

## **APPENDIX A**

Review Comments and Responses  
on the Draft Eastern Bypass OE Removal Work Plan

**DESIGN REVIEW COMMENTS**

- SITE DEV & GEO
- ENVR PROT& UTIL
- ARCHITECTURAL
- STRUCTURAL

- MECHANICAL
- MFG TECHNOLOGY
- ELECTRICAL
- INST & CONTROLS

- OE SAFETY
- ADV TECH
- ESTIMATING
- SPECIFICATIONS

- SYSTEMS ENG
- VALUE ENG
- OTHER

REVIEW Back check, Safety  
 DATE 16 October, 2002  
 NAME Tom Baksa 256-759-3935

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
1.	General	The author of this WP is demonstrating a consistency, as with the last draft, not all the Appendices that were referenced in the table of contents were sent.	By direction only Appendices with changes were included.
2.	General	Seven of my original comments were not addressed adequately. Five comments were non-concurred with, I wasn't seeking your concurrence, you were being directed to correct a deficiency.	Defer to Contracting Officer.
3.	Para 2.3.9	<p><b>Task does not reflect the requirements of the SOW. (No Action taken because it was unclear how this task did not meet the requirement of the SOW).</b></p> <p>Specifically Sub Paragraph 2.3.9.2 failed to elaborate that approximately 10 grids that had been cleared and were in some process of QC. These grids needed to be mapped and identified so specific areas that might require additional work could be identified to reduce the actual mechanical area.</p>	A complete mapping of this area was completed and USAESCH/FWENC met and the area narrowed to it's current form. Those areas deemed eligible were selected for manual removal, which is currently underway under a separate Task.
4.	Para. 2.3.11	<p><b>This Task does not reflect the requirements of the SOW. (No Action taken because it was unclear how this task did not meet the requirement of the SOW).</b></p> <p>Specifically the SOW requires you to obtain the necessary permits for the disposal of the vegetation. This would indicate that a method other than shredding was desired. This task is now somewhat ambiguous and states;" tree debris shall be reduced utilizing an approved method". This is where you have to state what method you plan to use to get the approval.</p>	Defer to Contracting Officer.

ACTION CODES      W - WITHDRAWN  
 A - ACCEPTED/CONCUR      N - NON-CONCUR  
 D - ACTION DEFERRED      VE - VE POTENTIAL/VEP ATTACHED

PROJECT Control Number: 10-010-02; Work Plan Changes for Eastern Bypass, Back Check

**DESIGN REVIEW COMMENTS**

<input type="checkbox"/> SITE DEV & GEO	<input type="checkbox"/> MECHANICAL	<input checked="" type="checkbox"/> OE SAFETY	<input type="checkbox"/> SYSTEMS ENG
<input type="checkbox"/> ENVIR PROT& UTIL	<input type="checkbox"/> MFG TECHNOLOGY	<input type="checkbox"/> ADV TECH	<input type="checkbox"/> VALUE ENG
<input type="checkbox"/> ARCHITECTURAL	<input type="checkbox"/> ELECTRICAL	<input type="checkbox"/> ESTIMATING	<input type="checkbox"/> OTHER
<input type="checkbox"/> STRUCTURAL	<input type="checkbox"/> INST & CONTROLS	<input type="checkbox"/> SPECIFICATIONS	

REVIEW Back check Safety  
 DATE 16 October, 2002  
 NAME Tom Baksa 256-759-3935

ACTION

COMMENT

5.	<p><b>Haul road establishment/upgrade and processing pad construction.</b></p> <p><i>There is no specific task within the SOW to perform this work. The anticipated work is excessive because existing roads are either asphalt or gravel that go into the processing site. The processing site is also a large gravel parking area that would require limited preparatory work.</i></p>	<p>The road leading into the removal area and the Processing area itself required grading and upgrade to handle the weight of the heavy equipment. We are proceeding as negotiated.</p>
6.	<p><b>Paragraphs are vague and need to be rewritten with details of the operations. (Non-Concur sufficient, details are provided.)</b></p> <p><i>There still are not enough specific details to adequately run this operation i.e. jammed equipment. There is still reference to directly routing Process Streams to the shredder. Why is the observation booth going to be air-conditioned in the winter? Refer to paragraph 2.2 of the SOW; paragraph 2.3.12.4 of the WP indicates that the workweek is greater than the authorized 40hrs. This is still a UXO removal project and that 40hr restriction still applies.</i></p>	<p>Removed reference to process stream being routed directly to shredder.</p> <p>During the winter heat may be required.</p> <p>Defer 40 Hour restriction to Contracting Officer</p>
7.	<p><b>Appendix H and Mechanical Removal SOP were not attached with the basic document.</b></p> <p><i>The SOP that is now attached is nothing more than a rehash of the work plan in a condensed version without any specific details on how to conduct this operation.</i></p>	<p>Appendix H has been removed per comments from USATCES.</p>

ACTION CODES      W - WITHDRAWN  
 A - ACCEPTED/CONCUR      N - NON-CONCUR  
 D - ACTION DEFERRED      VE - VE POTENTIAL/VEP ATTACHED

PROJECT Control Number: 10-010-02; Work Plan Changes for Eastern Bypass, Back Check

**DESIGN REVIEW COMMENTS**

<input type="checkbox"/> SITE DEV & GEO <input type="checkbox"/> ENVIR PROT& UTIL <input type="checkbox"/> ARCHITECTURAL <input type="checkbox"/> STRUCTURAL	<input type="checkbox"/> MECHANICAL <input type="checkbox"/> MFG TECHNOLOGY <input type="checkbox"/> ELECTRICAL <input type="checkbox"/> INST & CONTROLS	<input checked="" type="checkbox"/> OE SAFETY <input type="checkbox"/> ADV TECH <input type="checkbox"/> ESTIMATING <input type="checkbox"/> SPECIFICATIONS	<input type="checkbox"/> SYSTEMS ENG <input type="checkbox"/> VALUE ENG <input type="checkbox"/> OTHER
DRAWING NO. OR REFERENCE		REVIEW <u>Back check Safety</u>	
		DATE <u>16 October, 2002</u>	
		NAME <u>Tom Baksa 256-759-3935</u>	

ITEM	COMMENT	ACTION
8.	<p><b>Para. 2.3.15 &amp; sub-parts.</b></p> <p><b>The process stated, is utilizing the UXOQCS to perform removal activities w/ the COE QA being the QC. This needs to be rewritten to match the accepted QC/QA process. (Non-concur)</b></p> <p><i>This section is still unacceptable because the QC is still involved in the removal process. It is not the QC responsibility to determine whether enough soil has been removed. That decision is the SUXOS. The QC's function is a verification process of the overall operation.</i></p>	<p>This process is the same process used throughout the EBP. Work is completed and turned over to QC. QC decides if it meets the standard. If not it is returned and rework completed. In this case, QC will do a manual check, if in the opinion of the QC it will not meet pass criteria it will be returned for rework. If the QC feels it will pass QC the grid will be remapped and evaluated. Once the grid passes QC it will then be turned over to government QA. The QC is a vital part of this entire process. From tree removal to final scrap inspection.</p>
9.	<p><b>Para. 11.6.1</b></p> <p><b>Needs to be revisited and corrected to match the rest of the plan and ensure that the QC process is not being confused with the removal process. (Non-concur)</b></p> <p><i>This still remains unchanged and has the QC involved in the removal process.</i></p>	<p>Defer to Contracting Officer.</p>

ACTION CODES      W - WITHDRAWN  
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Draft-Final Work Plan Amendment -EBP Rocket City Area CN: 10-010-02, S: 16 OCT 02

PROJECT

**DESIGN REVIEW COMMENTS**

<input type="checkbox"/>	SITE DEV & GEO	<input type="checkbox"/>	MECHANICAL	<input type="checkbox"/>	SAFETY	<input type="checkbox"/>	SYSTEMS ENG	<input type="checkbox"/>	REVIEW
<input type="checkbox"/>	ENVR PROT& UTIL	<input type="checkbox"/>	MFG TECHNOLOGY	<input type="checkbox"/>	ADV TECH	<input type="checkbox"/>	VALUE ENG	<input type="checkbox"/>	DATE
<input type="checkbox"/>	ARCHITECTURAL	<input type="checkbox"/>	ELECTRICAL	<input type="checkbox"/>	ESTIMATING	<input type="checkbox"/>	OTHER	<input type="checkbox"/>	NAME
<input type="checkbox"/>	STRUCTURAL	<input type="checkbox"/>	INST & CONTROLS	<input type="checkbox"/>	SPECIFICATIONS	Draft-Final WP Amendment			

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
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1.	General	All previous comments have been adequately addressed.	Concur
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ACTION CODES  
 A - ACCEPTED/CONCUR  
 D - ACTION DEFERRED  
 W - WITHDRAWN  
 N - NON-CONCUR  
 VE - VE POTENTIAL/VEP ATTACHED

**DESIGN REVIEW COMMENTS**

Fort McClellan Back Check of EBP Work plan Changes for Mechanical Removal

<input checked="" type="checkbox"/> SITE DEV & GEO	<input type="checkbox"/> MECHANICAL	<input type="checkbox"/> SAFETY	<input type="checkbox"/> SYSTEMS ENG	REVIEW	Draft -Final, dated Oct 02
<input type="checkbox"/> ENVIR PROT& UTIL	<input type="checkbox"/> MFG TECHNOLOGY	<input type="checkbox"/> ADV TECH	<input type="checkbox"/> VALUE ENG	DATE	9 Oct 02
<input type="checkbox"/> ARCHITECTURAL	<input type="checkbox"/> ELECTRICAL	<input type="checkbox"/> ESTIMATING	<input type="checkbox"/> OTHER	NAME	Porter Morgan, ext 5-1766
<input type="checkbox"/> STRUCTURAL	<input type="checkbox"/> INST & CONTROLS	<input type="checkbox"/> SPECIFICATIONS			

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
1.	General	All previous comments and responses were back checked and are acceptable, except Comment 10. See comment 2 below.	
2.	New Comments		
3.	General	Specific descriptions of areas on the site are no longer consistent with the terms describing each area of the site since the final revision to the ESS Amendment. Please search the work plan changes and update site descriptions to those used in the ESS Amendment. Also change Figures as necessary for site descriptions.	Corrected. Document corrected to match ESS.
4.	Sec. 2.3.12.3.3, 1 <sup>st</sup> bullet.	The process stream (PS -1) from the Power grid can not go directly to the "shredder". Please revise to show it going to the "inspection/demolition" point within the Shredder/Disposal Area	Corrected. Diagram now shows flow more clearly
5.	Sec 2.3.14.1, 2 <sup>nd</sup> sentence	Remove the word "shredder" and change to "inspection/demolition area".	Corrected. Removed reference to routing material directly to the shredder.
6.	Sec 2.3.14.2	Add a sentence after introducing use of the "control booth" something like : "The booth is used as a safety element in the unlikely event that a piece of OE/UXO is missed in the scrap inspection and is processed through the shredder."	Non Concur. The booth is not armored for that purpose. It is armored for demolition operations and the test described in chapter 15. All scrap is inspected before going to the shredder.
7.	Sec 2.3.15..4, middle of section	Change "mapping team" to "UXO team". The mapping team may be comprised of UXO techs but they will have to "change hats" to go intrusive.	Corrected. Changed Mapping team to intrusive team.

ACTION CODES                      W - WITHDRAWN  
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 D - ACTION DEFERRED            VE - VE POTENTIAL/VEP ATTACHED

Name: Bill Shanks Date: 18 October 2002		Comment Response Matrix for the Draft-Final Site-Specific Work Plan Eastern Bypass OE Removal (Revision 4)		
Who	Page	Line	Comment and Rationale	Response to Comment
BRS	v		Change "Clearance" to "Removal" in the title for Figure 1.2. Rationale: The change is needed for the figure title to be consistent with the title for the figure in the ESS.	Corrected. Corrected all Figures and List of Figures Table to reflect changes.
BRS	v		Should Figure 2.1 be added to the Table of Contents? Rationale: Figure 2.1 is included in the document but is not listed in the Table of Contents. The reference to Figure 2.1 in paragraph 2.3.9.2 indicates it is included to show the location and layout of the mechanical removal area but it shows the mechanical processing area and only part of the mechanical removal area.	Corrected. Rearranged the order of figures and renumbered as appropriate.
BRS	v		Correct the figure numbers in the Table of Contents for the Grid Layout Plan and Eastern Bypass OE Removal Management Team. Rationale: The figure numbers are shown as 2.1 and 2.2 but the revision provided indicates they should be 2.2 and 2.3.	Corrected. Rearranged the order of figures and renumbered as appropriate.
BRS	v		Change the title of Figure 4.2 from "Q-D Arcs and Planned Demolition Areas for the Mechanical Removal Area" to "Quantity Distance Arcs Within the Eastern Bypass" in the title for Figure 4.2. Rationale: The title for the figure in the Table of Contents is incorrect.	Corrected. Rearranged the order of figures and renumbered as appropriate.
BRS	1.2	Para. 1.3.1, Line 5	Change "Clearance" to "Removal". Rationale: The change is needed for the terminology to be consistent with that used in the ESS Amendment 1.	Corrected. Included Mechanical Removal Area, Mechanical Processing Area and Shredder/Disposal Area to match the new Figure.
BRS		Figure 1.2	Replace the figure with Figure 1-1 used in the ESS Amendment 1. Include the page number on the figure. Rationale: The current figure does not agree with the figure used in the ESS (has errors in the location of the possible high density area and the boundaries of the mechanical removal area). The page number is not shown on the figure.	Corrected. Rearranged the order of figures and renumbered as appropriate.

Name: Bill Shanks Date: 18 October 2002		Comment Response Matrix for the Draft-Final Site-Specific Work Plan Eastern Bypass OE Removal (Revision 4)		
Who	Page	Line	Comment and Rationale	Response to Comment
BRS	1.4 & 1.5		Change the page numbers of pages 1.4 and 1.5 to 1.5 and 1.6. Rationale: The page numbers are incorrect due to the page number not being included on Figure 1.2.	Corrected. Renumbered pages as needed to be correct with new figures.
BRS	2.7	Para. 2.3.9.2, Line 6	Change "Figure 2.1" to "Figure 1.2" or replace the figure. Rationale: Figure 1.2 shows the approximate location and layout of the mechanical removal area but Figure 2.1 does not.	Corrected. Rearranged the order of figures and renumbered as appropriate.
BRS	2.7	Para. 2.3.9.2, Line 7	Replace "clearance" with "removal". Rationale: The change is needed for the terminology to be consistent with that used in the ESS Amendment 1.	Corrected. Changed "clearance" to "Removal"
BRS	2.8	Para. 2.3.12.3, Line 2	Verify the statement that the soil will be processed to remove UXO/OE and metal scrap larger than 1.25" x 2.0" is accurate. Rationale: The ESS Amendment 1 information and information in paragraph 2.3.12.3.3 of this document indicates that metal down to less than 1" will be removed.	Added wording to explain the 1.25"x2.0" is the SOW requirement. We intend to segregate down to 1" with the equipment to ensure we meet the pass/fail criteria.
BRS	2.8	Para. 2.3.12.3.1.1, Line 5	Verify if 5/8" or 9/16" should be used for the armor thickness. Rationale: The ESS Amendment 1 states that armor at least 9/16" shall be used.	Corrected. Changed description to those in the ESS.
BRS		Figure 2.1	Check this figure to see if the correct figure has been included. Rationale: This figure does not show the mechanical removal area as indicated in the document. It would provide added information if this figure was added as an additional figure showing the mechanical processing area as was done in the ESS Amendment 1.	Corrected. Rearranged the order of figures and renumbered as appropriate.
BRS		Figure 2.1, Grid Layout Plan	Change the figure number to 2.2 and correct the page number. Rationale: The figure and page numbers are incorrect.	Corrected. Rearranged the order of figures and renumbered as appropriate.

**DESIGN REVIEW COMMENTS**

PROJECT CN 10-010-02, Work Plan Changes for Eastern Bypass (Mechanized Removal), Ft. McClellan

<input type="checkbox"/> SITE DEV & GEO	<input type="checkbox"/> MECHANICAL	<input type="checkbox"/> SAFETY	<input type="checkbox"/> SYSTEMS ENG
<input type="checkbox"/> ENVIR PROT& UTIL	<input type="checkbox"/> MFG TECHNOLOGY	<input type="checkbox"/> ADV TECH	<input type="checkbox"/> VALUE ENG
<input type="checkbox"/> ARCHITECTURAL	<input type="checkbox"/> ELECTRICAL	<input type="checkbox"/> ESTIMATING	<input type="checkbox"/> OTHER
<input type="checkbox"/> STRUCTURAL	<input type="checkbox"/> INST & CONTROLS	<input type="checkbox"/> SPECIFICATIONS	

REVIEW BACKCHECK  
 DATE 10 October 2002  
 NAME Michelle Crull, PhD, PE (256) 895-1653

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
1	General	The WP and the ESS are stand alone documents and as such it should be assumed that someone may not have both documents. Therefore, procedures, distances, siting, etc. need to be detailed in both documents. Care must be taken that the two documents do not conflict but just because the information is provided in the ESS does not mean that it should not be in the WP.	Concur. Made the two documents match.
2	Map of Shredder Operation Area	No map provided for the shredder area. Provide this map (Figure 1-3 from the ESS) and the accompanying text. It is my understanding that the material from the last grid will be put in the shredder without removing the OE first. At that time this is not just a scrap processing area, it will be an explosives area and requires siting. Discuss this in the WP (see Section 8.0 of the ESS).	1. Corrected. A Figure is now included which shows the layout of the Shredder/Disposal Area.  2. Information on the test have been added in section 2.3.14
3	Previous Comment 6	The distances between the armored control booths and their operations are not discussed. This distance must be at least K24 distance from the operation. (Calculations were provided for the maximum number of items in the spoils pile for the distance between it and the control booth, see ESS). How will this be provided/enforced? Show distance on map and discuss procedures to ensure operator protection in the WP.	Inserted the following sentence: The control booth will be a <u>minimum 100ft from the screening/sifting operations, which is the minimum calculated K24 distance.</u>

ACTION CODES W - WITHDRAWN  
 A - ACCEPTED/CONCUR N - NON-CONCUR  
 D - ACTION DEFERRED VE - VE POTENTIAL/VEP ATTACHED

**DESIGN REVIEW COMMENTS**

PROJECT

CN 10-010-02, Work Plan Changes for Eastern Bypass (Mechanized Removal), Ft. McClellan

<input type="checkbox"/> SITE DEV & GEO	<input type="checkbox"/> MECHANICAL	<input type="checkbox"/> SAFETY	<input type="checkbox"/> SYSTEMS ENG	REVIEW DATE NAME	Backcheck 10 October 2002 Michelle Cruli, PhD, PE (256) 895-1653
<input type="checkbox"/> ENVIR PROT& UTIL	<input type="checkbox"/> MFG TECHNOLOGY	<input type="checkbox"/> ADV TECH	<input type="checkbox"/> VALUE ENG		
<input type="checkbox"/> ARCHITECTURAL	<input type="checkbox"/> ELECTRICAL	<input type="checkbox"/> ESTIMATING	<input type="checkbox"/> OTHER		
<input type="checkbox"/> STRUCTURAL	<input type="checkbox"/> INST & CONTROLS	<input type="checkbox"/> SPECIFICATIONS			

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
4	Para. 2.3.12.3.1	<p>This paragraph states that vehicles will be armored with 5/8" armor and 2.3" ballistic glass. Paragraph 3.3 of the ESS says that at least 9/16" armor and 2.311" ballistic glass will be used. This information should be exactly the same in both documents. Resolve conflict.</p>	Corrected. WP now matches the ESS.

ACTION CODES  
 A - ACCEPTED/CONCUR  
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Name: Bill Shanks Date: 18 October 2002		Comment Response Matrix for the Draft-Final Site-Specific Work Plan Eastern Bypass OE Removal (Revision 4)		
Who	Page	Line	Comment and Rationale	Response to Comment
BRS		Figure 2.2, EB OE Removal Management Team	Change the figure number to 2.3 and correct the page number. Correct the Project Manager and SUXOS. Rationale: The figure and page numbers are incorrect. The Project Manager and SUXOS have been changed.	Corrected. Rearranged the order of figures and renumbered as appropriate.
BRS	2.16	Para. 2.4.2.2, Lines 1-3	Provide the resume for Mr. Holcomb in Appendix F. Rationale: The sentence on these lines indicates Mr. Holcomb's resume is in Appendix F but it is not included.	Corrected. Added Mr. Holcomb's resume to Appendix F.
BRS	4.1	Para. 4.1.4, Line 3	Add ", mechanical processing site and shredder/disposal area" after "mechanical removal area". Rationale: Figure 4.2 shows the 1181-foot exclusion zone for the mechanical processing site and shredder/disposal area in addition to the mechanical removal area.	Corrected. Included Mechanical Removal Area, Mechanical Processing Area and Shredder/Disposal Area to match the Figure.
BRS		Figure 4.2	Replace the figure with the corresponding figure used in the ESS Amendment 1. Add the page number to the figure. Rationale: The figure shows an incorrect layout for the mechanical removal area and the possible high density area in the wrong location. The page number is not shown on the figure.	Corrected. Removed 1 figure and now have only Figure 4.1.
BRS	8.3	Figure 8.1	It appears that an updated schedule should be inserted to replace the schedule shown. Rationale: The figure does not appear to incorporate the time added due to the additional 40 plus acres and the mechanical removal requirement.	Corrected. Replaced old schedule with an up to date schedule.
BRS	10.1	Para. 10.1.1, Line 1	Is the statement that a Sampling and Analysis Plan are not applicable accurate? Rationale: During initial discussion on the mechanical removal, ADEM was indicating that sampling of the removed soil for explosives was needed. Are we not going to do this?	Yes. Soil sampling is being conducted by Shaw under a separate work plan.
BRS		Appendix C	Shouldn't the site maps in Appendix C be updated? Rationale: The maps do not show the current ROW, Q-D Arcs and grid layout plan.	Corrected. Removed Appendix C

Name: Bill Shanks Date: 18 October 2002		Comment Response Matrix for the Draft-Final Site-Specific Work Plan Eastern Bypass OE Removal (Revision 4)		
Who	Page	Line	Comment and Rationale	Response to Comment
BRS	4	Appendix H, Para. 5.3.3, Line 3	Verify if 5/8" or 9/16" should be used for the armor thickness. Rationale: The ESS Amendment 1 states that armor at least 9/16" shall be used.	Removed Appendix H
BRS	7	Appendix H, Para. 5.5.10, Line 2	Verify if 5/8" or 9/16" should be used for the armor thickness. Rationale: The ESS Amendment 1 states that armor at least 9/16" shall be used.	Removed Appendix H
BRS	8	Appendix H, Para. 5.6.10, Line 1	Replace "site" with "sight". Rationale: The word is misspelled.	Removed Appendix H
BRS	11	Appendix H, Para. 5.10.7, Line 1	Insert "will" after "material" and "will be" after "UXO/OE". Rationale: The words need to be added to make the sentence grammatically correct.	Removed Appendix H

## **APPENDIX B**

Task Order 0010  
Eastern Bypass OE Removal  
Statement of Work

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STATEMENT OF WORK  
ORDNANCE AND EXPLOSIVES (OE) REMOVAL ACTION  
FOR THE EASTERN BYPASS

Modification NO. 0006, Task Order No. 0010

FORT McClellan

MAY, 2002 3 JULY 2002

**1.0 OBJECTIVE.** The objective of this modification to Task Order No. 0010 is to perform a "mechanized" removal action for all OE (UXO hazards and OE items) for the OE high density target areas in and around the general area bounded by grids L-60, L-33, M-19 M-41, and grids M-42, M-49 and L-67 in the Eastern Bypass at the Fort McClellan (FMC), Alabama. This clearance is a final removal action prior to transfer of the Eastern Bypass property to the Alabama Department of Transportation for construction of a highway in accordance with the Joint Powers Authority (JPA) Land Reuse Plan.

**2.0 BACKGROUND.**

**2.1 General.**

**2.1.1** The specific tasks for Mod No. 0006 begin at Task 12 in this Scope of Work. Minor text changes have been made in Sections 1.0 through 3.0 to support the current conditions for this modification. All previous tasks under the Task Order remain in effect, except as changed/supplemented by this specific modification. The work required under this Scope of Work (SOW) falls under the Base Realignment and Closure. Ordnance and Explosives (OE) and OE-related scrap contamination is suspected to exist on this property owned by the Department of the Army.

1

2.1.2 OE is a safety hazard and may constitute an imminent endangerment. Unexploded ordnance (UXO) may be buried on the site or may possibly be on the ground surface. During this modification for removal action under T.O. 0010, it is the Government's intent that the Contractor destroys, by mechanical shredding and/or detonation on-site, all Unexploded Ordnance (UXO) encountered. Chemical Warfare Materiel (CWM) are not suspected to exist within the limits where this work will be performed. However, if any suspect CWM is discovered, the Contractor shall stop work immediately, withdraw upwind from the area, and notify the Fort McClellan Transition Force Operations Center. The work done under this SOW 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). The applicable provisions of 29 CFR 1910.120 shall apply.

**2.1.3 Work Limitations.** Due to the inherent risk in this type of operation, the Contractor's UXO personnel shall be limited to a 40-hour workweek (either five 8-hour days or four 10-hour days) on an individual basis. UXO personnel shall not perform UXO-related tasks more than 10 hours per day. Non-UXO personnel work hours shall be governed by the appropriate labor laws/regulations, DID OE-025, and safety regulations.

2.1.4 All work in areas potentially containing unexploded hazards shall be conducted in full compliance with CEHNC, USACE, DA, and DoD requirements regarding personnel, equipment, and procedures. All operational procedures proposed and approved for this modification to the work shall comply with those established procedures and controls contained in Basic Safety Concepts and Considerations for Ordnance and Explosives Operations, the approved work plan and work plan changes, and the amended and approved ESS.

2.1.5 The contractor shall obtain any permits and licenses necessary to conduct operations including, but not limited to, building permits, licenses to purchase explosives, and Department of Transportation (DOT) permits for transport of ordnance and explosives and hazardous, toxic, and radiological waste (HTRW) on public highways.

**2.2 Site Description.** 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.

**2.3 Site History.** Fort McClellan has been used for artillery training of troops and the National Guard as early as 1912 to present day. In 1941, McClellan became 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.

**2.4 Proposed Eastern Bypass.** The proposed Eastern Bypass right-of-way has been divided into three Ordnance Operable Units (OOUs). OOU1 is the northwestern portion consisting of approximately 103 acres in non-impact training areas. OOU2 is the central portion consisting of approximately 225 acres within known impact areas. OOU3 is the southern portion consisting of approximately 259 acres in areas with no known historical OE usage. No DOD Action Indicated is the selected action for OOU3 and thus, this area will not be included in the SOW. A removal action in accordance with the signed Action Memorandum for the Eastern Bypass for OOU1 and OOU2 will be performed. A surface clearance to one foot has already been performed over the entire OOU1 and OOU2 areas.

**2.5 Recent OE-Related Activities.** Several previous site investigations in and around the EBP have indicated the presence of OE training items within the OOU1 area. The OOU2 area encompasses known impact areas. These activities as well as potential OE items that may be found within the EBP are described in the Final Engineering Evaluation/Cost Analysis prepared by Zapata Engineering dated April 2000. Explosive Ordnance Disposal Technology (EODT) has performed a surface clearance to 1 foot in support of pre-construction activities in the OOU1 and OOU2 areas.

The boundaries of OOU1 and OOU2 have been adjusted since finalization of the EBP EE/CA to better reflect the nature of past use indicative of the types of ordnance found during the surface clearance and the final removal on the M2 parcel. These boundaries as defined in the Draft Action Memorandum allow OOU1 to be defined as a training area, while OOU2 incorporates several range fans, including a 60mm mortar range, a 2.36-inch rocket range, and a tank range.

Since the Action Memo was signed, the Alabama Department Of Transportation (ALDOT) has requested a revision in the ROW acreage. The action required under Modification No. 0005 was for clearance to depth in the additional areas identified in the revised ROW that are adjacent to the existing OE Area 2. The proposed additional clearance area covers approximately 40 acres adjacent to the existing Eastern Bypass Right-of-Way (ROW) in the OE Area 2 sector. During the course of the removal work on the EBP site, an area in the "Y" junction of the northern segment of the EBP has been discovered that appears to be a major target site for 2.36" rockets. Additional parts of this target site may extend into the 40-acre revision, as added by Modification No. 0005. Additionally, an area to the east of this site may be a secondary 2.36" rocket target zone, also requiring clearance under a high OE density procedure.

**3.0 DESCRIPTION OF SERVICES.** The objective of this modification is for the contractor to safely detect, identify, remove, and dispose of all UXO and OE-like items from the specified target areas of the EBP site in accordance with the tasks specified below in paragraphs 3.12 through 3.19. The required clearance depths shall be as shown in DID OE-005-05.

All UXO shall be removed to their calculated detection depth as shown in DID OE-005-05 para. 10.4.1 and/or to a depth shown by the Contractor's QC acceptance process as being clear of UXO/OE-like items in the grids covered by this modification, to include geophysical re-mapping of the specified grids, after the initial excavation effort has been completed. The Contractor should anticipate that there could be areas of UXO/OE-like items in these grids at depths greater than the calculated detection depth. All UXO and OE scrap larger than 1.25" x 2.0" (Rocket, M6 HEAT) is to be collected, removed, and disposed of from the site.

**3.1 through 3.5** (Task 1 through Task 5, original scope of work) No changes, except under Task 4, section 3.4.1.3. All explosives are to be stored in the Contractor furnished magazine.

**3.6 through 3.11 (renumbered)** (Task 6 through Task 11, Modification No. 0005). No changes to Tasks 6 through 11.

**3.12 (Task 12 - Fixed Price) Prepare Work Plan and Safety Plan Changes.** The Contractor shall prepare and submit, for Contracting Officer approval, a work plan change to the existing Site-Specific Work Plan (SSWP) in accordance with DID OE-005-01, describing the modified or alternative removal processes and how they will be accomplished. The changes to the SSWP shall address the elements noted in DID OE-005-01, as applicable. Those elements that are not applicable shall be so noted. An approved Site-Wide General Work Plan (SWWP) exists for this site. This document shall be referred to and used to the maximum extent possible in the development of the changes to the SSWP and for all work required under this contract.

No single technical approach is appropriate for all OE sites, therefore, the proposed additions/changes to the existing SSWP, prepared by the contractor, shall describe and justify the particular technical approaches proposed for use on the 5 to 7 acre area of the target zone and any nearby similar areas. For this modification to T.O. #0010, a mechanical removal, sorting, and demilling process shall be employed by the Contractor to the greatest extent possible. The proposed changes to the SSWP shall describe the contractor's proposed method of accomplishing the additional work, in accordance with the Basic Contract, this SOW, and the approved SSWP. The changes shall include all necessary changes to the Site-Specific Safety and health Plan, to include a Standard Operating Procedure (SOP) with respect to safety aspects for operation of the mechanical systems planned for use at the site. The Contractor may not mobilize to the site or begin working until the work plan change to the SSWP has been approved and a permission to mobilize issued.

**3.13 (Task 13 - Fixed Price) Perform Location Surveys at the Specified Target Area and Adjoining Areas Designated for Mechanical Removal.** The Contractor shall provide the necessary personnel and equipment to perform location and mapping surveys in accordance with DID OT-005-07. Surveys shall establish block/grid boundaries for the excavation work, pre- and post-excavation quantity determination, and any pre-excavation geophysical mapping necessary to define the excavation grid boundaries. It is understood that around ten (10) of the twenty-three 23 (23) grids in the main target zone have been cleared by the Contractor's UXO sub-contractor to some depth below 1.0-foot.

These specific grids shall be identified, geophysically re-mapped, and analyzed for potential UXO/OE-like targets before any mechanical excavation begins. This work is necessary in order to provide a clearer understanding of specific excavation requirements in these grids.

**3.14 (Task 14 - Fixed Price) Prepared Final Amendment to Explosive Safety Submittal.** The Contractor shall use a Government prepared "draft" Amendment to the current Explosive Safety Submittal (ESS) to prepare the final version of the Amendment to the document. The Contractor shall complete a description of the various mechanical processes to be employed and the safety measures to be adopted to execute the removal and disposal activities. In addition to the above, the Contractor shall include all SOPs developed for the mechanical processes and associated safety procedures as an Attachment to the Amendment. Exclusion zone maps and maps of the specific grids/locations of the work shall also be provided.

**3.15 (Task 15 - Fixed Price) Vegetation Removal and Disposal - 4 Acres (Approximate).** The contractor shall provide the necessary personnel and equipment to perform complete vegetation removal and disposal, including grubbing of stumps and roots 3-inches and larger, necessary to support UXO clearance at the site. The Contractor shall be responsible for obtaining all permits for disposal of the vegetation. Timber harvesting of salvageable trees is not required.

**3.16 (Task 16 - Fixed Price) Perform Mechanical Excavation and Separation of UXO/OE-like items for Clearance at the Specified Target Zone and Adjoining High OE Density Areas.**

The contractor shall provide the necessary personnel and equipment to locate, gain access, identify, recover, and mechanically separate, all UXO/OE-like items at the site. A planned, systematic, effective approach shall be used, to include a short prove-out process upon initial startup of the processing plant. The Contractor shall determine the workflow process and provide an operational concept with a flow diagram for all elements of the entire sequence of operations with the SWWP changes.

The approximate total area included in the work around the specified target site(s) covers between 5 and 7 surface acres of extremely high density OE occurrence. The intent of the work is to also remove any high OE density UXO/OE-like clusters of items which extend beyond the currently known boundary of the specific site, and which can be reasonably assumed/shown to be a part of the target site and/or a nearby, adjoining secondary target area. The current working estimate of material to be excavated and processed within the assumed site boundary is approximately 20,000 Cubic Yards (CY), bank-run (in-place) using a 2.5-foot depth across 22 site grids. The Contractor shall assume, and price separately, an additional 5,000 CY of bank run material to be removed and processed at the direction of the Government, for any areas that extend beyond the assumed site boundary.

The Contractor shall size the equipment, work force, plant layout, etc. to process between 4500 CY and 6000 CY of excavated (bulk) material per week. The Contractor shall determine the hours and days of operation per week. The Contractor shall select and prepare the location for plant set-up and operations to ensure an efficient flow of the work from the excavation site(s) to and around the processing plant. The Contractor should assume an initial 1.0 to 1.5-foot excavation depth, followed by geophysical screening/mapping to determine extent and depth of remaining UXO/OE to be excavated. The Contractor shall maintain a positive drainage across the site during all excavation activities such that the area does not become a single large sump/pond or multiple small ponds. The Contractor shall provide and install an appropriate "armoring" kit for the operator station on each piece of motorized equipment, or stationary control station, that is proposed for use at the worksite and in proximity to areas potentially affected by an unintentional detonation of the MPM at the site.

The following minimum equipment is anticipated to be employed at the site: one (1) track mounted hydraulic excavator with various working tools, two (2) ~~three (3)~~ off-road dump trucks, one (1) wheeled front loader, 1 equipment operator station for the shaker/processing area, a shaker/grizzly processor for large size separation, a trommel screening system for final sorting/screening, and appropriate conveyors to deposit the screened materials into separate piles. The Contractor shall identify any additional equipment proposed for use, for example, magnets, eddy current separators, etc., and any additional equipment requiring an armored operator station.

The Contractor shall provide for remote video monitoring of the shaker and trommel processing areas within the equipment process control station. The process operator shall have an "emergency" kill switch located within easy reach of the operator's position in the control station.

The Contractor shall process the materials to sort UXO/OE-like items from the excavated materials. UXO/OE-like items shall be screened by and conveyed from the system to a single stockpile to the greatest extent possible. Manual handling of UXO/OE-like material at the processing plant shall be on an "as needed" basis only, for example, when the equipment becomes jammed and requires hand-clearing and/or repairs are needed to the equipment and items need to be cleared to complete the repairs. The Contractor shall stockpile the processed soil materials that are free of UXO/OE-like items in an area previously cleared of UXO, preferably close to the excavated grids. Upon each grid being released by both the Quality Control inspection and the Quality Assurance inspection, the stockpiled clean soils may be backfilled into such grids. The backfilled materials shall be compacted by the spreading equipment, graded to drain, and seeded with a winter mixture of rye grass/fescue or other approved winter mixture suitable for the local area.

The Contractor shall install silt fencing in accordance with the State of Alabama sedimentation and erosion control requirements around the down hill sides of the site, after all grids have been backfilled and graded. The Contractor shall assume a minimum of 1500 linear feet of silt fencing and any other associated erosion control materials to be required.

The Contractor shall maintain the erosion control measures for a period of one-year from completion of the installation of the measures. The Contractor shall coordinate with the project office of the Alabama DOT responsible for construction of the Eastern Bypass highway to ensure that the sedimentation and erosion control measures meet DOT requirements for the one-year maintenance period.

All operational procedures proposed and approved for this modification to the work shall comply with those established procedures and controls contained in Basic Safety Concepts and Considerations for Ordnance and Explosives Operations, the approved work plan and work plan changes, and the amended and approved ESS

**3.17 (Task 17 -Time and Materials) Perform Demolition, Demilitarization, AEDA/Range Residue Management, and Disposal of all UXO/OE-like Items from the Specified Target Zone and Adjoining High OE-Density Areas.** The Contractor shall provide the necessary equipment, equipment operators, UXO personnel, and equipment to transport, process, and demilitarize the UXO/OE-like items separated during the performance of work under Task 16 above. The Contractor shall establish a separate work area, beyond the 1180-foot exclusion zone of the Rocket City area, to conduct the mechanical shredding, demolition, and/or demilitarization operations of the UXO/OE-like materials collected as output from the mechanical separation process and any random/stray UXO/OE-like items uncovered/located during the site work. The Contractor shall establish a separate "Exclusion Zone" and an associated map for this working area.

The ~~Contractor~~ Government shall provide a mechanical shredder of suitable size and capacity to process approximately 3 tons per week of the metal items expected to be encountered at the site. The mechanical shredding process shall be considered as an innovative, experimental technology development process, for which performance and capability of the equipment shall be monitored and reported.

Any damage to the mechanical shredder from detonations of UXO/OE within the equipment shall be considered as a "planned for event". The ~~Contractor~~ Government shall consult with the manufacturer of the shredder equipment prior to its employment at the site to determine the means and methods for repair/improvement in the event of damage during UXO/OE material destruction operations. In the event of damage to the shredder from a detonation, which renders the equipment un-usable, the Contractor shall recommend to the Government a course of action with respect to either repairing the shredder equipment or completing the demolition of the remaining UXO/OE-like materials using standard hand processing procedures. The Contractor shall be prepared to *assist in providing* ~~provide for~~ repairs, improvements, upgrades, strengthening, etc. of the shredder equipment and returning the equipment to service as quickly as possible if the decision is made to continue evaluating/testing the mechanical shredding process.

If burning/detonating operations cannot be conducted on-site, the Contractor shall submit a disposal feasibility letter for Contracting Officer approval, IAW DID OE-040. All transportation and demolition of UXO shall be in accordance with all applicable Federal, State, and local laws and regulations, including the disposal alternative approved by the Contracting Officer.

If UXO is encountered that cannot be moved due to its condition and the location prevents disposal in place, then the on-site USACE OE Safety Specialist shall be notified.

The contractor shall furnish all necessary personnel and equipment to inspect, certify, and transport all recovered AEDA/Range Residue produced during the work on this modification to the approved OE Scrap Storage yard. The methodology to accomplish this task is defined in the existing, approved site-wide work plan for Fort McClellan. The Contractor shall inspect, certify, and move to storage all UXO/OE-like items and scrap at this site that have been inerted/de-energized/shredded.

**3.18 (Task 18 - Fixed Price) Perform Quality Control at the Specified Target Zone and Adjoining High OE Density Areas.**

The contractor shall furnish the necessary personnel and equipment to administer a Quality Control (QC) Program to manage, control, and document contractor and subcontractor activities to ensure compliance with contract requirements.

The methodology to accomplish this task shall be proposed in the WP amendment and shall be IAW CEHNC Data Item Description OE-005-11, "Quality Control Plan". **The Contractor shall provide for and conduct post-excavation re-mapping of each specified grid, using geophysical methods, as a part of the QC process.** The QC activities shall be documented and included in the Removal Report.

**3.19 (Task 19 - Fixed Price) Removal Report.** The Contractor shall incorporate the results of the additional work under this Scope of Work into the Overall Removal Report for this project, in accordance with DID OE-030. All data collected and prepared from this additional work shall be provided as a separate appendix to the Removal Report.

**3.20 (Task 20 - Time & Materials) Equipment Repair Due to Explosive Damage and/or UXO Clearance Work, In Support of Task 16 Work.** The Contractor shall include time and materials to facilitate clearance of UXO/OE from equipment jams due to equipment malfunctions and/or unintentional detonation of explosive items in the processing equipment. The Contractor shall initially assume a one-week UXO team effort to support maintenance/repair downtime and clearance operations in the equipment train. The Contractor shall also include time and materials to facilitate repairs to equipment damaged by unintentional detonation of explosive items within the processing train and/or individual pieces of excavation/haul equipment. The Contractor shall be solely responsible for costs associated with repairs related to non-explosive damage.

**4.0 SCHEDULE OF MEETINGS AND DELIVERABLES.**

**4.1 Deliverables.** The Contractor shall provide the indicated deliverables on the following schedule:

<b>Deliverables</b>	<b>Date</b>
Draft Work Plan Changes/ESS Amendment	10 days after award
Final Work Plan Changes/ESS Amendment	1 week after receipt of comments
Draft Removal Report to CEHNC	3 weeks after completion of field work
Draft-Final Removal Report to DDESB/FMC	1 week after receipt of CEHNC com'ts
Final Removal Report	1 week after receipt of final com'ts
Report/Minutes, Record of Meeting IAW DID OE-045	5 days after event
Monthly Status Report IAW DID OE-08	Monthly
Weekly Status Report IAW DID OE-085	Weekly
Cost/Schedule Status Report IAW DID OE-035	Monthly
Telephone Conversation/Correspondence Report IAW DID OE-055	Monthly
Ordnance Filler Report IAW DID OE-090	2 weeks after completion of field work
Accident/Incident Report IAW DID OE-015	Written report within 24 hours after the incident occurrence
OVERALL COMPLETION DATE	3, 31 Jan 2003

The original of all status reports shall be sent within 10 days of the end of the reporting period by normal mail to:

Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-OE-DC (Mr. Dan Copeland) P.O. Box 1600 4820 University Square Huntsville, Alabama 35816-1822
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**4.2 Addresses and Distribution.** The Contractor shall furnish copies of the draft and final work plans and removal report as indicated to each addressee listed below in the quantities indicated. The Contractor shall use express mail services for delivering these plans and reports.

Following each submission, comments generated as a result of their review shall be incorporated as applicable. All comments will be sent to the CEHNC Project Manager for consolidation prior to incorporation. The contractor shall annotate all comments to show all changes and/or responses to support those comments.

The following addresses shall be used in mailing submittals:

ADDRESSEE	Draft Submittals	Draft-Final & Final Submittals
Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-OE-DC (Mr. Dan Copeland) 4820 University Square Huntsville, Alabama 35816-1822	6	6
Commander US Army Engineer District, Mobile ATTN: CESAM-EN-GH (Mr. Ellis Pope) 109 St. Joseph St. Mobile, AL 36602-3630	2	2
U.S. Environmental Protection Agency ATTN: Mr. Doyle Brittain 61 Forsyth Street, SW Atlanta, GA 30303-3104	3	3
Alabama Department of Environmental Management Government Facilities Section, Haz Waste Branch, Land Division ATTN: Mr. Philip Stroud 1400 Coliseum Blvd, Montgomery, AL 36110-2059	3	3
U.S. Army Garrison ATTN: ATZN-ENV 291 Jimmy Parks Blvd. Fort McClellan, AL 36205-5000	9	9

All other submittals shall be distributed in accordance with the corresponding DID.

**5.0 SUBMITTALS and CORRESPONDENCE.**

**5.1 Format and Content of Engineering Report.** All drawings shall be of engineering quality with sufficient details. Reports shall consist of 8 1/2" X 11" sheets of paper.

The report covers shall consist of durable binders and shall hold pages firmly while allowing easy removal, addition, or replacement of pages. A title shall identify the site, the Contractor, the Huntsville Center, and date. The Contractor's identification shall not dominate the title page.

**5.2 Review Comments.** The Contractor shall review all comments received through the CEHNC Project Manager and evaluate their appropriateness based upon their merit. The Contractor shall incorporate all applicable comments and provide a written response to each comment.

**5.3 Identification of Responsible Personnel.** Each submittal shall identify the specific members and title of the subcontractor and Contractor's staff, which had significant input into the report.

**5.4 Correspondence.** The Contractor shall keep a record of phone conversations and written correspondence affecting decisions relating to the performance of this task order in accordance with DID OE-055. A summary of the phone conversations and copies of written correspondence shall be submitted to the CO with the Cost/Schedule Status Report.

**5.5 Computer Files.** All final text files and drawings generated by the Contractor under this task order shall be furnished to the CO in accordance with DID OE-005-07 and DID OE-005-14.

**6.0 PERFORMANCE METRICS.** The performance and subsequently the evaluation of the contractor shall be based on certain performance metrics. The metrics include safety, quality, schedule, and customer satisfaction. At the completion of the Task Order a board consisting of at least two government personnel and one representative of the contractor will perform the contractor evaluation. The specific performance metrics in effect for this Task Order are stated in the Basic Contract Statement of Work.

**7.0 SAFETY REQUIREMENTS.** The Contractor shall develop and implement a Health and Safety Program in compliance with the requirements of OSHA standard 29 CFR 1910.120 (b) (1) through (b) (4) and in accordance with DID OE-005-06, as required for this effort. The Contractor shall provide a copy of the Corporate Health and Safety Program for review as requested by the Contracting Officer. Hard hats and safety toe boots shall be worn when working in and around heavy equipment per USACE 385-1-1.

**8.0 Public Affairs.** In accordance with the Basic contract.

**9.0 REFERENCES.**

"Final EE/CA for the Eastern Bypass at Fort McClellan." April 2000, Zapata Engineering.

References identified in the Basic Contract as applicable.

## **APPENDIX C**

### Local Points of Contact

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**Emergency Telephone Numbers**

<b>Contact</b>	<b>Firm or Agency</b>	<b>Telephone Number</b>
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
Project Manager, Mr. Authur Holcomb	Foster Wheeler Environmental Corporation	(256) 830-4100
DO Manager, Mr. Greg Williams,	Foster Wheeler Environmental Corporation	(256) 820-7904
PESM, Mr. Joseph L. Sbarra, CIH	Foster Wheeler Environmental Corporation	(973) 630-8101
Project Manager, Mr. Daniel Copeland	CEHNC	(256) 895-1468
Poison Control Center		(800) 462-0800
Chemtrec		(800) 424-9300
National Response Center		(800) 424-8802
Fort McClellan Transition Force Operations		(256) 848-5178

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## APPENDIX D

### Contractor Forms

- D.1 QC Log Forms
  - QC Surveillance Report
  - Deficiency Report
  - Nonconformance Report
  - Inspection Report
- D.2 Safety Meeting Attendance Form
- D.3 Site Visitor Log Form
- D.4 Safety Inspections Log
- D.5 Daily Report of OE Operations Form
- D.6 Explosive Accountability Forms

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**QC SURVEILLANCE REPORT**  
**DACA87-99-D-0010**  
**Former Ft. McClellan**

<b>1 - Definable Feature of Work</b>		
<input type="checkbox"/> Project Management	<input type="checkbox"/> Geophysical Investigation	<input type="checkbox"/> Data Management
<input type="checkbox"/> Brush Cutting/Clearing	<input type="checkbox"/> Intrusive Investigation	<input type="checkbox"/> UXO Avoidance
<input type="checkbox"/> Demolition	<input type="checkbox"/> Other: UXO Reacquire	
<b>2 - Phase</b>		
<input type="checkbox"/> Preparatory	<input type="checkbox"/> Initial	<input type="checkbox"/> Follow up
<b>3 - References</b>		
<b>4 - Observed Condition/Activities:</b>		
<b>5 - Comments:</b>		
<b>6 - Results of Surveillance</b>		
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Unacceptable	Deficiency #: NCR #:
Conducted By:	Signature:	Date:
<b>7 - Site QC Representative Comments</b>		
<b>8 - Site QC Representative Review</b>		
<input type="checkbox"/> Concur	<input type="checkbox"/> Non-Concur	Signature:
		Date:
<b>9 - Distribution:</b>		
<input type="checkbox"/> PM	<input type="checkbox"/> DOM	<input type="checkbox"/> CEHNC
<input type="checkbox"/> Site Superintendent	<input type="checkbox"/> SUXOSS	<input type="checkbox"/> Program QC Manager
<input type="checkbox"/> Other:		

**DEFICIENCY REPORT  
DACA87-99-D-0010  
Former Ft. McClellan**

Corrective Action Request		
CAR/Deficiency Number:	Date:	
Organization/Project/Team/Activity:	Person Contacted:	
Observation/Condition/Deficiency:		
Reference:		
Corrective Action Recommendation:		
Originator:	Signature:	
Site QC Representative:	Signature:	Date:
Corrective Action Response		
Responsible Manager/Designee:	Date:	Telephone/Email Address:
Immediate Action Taken:		
Root Cause:		
Corrective Action Taken to Prevent Reoccurrence:		
Corrective Action Taken By:	Signature:	Date:
Evaluation		
Responsible Manager:	Signature:	Date:
QC Comments:		
Site QC Representative:	Signature:	Date:
<input type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable		
Distribution		
<input type="checkbox"/> PM <input type="checkbox"/> DOM <input type="checkbox"/> CEHNC <input type="checkbox"/> Site Superintendent <input type="checkbox"/> SUXOS <input type="checkbox"/> Program QC Manager <input type="checkbox"/> Other.		

**NONCONFORMANCE REPORT**  
DACA87-99-D-0010  
Former Ft. McClellan

Corrective Action Request		
Nonconformance Report Number:	Date:	
Organization/Project/Team/Activity:	Person Contacted	
Nonconformance:		
Reference:		
Corrective Action Recommendation: Plan the work and work the plan.		
Originator:	Signature:	
Site QC Representative:	Signature:	Date:
Corrective Action Response		
Responsible Manager/Designee:	Date:	Telephone/Email Address:
Immediate Action Taken:		
Root Cause:		
Corrective Action Taken to Prevent Reoccurrence:		
Corrective Action Taken By:	Signature:	Date:
Evaluation		
Responsible Manager:	Signature:	Date:
QC Comments:		
Site QC Representative:	Signature:	Date:
<input type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable		
Distribution		
<input type="checkbox"/> PM <input type="checkbox"/> DOM <input type="checkbox"/> CEHNC <input type="checkbox"/> Site Superintendent <input type="checkbox"/> SUXOS <input type="checkbox"/> Program QC Manager <input type="checkbox"/> Other:		

Appendix E-1  
INSPECTION REPORT  
DACA87-99-D-0010  
Former Fort McClellan

1 - Lot Number		2 - Sampling Plan			3 - Date	
4 - Unit of Production	5 - Lot Size	6 - Verification Level	7 - Code Letter	8 - Inspection Stage	9 - Sample Size	
10 - Description of Inspection						
11 - Comments						
Conducted By:			Signature:		Date:	
12 - OCM Comments/Review						
<input type="checkbox"/> Accept		<input type="checkbox"/> Withhold		Deficiency/NCR #:		
Signature:				Date:		
13 - Inspection Results Acknowledged By						
Signature:				Date:		



**FOSTER WHEELER ENVIRONMENTAL CORPORATION**  
**DAILY BRIEFING SIGN-IN SHEET**

Date: \_\_\_\_\_ Project Name/Location: \_\_\_\_\_

Shift/Department: \_\_\_\_\_ Person Conducting Briefing: \_\_\_\_\_

**1. AWARENESS (e.g., special EHS concerns, pollution prevention, recent incidents, etc.):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**2. OTHER ISSUES (EHS Plan changes, attendee comments, etc.):**

\_\_\_\_\_  
\_\_\_\_\_

**3. ATTENDEES (Print Name):**

1.	21.
2.	22.
3.	23.
4.	24.
5.	25.
6.	26.
7.	27.
8.	28.
9.	29.
10.	30.
11.	31.
12.	32.
13.	33.
14.	34.
15.	35.
16.	36.
17.	37.
18.	38.
19.	39.
20.	40.

Revision Date 10/15/99





**FOSTER WHEELER ENVIRONMENTAL CORPORATION**  
**EHS WEEKLY/MONTHLY CHECKLIST AND ACTION ITEM REPORT**

Project: \_\_\_\_\_ Area of Inspection: \_\_\_\_\_

Inspection Type:     Weekly     Monthly

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
<b>Work Conditions</b>		
1 Walking /Working Surfaces		
2 Aisles and Passageways		
3 Platforms/ Scaffolding		
4 Ladders		
5 Stairs		
6 Exits/Egress		
Roadways		
8 Ventilation		
9 Lighting		
10 Noise Exposure		
11 Ergonomics		
<b>Materials</b>		
1 Stacking and Storage		
2 Chemicals and Fuel		
3 Compressed Gases		
<b>Equipment</b>		
1 Hand / Portable Tools		
2 Machine, Tools, Guarding		
3 Mobile/ Heavy Equipment		
a. Physical inspection of equipment		
b. Review of daily inspection reports		
c. Review of equipment deficiency correction logs/records		

Fort McClellan  
Final Site-Specific Work Plan  
Eastern Bypass OE Removal

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
4 Lifting Gear Equipment		
5 Materials Handling Equipment		
6 Mechanical Power Systems		
7 Hydraulic Power Systems		
8 Pneumatic Power Systems		
9 Electrical Power Systems		
10 Valves and Controls		
<b>Hazard Controls</b>		
1 Other Heavy Equipment		
2 Lock-Out Systems		
3 Signs and Tags		
4 Color Coding		
5 Materials Labeling		
6 Warning Systems		
<b>Emergency Systems</b>		
1 Emergency Instructions		
2 Fire Protection		
3 Eye Wash and Showers		
4 First Aid Kits/ Stations		
5 Emergency Rescue Equipment		
<b>Protective Equipment</b>		
1 Eye Protection		
2 Ear Protection		
3 Respiratory Protection		
4 Head Protection		
5 Hand Protection		
6 Foot Protection		
7 Body Protection		
8 Fall Protection		

Fort McClellan  
Final Site-Specific Work Plan  
Eastern Bypass OE Removal

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
<b>Hazardous Waste Storage Area(s)/Satellite Accumulation Area<sup>1</sup></b>		
1 Designated, secured area with "Hazardous Waste" signage. For SAA area is marked "SAA". (SAA)		
2 Containers:		
a. DOT-spec. containers (for wastes to go off-site only)		
b. Intact/in good condition (SAA)		
c. Waste compatible with containers (e.g., no evidence of corrosion, softening, bulging) (SAA)		
d. Marked "Hazardous Waste"/ visible Accumulation Date.  <i>For SAA, marked "Hazardous Waste" or identify container contents and Accumulation date (SAA)</i>		
e. Securely closed and stored to prevent rupture/leaking, except when add/remove waste. (SAA)		
f. Labeled with EPA Id. No.		
g. For SAA only, Stored "at the point of generation" and meets quantity limits.		
Reactive/ignitable wastes stored at least fifty (50) feet from property.		
4 Liquid wastes within secondary containment.		
5 Incompatible wastes separated by a dike, wall, berm or other device.		
6 Stored for less than 90 days. (CERCLA projects may have storage variance). <sup>3</sup>		
7 Container tracking log accurately reflects containers stored. (SAA)		
8 Area maintained in an orderly fashion and complies with state/EHS plan requirements. (SAA)		
<b>Hazardous Waste Tank Storage Area (Daily inspection is being conducted and maintained on-site)</b>		
<b>Waste/Stockpiles - State Regulated Non-Hazardous Wastes (Refer to PESM Checklists, if applicable)</b>		
<b>TSCA PCB Wastes – must be inspected at least every 30 days (GMP - weekly) (Refer to PESM TSCA Checklist for inspection items)</b>		

<sup>1</sup> For sites with multiple storage areas or Satellite Accumulation Areas (SAAs), indicate location where deficiencies are noted.

<sup>2</sup> For SAAs, evaluate only rows marked with (SAA).

<sup>3</sup> If stored on-site 75 or more days, TSDF/transporter has been selected (EHS 1-4), pick-up date scheduled and PM/PESM are aware of 90-day limit.

Fort McClellan  
Final Site-Specific Work Plan  
Eastern Bypass OE Removal

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
<b>Point Source Discharges/ Air Emissions</b>		
1 Permit conditions are being met.		
2 Monitoring equipment is fully operational.		
3 Equipment calibrations and maintenance is up-to-date.		
4 Discharge sampling performed at required intervals.		
5 Review monitoring results ( <i>Report permit exceedences per EHS 1-7</i> )		
6 DMR and Plant Logs properly completed, signed, and submitted (if required).		
7 Fugitive Dust – Appropriate BMPs are instituted for fugitive dust emissions.		
<b>Stormwater Discharge Activities</b>		
1 SWPPP /Soil Plan reflects current activities.		
2 Monitoring/sampling performed at required intervals.		
3 Review monitoring results ( <i>Report permit exceedences per EHS 1-7</i> )		
4 BMPs in SWPPP/Soil Plan implemented.		
5 Visual observations indicate stormwater meets water quality criteria.		
6 Inspections conducted as required and documented. Corrective actions are implemented and documented.		
<b>Other Conditions or Work Practices</b>		
1		
2		
3		
4		

- End of Checklist-

*Monthly Inspections must be sent to PESM and Project Manager.*

Fort McClellan  
Final Site-Specific Work Plan  
Eastern Bypass OE Removal

*Review previous week's/month's Action Item Report. Carry forward action items that have not been implemented. Note outstanding action items with an (F) in the "Action Item" column on this report. Note an (F) in the "Date Completed" column on previous week's/month's Action Item Report.*

**Project:**

**Area of Inspection:**

**Inspection Type:**     Weekly     Monthly

**Date of Inspection:**

ACTION ITEM	RESPONSIBLE PARTY	SCHEDULE	DATE COMPLETED
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			

Reviewed by: \_\_\_\_\_  
Site Superintendent/ Site Manager

\_\_\_\_\_ Date

*cc: Project Manager (monthly only)  
PESM (monthly only)*





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## **APPENDIX E**

### Key Personnel Resumes

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Arthur B. Holcomb, CIH, PE  
Senior Program Manager

#### EXPERIENCE SUMMARY

Nineteen years of progressively responsible experience in project management, remediation, remedial design investigation, industrial hygiene, and environmental engineering related to hazardous and toxic waste and other environmental programs. A Certified Industrial Hygienist, as well as a registered professional engineer. Experienced in managing indefinite delivery task order contracts, both fixed price and cost reimbursable, according to the requirements of the FAR and DFARS. Successfully developed and managed complex and controversial projects in government and industry requiring community and regulatory interaction. Served at the senior project manager level for nearly 10 years.

#### REGISTRATIONS/CERTIFICATIONS

National Council of Examiners for Engineering and Surveying - NL, 2/28/99, No. 14124 Dates: 02/28/96  
Professional Engineer, Civil - PA, 9/30/97, No. PE-051873-E Dates: 9/30/96  
Professional Engineer, Civil - RI, 10/26/97, No. 6631 Dates: 10/26/96  
Professional Engineer, Civil - ME, 12/31/99, No. 8530 Dates: 11/06/96  
Professional Engineer, Civil - AL, 4/30/00, No. 21126 Dates: 05/10/96  
Professional Engineer, Civil - TX, 5/10/97, No. 51424 Dates: 4/19/96  
Cert. Industrial Hygienist, National - NT, 6/30/91, No. 4663 Dates: 06/18/90

#### TRAINING

40-Hour OSHA Hazardous Waste Health and Safety Training - 1989  
8-Hour OSHA Hazardous Waste Health and Safety Supervisor Training - 1990  
8-Hour OSHA Hazardous Waste Health and Safety Refresher Course - Current  
First Aid Training- 1993  
Cross Training - 1990

#### EDUCATION

MSPH / Industrial Hygiene / University of Alabama in Birmingham / 1983  
BS / Civil Engineering / University of Texas / 1976

#### REPRESENTATIVE PROJECT EXPERIENCE

**Foster Wheeler Environmental Corporation; Langhorne, PA; Project Manager; 09/90-Present** - Served as Project Manager on numerous HTRW and environmental projects. Only a few samples of those projects are listed below. Thoroughly familiar with the Defense Environmental Restoration Program, and has experience in federal facility compliance with environmental requirements including RCRA, CERCLA, TSCA, SWDA, and applicable federal and state requirements. This experience has been gained through assignments within the government and in the private sector.

**U.S. Navy; Northern Division Remedial Action Contract (RAC), Philadelphia, PA; Program Manager/Manager of Projects; 1995-Present** - Responsible for a 5 year, \$125 million cost plus award fee (CPAF) program, providing remedial actions at environmentally contaminated sites predominately located at Department of Navy and Marine Corps installations and other government facilities. Sites are generally located in the Northeastern United States. For the 26

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FOSTER WHEELER ENVIRONMENTAL CORPORATION

**Arthur B. Holcomb, CIH, PE**  
**Senior Program Manager**

tasks orders awarded to date services include lead paint abatement for historical sites; landfill closure activities; design and build landfill caps; UST closures; Bank stabilization; closure of hydraulic lift pits; O&M of treatment plants and landfill caps; debris removal; sampling and analysis of marine environments; restoration of aircraft crash site; various soil removals; and UST installation. Responsibilities as Program Manager include administering and managing all contract delivery orders for remedial action, construction, and services. Duties include overseeing and controlling project progress including costs and quality control, assuring the project is consistent with contract requirements, and ensuring that governmental regulations are enforced. In addition, as Task Order Manager for CTO 17, is responsible for the day-to-day operations at these sites as well as the financial success of this individual CTO. Concurrently responsible for a five-year, \$250 million cost plus award fee (CPAF) program, providing remedial actions at environmentally contaminated sites predominately located at Department of Navy and Marine Corps installations and other government agencies. Sites are generally located in the northeastern United States but have included NASA sites in Virginia and Mississippi. Of the 71 Delivery Orders awarded to date, services have included performing remedial actions; performing landfill closures and hazardous waste facility closures; performing Wetlands Restoration; performing removal actions; performing expedited and emergency response actions at sites; performing pilot and treatability studies; developing work plans; providing facility or system operation, maintenance, repair, and instruction; and performing all related activities associated with returning sites to safe and acceptable levels. Tasks include excavation/tank removal, fuel pump installation and O&M, bank stabilization, and drydock remediation at the Navy Shipyard (D.O. #2); excavation and removal of PCB-contaminated soils (D.O.#4,7,16,32,66,70); installation/operation/closure of groundwater treatment systems (D.O.#5,9,10,11); removal/demolition/disposal of above and underground storage tanks and structures (D.O. #6,13,15,23,26,70); building lead paint and asbestos abatement (D.O. #9, 12,15,23,26,32,70); free-product recovery and thermal desorption pilot studies (D.O. #17,20); and landfill tasks (D.O. #19,24,25,28). Some of the larger, multitasked sites include: D.O. #2 at the Navy Ship Yard in Philadelphia, PA (\$6.4 million) to perform removal actions involving PCB sludge, lead, petroleum, ash, LNAPL, asbestos, and USTs; D.O.#13 at Tank Farm #4 and #5 in Newport, RI (\$19 million) for oil, sludge, and pipe/asbestos removal, UST closure and tank repairs, fuel oil and free-products removal; demolition of 23 2.5 million-gallon USTs; Design and construction of a 600,000-gallon fuel oil storage tank and truck off loading station (D.O. 27), converting oil-fired boilers to natural gas (D.O. 23 and 32) and D.O.s #19 (\$3.3 million) and #24 (\$4.6 million) for landfill remediation services at the McCallister Point Landfill, RI and Area A Landfill, New London, CT, respectively, involving VOCs, BNAs, PAHs, PCBs, inorganic compounds, metals, and unmarked drums and tanks. Responsibilities as Program Manager include administering and managing all contract delivery orders for remedial action, construction, and services. Duties include overseeing and controlling project progress including costs and quality control, assuring the project is consistent with contract requirements, and ensuring that governmental regulations are enforced. In addition, as Delivery Order Manager for nine D.O.s, including D.O. 13, is responsible for the day-to-day operations at these sites as well as the financial success of these individual D.O.s.

**U.S. Navy; Remedial Action Contract (RAC), Port Hueneme, CA; Program Manager; 1993-1995** – A nationwide RAC with the U.S. Navy's Construction Battalion Center. The contract, valued at \$25 million, is a cost plus fixed fee (CPFF) Indefinite Delivery Order program for the remediation of hazardous waste sites at Navy and Marine Corps installations where the predominant contaminants are acids, metals, and/or bases. The contract is designed to utilize innovative and proven technologies for the cleanup of contaminated soils and groundwater.

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**Arthur B. Holcomb, CIH, PE**  
**Senior Program Manager**

Other services include performing pilot studies and design and constructability reviews. The tasks to date under this contract have included capping of PCB-contaminated soils, closure of a former electroplating facility, installation and testing of an LNAPL recovery system, delineation and disposal of contaminated soil from a disposal trench, and decontamination and demolition of an industrial wastewater treatment plant. Also served as the Project Manager for a delivery order under this contract for the decontamination and demolition of a former plating shop at the Naval Air Station in Jacksonville, FL.

**Program Manager; 1991-1995** – Concurrently serves as the Program Manager on an indefinite delivery order contract for HTRW services for the Mobile District, U.S. Army Corps of Engineers. This contract is valued at \$10 million and involves 24 individual delivery orders and requires the coordination of over a dozen subcontractors. Additionally, served as Project Manager for five task orders under this contract. Two delivery orders for the preparation of SPCC plans, OPPOMs, and FRPs for defense fuel support points under the direction of the Defense Fuel Supply Center. Coordination with numerous regulatory and public agencies was accomplished. Two Delivery Orders to support the Project Manager for Nuclear Munitions (PMNUC). These task required the development of screening criteria for the disposal of non-nuclear material associated with the PM-NUC program and the preparation of two EAs, one of which was classified. An Environmental Assessment for the demilitarization and elimination of Lance Missiles. This Delivery Order included a test firing of the missiles at Redstone Arsenal and the development of a sampling and analysis program including air and water samples. A separate EA for the test firing was developed.

**Huntsville, AL; Project Manager; 1990-1991** – Responsible for interim remedial design of a fuel-contaminated site at a Defense Fuel Supply Center. This project was completed in full compliance with federal and state requirements.

**Project Manager; 1991-1992** – Responsible for interim remedial design of a fuel-contaminated site at a Defense Fuel Supply Center. This project was completed in full compliance with federal and state requirements. This task order received an overall rating of outstanding and we received a letter of appreciation from the Commanding Officer of the Corps of Engineers' Division for outstanding contributions.

Additionally, from 11/90-01/93, served as the **Regional Health and Safety Manager** for the company's Region II - Assignment required visits to HTRW sites in the region to ensure proper implementation of Health and Safety procedures in compliance with federal, state, local, company, and client requirements. Developed an Ordnance Program Health and Safety Plan, which established corporate policies and procedures for use during ordnance contamination investigations and remediation. Supervised the preparation of numerous health and safety plans and provided final approval of these plans in Region II. Provided technical support and guidance to all projects in the regions that include hazardous waste and ordnance investigation and remediation projects. Also assisted at complex sites outside the southeast region, including the Bridgeport Rental and Oil Services (BROS) NPL Site in New Jersey.

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Arthur B. Holcomb, CIH, PE  
*Senior Program Manager*

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**PRIOR EXPERIENCE**

***Bechtel Construction Company; Oak Ridge, TN; 1989-1990*** – Provided Health and Safety support to multiple Bechtel projects. Developed and implemented health and safety procedures and plans for the Alternative Remedial Contract Strategies (ARCS) IV Program and the Remedial Design for the Montclair, New Jersey NPL site. Developed lesson plans and presented various sections of the 40-hour and 24-hour Hazardous Waste Management Training required by 29 CFR 1910120, Hazardous Waste Management and Emergency Response.

***U.S. Army Corps of Engineers; Huntsville Division, TN; 1977-1989***

***U.S. Army Corps of Engineers; Huntsville Division, Project Manager, 1987-1989*** – Medical Facilities Program and Asbestos Hazard Emergency Response Act Compliance for DoD Section 6 Schools - Planned, initiated, directed, and monitored technical and administrative efforts in support of the medical facilities program. Developed and managed in-house and contract personnel in the preparation of asbestos management plans for 55 Department of Defense schools within the Continental U.S. and Puerto Rico. Additionally, coordinated support of military units to conduct investigation/remedial actions at sites contaminated with hazardous waste and unexploded ordnance.

Served as the senior DoD representative during the on-site detonation of compressed gas cylinders containing ethylene trioxide. This high-visibility project required the daily evacuation of the residents of a small community over a period of two weeks.

**Tierra Santa Project**  
CA  
1986-1989

***Project Engineer*** – Supervised the technical aspects of a feasibility study and an environmental impact statement for an ordnance clearance project at a Formerly Used Defense Site. Due to the proximity of the site to residential areas, this project required great sensitivity to the concerns of the local populace.

***Senior Industrial Hygienist*** – Directed Occupational Health and Industrial Hygiene Programs for in-house personnel. Evaluated OSHA compliance for all environmental remediation programs managed by the Huntsville Division. Duties included review, guidance, and direction for environmental remediation surveys, handling and storage of hazardous and toxic wastes and chemical munitions, personnel protection measures, pollution control measures, and compliance with state and federal regulations. Additionally, developed and managed four contracts for hazardous waste management training for all Corps of Engineer personnel throughout the U.S.

***5th Preventive Medicine Unit; Korea; Officer-in-Charge, 1983-1984*** – Of an environmental engineer detachment and occupational safety and health consultant to the Surgeon, 8th Army and U.S. Forces Korea. Provided Technical/Managerial oversight for implementation of all environmental health programs for the northern portion of South Korea. These included programs for drinking water quality, wastewater treatment, and solid waste disposal. Additionally, directed the implementation of all OSHA compliance and industrial hygiene programs at over 60 military installations throughout South Korea. As consultant to the surgeon,

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 FOSTER WHEELER ENVIRONMENTAL CORPORATION

**Arthur B. Holcomb, CIH, PE**  
**Senior Program Manager**

reviewed plans and specifications to ensure compliance with OSHA regulations and NFPA codes.

**U.S. Army Environmental Hygiene Agency; Industrial Hygiene Division, Aberdeen Proving Grounds, MD; Senior Project Officer; 1977-1981** – Planned, directed and conducted health hazard assessments and industrial hygiene program consultations at DoD installations throughout the continental U.S. Trained, directed, and evaluated junior project officers during conduct of health hazard assessments. Reviewed reports, technical documents, and regulations prepared by other industrial hygienists.

**U.S. Army, Administrative NCO; Various Assignments, 1968-1976** – Served in the U.S. Army on numerous administrative assignments across the country. Was directly commissioned to second lieutenant in the Medical Services Corps as a sanitary engineer.

**PUBLICATIONS**

Rose and Perkins, editors. Holcomb, A.B. and Perkins, J.L. Chapter 4 Case Studies in Industrial Hygiene. Wiley & Sons. 1987.

**LOCATION**

**Company:** Foster Wheeler Environmental Corporation; 9/4/90 - Present

**Years w/Other Firms:** 14

**Present Location:** Langhorne, PA

**Daytime Phone:** 215-702-4016

**SKILL SET**

**DISCIPLINE(S)** (Y = Primary Indicator, N = Secondary Indicator)

Civil Engineers	N
Environmental Engineers	N
Industrial Hygienists	N
Project Managers	Y
Sanitary Engineers	N



**GREG WILLIAMS**  
Remediation Engineer

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**EXPERIENCE SUMMARY**

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Greg Williams is currently employed by Foster Wheeler Environmental Corporation at the Fort McClellan Office and is involved in the Unexploded Ordnance/Ordnance Explosive (UXO/OE) remediation of the facility. Greg fulfills the roles of Project Civil Engineer and is one of several Delivery Order Managers on the project.

Greg is an Australian Chartered Professional Engineer (CPEng) with six years experience who is also trained as an Explosive Ordnance Disposal Technician (UXO Technician). Previous to employment with Foster Wheeler Environmental, Greg was a Civil Engineer/Project Manager at Sinclair Knight Merz in Brisbane, Australia (2 years). He was involved in environmental consulting projects including asbestos auditing and remediation, telecommunication industry consulting which involved working at heights and RF radiation assessment, wastewater and water supply design, UXO remediation and environmental assessments.

Greg underwent Officer Training in the Australian Army Reserve (92 to 94) while completing his Civil Engineering Degree. After working in the civil sector during 1995, he was invited to join the Australian Regular Army as a General Service Officer waiving the requirement to attend Royal Military College. He fulfilled several administrative and technical positions during his three years in the service including being trained as an Explosive Ordnance Technician and Army Work Diver. Greg left the Army during 1998 to pursue opportunities in the civil sector primarily in Unexploded Ordnance Remediation projects.

**EDUCATION**

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B.S. (Bachelor of Science), Civil Engineering, Monash University, Australia, 1995  
M.B.A. (Master of Business Administration), Technology Management, Deakin University, Australia,

**TRAINING**

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40-Hour OSHA Hazardous Waste Health and Safety Training, July 2000  
8-Hour OSHA Hazardous Waste Health and Safety Training Refresher, March 2001  
FWENC PM200 Project Management, October 2000  
FWENC PM300 Project Management, March 2001  
American Red Cross First Aid, August 2000

**FOSTER WHEELER ENVIRONMENTAL CORPORATION EXPERIENCE**

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**Delivery Order Manager/Project Civil Engineer, 7/2000 - Present**  
**U.S. Army Corps of Engineers, The Eastern Bypass OE Removal, Engineering and Support Center, Huntsville, AL**

Dual role of Project Engineer and Delivery Order Manager. Duties include planning, negotiating, implementing, managing and closing out of Delivery Order.

**Delivery Order Manager/Project Civil Engineer, 7/2000 - Present**  
**The Anomaly Avoidance and Construction Support Delivery Order, Fort McClellan, AL**  
Dual role of Project Engineer and Delivery Order Manager. Duties include planning, negotiating, implementing, managing and closing out of Delivery Order.

**PREVIOUS EXPERIENCE**

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**Project Manager, April 2000 - July 2000**

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Page 1 of 3



**GREG WILLIAMS**  
Remediation Engineer

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**Australian Department of Defense, DoD South Queensland Defense Properties Asbestos Audit, Queensland, Australia**

Appointed Project Manager of project to sample, identify by laboratory analysis, and report on Asbestos Containing Materials (ACM) in over 2000 Defense buildings at over forty separate facilities. This was the initial stage of a ten-year project to remove identified asbestos from buildings. Acted as Project Manager from project award to completion and was also Team Leader of sampling teams. Data was consolidated into Remote Data Module using Microsoft Access database and presented to client for inclusion into their existing Property Management System. Project was completed on time and significantly under budget. **Regulatory Issues:** Asbestos Act & Occupational Health and Safety Act - Australia

**Lead Auditor, June 1999 - April 2000**

**Vodafone Australia, Vodafone Workplace Health and Safety Audit, Queensland & Northern Territory, Australia**

Lead auditor for two States assessing compliance with relevant standards relating to Workplace Health and Safety and Radio frequency (RF) Radiation emissions at client's own facilities. Conducted site inspections at over 340 sites including provision of recommendations, initial design and costing of urgent, compliance, retrofit and maintenance works in order for sites to comply with Regulations. The project involved extensive working at heights (up to 50m) and RF Radiation Safety. **Regulatory Issues:** RF Radiation emissions and Workplace Health and Safety Regulations.

**Civil Engineer, September 1998 - June 1999**

**Environmental Consulting Projects, Several Local and Municipal Utilities, South Queensland, Australia**

Civil Engineer involved in general design, report preparation and contract management of several water, wastewater projects and environmental studies including: Northern Territory Airports Master Plans and Environmental Impact Assessments for Darwin and Alice Springs Airports; Ipswich River Flood Study for Ipswich River Improvement Trust; Designer and Project Manager of an Effluent Irrigation scheme at Wivenhoe Dam; Design of bypass system for Stage 3 Clarifier and Reactor Tank at Goodna Sewerage Treatment Plant; Conducted Study into effectiveness of Cormorant Bay Transportation beds including recommendations for redesign; Design of a 12000 EP sewage pumping station including a 750 m3 overflow structure and control building. Contract and Specification preparation for Gravity Main, Rising Main, Water Main and Pump Station; Minor specification preparation and contract administration for Water Supply Project, Kokopo, Papua New Guinea; Project Scheduling for Kogan Creek Power Station Environmental Impact Assessment Study.

**Civil Engineer qualified Army Officer / Lieutenant, December 1995 - September 1998**

**Australian Regular Army, Sydney, New South Wales, Brisbane, and Queensland Australia**

Explosive Ordnance Disposal Officer: EOD trained and responsible for provision of advice to superiors, supervision of area clearance operations and control of ordnance disposal cell whilst on operations. Management and planning for utilization of plant equipment (EMM). Provision of engineering advice to non-qualified personnel. Design and construction of expedient bridging including design, project management, fabrication and construction supervision of 80 foot steel bridge. Project Management of unit operations. Logistics and administration including manning, supervision of acquisitions and forecasts, resource allocation, resolution of personnel issues and problems. Provision of administrative direction to subordinates. Implementation of an Arc View based Geographical Information System. Unit Diving Officer trained as Army Work Diver responsible for training of unit



**GREG WILLIAMS**  
Remediation Engineer

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divers, maintenance and control of equipment and administration of unit diving store. Also undertook training as Demolitions Supervisor and Mine Warfare Instructor.

**PROFESSIONAL AFFILIATIONS**

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Institution of Engineers Australia (IEAust), Civil, Chartered Professional Engineer, 1999

**DISCIPLINE CODES**

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Civil Engineers: 004, Primary  
Hazardous Waste Specialist: 183, Secondary

**SKILL SET**

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**Other**  
Unexploded Ordnance Remediation

**TECHNICAL EXPERTISE**

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Unexploded Ordnance Remediation Projects  
Working at Heights and RF Radiation Safety Auditing  
Water and Wastewater Design  
Commercial / Work Diving Task Management

**LANGUAGE SKILLS**

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English *Knowledge Level: Primary*

**PROFESSIONAL REFERENCES**

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Ms. Lesley Morris, Operations Centre Manager REED, Sinclair Knight Merz, +617-3244-7100  
Mr. Grahame Crane, Director, Explosives & Ammunition Technologies Pty. Ltd., +617-5494-9724  
Rainer Frisch, Colonel (ret'd), Australian Regular Army, +617-5545-0810

**RELATED COMPANY INFORMATION**

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*Office Location:* Fort McClellan  
*FWENC Hire Date:* 7/11/00  
*Years with Other Firms:* 6  
*Daytime Telephone:* 256-820-7904  
*E-mail Address:* gwilliams@fwenc.com



**MARK D. FLETCHER, REM**  
Supervising Health and Safety Scientist

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#### **EXPERIENCE SUMMARY**

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Eighteen years experience in multidisciplinary assessments and remediation projects. Prepared planning documents, Health and Safety Programs and final reports for both Federal and State clients.

Management and field experience include the following:

- Unexploded Ordnance, Explosives and Recovered Chemical Warfare Materiel (RCWM) procedures, remediation and emergency response;
  - Developed and implemented Risk Management Systems;
  - Regulatory Compliance and Consulting pertaining to OSHA, EPA, RCRA, TSCA, CERCLA/SARA, NFPA, DOT, and Army Regulations;
  - Hazardous Waste site evaluation, assessments and management;
  - On-Scene Incident Commander for hazardous material and RCWM;
  - Conducted Emergency Response audits and exercises;
  - Written Explosive and Chemical Site Safety Submissions for USATCES and DDESB;
- Analyzing budget proposals, cost analysis, labor distribution, organizational efficiency and evaluating/writing proposals for new business/RFP's.

#### **EDUCATION**

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M.S. (Master of Science), Occupational Health and Safety Engineering, Columbia Southern University, , 1997

M.B.A. (Master of Business Administration), Business Administration, Embry Riddle Aeronautical University, , 1989

B.S. (Bachelor of Science), , University of State of New York, , 1986

#### **REGISTRATIONS/CERTIFICATIONS**

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**Associate Safety Professional (ASP)**

, #A11128, Date of Issue: 2001, Date of Expiration:

**Registered Environmental Manager, REM**

, #, Date of Issue: , Date of Expiration:

**Certified Environmental Compliance Manager, CECM**

, #, Date of Issue: , Date of Expiration:

#### **TRAINING**

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Explosive Ordnance Disposal School / 1983

Explosive Ordnance Disposal Chemical School / 1983

Emergency Response Team on Scene Incident Commander / 1988

First Aid and Cardiopulmonary Resuscitation Course / Current

Civilian Blasters Course Licensed in VA, WV, PA, and CO. / 1986 and 1999 (CO)

Commercial Driver's License with Hazmat Endorsement / 1989

OSHA Course Number 500, Occupational Safety & Health Standards for the Construction Industry / 1995

OSHA Course Number 501, Voluntary Compliance to Health & Safety / 1995



**MARK D. FLETCHER, REM**  
Supervising Health and Safety Scientist

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Basics of Industrial Hygiene / 1995  
Industrial Toxicology / 1996  
Radiation Safety Officer (TOXLER) Course and Nuclear Emergency Response / 1989  
DOT Compliance Hazardous Materials Storage and Transportation / 1996  
Advanced Safety Concepts / 1996  
Construction Standards (29CFR1926) / 1994  
PM 200, Foster Wheeler Program Manager Course / 1999  
Practical Loss Control Leadership / 1999  
OSHA: Initial 40 Hour (Hazwoper) / 1986  
8-Hour Supervisors / 1986  
8-Hour refresher / current

**FOSTER WHEELER ENVIRONMENTAL CORPORATION EXPERIENCE**

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**Project Environmental and Safety Manager, 04/01 - Present**

**Foster Wheeler Environmental Corporation; Huntsville, Alabama**

Responsible for projects won under the OE Response At Sites In CONUS and OCONUS (DACA87-00-D-0039) with a contract value of 60 million. This contract is with the US Army Engineering and Support Center (CEHNC), Huntsville, Alabama and currently involves projects at Camp Maxey and Ft. Meade. Also responsible for the Ft. McClellan OE/UXO Removal Project (DACA87-99-D-0010) contracted with CEHNC and valued at 50 million. The Ft McClellan project currently has 100 personnel on-site to include Subcontractors.

Duties for each contract include: implementing the health and safety program for all delivery orders; provide health and safety management of remediation activities; developing and peer-reviewing all health and safety plans; providing advise and counsel to Project Managers; incident/accident investigations; managing worker compensation claims; conducting and issuing site audits and tracking responses to closure; and providing site-specific and refresher training for site personnel.

**Project Manager, 06/01 - Present**

Responsible for a 1.3 million Firm Fixed Price and Time and Materials Project to Investigate and Remove Ordnance and Explosives and Chemical Warfare Materiel from a water filled quarry at Redstone Arsenal Huntsville, Alabama. This project is currently in the Safety Submission development, comment/response and approval process.

**Safety Engineer, 01/99 - Present S**

**Rocky Mountain Arsenal, Denver, CO**

Unexploded Ordnance (UXO), Ordnance/Explosives (OE) and Recovered Chemical Weapons Materiel (RCWM) Emergency Response procedures, implementation and field operations. Developed standard operating procedures for UXO/OE transportation, storage and disposal. Safety Engineer responsible for UXO/OE and RCWM remediation. Quality Assurance/Quality Control Representative for remediation of UXO/OE/RCWM and Environmental Compliance for waste stream segregation and disposal. Supervise field operations involving Real Time Monitoring (minicams) and integrated monitoring (DAAMS, CAMS 2, Bubblers and Saw Minicad). Design and implementation of remediation projects at UXO/OE/RCWM sites. All Procedures, Plans and Field Operations conducted and written in accordance with applicable Army, DOT, State and Federal Regulations.

**PREVIOUS EXPERIENCE**

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**MARK D. FLETCHER, REM**  
Supervising Health and Safety Scientist

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**Site Supervisor/Safety Engineer, 09/94 - 01/99**

**Research Management Consultants, INC. , Rocky Mountain Arsenal, Denver, CO**

Developed and implemented a Health and Safety Program and Risk Management System for the installation. Established procedures for UXO and RCWM Emergency Response actions and a Chemical Accident or Incident Response and Assistance (CAIRA) Operations Plan. Performed Environmental, Industrial Hygiene and Health and Safety surveys/audits of Contractor and Government facilities and operations. Implemented a Military agent waste management plan.

**UXO Project Manager, 08/91 - 09/94**

**Environmental Hazards Specialists INT. INC., Belvidere, NC**

Supervised operations conducted at Dugway Proving Grounds (Utah), Grayling Air National Guard Impact Range (Michigan) and the Twin Cities Ammunition Plant (Minnesota). Responsibilities included development and implementation of remedial investigations, site Health and Safety plans, industrial hygiene assessments, geophysical surveys for Ordnance, OE/UXO remediation and hazardous waste disposal procedures.

**Instructor, 01/91 - 08/91**

**Mike Baker & Associates, Kennedy Space Center, FL**

Instructed OSHA mandated 40 hours Health and Safety (29CFR1910.120) Course and 8 hour Managers/Supervisors Course to personnel involved in cleanup operations at hazardous waste sites.

**Safety/Systems Engineer, 01/90 - 01/91**

**Alliant Techsystems, INC., Poughbo, WA**

Performed costs analysis, systems engineering, configuration management, acceptance test monitoring, quality assurance, integrated logistic services and coordinated electronic, mechanical and hydraulic diagnostic testing for an Italian R & D Mini-Submarine. This technical evaluation was required to determine inadequacies of the submarine's subsystems in accordance with the US Navy Diving and Hyperbaric Systems Safety Certification Manual.

**Operations Manager, 01/86 - 01/90**

**E G & G, Cape Canaveral Air Force Station, FL**

Supervised testing, planning and operational functions between NAVSEA, Naval Ordnance Test Unit Eastern Test Range, Eastern Space and Missile Center (ESMC), and Operating Forces (SUBLANT, SUBGRU, SIX, NUSC). Prepared master plans for resource allocations, cost estimates and funding profiles for acquisition, development, documentation and life cycle costs related to weapon systems, Ordnance and associated training systems. Daily responsibilities included; safety, and security in accordance with OSHA, Cape Canaveral Air Force Station and US Navy regulations. Supervised the handling and transportation of MK 48 Torpedoes and the disposal of hazardous waste.

**Explosive Ordnance Disposal Technician, 1982 - 1986**

**United States Navy**

Detect, identify, render safe, evaluate and dispose of explosive ordnance (foreign and domestic) as well as nuclear, chemical and biological munitions and agents. Instructed damage control and emergency response personnel radiological monitoring, contamination control and decontamination procedures.

**PUBLICATIONS & PRESENTATIONS**

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**MARK D. FLETCHER, REM**  
Supervising Health and Safety Scientist

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**PROFESSIONAL ACCOMPLISHMENTS**

---

**PROFESSIONAL AFFILIATIONS**

---

**DISCIPLINE CODES**

---

Chemical Engineers: 003, Secondary  
Hazardous Waste Specialist: 183, Secondary  
Safety Engineers: 157, Primary

**SKILL SET**

---

**CHEMICAL SCIENCES**

Air Sampling  
Drum Sampling  
Feasibility Study  
Field QA Audit  
Field Sampling and Analysis Plan  
Preliminary Assessment/Site  
Investigation  
Quality Assurance  
RCRA Compliance Audit  
RCRA Facility  
Investigation/RCRA Facility  
Audit  
Remedial Action  
Remedial Investigation  
Remedial Investigation/Feasibility  
Study  
Resource Conservation Recovery  
Act  
Risk Assessment  
Site Characterization  
Soil/Sediment Sampling  
TANKS Sampling  
Transformer Sampling  
Treatability Study  
Volatile Headspace Analysis  
Waste Characterization



**MARK D. FLETCHER, REM**  
Supervising Health and Safety Scientist

**GEOSCIENCE**  
Geophysics - Borehole  
Geophysics - Electromagnetics  
RCRA / CERCLA  
Sampling - Groundwater  
Sampling - Soil

**HEALTH PHYSICS**  
Decontamination &  
Decommissioning Operations  
Decontamination &  
Decommissioning Planning  
Safety Analysis  
Shielding Design/Analysis

**HEALTH RISK**  
CERCLA  
Environmental Assessments  
Environmental Impact Studies  
Human Health Risk Evaluation  
Human Health Toxicology &  
Dose Response  
RCRA  
Risk Communication  
Risk Policy & Regulatory  
Development  
Risk-Based Corrective Action  
Assessment

Sampling & Analysis Planning  
TSCA

**REGULATORY AFFAIRS**  
Asbestos  
Base Realignment and Closure  
Requirements  
CERCLA  
CERCLA Remedial Investigation  
Compliance Audits  
DERP/ DERA Program  
DOT  
DOT Hazardous Materials  
DOT/Transporter regs.  
Emergency Planning  
Environmental Assessment  
Environmental Audits  
Environmental Compliance  
Audits  
Environmental Policy  
Development  
Environmental Site Assessments  
Facility Response Plans (OPA/QO)  
Federal Facility Compliance Act  
Hazardous & Solid Waste Mgmt  
Hazardous Waste Management  
Installation Restoration Program  
Medical/ Infectious Waste

Mixed Waste  
Multi-Media Environmental  
Audits  
PCBs  
RCRA  
RCRA Corrective Action  
RCRA Facility Investigation  
RCRA Hazardous Waste Mgmt  
RCRA Waste Characterization  
RCRA/CERCLA Interface  
RCRA/Superfund Interface  
Risk Analysis  
Risk Engineering &  
Environmental Site Assessments  
Risk Management Plans/Process  
Safety Disaster Planning  
SARA  
Solid Waste  
Superfund  
Transporter regs.  
TSCA/PCB disposal  
TSCA  
Waste Characterization

**SOCIAL SCIENCE**  
Cultural Resources  
Land Use

**TECHNICAL EXPERTISE**

**LANGUAGE SKILLS**

English *Knowledge Level:* Primary

**PROFESSIONAL REFERENCES**

**RELATED COMPANY INFORMATION**

*Office Location:* Huntsville  
*FWENC Hire Date:* 1/11/1999  
*Years with Other Firms:* 13  
*Daytime Telephone:* 256-430-3622  
*E-mail Address:* mfletcher@FWENC.com



**Timothy M. Deignan**  
*Senior Geoscientist*

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#### **EXPERIENCE SUMMARY**

Mr. Deignan has more than 12 years experience dedicated to engineering and environmental geophysics, with a special emphasis on UXO. Experience includes the design and management of integrated geophysical programs that have utilized electromagnetic, magnetic, resistivity, gravity, seismic, and borehole geophysical methods to investigate and assess ordnance and explosives (OE), geotechnical, geologic, hydrogeologic, and cultural resource features. Utilized these methodologies as part of engineering and cultural resource management programs in the United States and abroad. Specialized in the design and management of high-resolution integrated geophysical programs for OE investigations.

For the past 6 years, Mr. Deignan has been the technical manager for the Foster Wheeler Environmental UXO/ geophysics contingent, and has extensive experience with commercial and internal scientific software routines applied to the modeling, reduction, analysis, and interpretation of geophysical data for UXO projects. He has designed and continuously develops Foster Wheeler Environment's internal processing and interpretation software, mechanical platforms to integrate specific geophysical instruments and differential global positioning system technology, and multiple sensor systems for UXO applications.

Mr. Deignan has been the driving force behind substantial improvements in both effectiveness of UXO removal and in cost reduction made by Foster Wheeler Environmental, including advances in the use of computer-aided systems to collect data and present images of the area to be cleared. These systems can be used effectively to "filter out" the signals from small pieces of metal that obscure the unexploded ordnance items, allowing the UXO specialist to dig more targets that are potential UXO. Mr. Deignan is an expert in state-of-the-art passive and active sensor systems (and other geophysical sensors where radiation or signatures from nonmetallic objects are expected) coupled with internally developed processing, analysis, and visualization software to locate and identify metallic items that may be unexploded ordnance. The software produces target characteristics such as size or mass, depth, x-y location, and color coded images for special analysis.

Mr. Deignan also possesses expertise and experience in the use of the USRADS positioning system – which has been a key factor in the success of several of our UXO remediation sites. USRADS is a positioning and data acquisition system that automates the measurement and mapping of data collected for site investigations. It is especially useful in areas of obstructions, such as heavily wooded areas where current GPS technology cannot accurately locate the geophysical sensor. Utilization of USRADS in difficult survey areas ensures that position accuracy is maintained so that smaller sizes of UXO can be reliably located.

#### **PROFESSIONAL AFFILIATIONS**

Archaeological Institute of America  
Denver Engineering and Mining Geophysical Society  
Engineering and Environmental Geophysical Society (Founding Member)  
Minerals and Geotechnical Logging Society  
Near Surface Geophysical Society (Society of Exploration Geophysicists)

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**Timothy M. Deignan**  
*Senior Geoscientist*

#### TRAINING

40-Hour OSHA Hazardous Waste Health and Safety Training - 1988  
8-Hour OSHA Hazardous Waste Health and Safety Training - Current  
NPS Geophysical Training, Instructor - 1991-1995  
Ground Penetrating Radar - 1990, 1994  
SAGEEP - 1993, Author  
Geotech 1991 and 1992, Geophysical Session Chairman  
SAGEEP - spring 1991, Author and Speaker  
Borehole Geophysics - winter 1990  
SAGEEP - spring 1989  
Clandestine Graves - spring 1989  
SAGEEP - spring 1988

#### EDUCATION

MS / Geophysical Engineering / Colorado School of Mines, IP  
BS / Geophysical Engineering / Colorado School of Mines / 1987

#### REPRESENTATIVE PROJECT EXPERIENCE

Responsibilities have included work as project and technical manager as well as lead project geophysicist for numerous geophysical investigations at Department of Energy (DOE) sites, Department of Defense (DoD) sites, and EPA Superfund sites.

**Naval Air Facility, Adak, AK; Technical Manager** – Conducted geophysical investigation to statistically assess UXO/OEW contamination at site characterized by rough terrain and culturally noisy areas. Evaluated electromagnetic and magnetic results from this site to select optimum methodology and data acquisition parameters for survey. Managed 15+ personnel involved in data acquisition, processing, and analysis of data acquired over 1,400 acres at 1 meter line spacing (21 million data measurements). Acquisition teams used both standard and DGPS location devices for positioning. Developed processing and interpretation software to reduce processing and analysis time, as well as produce more accurate results giving a 96%+ UXO detection rate for dig teams.

**Former Camp Wellfleet, MA; Project Geophysicist** – Co-managed geophysical survey to statistically assess OE contamination. Designed data acquisition program based on testing of instrumentation and analysis of spatial sample density requirements for small and large OE targets (20mm – 1000 # bombs). Several large practice bombs detected by geophysical survey at depths of 10 – 15 ft below the ground surface. Geophysical and sampling data used to define nature and extent of contamination at facility.

**Fort Hancock, NJ; Morgan Depot, NJ; Savanna Depot, GA; Camp Wellfleet, MA; Technical Manager, Project Geophysicist** – Involved in the design and implementation of geophysical surveys that used multiple sensors and positioning technologies for OE characterization. Primary responsibilities include data processing and evaluation of target characteristics, as well as selection of the most optimum data acquisition strategy to meet project goals. Ongoing development of software for data processing and evaluation methodologies, as well as definitive statistical parameters based on the geophysical data for risk-based analysis. Designed data acquisition program based on testing of instrumentation and analysis of spatial sample density

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**Senior Geoscientist**

requirements for small and large OE targets (20mm – 1000 # bombs). Several large practice bombs detected by geophysical survey at depths of 10 – 15 ft below the ground surface

**Rocky Mountain Arsenal, Commerce City, CO; Technical Manager, Project Geophysicist** – Lead project to provide detailed, high resolution, geophysical maps of 3,200 acres on Rocky Mountain Arsenal to permit design of subsurface structures without interference from significant anomalies. High-resolution magnetic data was collected using precision magnetometers and differential GPS. The data was analyzed and stored in a GIS capable of producing detailed maps for use in designing projects.

UXO-related tasks at Rocky Mountain Arsenal included identification of ferrous anomalies at the Arsenal and integration of this information with a site-wide GIS to assess potential UXO impacts on future construction activities, use of an innovative approach that utilizes time domain electromagnetic induction (TDEMI) technology to characterize subsurface anomalies in the precise region the slurry wall was to be constructed, preparation of design drawings and specifications to remove ordnance debris and soil that has failed the TCLP test from 5 burial trenches and 8 munitions testing sites, excavation, transportation to an approved site and detonation or, if deemed unstable, in place explosion of UXO, and screening of excavated soils for potential agent-contamination by headspace sampling.

**U.S. Department of Energy; Idaho National Engineering Laboratory, Airborne Geophysics, Idaho Falls, ID; Technical Manager; 04/90-06/92** – Technical manager for an innovative airborne geophysical survey at the Idaho National Engineering Laboratory. More than 120 line miles of magnetic, electromagnetic (EM), and spectroscopy data were collected at four complexes to locate and characterize buried waste. Responsible for the acquisition, analysis, and interpretation of the data as well as interacting with the client and DOE staff on a daily basis. Based on the success of the airborne geophysical survey, a ground-based geophysical survey was completed in the spring of 1992. As the technical manager for this project, organized the acquisition, analysis, and interpretation of more than 100,000 magnetic and electromagnetic data stations.

**U.S. Department of Energy; Rocky Flats Plant, Rocky Flats Seismic Program, Golden, CO; Lead Project Geophysicist/Technical Manager; 05/90-05/93** – Lead project geophysicist for the DOE Rocky Flats Plant (RFP) geophysical investigation, including 20,000 linear feet of high-resolution seismic data acquisition, analysis, and interpretation. Additionally, was the technical manager for an EM and ground penetrating radar survey to determine vadose zone characteristics in several drainages at the RFP. He was the technical manager and processor for the RFP borehole geophysics and vertical seismic profile program, which utilized an extensive suite of borehole logging and seismic methods to provide information on lithologic, hydrologic, and geologic properties of the subsurface. Analyzed more than 8,000 feet of geophysical logs at the RFP and interpreted the logs in conjunction with hydrogeologists to generate estimates of hydrogeologic properties.

**Raymark Industries Superfund Site; Geophysical Program, Stratford, CT; Technical Manager** – Technical manager for the geophysics program, which plays a vital role in the \$50 million remediation of the Raymark Industries site. A comprehensive geophysical survey is currently being performed with time and frequency domain electromagnetics, ground penetrating radar, and downhole geophysics to provide a wide range of geotechnical, geologic, and hydrogeologic information to engineers and geologists characterizing the site. More than 35

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*Senior Geoscientist*

line miles of high-resolution geophysical data have been collected as of the end of 1995. Responsible for the acquisition, analysis, and interpretation of the data, as well as managing a staff of ten field personnel. Also responsible for interacting with Foster Wheeler engineers and scientists, as well as those of the clients (USEPA, USACE, and CT-DEP).

**PRIOR EXPERIENCE**

**Battelle**  
Denver, CO  
08/87-05/88

*Project Geophysicist* – Project leader conducting magnetic and ground penetrating radar measurements to locate and assess 400 abandoned underground storage tank sites. Implemented ground penetrating radar computer modeling to simulate anticipated subsurface characteristics. Conducted terrain conductivity (electromagnetic) measurements at abandoned landfill sites to delineate landfill boundaries, contaminant plumes, and transportation mechanisms affecting groundwater flow. Also investigated a 4-acre probable drum storage trench with magnetics and ground penetrating radar.

**Contract Geological**  
Denver, CO  
06/87-08/87

*Geoscientist* – Employed on a reverse-circulation drill rig as a well log geoscientist. Characterized mineralogy and subsurface structure from drill cuttings. Additional responsibilities included geologic field mapping, surveying, and microscopy.

**Colorado School of Mines**  
Golden, CO  
05/87-06/87

*Student Geophysicist* – Co-supervisor for an integrated geophysical survey comprised of gravity, magnetic, seismic, and electrical methods. Involved in management of data acquisition, reduction, and interpretation to acquire relevant information on the San Juan Volcanic Series in Colorado. Also responsible for quality control and technical presentation of data.

**PUBLICATIONS**

Deignan, T.D. Interpreting the Results of Geophysical Test Programs to Detect UXO. In Process, (2000), Accepted to be presented at the UXO Demining Forum, May 2000.

Deignan, T.D. Statistical Evaluation of EM61 Responses for Ordnance Surveys. 1999

DeVore, S.L. w/ multiple authors. Remote Sensing/Geophysical Techniques for Cultural Resource Management. 1992-1997.

Deignan, T.D., Geophysical Survey of Fort Douglas Cemetery (Fort Carson, CO Internal Report), 1996.

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Page 5 of 6

**Timothy M. Deignan**  
**Senior Geoscientist**

Deignan, T.D., et. al. Remote Sensing on the South Side of Ferry Street (Washington on the Brazos State Historical Site). 1995.

Deignan, T.D., et. al. High Resolution Airborne and Ground-Based Geophysics Applied to Hazardous Waste Site Investigations. 15th Annual DOE Conference on Low-Level Radioactive Waste Management. 1993.

Carpenter, G. and Deignan, T.D. Large Scale, High Resolution Survey for Burial Pit and Trench Mapping. SAGEEP Proceedings. 1993.

Deignan, T.D., et. al. Geophysical Investigations at Twelve Mile House, Southwestern Lore. 1992.

Deignan, T.D., et. al. Seismic Source Analysis on a PC, Geotech Proceedings. 1991.

Deignan, T.D. Low and High Frequency Electromagnetics in Landfill Investigations, SAGEEP Proceedings. 1991.

Deignan, T.D. A Cost-Effective Approach for Borehole Data Reduction and Interpretation, Geotech Proceedings. 1989.

**LOCATION**

**Company:** Foster Wheeler Environmental Corporation; 08/16/1988 - Present

**Years w/Other Firms:** 1

**Present Location:** Denver, CO

**Daytime Phone:** 303-980-3587

**SKILL SET**

**GEOSCIENCES**

Borings and Wells - Geotechnical Borings  
Borings and Wells - Soil Classification / Logging  
Dense Non Aqueous Phase Liquids (DNAPL)  
Exploration - Mineralogy  
Exploration - Mining  
Geophysics - Borehole  
Geophysics - Electromagnetics  
Geophysics - Gravity  
Geophysics - Ground Penetrating Radar  
Geophysics - Neutron / Gamma  
Geophysics- Other  
Geophysics - Resistivity  
Geostatistics  
Hydrogeology - Pump Test Performance  
Hydrogeology - Water Quality  
Karst Terrain  
Light Non Aqueous Phase Liquids (LNAPL)

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Page 6 of 6  
**Timothy M. Deignan**  
*Senior Geoscientist*

Marine Geology - Oceanography  
Radioactive Waste / Mixed Waste  
RCRA / CERCLA  
Underground Storage Tanks / Refineries

**DISCIPLINE(S)** (Y = Primary Indicator, N = Secondary Indicator)

Geologists            N  
Geophysicists       Y

**PROFESSIONAL REFERENCES**

Mr. Lynn Helms, US Army Engineering & Support Center, Huntsville  
4820 University Square  
Huntsville, AL 35807-4301  
(256) 895-1887

Mr. Bob Selfridge, US Army Engineering & Support Center, Huntsville  
4820 University Square  
Huntsville, AL 35807-4301  
(256) 895-1887

Mr. Mark Murphy  
Remediation Project Manager  
Naval Facilities Engineering Command, EFANW  
19917 7<sup>th</sup> Ave NE  
Poulsbo, WA 98370  
(360) 396-0070

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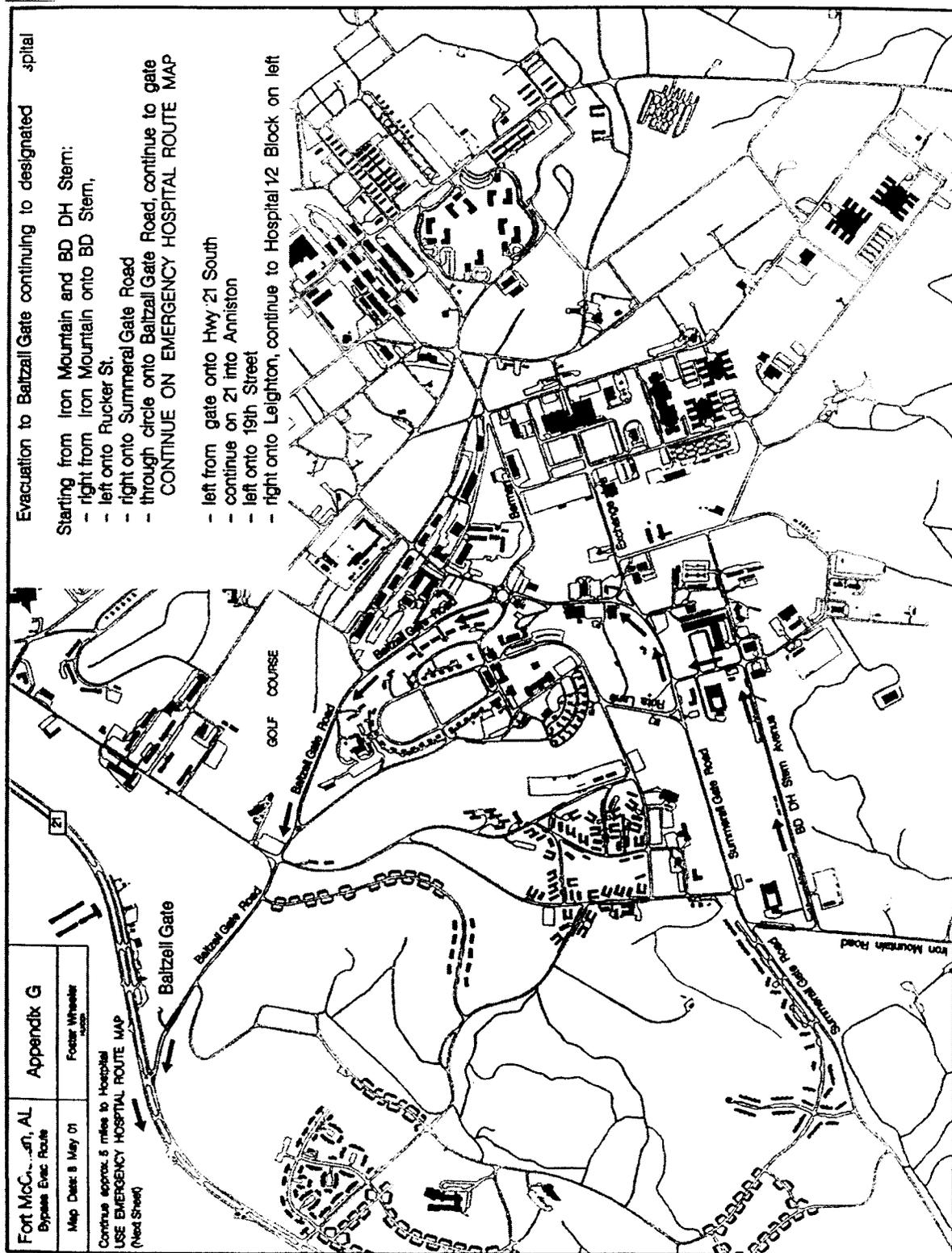


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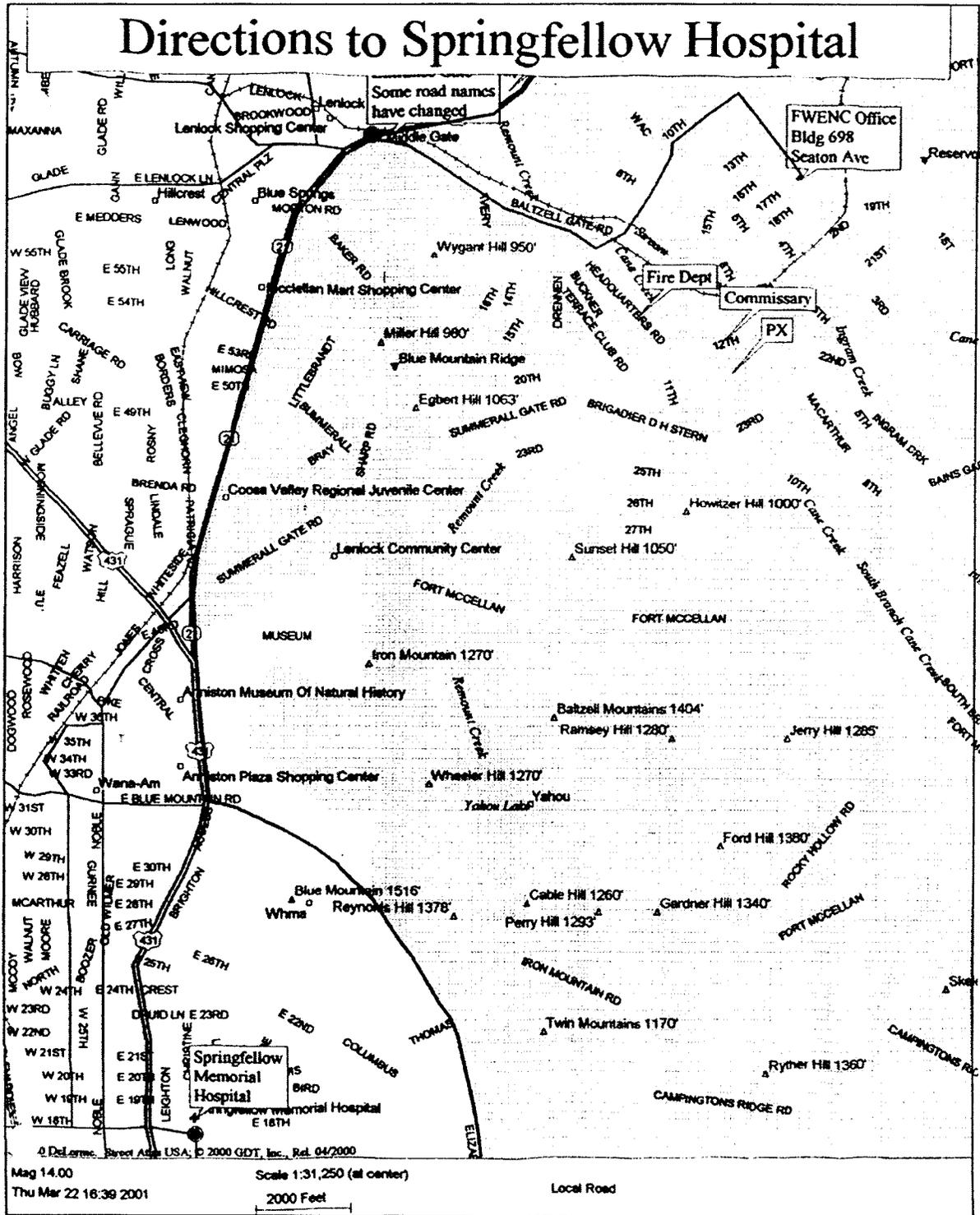
## **APPENDIX F**

### Emergency Hospital Route

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Name: Bill Shanks Date: 12 March 2003		Comment Response Matrix for Draft-Final Amendment 1 to the SSWP for OE Removal Action for the Eastern Bypass, Revision 3		
Who	Page	Line	Response to Comment	
BRS			Concur. Table of contents has been changed to reflect the new figures.	
BRS	8.4	<p>It appears that a change should be made to the List of Figures in the Table of Contents for Revision 3 of the SSWP.</p> <p>Rationale: Figures 2.5 and 4.2 have been added by Amendment 1, but there does not appear to be any reference to them in the Table of Contents.</p> <p>It appears that Figure 8.1 should be changed to add the "Y" Area requirements.</p> <p>Rationale: The figure does not show the "Y" Area requirements which are being carried as part of the Eastern Bypass OE Removal.</p>	Concur. A new schedule has been developed which is for the Y Area.	
BRS	3	27	<p>Provide Figure 2.5 as part of the document.</p> <p>Rationale: Figure 2.5 referenced on this line is not provided as part of the document.</p>	Concur. Will add figure 2.5 and 4.2 to this document.
BRS	3	30	<p>Change "subtask" to "subtasks".</p> <p>Rationale: The plural form of the word is needed for the sentence to be grammatically correct.</p>	Concur. Changed "subtask" to "subtasks".
BRS	5	18	<p>Provide Figure 4.2 as part of the document.</p> <p>Rationale: Figure 4.2 referenced on this line is not provided as part of the document.</p>	Concur. Will add figure 2.5 and 4.2 to this document.
BRS	7	21-25	<p>Verify that the procedure outlined in lines 21-25 will be followed for areas where mechanical removal may be performed in the "Y" Area.</p> <p>Rationale: From the information on these lines, it appears that a different sampling method will be used on mechanical removal areas in the "Y" Area than what is used on mechanical removal areas in the remainder of the Eastern Bypass OE Removal.</p>	The sampling method remains the same. It is the failure criteria which has changed and will be different for the Y area than it was for the EBP. This is due to a change in the geophysical DID requirement from USACE.
BRS	7	27	<p>Change the paragraph number on this line to the correct number.</p> <p>Rationale: Paragraph 11.6.3 is used, however there is already a paragraph 11.6.3 and the information provided appears to fit as additional information in paragraph 11.6.2.</p>	Concur. Paragraph numbering has been corrected.



# FOSTER WHEELER ENVIRONMENTAL CORPORATION

March 26, 2003  
FWHN-FTMC-03-0075

Ms. Lydia Tadesse  
Contracting Officer  
US Army Engineering and Support Center, Huntsville  
P.O. Box 1600  
Huntsville, AL 35807

Subject: Final Amendment 1 to Revision 3, Site Specific Work Plan, Task Order 0010,  
Ordnance and Explosive Response at Fort McClellan, Alabama, Contract Number  
DACA87-99-D-0010

Dear Ms. Tadesse:

Foster Wheeler Environmental is pleased to submit the Amendment 1 to Revision 3, Site Specific Work Plan. Our responses to comments have previously been reviewed and approved by your office and the Fort McClellan Transition Force. The changes have been incorporated into the document. Copies are being provided in accordance with the attached distribution list.

We request that once this document is reviewed and approved, that a Notice to Proceed be granted for work to begin activities on Task Order 0019, OE Removal, Eastern Bypass "Y" Area Junction.

If you have any questions concerning this submission, please contact me or Todd Biggs, Task Order Manager at (256) 820-7904.

Sincerely,

for

Arthur B. Holcomb, P.E.  
Project Manager

Enclosures, as stated

CF: See Distribution List



## DISTRIBUTION

### ADDRESSEE

### Submittals

Commander  
US Army Engineering and Support Center, Huntsville  
ATTN: CEHNC-OE-DC (Mr. Dan Copeland)  
4820 University Square  
Huntsville, Alabama 35816-1822

6

Commander  
US Army Engineering and Support Center, Huntsville  
ATTN: CEHNC-CT-E (Ms. Evelyn Kelly)  
4820 University Square  
Huntsville, Alabama 35816-1822

1

Transition Force  
US Army Garrison  
ATTN: ATZN-ENV, Lisa Kingsbury  
291 Jimmy Parks Blvd.  
Fort McClellan, AL 36205-500

14\*

**Total copies** 21

\*Includes 9 copies to Lisa Kingsbury for distribution and 5 copies delivered to Paul James for ADEM, Hampton Field Office, URS, and USATCES.



# **Final Amendment 1 to Site-Specific Work Plan**

## **Ordnance and Explosives (OE) Removal Action Eastern Bypass Revision 3**

Fort McClellan, Alabama

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



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

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

Prepared by  
Foster Wheeler Environmental Corporation  
Ft. McClellan, Alabama

March 2003

The following Amendment 1 to the Easter Bypass Site Specific Work Plan Revision 3 is for the addition of the Eastern Bypass Y area. This amendment covers only those paragraphs that have additional requirements or that are added to the original document.

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1.1.8 Amendment 1 to this document adds an additional 60 acres designated as the EBP "Y" Area Junction. This area is contiguous to the northern boundary of OE Area 2 and the northeastern boundary of OE Area 1. This removal conforms to the scope of the original removal. It may include up to 2.5 acres of mechanical removal with the rest being conventional clearance to depth using geophysical investigation to select anomalies.

## 2.2 Technical Scope

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

- a. **Task 1** - Preparation of Site Specific Work Plan and Conventional Explosives Safety Submission
- b. **Task 2** - Location Surveys, Site Preparation and Mapping;
- c. **Task 3** - Geophysical Mapping and Preparation of Dig Sheets;
- d. **Task 4** - Unexploded Ordnance Removal, Turn In of Inert Ordnance and Metallic Debris, and Perform Quality Control; and
- e. **Task 5** - Prepare and Submit Site Specific Removal Report.
- f. **Task 6** – Modification to Workplan to accommodate additional 40 acres to right-of-way
- g. **Task 7** – Location Surveys and Mapping – Boundary and Grid Setout;
- h. **Task 8** – Brush Clearance – removal of brush and trees up to 6 inches within additional 40 acres;
- i. **Task 9** – Perform UXO Clearance and Range Residue Management on additional 40 acres;
- j. **Task 10** – Perform Quality Control on Additional 40 acres;
- k. **Task 11** – Removal Report;
- l. **Task 12** – Prepare Work Plan and Conventional Explosive Safety Submission Changes;
- m. **Task 13** - Perform Location Surveys at the Specified Target Area and Adjoining Areas Designated for Mechanical Removal;
- n. **Task 14** – Prepared Final Amendment to Explosive Safety Submittal
- o. **Task 15** - Vegetation Removal and Disposal;
- p. **Task 16** - Perform Mechanical Excavation and Separation of UXO/OE like items for Clearance at the Specified Target Zone and Adjoining High OE Density Areas;
- q. **Task 17** - Perform Demolition, Demilitarization, AEDA/Range Residue Management and Disposal of all UXO/OE like Items from the Specified Target Zone and Adjoining High OE Density Areas;
- r. **Task 18** – Perform Quality Control at the Specified Target Zone and Adjoining High OE Density Areas
- s. **Task 19** – Removal Report;
- t. **Task 20** - Equipment Repair Due to Explosive Damage and/or UXO Clearance Work, In Support of Task 16 Work.
- u. **Task Order 0019** – Additional 60 acres. See paragraph 2.3.19 for details.

2.3.12.3.2 Operation of Excavation, Loading and Hauling Machinery. Foster Wheeler Environmental will provide personnel familiar with and qualified to operate the specific machinery. The machines will operate as follows:

- An armored Excavator will systematically excavate soil within the designated areas and load into the armored dump trucks.
- The armored dump trucks shall transport the soil from the excavation area to the processing area. An appropriate amount of freeboard shall be observed in the trays of the dump trucks to ensure contaminated soil does not fall off during transport to the processing area.
- An armored, wheeled front-end loader shall be used to maintain the soil piles and load the mechanical processing equipment. The armored, wheeled front-end loader shall also maintain scrap piles and load the metal shredder as required during Task 17.

2.3.12.3.3 Operation of Sifting Equipment and Metal Separating Magnets. Equipment shall be supplied and operated to sift the raw contaminated soil into multiple process streams. **Figure 2.2** is included to show the approximate location and lay out of the Mechanical Processing Area. To date, no ordnance items have been discovered that could be caused to detonate by the electromagnets. Jamming or clogging of the machinery will be assumed to be UXO related until proven otherwise. In the event a jam occurs, the Control Booth Operator will stop all operations and will direct all equipment operators to remain in their equipment. The Control Booth Operator and one other UXO technician will investigate the jam. The operator will notify the USACE Safety Representative and SUXOS, and together they will determine the best method to safely remove the jam. Minimum personnel will be allowed on site outside of armored equipment during the clearing of jam. For sifting and separation operations the following equipment shall be used:

- A PowerGrid 1200 with approximately three-inch bars above the hopper. The first process stream (PS1) sloughing off these bars shall be approximately three inches or greater and will pass along a raised conveyor that has a metal separating electromagnet incorporated into its top roller. The purpose of the electromagnet is to separate ferrous objects from the soil into an adjacent hopper, which shall be at the end of the conveyor. Depending on the composition of this process stream, the soil (minus all UXO and OE scrap larger than 3.0") will be back filled to the excavation site, after being checked. Alternative actions include recycling this process stream back through the PowerGrid 1200. This decision shall be made when the characteristics of this process stream can be clearly ascertained. The soil passing through the three-inch bars will proceed by conveyor to the loading hopper of the Trommel 830. For the Eastern Bypass "Y" Area Junction different brand names of mechanical sifting equipment may be used in place of the name brand equipment mentioned above. This new equipment will work in similar ways with the outcome being the same. The new equipment will separate the metal spoils from the soil.
- A Trommel 830 shall be provided and operated to separate the incoming process stream of three inches or less into two process streams (PS2 and PS3). The process

stream (PS2) of approximately 1" to 3" shall pass out the end of the Trommel 830 onto a raised conveyor. An electromagnet is incorporated into the PS2 conveyor to separate ferrous and non-ferrous materials. Once characteristics are known, as indicated in the previous paragraph, PS2 shall be dealt with further. The other process stream (PS3) shall consist of material less than 1" and will again pass through a raised conveyor incorporating an electromagnet. PS3 will be appropriately handled once actual characteristics are apparent. For the Eastern Bypass "Y" Area Junction different brand names of mechanical sifting equipment may be used in place of the name brand equipment mentioned above. This new equipment will work in similar ways with the outcome being the same. The new equipment will separate the metal spoils from the soil.

2.3.18            **Grid Sizes and Layout**

2.3.18.1            The grid size that will be utilized on this Task Order is 100' X 100' plan view.

2.3.19            **Additional 60 Acres (Task Order 19)** – Additional 60 acres designated as EBP "Y" Area Junction. This area is contiguous to the northern boundary of OE Area 2 and the northeastern boundary of OE Area 1 (See Figure 2.5). All work will be completed under existing work plan methodologies with the exception of Task 3, which adds a geophysical prove out before collecting geophysical data under this Task Order. Specific subtasks are described below.

2.3.19.1            **Task 1:** Not used

2.3.19.2            **Task 2:** Not used

2.3.19.3            **Task 3:** Geophysical Prove Out. A geophysical prove out will be completed and a report written in accordance with DID OE-005-05A.01 This prove out will occur at FWENC's existing geophysical test grid and will occur prior to starting actual collection of geophysical data under this task.

2.3.19.4            **Task 4:** Prepare Revision to this work plan.

2.3.19.5            **Task 5:** Perform Location Surveys and Mapping. This task is similar in scope to Task 2, paragraph 2.3.3 and will include boundary delineation and grid layout. Because of the need for mechanical removal a topographic survey of the mechanical removal area will also be needed, and will be conducted similar to paragraph 2.3.9.2.

2.3.19.6            **Task 6:** Establish and Management of GIS. For the purpose of Task Order 19, the GIS Model will be converted to Arcview format. This change in format only effects the additional 60 acres under this task order.

2.3.19.7            **Task 7:** Perform Surface Clearance, Brush Clearing and Vegetation Removal. Surface clearance will be completed prior to brush clearing and vegetation

removal operations. The brush clearance and vegetation removal will be done primarily by mechanical means with manual brush removal used as needed to supplement the mechanical brush clearing.

2.3.19.8      **Task 8:** Geophysical Investigation and Evaluation. Similar in scope to this portion of Task 3, paragraph 2.3.4

2.3.19.9      **Task 9:** Anomaly Reacquisition and Marking. Similar in scope to this portion of Task 4, paragraph 2.3.5.2.

2.3.19.10     **Task 10:** Perform UXO/OE Clearance. Similar in scope to this portion of Task 4, paragraph 2.3.5.3. The exception to this is the criteria for accepting grids that have been completed. The criteria for accepting grids is: "No ferrous objects with a width (intermediate principle dimension) between a 37mm projectile and a 81mm mortar at a depth of less than 11 diameters of the object." The Mechanical removal portion of this area will be completed similarly to paragraph 2.3.12.3.

2.3.19.11     **Task 11:** Inspection and Final Disposition of AEDA/Range Residue. Similar in scope to this portion of task 4, paragraph 2.3.5.6 except the scrap will be turned over to the approved FWENC scrap holding area for disposition under a separate task order.

2.3.19.12     **Task 12:** Not used.

2.3.19.13     **Task 13:** Prepare Site-Specific Removal Report. Similar in scope to Task 5, paragraph 2.3.6.

2.3.19.14     **Task 14:** Meetings. FWENC will participate in 3 on-site, on-board technical review meetings.

2.3.19.15     **Task 15:** Provide Support for Government Quality Assurance. This task requires one dedicated UXO Technician II to assist in the government QA process. It also provides for demolition support after the completion of the removal activity for 2 weeks in the event government QA discover a UXO/OE item requiring demolition to be performed.

2.4.2.3      **Task Order Manager.** The Task Order Manager is Mr. Greg Williams (see Appendix E for resume). His responsibilities include: co-ordination with the Foster Wheeler 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 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 PM, and with the USAESCH PM as necessary. For the Mechanical Removal and Eastern Bypass "Y" Area Junction portion of this Task Order, Mr. Todd Biggs is the Task Order Manager and his duties and responsibilities remain the same as stated above for these portions of the Task Order.

4.1.5 For the Eastern Bypass "Y" Area Junction the MPM remains the 37mm Mk II Projectile. The EZ for this area will remain 1181 ft as per the original SSWP. Figure 4.2 shows the EZ for the Eastern Bypass "Y" Area Junction. The EZ for this additional area does not encompass any inhabited buildings and existing gates and barricades will be used to control entry and exit from the area during intrusive operations.

5.3.2.4 It may prove advantageous to utilize Robotic Total Stations or Constellation Systems for positional data due to the increased efficiency and accuracy of the setup procedure when compared to USRADS. The instrument will be set up on a known point and will track a reflective prism situated directly above the central axis of the EM-61 coil. The use of this system will be based upon the results from the test phase of the geophysical program.

### **5.3.3 Personnel**

5.3.3.1 The geophysical staff will consist of (1) QC Geophysicist, (1) Interpretation Geophysicist and (1) Site Geophysicist. Three geophysical survey crews will be used to acquire data. Each acquisition team will consist of one UXO Technician III and two UXO Technician II.

5.3.3.2 The Site Geophysicist will work with the Mapping Teams to ensure the production rates are met and the data quality, especially during field data acquisition activities, is adequate to meet the program objectives. The QC Geophysicist will be responsible for the overall quality of the geophysical program, and will provide guidance to the Interpretation and Site Geophysicist in the processing and interpretation of the data. All Geophysicists involved will process and interpret the geophysical data as well as provide field QC oversight for the data acquisition and specific intrusive investigation processes, including target reacquisition and comparison of excavation results with the interpreted geophysical characteristics.

5.3.3.3 The Mapping Teams will be responsible for collecting data and providing this data to the Site GIS Manager and Site Geophysicist on a daily basis. All geophysical data will be supplied to the data manager or Site Geophysicist after the conclusion of each day's data acquisition activities. The Site Geophysicist is responsible for the field component of the geophysical investigation including planning data acquisition, ensuring data quality, resolution of instrumentation problems, and assisting with the review of intrusive investigation data. The Interpretation Geophysicist is responsible for data

processing, transfer of the raw and positionally corrected data to USAESCH geophysical representative on a weekly basis and technical review of geophysical and intrusive investigation data. The Site and Interpretation Geophysicists both report to the QC Geophysicist.

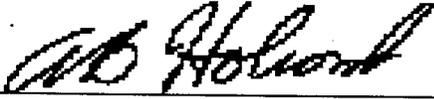
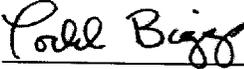
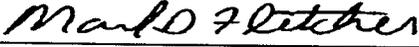
## 5.8 Anomaly Reacquisition

5.8.1 It is anticipated that Vulcan System will be the primary method used to provide navigation assistance to relocate the x-y grid coordinates of interpreted targets. Anomaly co-ordinates will be provided to the Reacquisition Teams who will place numbered surveyor's pin flags at the anomaly location. Where it is appropriate, other methods such as USRADS, Robotic Total Station, Constellation, measuring tape or other surveying methods may be used.

## 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 Eastern Bypass 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 B. Holcomb, PE, CIH Project Manager	1/8/03 _____ Date
 _____ Todd Biggs, Task Order Manager	1/8/03 _____ Date
 _____ Mark Fletcher Project Environmental and Safety Manager	1/8/03 _____ Date
 _____ Nathaniel Martin UXO Safety Officer	1/8/03 _____ Date

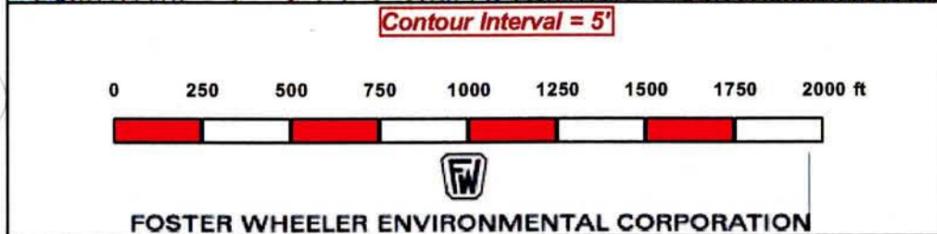
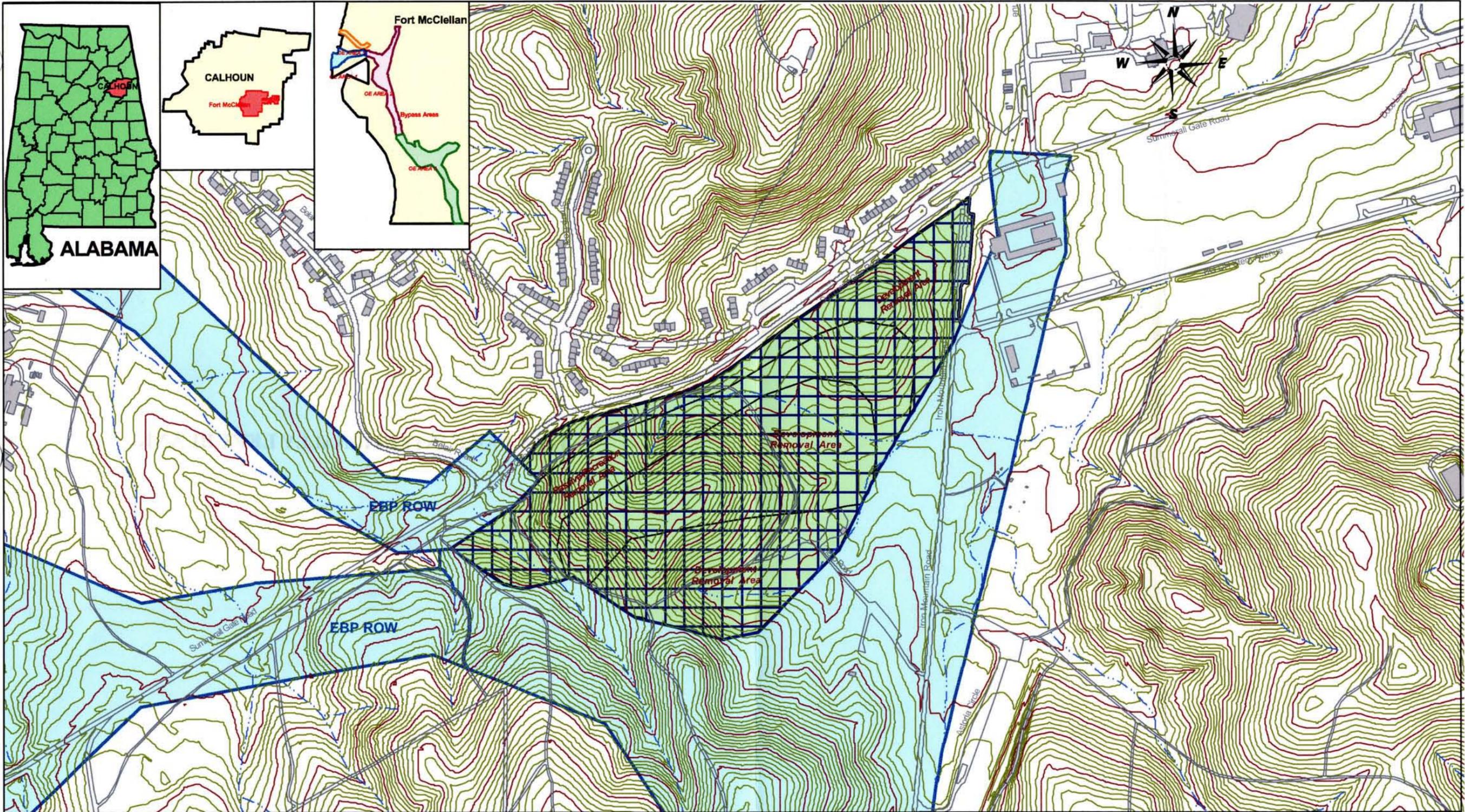
## 11.6 Geophysical Acceptance Inspection

11.6.1 After work is complete, an acceptance inspection will be conducted using a sampling plan. The sampling plans/procedures that may be used are MIL-STD 1916 or other client directed plans, such as a minimum 10% check. For the 40.7-acre extension, the sampling plan selected is the minimum 10% check with a handheld instrument

(Vallon VMX2 or equivalent). For the Armored Mechanical Ordnance Removal there will be an initial 100% geophysical mapping of the defined clearance area. Periodic geophysical mapping or handheld magnetometer checks will be conducted as a QC inspection to ensure enough soil has been removed and the contaminated area has been cleared. Upon completion, a final 100% geophysical mapping will be conducted prior to turnover. The site geophysicist will analyze the data to determine if anomalies are present and their location. If no additional anomalies are located the QC Specialist will present the grid to the USAESCH Safety Specialist who will conduct his QA inspection. Process and product QC inspections will also be conducted throughout the project. Figure 11.2 illustrates the simplified Armored Mechanical Ordnance Removal process. When MIL-STD 1916 is selected as the sampling plan, it will be applied using verification level (VL) III, inspection by attributes, inspection by lots, using switching procedures in the standard. The method of conducting the inspection will be to apply the sampling plan to areas completed, collect data in those areas using the same type of equipment as the field teams, process the data, identify anomalies, and excavate the anomalies to determine the nature of the anomaly. For the Eastern Bypass "Y" Area Junction, a random 10% sampling method will be used. This method will involve mapping 10% of each grid in randomly selected lanes in those grids geophysically investigated. In grids, which were manually investigated the geophysical acceptance method will be a standard 10% check with a hand held instrument.

11.6.2 For the Eastern Bypass "Y" Area Junction acceptance criteria is, "No ferrous objects with a width (intermediate principle dimension) between a 37mm projectile and a 81mm mortar at a depth of less than 11 diameters of the object."

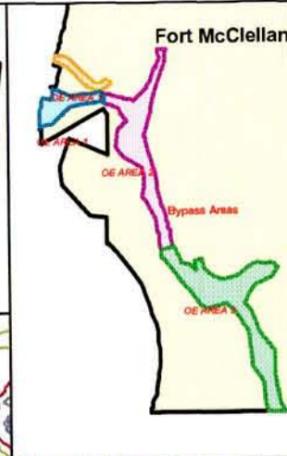
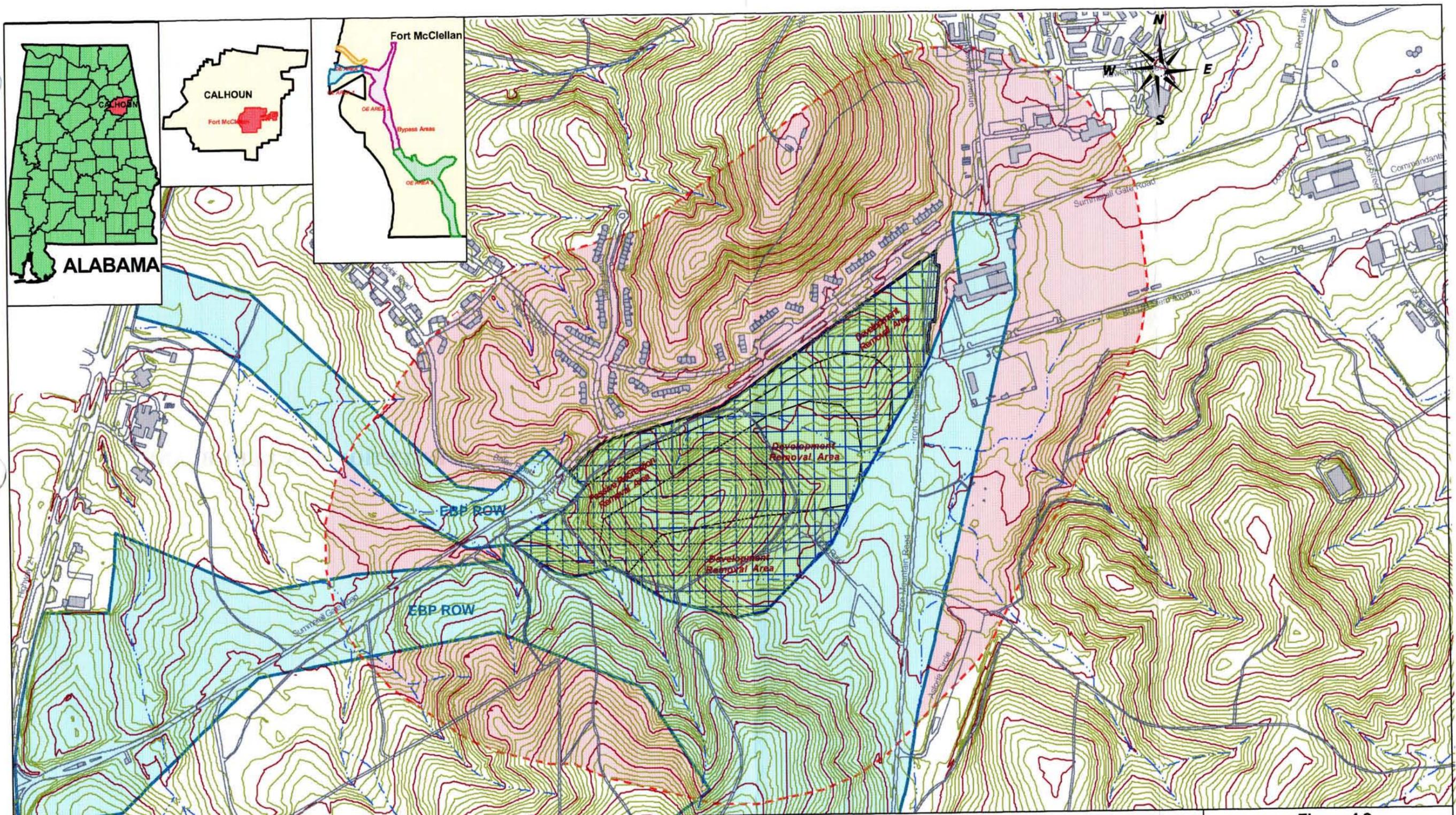
14.1.2 For the Eastern Bypass "Y" Area Junction, the format of the GIS system will be Arcview. The remaining portions of the FWENC's GIS system will remain in the current Geomedia format until directed otherwise. For the purpose of this task, all GIS data pertaining to the Eastern Bypass "Y" Area Junction will be converted to Arcview and maintained in that format.



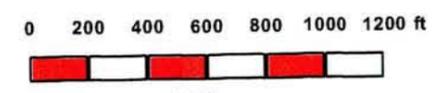
**LEGEND**

Grids	"Y" Removal Area Sectors	Bypass ROW Areas
"Y" Removal Area		

**Figure 2.5**  
**EBP "Y" Area Junction**  
 Fort McClellan, Calhoun County  
 Anniston, Alabama  
 March 2003



Contour Interval = 5'



FOSTER WHEELER ENVIRONMENTAL CORPORATION

**LEGEND**

- Grids
- 1181' EZ for "Y" Removal Area
- "Y" Removal Area Sectors
- "Y" Removal Area
- Bypass ROW Areas

**Figure 4.2**  
**EBP "Y" Area Junction**  
**Quantity Distance Arcs**  
 Fort McClellan, Calhoun County  
 Anniston, Alabama  
 March 2003

# Y Area Removal Action Task Schedule

## Figure 8-1

Activity ID	Activity Description	Orig Dur	% Comp	Early Start	Early Finish	Target 1 Early Start	Target 1 Early Finish	2003	2004
Y Area Removal Action									
Y Area Removal Action									
Work Plan									
YA0010	Internal Draft Work Plan Preparation	21	100	16DEC02A	20DEC02A			Internal Draft Work Plan Preparation	
YA0020	Submit Internal Draft Work Plan	0	100		20DEC02A			Submit Internal Draft Work Plan	
YA0030	Internal Draft Work Plan Review Period	22	100	23DEC02A	31DEC02A			Internal Draft Work Plan Review Period	
YA0040	Internal Draft Work Plan Comments	0	100	02JAN03A				Internal Draft Work Plan Comments	
YA0050	Draft Work Plan Preparation	10	100	02JAN03A	07JAN03A			Draft Work Plan Preparation	
YA0060	Submit Draft Work Plan	0	100		07JAN03A			Submit Draft Work Plan	
YA0070	Draft Work Plan Review Period	22	100	08JAN03A	24JAN03A			Draft Work Plan Review Period	
YA0080	Draft Work Plan Comments	0	100	24JAN03A				Draft Work Plan Comments	
YA0090	Draft Final Work Plan Preparation	10	100	24JAN03A	06FEB03A			Draft Final Work Plan Preparation	
YA0100	Submit Draft Final Work Plan	0	100		07FEB03A			Submit Draft Final Work Plan	
YA0110	Draft Final Work Plan Review Period	22	30	10FEB03A	03MAR03			Draft Final Work Plan Review Period	
YA0120	Draft Final Work Plan Comments	0	0	04MAR03				Draft Final Work Plan Comments	
YA0130	Final Work Plan Preparation	10	0	04MAR03	17MAR03			Final Work Plan Preparation	
YA0140	Submit Final Work Plan	0	0		17MAR03			Submit Final Work Plan	
Grid Preparation									
YA0150	Boundary Survey	1	0	17MAR03	17MAR03			Boundary Survey	
YA0154	Surface Clearance	16	0	18MAR03	08APR03			Surface Clearance	

Start Date: 16DEC02  
 Finish Date: 02JUN04  
 Data Date: 10FEB03  
 Run Date: 26MAR03 07:00

Legend:  
 Early Bar: Yellow triangle  
 Target: Green triangle  
 Progress Bar: Blue bar  
 Critical Activity: Red bar

2215 - YARA

Foster Wheeler Environmental  
 Y Area Removal Action

Sheet 1 of 2

Date	Revision	Checked	Approved

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