



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

REPLY TO
ATTENTION OF:

CEHNC-DE

SEP 18 2006

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

SUBJECT: Amendment 7, Approved Conventional Explosives Safety Submission (ESS), Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 6.

1. Reference: Approved Conventional Explosives Safety Submission (ESS), Munitions Response (Removal), Eastern Bypass, Fort McClellan, Alabama with Amendments 1 through 6.
2. This amendment is submitted to withdraw the requirement for education for construction workers in the "Y" area because past removal activities have proven the detection depth for subsurface anomalies exceeds the actual recovery depth of the munitions and explosives of concern. It is not anticipated any mortars fired on this range would have been fired with anything larger than Charge 0, due to the length of the range fan, making the training unnecessary for subsequent work in the "Y" area.
3. The effective date for this amendment to be implemented is as soon as possible. All other portions of the ESS remain unchanged.
4. This office has reviewed the amendment and this memorandum constitutes Major Army Command approval.
5. If you have any questions, please call Mr. Hank Hubbard, at 256-895-1586.

Encl


LARRY D. McCALLISTER
Colonel, Corps of Engineers
Commanding

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

Amendment 7
To the Approved Conventional Explosive Safety Submission, Munitions Response
(Removal), Eastern Bypass, Fort McClellan, Alabama

8 September 2006

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 requests the withdrawal of the requirement for education of construction workers in the “Y” area (see Figure 4-1, “Y” Removal Area Overview). This amendment provides justification for withdrawing this requirement.

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. However, the text from Amendment 6 is repeated here to re-emphasize that the depths of detection are much deeper than the recovery depths and the maximum calculated penetration depths.

Examination of the historical range fans in the “Y” area of the Eastern Bypass at Ft. McClellan shows that the maximum length of any of the fans is 2400 ft. Since this includes the safety distances at the far end of the fan, the distance from firing point to target area is less than this. Based on the size of the range fan, it is unlikely that a mortar charge other than Charge 0 was used on this range because this would have led to mortars impacting outside the range fan.

Table 1 shows the OE items found in the “Y” area with the maximum depth at which they were found (recovery depth). For comparison purposes the maximum calculated penetration depth and the detection depth are also shown in Table 1. The recovery depth is measured from the ground surface to the shallowest point on the item. The maximum calculated penetration depths for the 81mm mortar and the 3” Stokes mortar were calculated using the velocity from the smallest firing charge (Charge 0) likely to have been used on the range(s) in the “Y” area. The maximum calculated penetration depths of the mortars are measured to the center of gravity of the item so will be deeper than the recovery depth. The 2.36” rocket and the rifle grenade are direct fire items and the maximum calculated penetration depth is based on the muzzle velocity (actual striking velocity will be less) and penetration normal to the surface (actual penetration angle will be very shallow). The hand grenade is thrown or possibly placed as a booby trap with a trip wire and the trip flare is hand placed as a booby trap. There is no method for calculating a penetration depth for these items.

Table 1 – OE Items Found in the “Y” Area During the Removal Action

MEC Item	Recovery Depth (inches bgs)	Maximum Calculated Penetration Depth (inches bgs)	Depth of Detection using Time Domain Electromagnetic Method (inches bgs)
2.36” Rocket	10	10	26
M9 Rifle Grenade	6 ^A	3	25
Mk II Hand Grenade	6 ^A	Not Applicable	25
M49A1 Trip Flare	6	Not Applicable	17
81mm Practice M43A1 Mortar	2	11	35
3” Stokes Mk I Mortar (sand filled)	12	12	34

^AM9 rifle grenade and Mk II hand grenade both recovered from the same location; appear to have been buried there. All other rifle grenades were found on the surface. Maximum recovery depth for other hand grenades was 4” bgs.

As shown in Table 1, the depths of detection are more than 2 ½ times the recovery depths and the maximum calculated penetration depths.

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 removes the education of construction workers within the “Y” area (see Figure 4-1, “Y” Removal Area Overview). The remainder of the LUC specified in the original ESS and all previous amendments are unchanged by this Amendment.

11.0 Public Involvement

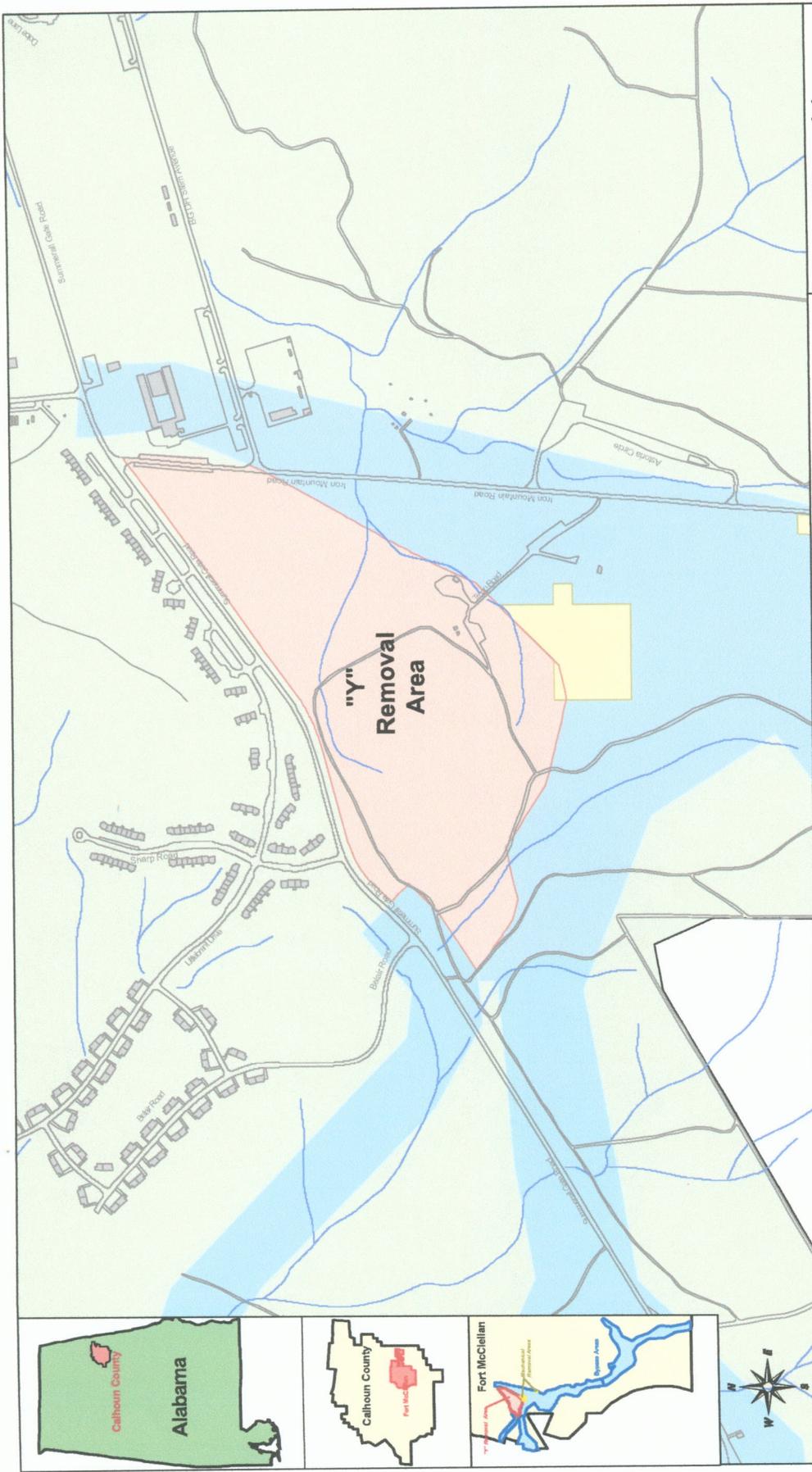
No change from original ESS or previous amendments.

12.0 Maps

Figure 4-1 taken from the “Y” Area Removal Report shows the location of the “Y” area.



Fig 4-1_011504.pdf *(print embedded map on 11" x 17" paper)*

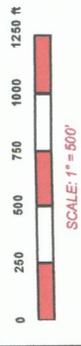
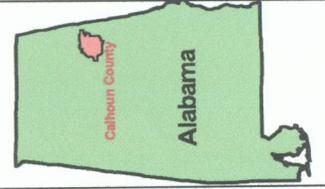


**Figure 4-1
"Y" Removal Area
Overview**

Fort McClellan, Calhoun County
Anniston, Alabama
January, 2004

LEGEND

- "Y" Removal Area
- Mechanical Removal Areas
- Bypass Removal Areas
- Buildings
- Streams
- Fort McClellan
- Lakes
- Roads



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