

11.4.1 After work is complete, an acceptance inspection will be conducted using the same equipment that the work was accomplished with. The sampling plans/procedures will be a 10% sample of any given grid. The method of conducting the inspection will be to apply the sampling plan to grids that are completed, collect data in those areas using the same type equipment as the field teams, process the data, identify anomalies, and excavate the anomalies to determine what the anomaly is.

11.4.2 Criteria for accepting land parcels that have completed sub-surface clearance are no UXO or UXO look-a-like found shallower than one foot below grade.

11.4.3 All conditions observed during the acceptance inspection will be documented. Conditions that are identified as questionable will be evaluated by project management and site QC manager to determine the acceptability. When a withhold condition is identified a deficiency or nonconformance report will be issued and corrective action must be taken to correct the condition prior to offering the product to the client. Inspections will be documented on the Inspection Report.

11.5 DEFICIENCIES AND NONCONFORMANCE

11.5.1 All deficiencies or nonconforming conditions discovered during inspection or other QC functions will be noted on either a Deficiency or Nonconformance Report (NCR) as appropriate. These two forms are contained in Appendix E along with the Corrective Action Request Log for tracking these reports. All deficiencies and nonconformance conditions will be resolved prior to completion of the project and in the most timely manner possible. The Daily QC Report will include a report on each Deficiency/NCR that was completed and closed out for the day.

11.5.2 It is the responsibility of all personnel on the project to identify deficiencies and nonconforming conditions to their supervisor or manager as soon as they are identified. Deficiencies and nonconforming conditions should be considered opportunities to improve the process.

11.6 ROOT CAUSE ANALYSIS

11.6.1 Both the deficiency and nonconformance report forms contain an area for the entry of information regarding the cause of the problem and proposed resolution. The determination of the root cause of a deficiency or nonconformance is an integral part of the QC process. The depth and extent of the root cause analysis depends on the situation. It may be as simple (minor) as an overlooked step or procedure or be a complicated process. Root cause analysis is the responsibility of the functional manager or his/her designee with the assistance of Quality Control Representatives. Criteria considered in the analysis will include:

1. Staff qualifications and training;
2. Adequacy of procedures;

3. Adequacy of equipment; and
4. Adequacy of QC measures.

11.6.2 Input will be obtained as necessary from field personnel and technical advisors in order to identify the factors, which led to the problem. The root cause is always “upstream” from where the problem was detected. Two strategies that will be employed for determining the root cause of a deficiency or NCR for this project are: 1) tracing the problem back to the source, and 2) evaluation of the cause using basic questions such as who, what, when, where, why, and how. ‘Why?’ is probably the most beneficial question when attempting to arrive at a root cause. This question may need to be asked multiple times before the cause is identified. For example “Why did A happen?” Answer: “Because of B,” “Why did B happen?” Answer: “Because of C.” This process is carried on until the real cause is identified.

11.7 CORRECTIVE ACTION

11.7.1 Following the root cause analysis, the UXOQC will perform analysis of potential solutions (corrective actions) to determine which remedy is most effective in correcting the problem. The process will include all appropriate personnel and will be documented via meeting notes and information listed in the proper sections on the deficiency report or NCR report. Potential remedies considered may include:

1. Supplemental personnel training;
2. Changes of equipment or modification of equipment currently in use;
3. Acquisition of supplemental equipment;
4. Implementation of new procedures or modification of existing procedures;
and
5. Changes in QC procedures.

11.7.2 The decision for appropriate corrective action to implement is the responsibility of the Task Order Manager, however, all parties involved prior to implementation should agree upon this decision.

11.7.3 Successful implementation of corrective action will be documented on the deficiency or nonconformance report. The project QC representative will verify through a follow-up phase surveillance that the corrective action implemented has corrected the deficiency or nonconforming condition and is sufficient to prevent recurrence.

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