



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY DEFENSE AMMUNITION CENTER
1 C TREE ROAD
MCALESTER OK 74501-9053

SJMAC-ESM

MEMORANDUM FOR U.S. Army Corps of Engineers (CEHNC-DE/Mr. Hank Hubbard),
P.O. Box 1600, Huntsville, AL 35807-4301

SUBJECT: Department of Defense Explosives Safety Board (DDESB) Approval of Amendment 8, Approved Conventional Explosives Safety Submission (ESS) Munitions Response (Removal) Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7

1. References:

- a. Memorandum, DDESB, DDESB-PE, 16 Nov 2007, subject: SAB (enclosed).
- b. Memorandum, Department of Army, Huntsville Center, Corps of Engineers, CEHNC-OE-CX, 03 Oct 2007, subject: Amendment 8, Approved Conventional Explosives Safety Submission (ESS), Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7
- c. DOD 6055.9-STD, Ammunition and Explosives Safety Standards, 5 October 2004.

2. Reference 1a provides DDESB final approval for Amendment 8 to the Ft McClellan Eastern Bypass ESS (reference 1.b) and imposes no new conditions. This amendment withdraws the requirement to post signs around the Eastern Bypass OES-2 that were intended to prohibit excavation activities. A clearance to depth of detection has been performed on all areas of the Eastern Bypass OES-2 except for locations that will have a minimum of four feet of fill placed on them. There is no longer a need to post warning signs around the Eastern Bypass OES-2.

3. Point of contact (POC) is Karl J. Raue, SJMAC-ESM, DSN 956-8122, (918) 420-8122, FAX 8503, karl.raue@dac.army.mil.

FOR THE DIRECTOR:

Encl
as

CLIFFORD H. DOYLE
MEC Team Leader
Explosives Safety Knowledge,
OE and Chemical Division
US Army Technical Center for Explosives Safety

SJMAC-ESM

SUBJECT: Department of Defense Explosives Safety Board (DDESB) Approval of Amendment 8, Approved Conventional Explosives Safety Submission (ESS) Munitions Response (Removal) Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7

CF (w/encl):

Office of the Director of Army Safety (DACS-SF/Mr. Patton), 223 23rd Street, Crystal Plaza 5, Suite 980, Arlington, VA 22202

Office of the Assistant Secretary of the Army for Installations & Environment), (Asst. for Munitions) (DESOH/Mr. King), 110 Army Pentagon, Washington, DC 20310-0110

U.S. Army Corps of Engineers (CESO/Ms. Roberts), 441 G Street, NW, Washington, DC 20314-1000



DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD
2461 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22331-0600

NOV 16 2007

DDESB-PE

MEMORANDUM FOR DIRECTOR, U.S. ARMY DEFENSE AMMUNITION CENTER
ATTENTION: SJMAC-ESM

SUBJECT: DDESB Approval of Amendment 8, Approved Conventional Explosives Safety Submission (ESS) Munitions Response (Removal) Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7

References: (a) DAC SJMAC-ESM Memorandum, 17 October 2007, Subject: Amendment 8, Approved Conventional Explosives Safety Submission (ESS) Munitions Response (Removal) Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7

(b) DoD 6055.9-STD, DoD Ammunition and Explosives Safety Standards, 5 October 2004

The Department of Defense Explosives Safety Board (DDESB) Staff has reviewed the subject explosives safety submission (ESS) forwarded by reference (a), against the requirements of reference (b). Based on the information provided, approval is granted for ESS Amendment 8 to remove the requirement to post signs around the Eastern Bypass OES-2 at Fort McClellan, AL. This approval is based on the following:

a. The Army will need to investigate and take action to remove any explosives hazard in the event any future discovery of munitions and explosives of concern at Eastern Bypass OES-2 occurs.

b. All other stipulations and requirements established via the original ESS and subsequent amendments remain in effect.

The point of contact for this action is Mr. Tony Dunay, (703) 325-3513, DSN 221-3513, E-mail address: tony.dunay@ddesb.osd.mil.


FOR CURTIS M. BOWLING
Chairman
DDESB



REPLY TO
ATTENTION OF

SJMAC-ESM

DEPARTMENT OF THE ARMY
US ARMY DEFENSE AMMUNITION CENTER
1 C TREE ROAD
MCALESTER OK 74501-9053

37 OCT 2007

MEMORANDUM FOR Department of Defense Explosives Safety Board (DDESB-PE),
2461 Eisenhower Avenue, Alexandria, VA 22331-0600

SUBJECT: Amendment 8, Approved Conventional Explosives Safety Submission (ESS),
Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1
through 7.

1. References:

- a. Memorandum, Department of Army, Huntsville Center, Corps of Engineers, CEHNC-DE,
3 Oct 2007, Subject: SAB
- b. Memorandum, Department of Defense Explosives Safety Board, 27 Nov 2001, Subject:
Explosives Safety Submission (ESS) for Ordnance Removal Action at the Eastern Bypass, Fort
McClellan, Al.
- c. DOD 6055.9-STD, Ammunition and Explosives Safety Standards, 5 October 2005.

2. Reference 1.a enclosed amendment 8 to the Explosives Site Safety Submission (ESS)
reference 1.b for the Eastern Bypass, Fort McClellan is provided for review IAW reference 1.c.
We have reviewed this document against Army and DOD explosives safety criteria and find it
acceptable. Recommend approval.

3. This amendment removes the requirement to post signs around the Eastern Bypass OES-2 that
were intended to prohibit excavation activities. It has been determined that the signs are no
longer required because an initial clearance to one foot was performed followed by a clearance to
depth of detection (the response selected within the Action Memorandum). In heavily
contaminated areas, a mechanical removal action was performed. A removal action to depth of
detection has been performed on all areas of the Eastern Bypass OES-2 except for locations
which will have a minimum of four feet of fill placed on them. Thus, there is no longer need to
post warning signs around the Eastern Bypass OES-2.

4. Point of contact (POC) is Karl Raue, SJMAC-ESM, DSN 956-8122, commercial (918) 420-
8122, fax 8743, Karl.Raue@dac.army.mil.

FOR THE DIRECTOR

Encl
as


CLIFFORD H. DOYLE
MEC Team Leader
Explosives Safety Knowledge, OE and Chemical Division
US Army Technical Center for Explosives Safety

SJMAC-ESM

SUBJECT: Amendment 8. Approved Conventional Explosives Safety Submission (ESS), Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7.

CF (w/encl):

Office of the Director of Army Safety (DACS-SF/Mr. Patton), 223 23rd Street, Crystal Plaza 5, Suite 980, Arlington, VA 22202

Office of the Assistant Secretary of the Army for Installations & Environment), (Asst. for Munitions) (DESOH/Mr. King), 110 Army Pentagon, Washington, DC 20310-0110

U.S. Army Corps of Engineers (CESO/Ms. Roberts), 441 G Street, NW, Washington, DC 20314-1000

U.S. Army Engineering and Support Center Huntsville, (CEHNC-DE/Mr. Hubbard)
P.O. Box 1600, 4820 University Square, Huntsville, AL 35816



REPLY TO
ATTENTION OF

CEHNC-OE-CX

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

DEC 9 3 2007

MEMORANDUM FOR U.S. Army Technical Center for Explosives Safety, Explosives Safety Knowledge, Ordnance and Explosives (OE) and Chemical Division, (SJMAG-ESM/Mr. Cliff Doyle), Building 35, 1C Tree Road, McAlester, OK 74501-9053

SUBJECT: Amendment 8, Approved Conventional Explosives Safety Submission (ESS), Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7

1. Reference:

a. Approved Conventional Explosives Safety Submission (ESS), Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 7.

b. Engineer Regulation 385-1-95, Safety and Health Requirements for Munitions and Explosives of Concern (MEC) Operations, 30 March 2007.

2. This amendment is submitted to withdraw the requirement to post signs around the Eastern Bypass OES-2 that were intended to prohibit excavation activities. An initial clearance to one foot was performed followed by a clearance to depth of detection (the response selected within the Action Memorandum). In heavily contaminated areas, a mechanical clearance was performed. A clearance to depth of detection has been performed on all areas of the Eastern Bypass OES-2 except for locations which will have a minimum of four feet of fill placed on them. Thus, there is no longer a need to post warning signs around the Eastern Bypass OES-2.

3. The effective date for this amendment to be implemented is as soon as possible. All other portions of the ESS remain unchanged.

4. An Explanation of Significant Differences (ESD) is enclosed to support this decision.

5. This office has reviewed the amendment and this memorandum constitutes Direct Reporting Unit (DRU) approval per reference 1b.

6. If you have any questions, please call Mr. Hank Hubbard, at (256) 895-1586.

Encl


CAROL A. YOUKEY, P.E., PLS
Chief, Military Munitions Center
Of Expertise

001 0 2007

CEHNC-OE-CX

SUBJECT: Amendment 8, Approved Conventional Explosives Safety Submission (ESS),
Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1
through 7

CF: (wo/encl)

Commander, US Army Corps of Engineers, (CESO-SWD/Ms. Blanca Roberts) 441 G Street,
NW, Washington, DC 20314-1000



**US Army Corps
of Engineers®**

EXPLANATION OF SIGNIFICANT DIFFERENCES

Withdrawal of Requirement to Post Warning Signs along the
Eastern Bypass Ordnance and Explosives Site – 2

Fort McClellan, Alabama

INTRODUCTION

The purpose of this Explanation of Significant Differences (ESD) is to document a change in the requirement for posting warning signs along the Eastern Bypass Ordnance and Explosives Site – 2 (OES-2). This requirement was originally described in the U.S. Army's August 2001 Action

Memorandum decision document regarding the selected risk-reduction alternatives taken to address the presence of munitions and explosives of concern (MEC) that pose a threat to human health and the environment in the Eastern Bypass OES-2. The Department of Defense is the lead authority for the Fort McClellan cleanup

project. The Fort McClellan Transition Force is responsible for implementing public involvement activities, producing public statements and media releases, and serving as community point of contact. In support of the Transition Force is the U.S. Army Engineering and

Support Center, Huntsville (USAESCH) providing technical expertise and contractor support for the proposed risk-reduction alternatives. The Alabama Department of Environmental Management (ADEM) has been directly involved throughout the Engineering Evaluation and Cost Analysis (EE/CA) process to ensure protection of public health and the environment and consistency with Federal and State environmental regulations and policies. Regulatory acceptance of the findings of the EE/CA is considered in the final recommendations of the alternative(s) presented in the EE/CA Action Memorandum.

In accordance with section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), an ESD is required to be issued when the lead agency proposes to make a significant change to a component of the initial remedy as stated in the EE/CA Action Memorandum.

This ESD will become part of the Administrative Record and also will be on file in the information repositories established at the Anniston Calhoun County Library and the Houston Cole

Table of Contents

Introduction	1
Summary of Site History, Contamination Problems, and Selected Remedy	2
Description of Significant Differences	5
Support Agency Comments	5
Statutory Determinations	5
Public Participation Activities	5
References	6

Library for the public to review. This will not be a formal opportunity for the public to comment since the overall remedy is not being revised.

SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

Site History and Land Use

Fort McClellan is an inactive U.S. Army post located in Calhoun County, Alabama occupying approximately 41,174 acres. The main post encompassed approximately 18,929 acres and Pelham Range encompassed 22,245 acres. Documented military use at Fort McClellan began in 1912 when the Alabama National Guard used part of the site as a Field Artillery Range. The installation was deactivated for a brief period of time in the late 1940s but was reactivated in 1950 and remained active until September 1999 when it closed under Base Realignment and Closure (BRAC) as recommended by the 1995 Defense Base Closure and Realignment Commission in conformance with Public Law 101-510, as amended, the Base Realignment and Closure Act of 1990.

The Fort McClellan main post is bounded to the south and west by the City of Anniston and to the northwest by the City of Weaver. Adjoining the main post to the east is the 4,488-acre Choccolocco Corridor, which was leased from the State by Fort McClellan until May 1998 and

connected the post to the Talladega National Forest. Figure 1 depicts the general location of Fort McClellan and the eastern bypass corridor within the State of Alabama. Figure 2 is a map of the southwestern corner of Fort McClellan showing the OES-2 portion of the eastern bypass right-of-way.

The Eastern Bypass project will provide an additional north/south transportation route for Anniston, Oxford, and Calhoun County. The construction of the bypass will improve access between U.S. 431 and Alabama 21 and Interstate 20. The bypass also will provide access to planned redevelopment areas of Fort McClellan.

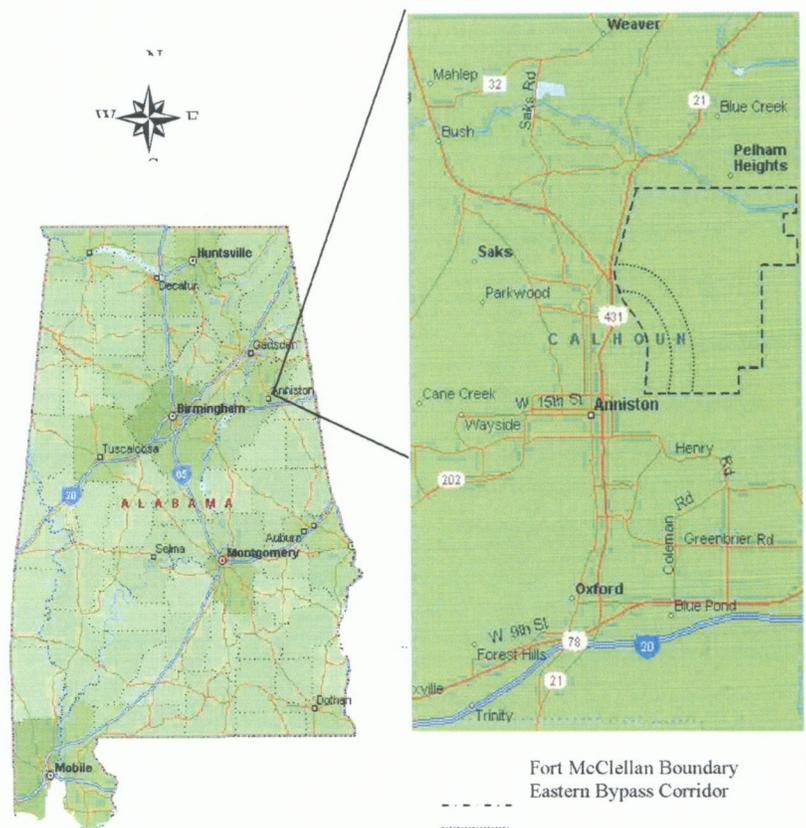


Figure 1
Eastern Bypass Vicinity Map, Fort McClellan

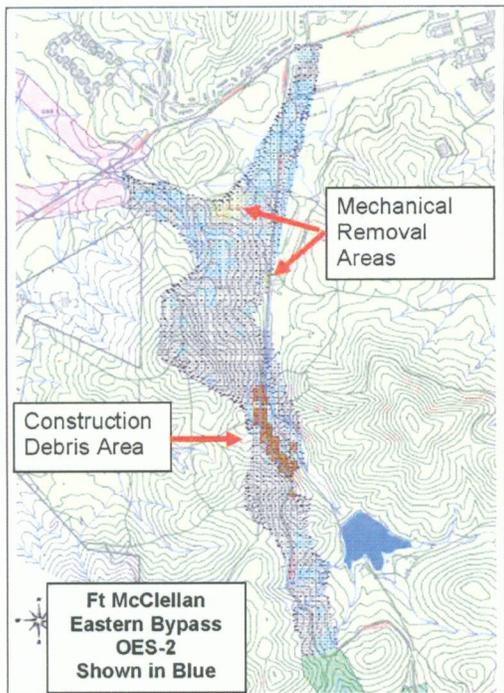


Figure 2

Previous Investigations and Munitions Responses:

Archives Search Report

The U.S. Army Corps of Engineers, St. Louis District, compiled an Archives Search Report (ASR) in 1996. The ASR was prepared by reviewing available records and reports documenting the history of the site.

Historical information pertaining to site operations, including a listing of site investigations conducted before 1996, is contained in this ASR. In 1998, the U.S. Army Corps of Engineers, St. Louis District, revised the ASR to include suspect Chemical Warfare Materiel (CWM) areas. The ASR, finalized in July 1999, and revised in September 2001, presented the findings of the site inspection and evaluation of potential MEC occurrence at Fort McClellan.

Ground Reconnaissance/Historical Aerial Photography Review

The USAESCH conducted a ground reconnaissance of the entire route of the proposed eastern bypass in June 1997. The ground reconnaissance team noted evidence of surface and possible subsurface occurrences of 60mm high explosive (HE) mortars and 2.36-inch rockets within the boundaries of a designated dud impact area in OES-2. The findings of the ground reconnaissance are incorporated into the risk analysis and conclusions of the EE/CA.

Oak Ridge National Laboratory prepared a *Historical Aerial Photography Investigation of the Fort McClellan East By-Pass Study Area (1998)* for the USAESCH. It provided an analysis of land usage over a span of more than 50 years and potential areas of MEC occurrence.

EE/CA for the Eastern Bypass

USAESCH contracted with ZAPATA ENGINEERING to prepare an EE/CA for the Eastern Bypass. The purpose of the EE/CA was to characterize the type and extent of ordnance items within the bypass right-of-way through visual and intrusive field investigations. Portions of the corridor beyond the right-of-way were included in the investigation to determine the extent of MEC occurrence that possibly could be encountered during construction activities for the right-of-way. Analysis of the field investigation data enabled USAESCH to determine the risks associated with construction of the bypass and to evaluate and recommend effective risk-reduction alternatives.

For the EE/CA investigation, the eastern bypass right-of-way was subdivided into three distinct areas

designated as ordnance and explosives sites each possessing different MEC characteristics. These units were based on the historical military use, information in the ASR, findings of ground reconnaissance efforts and historical aerial photography, and consideration of proposed land reuse. This facilitated an approach to evaluating the entire eastern bypass right-of-way without assigning the most conservative (and most expensive) risk reduction alternative to the entire bypass right-of-way. Segregation of the three different areas based on MEC characteristics allowed unique, effective and cost-efficient remediation recommendations for each OES. This ESD relates only to OES-2.

OES-2 is located in the northern and central portion of the proposed eastern bypass right-of-way. OES-2 was a known impact area containing significant quantities of MEC. OES-2 was investigated using historical record review and ground reconnaissance. Historical records indicate that this area was used as a 60mm mortar range, a 2.36-inch rocket range and a tank range. Ground reconnaissance efforts by U.S. Army Corps of Engineers (USACE), St. Louis District, and the USAESCH indicated a moderate to high density of surface MEC occurrences from 60mm (HE) mortars, 2.36-inch rockets, and munitions debris. Hand-held magnetometers also indicated subsurface anomalies attributed to MEC. Naturally occurring iron-bearing material was also detected with the magnetometers and may account for some of the subsurface anomalies. No subsurface intrusive sampling was performed during these efforts.

Munitions Response Activities

Three munitions responses were conducted in OES-2. From September 1999 to March 2001, under contract to USAESCH, Explosive Ordnance Disposal Technologies, Inc. (EODT) performed a munitions response for removal of MEC to 1-foot depth in the majority of the OES-2 area. This action was undertaken to support timber harvesting and pre-design activities necessary for Alabama Department of Transportation (ALDOT) to begin design of the bypass.

From April 2001 to April 2003, under contract with USAESCH, Tetra Tech Foster Wheeler performed a clearance to depth on 255 acres in OES-2. This munitions response as shown on Figure 2, included a mechanical removal to depth in areas that were heavily contaminated with MEC and metallic debris.

From June to August 2005, under contract with USAESCH, Tetra Tech Foster Wheeler performed a clearance to depth on an area that contained large amounts of construction debris with the exception of 30 grids that would be covered with a minimum of 4 feet of fill during bypass construction (Figure 3).

All of OES-2 has been cleared to depth with the exception of 30 whole or partial grids that will be covered with a minimum of 4 feet of fill when the highway is constructed.



Figure 3 – Grids in yellow were not cleared but will be covered with a minimum of 4 feet of fill.

Description of the Selected Remedy

As Described in the Action Memorandum, signed on August 2, 2001, the alternatives for OES-2 were based on existing site conditions and an understanding of the projected land use and represent conclusions based only on the portions of the sites that were investigated. Institutional Controls including construction worker education and posting of signs, Clearance for Intended Land Use, and Construction Support were the selected alternatives for the eastern bypass right-of-way through OES-2. The estimated cost to implement Institutional Controls, Clearance for Intended Land Use, and Construction Support at OES-2 was \$6.35 million.

DESCRIPTION OF SIGNIFICANT DIFFERENCES

Because all of the Eastern Bypass OES-2 has been cleared to depth with the exception of the 30 grids that will be covered with a minimum of 4 feet of fill during Bypass construction, the requirement to post signs prohibiting excavation activities in OES-2 is removed from the selected remedy documented in the Action Memorandum. There is no cost to implement this action.

SUPPORT AGENCY COMMENTS

Any support agency comments will be provided in the final version of this ESD.

STATUTORY DETERMINATIONS

The selected risk-reduction alternatives in the Action Memorandum were developed in a manner consistent with CERCLA, as amended, and with the National Contingency Plan. The U.S. Army and ADEM believe that the remedy as revised remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this remedy, and is cost-effective.

PUBLIC PARTICIPATION ACTIVITIES

A notice of the ESD will be published in the Anniston Star. The ESD will be added to the Administrative Record and will be placed on file in the information repositories established at the Anniston Calhoun County Library and the Houston Cole Library for the public to review

References

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- ZapataEngineering, P.A., April 2000, *Engineering Evaluation/Cost Analysis, Proposed Eastern Bypass, Fort McClellan, Alabama*, Prepared for the U.S. Army Engineering and Support Center, Huntsville.
- ZapataEngineering, P.A., August 2001, *Action Memorandum, Eastern Bypass, Fort McClellan, Alabama*, Prepared for the U.S. Army Engineering and Support Center, Huntsville.
- EOD Technology, Inc. (EODT), October 2001, *Final Removal Report, Ordnance and Explosives Surface Clearance for Construction Support, Proposed Eastern Bypass, Fort McClellan, Alabama*, Prepared for the U.S. Army Engineering and Support Center, Huntsville.
- Foster Wheeler Environmental Corporation, April 2006, *Site Specific Final Report Eastern Bypass OE Removal, Fort McClellan, Alabama*, Prepared for the U.S. Army Engineering and Support Center, Huntsville.
- Tetra Tech EC, Inc, May 2005, *Site Specific Final Report Addendum Construction Debris Removal Area of the Eastern Bypass, Fort McClellan, Alabama*, Prepared for the U.S. Army Engineering and Support Center, Huntsville.
- Army meeting with the Alabama Department of Environmental Management (ADEM), September 2007.

Amendment 8
To the Approved Conventional Explosive Safety Submission, Munitions Response
(Removal), Eastern Bypass, Fort McClellan, Alabama

02 October 2007

1.0 Introduction

The original ESS indicated that the munitions response would include a removal to depth in the impact area portion of the Eastern Bypass parcel, with construction support to be provided during highway construction.

1.1. Amendment 1 added a soil sifting operation for a portion of the eastern bypass parcel with extremely high density of MEC and munitions debris (referred in the ESS as OE and OE scrap).

1.2. Amendment 2 added 60 acres ("Y" area) to the munitions response.

1.3. Amendment 3 requested DDESB approval to withdraw the requirement for construction support, with the exception of those grids that contained construction debris. (USATCES did not submit Amendment 3 to the DDESB because it did not believe it justified, but it maintained the amendment numbering system.)

1.4. Amendment 4 provided justification--construction debris in some grids precluded removal--for the Army not conducting a removal to depth, as required by the DDESB-approved ESS, for grids containing construction debris. Amendment 4 stated that as ALDOT removed construction debris during highway construction, the Army would provide construction support and conduct a removal to depth beneath the debris.

1.5. Amendment 5 revises the locations at which construction support and removal to depth will be occurring. Both the Alabama Department of Transportation (ALDOT) and the Alabama Department of Environmental Management (ADEM) agree

with the planned munitions response action, which now only includes construction support and removal to depth for: (a) grids that will have less than four feet of fill deposited above the existing construction debris, and (b) the locations where removal is necessary for the placement of drainage (e.g. culverts and drains), see Figure 5. A removal to depth will not be performed for grids where the existing construction debris will be covered by at least four feet of fill.

1.6. Amendment 6 withdrew the requirement for construction support and the posting of warning signs within the “Y” area (see Figure 4-1, “Y” Removal Area Overview). The deed notice as specified in the original approved ESS will be included in the transfer documents.

1.7. Amendment 7 withdraw the requirement for education of construction workers in the “Y” area

1.8 This amendment withdraws the requirement to post signs around the Eastern Bypass OES-2 that were intended to prohibit excavation activities. An initial clearance to one foot was performed followed by a clearance to depth of detection (the response selected within the Action Memorandum). In heavily contaminated areas, a mechanical clearance was performed. A clearance to depth of detection has been performed on all areas of the Eastern Bypass OES-2 except for locations which will have a minimum of four feet of fill placed on them. Thus, there is no longer a need to post warning signs around the Eastern Bypass OES-2.

2.0 Reason for Munitions and Explosives of Concern (MEC) (formerly referred to as OE)

No change from the original ESS or previous amendments.

3.0 Amount and Type of MEC

No change from Amendment 6.

4.0 Start Date

No change from original ESS or previous amendments.

5.0 Frostline

No change from original ESS or previous amendments.

6.0 Removal Techniques

No change from original ESS or previous amendments.

7.0 Alternate Removal Techniques

No change from original ESS or previous amendments.

8.0 Offsite Destruction

No change from original ESS or previous amendments.

9.0 Technical Support

No change from original ESS or previous amendments.

10.0 Land Use Controls (LUC)

This Amendment withdraws the requirement to post signs around the boundary of the Eastern Bypass OES-2 that were intended to prohibit excavation activities. The remainder of the LUC specified in the original ESS and all previous amendments are unchanged by this Amendment.

11.0 Public Involvement

An Explanation of Significant Differences is being developed and coordinated with regulators. The Explanation of Significant Differences will be published in the local newspaper and placed in the Administrative Record.

12.0 Maps

No changes from original ESS and previous amendments.