U.S. Army Corps of Engineers
Wilmington District

Action Memorandum

For Area 1A – Flamethrower Range

Former Camp Butner
Butner, North Carolina

February 2005

U.S. Army Corps of Engineers,
Wilminton District
69 Darlington Avenue
Wilmington, North Carolina 28402-1890

ACTION MEMORANDUM FOR AREA 1A – FLAMETHROWER RANGE FORMER CAMP BUTNER BUTNER, NORTH CAROLINA

FOREWORD

This Action Memorandum presents the selected removal action of subsurface clearance to depth at Area 1A – Flamethrower Range within the former Camp Butner, Butner, North Carolina. The U.S. Army Corps of Engineers (USACE) is the lead agency under the Defense Environmental Restoration Program (DERP) at the former Camp Butner Formerly Used Defense Site (FUDS), and has developed this Action Memorandum consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision document will be incorporated into the larger Administrative Record file for former Camp Butner, which is available for public view at both the South Branch of the Granville County Library at 1547 S. Campus Drive, Creedmoor, North Carolina as well as the Town of Butner Operations Center, 205C West E Street, Butner, North Carolina. This document, presenting a selected remedy with a present worth cost estimate of $448,618, is approved by the undersigned, pursuant to Memorandum, DAIM-ZA, September 9, 2003, Subject: Policies for Staffing and Approving Decision Documents (DDs), and to Engineer Regulation 200-3-1, Formerly Used Defense Sites (FUDS) Program Policy.

APPROVED:

Charles R. Alexander
Colonel, Corps of Engineers
Commanding

5/11/05
Date

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1.0 INTRODUCTION

The United States Army Corps of Engineers, Engineering and Support Center, Huntsville (USAESCH) issued a contract to Parsons for conducting an EE/CA at the former Camp Butner, Butner, North Carolina. In order to fulfill the contract requirements, Parsons conducted an EE/CA of five areas of interest (AOIs) located within the former Camp Butner, as designated in the Archives Search Report (ASR, USACE 1993, revised 1997 & 2003) and final Statement of Work (SOW, May 2000, revised 10 December 2001 & 16 August 2002). The results of the EE/CA investigation were presented in the Final EE/CA Report (Parsons, July 2004). This document specifically presents the MEC subsurface removal action selected for the Area 1A – Flamethrower Range within the former Camp Butner. Site-Wide institutional controls (IC) strategies and selected munitions response actions for other areas within the former Camp are addressed in separate Action Memoranda.

2.0 BACKGROUND

2.1. The former Camp Butner (the Camp) is a formerly used defense site (FUDS) located primarily in Granville County, North Carolina (75%) but does also include some parcels within Durham and Person Counties, North Carolina. For purposes of the ordnance and explosives (MEC) engineering evaluation/cost analysis (EE/CA) characterization study, the Camp comprises approximately 40,384 contiguous acres; however, 4750 acres currently under the jurisdiction of the North Carolina National Guard (NCNG) are used as active ranges and were excluded from the study. The present Town of Butner, formerly the facility cantonment area, resides within the site boundary. The site is located approximately 30 to 35 miles northeast of Raleigh-Durham, North Carolina along Interstate I-85 and west of the Town of Stem (Figure 1). The boundary of the site is loosely defined by the old Range Road, which makes a contiguous loop around the site although identified by multiple names and County designations. The northern and eastern boundary roughly follows Range Road (County Road 1126). County Road 1721 (continuation of Range Road into Person County) defines the western boundary and continues southward onto Cassam Road. The Southern Railroad defines the southeastern border (Figure 2).

2.2 The Camp was established as a result of the War Department acquiring the property from private land owners in 1942 for use as a training and cantonment facility during World War II. The Camp was designed to house up to 40,000 troops and was primarily established for the training of infantry divisions (including 78th, 89th, and 4th) and miscellaneous artillery and engineering units. There were approximately 15 ammunition training ranges, a grenade range, 1000-inch range, a gas chamber, and a flame-thrower training pad. In addition to infantry training, the facility was the location of the one of the Army's largest general and convalescent hospitals and the War Department's Army Redeployment Center. The ordnance used at the camp included rockets, mortars, grenades, and artillery rounds up to 240mm. UXO/MEC that may be encountered within the Camp include: 2.36-inch rockets (practice and high explosive

[HE]), rifle and hand grenades, 20mm through 155mm HE projectiles, 60mm and 81mm mortars, anti-personnel practice mines, and demolition items to include TNT.

2.3 The Camp was declared excess by the War Department in 1947 and property dispersal initiated. Much of the property was sold back to the original owners, however, some parcels included provisions in the property deed restricting land use to 'surface use only'.

2.4 Dedudding operations were conducted in selected areas in 1947 and continued through 1950. The Recapitulation Dedudding Report presented in the ASR stated that 1366 UXO/MEC items had been discovered and destroyed by the completion of dedudding operations. Six areas (designated A-F) were identified during dedudding inspections as warranting land restrictions to 'surface use only' due to the numerous amount of HE duds found (Figure 3). Periodic inspections of the six areas with land restrictions continued between 1958 and 1969. During the inspections and removal of ordnance from the restricted areas other property owners identified ordnance for disposal that had been found in unrestricted areas. Table 1 lists the type of ordnance items found during the annual/semiannual inspections of restricted areas (as well as general findings within unrestricted areas) at the former Camp Butner Site:

TABLE 1
FORMER CAMP BUTNER
ANNUAL INSPECTION (DEDUDDING) FINDINGS
(1958 – 1969)

AREA RESTRICTED TO 'SURFACE USE ONLY'	TYPE OF UXO RECOVERED
Area A	Rifle grenade, 2.36-inch rockets, 37mm, 40mm, 81mm mortar, 105mm, 155mm, and 240mm projectiles
Area B	2.36-inch rockets and 81mm mortars
Area C	81mm mortars, 37mm, 105mm, 155mm, and 240mm projectiles
Area D	2.36-inch rocket, 37mm and 40mm projectiles
Area E	2.36-inch rocket
Area F	No findings reported
Other "Unrestricted" Areas	Hand grenades, 37mm, 40mm, 60mm, 81mm, 105mm, and 155mm projectiles and 2.36-inch rockets

2.5 Although much of the site remains rural, unbridled residential development is occurring along artery roads and near Lake Butner. Current residential development is encroaching in areas to the south and stretching north along the eastern boundary of the site. Sprawling development will continue to be experienced in these regions due to migration from Durham and Wake Counties. The cause of the development is the proximity to the growing Raleigh-Durham area. Many large family-owned tracts previously idle or used for agricultural purposes for 50 years are now being converted to single family subdivisions. As growth and residential development continue throughout the region, land used for agriculture and forestry will consequently diminish. Several

U.S. Army Corps of Engineers (USACE) tracts in the southern portion of the site, specifically the 2300-acre Waterfowl Impoundment Reserve and Falls Lake State Park, are protected from residential development.

2.6 The USACE Rock Island District conducted a records search and reconnaissance of the project site in September 1993. The findings are documented in the Archives Search Report (ASR, USACE 1993/1997) and ASR Supplement (USACE, 2003). The former Camp was subdivided into six areas, as depicted on Figure 1 (Areas 1: Cantonment Area And Vicinity, Area 2: Ammunition Storage Area and Dump, Area 3: Grenade Training Ranges, Area 4: Ammunition Training Ranges and Impact Areas, Area 5: Remaining Land, and Area 6: NCNG (not investigated) for evaluating purposes based on former land use, terrain, and visual site inspection. Areas 1 and 4 were classified as having "confirmed" ordnance present. Areas 2 and 3 were classified as "potential" for ordnance presence. Area 5 was identified as "uncontaminated" and Area 6 was not assessed. Based on these recommendations the EE/CA investigation was initiated. Area 5 was included in the EE/CA investigation (in accordance with the project SOW) in order to confirm/disprove the ASR classification.

2.7 An EE/CA was conducted at the former Camp Butner to characterize the presence of MEC, analyze risk management alternatives, and recommend feasible MEC risk reduction alternatives for five of the six AOIs identified in the ASR. The EE/CA investigation results indicated the presence of UXO in several areas. As a result, the original AOI boundaries were modified in order to facilitate the appropriate selection of munitions response alternatives. Old AOIs 1 through 4 were combined and resectored to form nine AOIs including Area 1A (Flamethrower Range), Area 4 Proper, Area 4A, Area 4B, Area 4C, Area 4D, Area 4E, and Lakeview Subdivision (Figure 3). Area 5 was not changed. The re-sectored AOI boundaries were based on UXO type, UXO distribution, and current and near future land use.

2.8 Area 1A, the subject site for this Action Memorandum, includes EE/CA sampled grids characterized with UXO and MEC scrap located just north and east of the Butner water tower (Figure 4). The site comprised approximately 20 acres and is located just north of the Town of Butner along Central Avenue/County Road 1103. The EE/CA findings for this AOI included two UXO items (a M1 practice anti-tank landmine with spotting charge and fuze and a Mk II hand grenade) and five MEC scrap items (all expended and inert M15 smoke grenades) from 98 anomalies investigated. Historically this area was designated as a flame thrower/small arms range; however, the findings from the EE/CA suggest that this area was also used as a grenade training range.

2.9 The land comprising Area 1A is currently undeveloped, primarily wooded, with moderate soil erosion in drainage areas caused by storm runoff at the northeast portion of the AOI. The Butner Long Range Master Plan proposes future land use in this area will be for recreational activities and include the passage of a greenway/trail system (O'Brien/Atkins, 1998). However, construction of a day care facility onsite as well as adjacent development associated with a new hospital are currently planned.

3.0 STATEMENT OF BASIS AND PURPOSE

3.1 The purpose of this EE/CA Action Memorandum is to present the selected munitions response action for Area 1A – Flamethrower Range, located within the former Camp. The basis for the selection was in accordance with the DERP FUDS and relevant U.S. Army regulations and guidance for MEC programs.

3.2 Based on the results of the completed EE/CA, which included a qualitative baseline risk evaluation and comparative analysis of potential munitions response actions, the most appropriate alternative was selected for each of the nine subareas. As a result of the comprehensive evaluation of alternatives, Site-Wide IC was selected as the most appropriate and sole munitions response action for Area 5. This selection was primarily driven by the absence of significant hazardous ordnance-related contamination within this AOI. For Area 4D, Area 4E, and Area 4 (proper) Site-Wide IC was also selected in tandem with a residential removal action component. To ensure public safety associated within the AOIs (excluding Area 5), a two-acre subsurface removal action around each existing homestead was also selected. This selection was primarily driven by the lack of complete public exposure pathways present throughout much of the AOIs. Mechanisms will be developed for requesting UXO construction support for new residential dwellings. Recurring reviews will be conducted on 5 year intervals to ensure the selected response alternative remains appropriate.

3.3 For the balance of the AOIs (inclusive of Area 1A) removal actions were selected with Site-Wide IC intended to be an effective complement to the removal actions. This Action Memorandum addresses the selected munitions response action for Area 1A – Flamethrower Range. Separate Action Memoranda have been prepared for the Site-Wide IC munitions response action as well as for other removal action sites.

3.4 The Final EE/CA Report describes the potential response alternatives that were evaluated for each of the AOIs within the site and presents the recommended munitions response alternative. As stated previously, Site-Wide IC strategies have been selected for four individual sites and subsequently expanded to cover the entire site. MEC removal actions are selected for five sites to include Area 1A – Flamethrower Range. The North Carolina Department of Environment and Natural Resources (NCDENR) and the U.S. Environmental Protection Agency (EPA) have been actively involved in the project and both agencies reviewed the EE/CA Report and subdocuments. Comments were received and addressed during multiple teleconferences and project team meetings held at NCDENR offices in Raleigh, North Carolina. Following comment resolution, NCDENR concurs with the EE/CA selected alternatives detailed in the Final EE/CA Report. All EPA comments were addressed and the agency has indicated they have no further comments.

3.5 The process for munitions response action selection is documented in the Administrative Record for the site. The project Administrative Record, which includes the ASR and other pertinent project documents, is maintained at two locations. The records are available for public access at the South Branch of the Granville County

Library at 1547 S. Campus Drive, Creedmoor, North Carolina as well as the Town of Butner Operations Center, 205C West E Street, Butner, North Carolina.

4.0 PROJECT JUSTIFICATION

4.1 A variety of ordnance items were recovered within the nine AOIs during the EE/CA field investigation conducted at the former Camp Butner to include 13 UXO. The presence of UXO was confirmed in all AOIs with the exception of Area 5. UXO recovered during the EE/CA investigation at the former Camp Butner Site included one 155mm projectile, two 105mm projectiles, a 57mm projectile, three 2.36-inch bazooka rockets, three 37mm projectiles, Mk II hand grenade, M52-series nose fuze, and M1 practice mine with spotting charge and fuze. Additionally, 6 UXO were recovered during a Time Critical Removal Action (TCRA) at the Lakeview Subdivision. No UXO was identified during a second TCRA (portion of Area 4C) although significant quantities of ordnance scrap was recovered. Ordnance scrap was found in all nine of the AOIs. All of the recovered ordnance items were consistent with the historical usage of the former Camp Butner.

4.2 The data collected during the EE/CA field investigation was used to perform a qualitative risk evaluation for assessing the MEC risk to public safety and the environment at the former Camp Butner. The qualitative risk analysis was completed based on the USAESCH MEC Risk Impact Assessment (MECRIA) evaluation tool. Results of the evaluation concluded that the overall explosive public safety risk in Area 1A (flamethrower range) is moderate to high. Public access to the entire site is basically unrestricted.

5.0 ALTERNATIVES CONSIDERED

A non-time-critical removal action (NTCRA) was developed and evaluated to address the public safety risks associated with residual MEC within Area 1A – Flamethrower Range. Several munitions response action alternatives were considered including:

- No DoD Action Indicated (NDAI);
- Institutional Controls (ICs);
- Surface Clearance of MEC; and
- Clearance of MEC to Depth.

6.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

6.1 During the former Camp Butner EE/CA project, public meetings were conducted during project planning and Work Plan development through preparation of the Final EE/CA Report and recommendations. The first Public Meeting was conducted on May 22, 2001 at the Butner-Stem Elementary School as part of the Technical Project Planning (TPP) process. A second Public Meeting was held at the Town of Butner Operations Building (as were all subsequent meetings) on June 26, 2001 to kickoff the

field investigation. Additional Public Meetings were held on April 2, 2002, October 29, 2003 (TCRA only), and November 13, 2003. The public participation process was coordinated with NCDENR.

6.2 A Public Meeting was held December 16, 2003 at the Town of Butner Operations Building located at 205-C West "E" Street to present the conclusions and recommendations of the Draft Final EE/CA to the public and to address any public concern. The meeting marked the beginning of the thirty-day period for public comment which expired (after extension) on January 30, 2004. No public concerns pertaining to the EE/CA recommendations were identified during the meeting nor were any received during the review period. All the requirements for public involvement have been met. A follow-up Public Meeting was held on May 25, 2004 to update the public on the status of the EE/CA and TCRA projects, present groundwater survey information, and kick off the formation of the Restoration Advisory Board (RAB). The RAB will include members of the community, regulatory officials, and USACE, Wilmington District (CESAW) and will make priority recommendations to the USACE for implementation of the EE/CA recommended removal actions.

7.0 COORDINATION SUMMARY

7.1 Project activities for the former Camp Butner EE/CA have been coordinated with the USAESCH, CESAW, NCDENR, EPA, various State of North Carolina agencies, and local (Granville, Person, and Durham County and Town of Butner) government officials. Project Work Plans were reviewed by USAESCH and CESAW with the review and development of the EE/CA Report including NCDENR and EPA. Project documents were made available to project stakeholders and property owners/public via the project website (www.projecthost.com) and the Administrative Record.

7.2 The initial Technical Project Planning (TPP) coordination meeting was conducted in conjunction with the project kickoff Public Meeting on January 10, 2001 to formally introduce the primary project stakeholders to the EE/CA process and solicit input and comment for development of the project WP. Representatives from the NCNG, NCDENR, Town of Butner, Emergency Responders, County Officials, and several State agencies were in attendance. Subsequent TPP meetings were held in conjunction with Public Meetings on June 26, 2001 and April 2, 2002. The culmination of these meetings was project team concurrence on the Final project WP.

7.3 The Draft Final EE/CA was made available to public review initially for a 30-day period in December 16, 2003 and it was opened for comments during the public meetings. During the Work Plan preparation stage the appropriate regulatory bodies including the State Historical Preservation Officer (SHPO) and the U.S. Fish and Wildlife Service were contacted to ensure that historical features, endangered species, and sensitive habitats were not adversely affected by MEC survey and clearance activities.

7.4 The lead regulatory agency, NCDENR, reviewed several versions of the Draft Final EE/CA. Comments received from NCDENR were addressed and resolved via multiple project team meetings held via teleconference as well as in their offices in Raleigh, North Carolina. The Project Delivery Team met with NCDENR before the public meetings in order to ensure concurrence with the recommended munitions response actions. The NCDENR concurs with the recommendations of the Final EE/CA (July 2004). All EPA comments were addressed and the agency has indicated they have no further comments.

Key contacts for state officials included:

State Regulatory Agency – NCDENR

Marti Morgan, P.E. Project Manager

Arthur Shacter, Superfund Section, Division of Waste Management

Dave Lown, Chief of Federal Remediation Branch, Superfund

Federal Regulatory Agency – U.S. EPA

Doug Maddox, EPA HQ, Federal Facilities Restoration and Reuse Office

Kevin Oates, Munitions and Explosives Response, EPA HQ, Federal Facilities Restoration and Reuse Office

Ken Lucas, Remedial Project Manager, North Site Management Branch, EPA Region IV

8.0 SELECTION CRITERIA

The selection criteria used to evaluate the four response action alternatives consist of the effectiveness in reducing the public safety risks, the implementability of the alternative, and the cost of implementing the alternative. The effectiveness criterion involved consideration of four criteria; protection of public safety and the environment, compliance with ARARs, long term effectiveness, and short term effectiveness. The implementability criterion involved consideration of six criteria; technical feasibility, administrative feasibility, availability of services and materials, property owner acceptance, local agency acceptance, and community acceptance. These criteria are discussed further in Section 6 and 7 of the Final EE/CA Report (Parsons, July 2004) and available in the project Administrative Record.

9.0 DESCRIPTION OF SELECTED REMEDIES

9.1 For Area 1A – Flamethrower Range subsurface clearance to depth (inclusive of Site-Wide IC components) is the selected munitions response alternative. Area 1A is included in the Military Munitions Response (MMR) Range Inventory.

9.2 The results of the EE/CA comparative analysis evaluation for Area 1A indicated there is a public safety risk associated with the presence of UXO. Two UXO items were identified within the AOI and a public exposure pathway is complete based on land use.

The two UXO items recovered included a Mk II hand grenade and a M1 practice landmine with spotting charge and fuze. A total of 5 MEC scrap items identified as inert/expended M15 hand grenades were also recovered. Both UXO items and all MEC scrap were found at 10 inches or less below ground surface (bgs). The EE/CA findings suggest that former military land use included grenade training (in addition to flamethrower training) and confirmed the risk of UXO explosive hazards within Area 1A.

9.3 A subsurface removal to depth is selected for the entire 20-acre site. It should be noted that Site-Wide IC components will also be implemented, although not selected as necessary via comparative analysis evaluation, for the entire site to include areas where removal action will be implemented. The overall estimated cost (in 2004 dollars) to implement the selected munitions response action is $448,618. Detailed development of the estimated clearance cost is presented in the Final EE/CA (Parsons, July 2004).

9.4 Table 2 presents the selected munitions response alternative for Area 1A – Flamethrower Range within the former Camp. This alternative was selected following a comparative analysis of alternatives and will provide significant protection to public safety and the human environment. Primary drivers of the selection process were the vertical distribution of UXO and MEC scrap, lack of access restrictions, and planned future land use.

Table 2
Area 1A – Flamethrower Range - Selected Alternative and Clearance Costs

Site	Selected Action	Clearance Acreage	Cost
Site 1A	**Subsurface Clearance to Depth**	20	$448,618

9.5 Based on the estimated costs presented in this Action Memorandum (See Table 2), the appropriate approval level for this project is the Major Subordinate Command (MSC) Commander.

10.0 TRADE OFF ANALYSIS

The alternatives recommended for Area 1A are the best alternatives as determined from the available historical records and data gathered in support of the Final EE/CA Report (Parsons, July 2004). Also, these alternatives were developed in concert with USAESCH, CESAW, NCDENR, EPA, and other project stakeholders. Mitigative measures will be implemented to ensure that no resources are impacted due to the actions proposed.

11.0 RECURRING REVIEWS

A Recurring Review Plan was not part of the EE/CA for this site and therefore has not yet been prepared. As described in Chapter 10 of the Final EE/CA Report, recurring

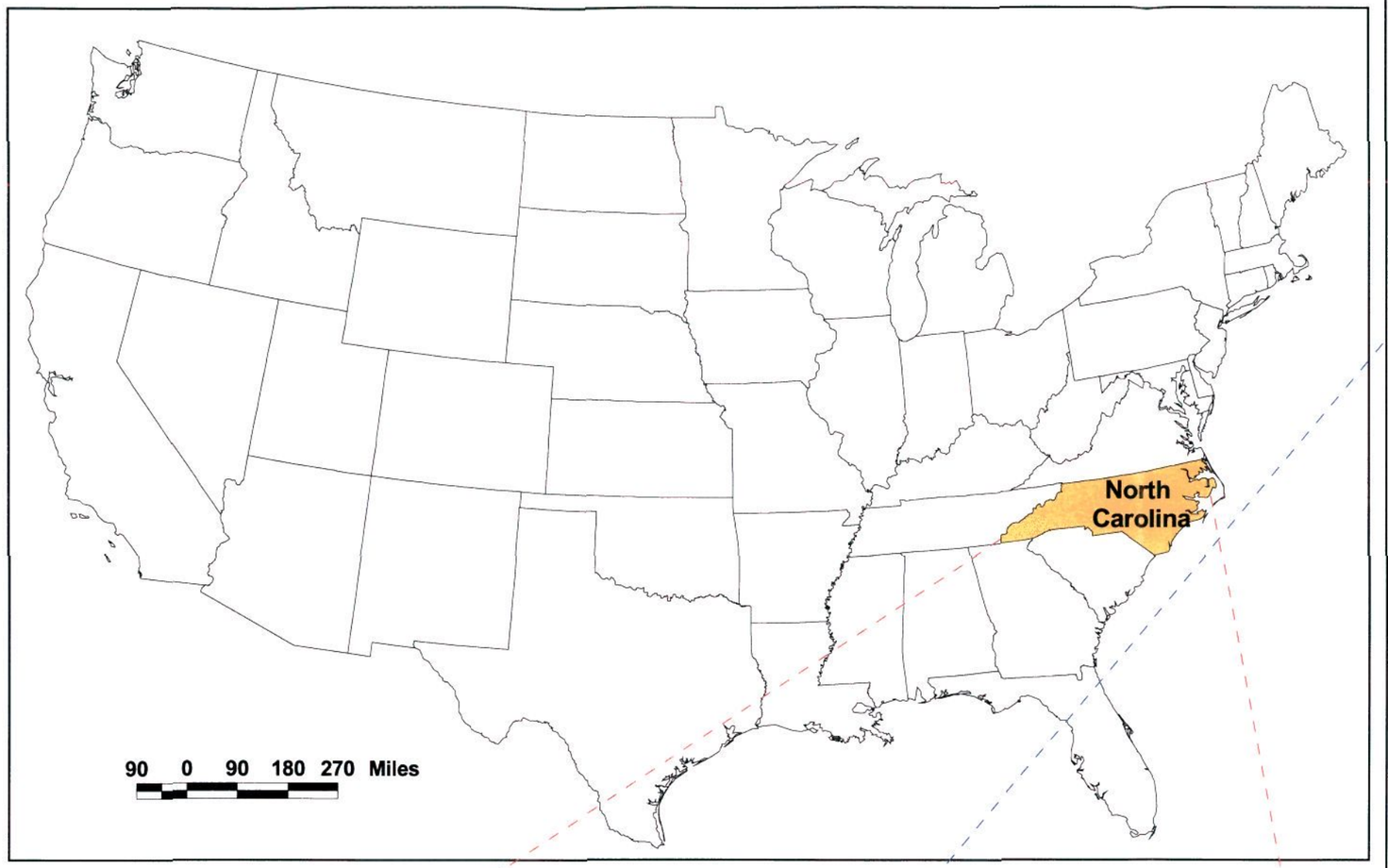
reviews at the former Camp Butner are anticipated to be performed every 5-years after the implementation of the selected munitions response actions. This effort will be performed to determine if the munitions response action for Area 1A (subsurface clearance to depth Site-Wide IC) continues to be protective of human health, safety, and the environment. Recurring reviews will also provide an opportunity to assess the applicability of new technology for addressing previous technical impractibility determinations. The review will evaluate specific factors that may impact the continued effectiveness of the response. These factors may include such things as changes in physical conditions at the former Camp Butner site or changes in public accessibility. The cost to conduct one recurring review is estimated to be approximately $35,000. If no changes have taken place, the AOIs will be continually monitored at the specified intervals.

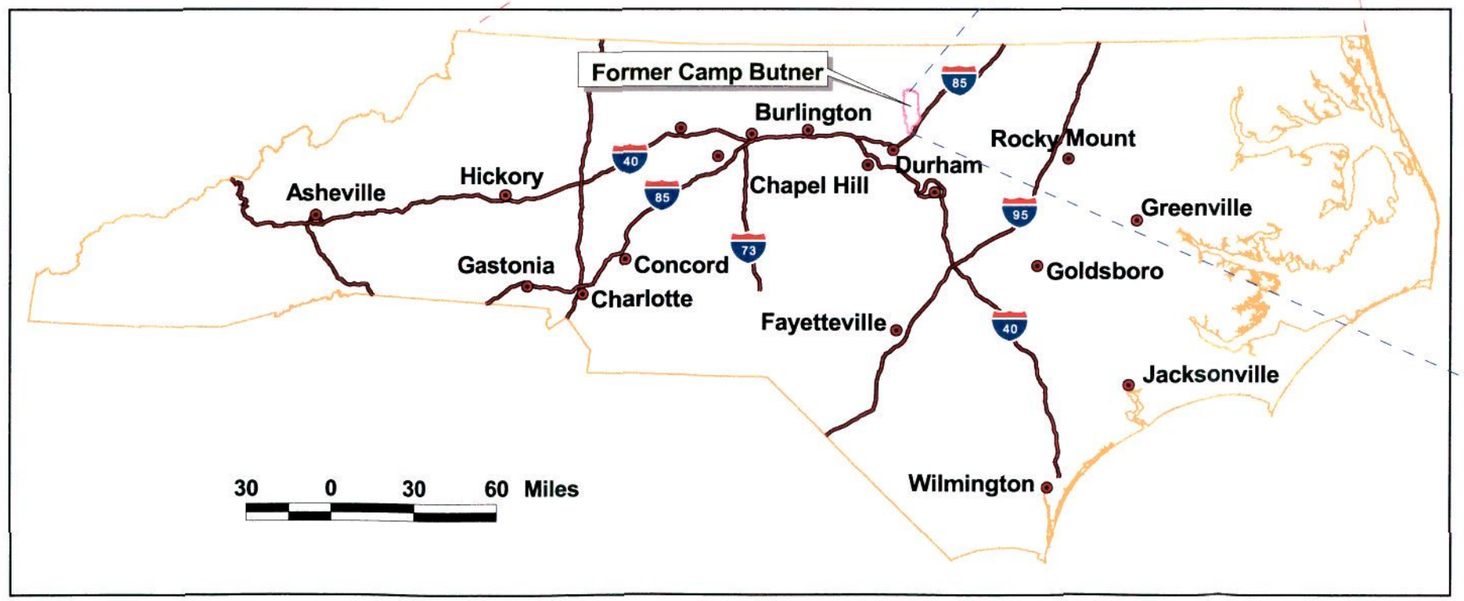
12.0 DOCUMENTATION OF SIGNIFICANT CHANGES

If the actions outlined in this EE/CA Action Memorandum are delayed or not taken at the former Camp Butner, the potential exists of continued and substantial endangerment to public health, welfare, and environment. The pending commercial development (daycare and hospital) will take place in areas likely to have UXO presence. Any significant changes to this document will be notified to the public by USACE.

13.0 RESPONSIVENESS SUMMARY

A responsiveness summary for the public meeting of December 16, 2003 is not necessary as no formal comments were received either at the meeting or during the 30-day public comment period. NCDENR and EPA comments on the Draft Final EE/CA Report were resolved via several project team meetings and teleconferences prior to the Final EE/CA Report issuance in July 2004.





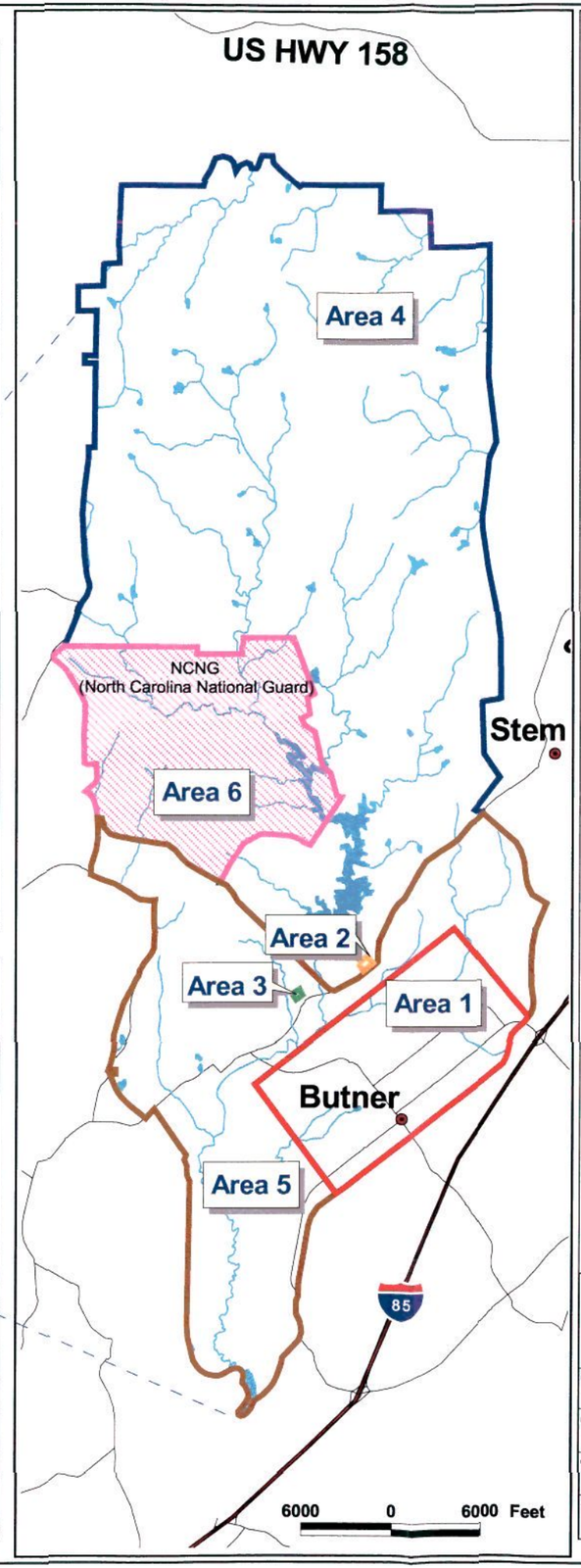


Figure 1

General Location Map

Former Camp Butner
Butner, NC

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PARSONS	U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER
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DRAWN BY: BT	
CHECKED BY: DS	SCALE: As Shown
SUBMITTED BY: DS	DATE: July 2004
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	PAGE: 10

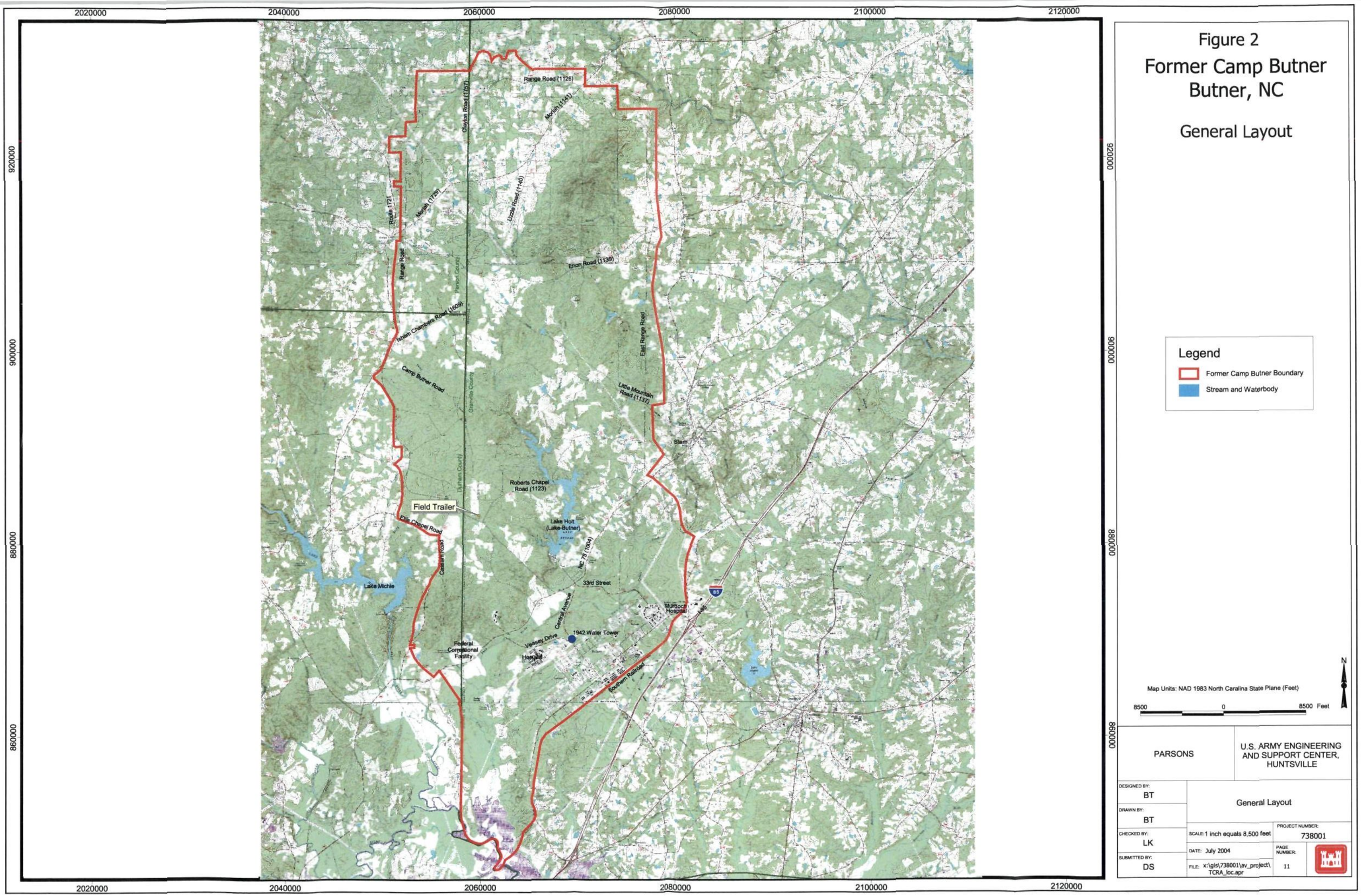

Figure 2

Former Camp Butner
Butner, NC

General Layout

Legend

- Former Camp Butner Boundary
- Stream and Waterbody

Map Units: NAD 1983 North Caralina State Plane (Feet)

8500 0 8500 Feet

N

PARSONS	U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

DESIGNED BY: BT	General Layout		
DRAWN BY: BT			
CHECKED BY: LK	SCALE: 1 inch equals 8,500 feet	PROJECT NUMBER: 738001	
SUBMITTED BY: DS	DATE: July 2004	PAGE NUMBER: 11	
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Figure 3

Selected OE Response Actions

Former Camp Butner
Butner, NC

Area 4

Area 4C

Area 4B

Area 4E

Area 4A

Area 4D

Area 6

Lakeview

Area 1A

Area 5

Mock German Village

RANGE COMPLEX 2

RANGE COMPLEX 1

Area A

Area B

Area C

Area D

Area E

Area F

Range Road

Moriah Road

Erwin Road

Adam Chambers Road

East Range Road

Little Mountain Road

Roberts Chapel Road

Ellis Chapel Road

Cassin Road

33rd Street

Ordnance Receiving Area

Central Avenue

Veasley Drive

24th

85

930000
920000
910000
900000
890000
880000
870000
860000
850000

2050000
2060000
2070000
2080000

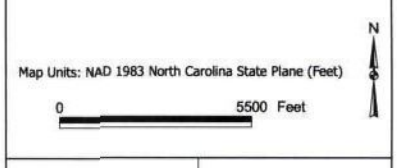
Legend

Areas of Interest

- Areas 4A through 4E, 1A, and Lakeview
- Areas 4 through 6

Recommendation:

- Site Wide IC (Areas 4D, 4E, and 5)
- Subsurface Clearances (Areas 1A, 4A, 4B,4C, and Lakeview)
- Range Complex 1
- Range Complex 2
- Firing Fan
- Stream and Lake
- Road
- Property Deed Restricted Prior to Government Release as "Surface Use Only" (Areas A-F) Due to Extensive Ordnance Presence (See Subchapter 2.3)



Site Location in North Carolina

Map Units: NAD 1983 North Carolina State Plane (Feet)

0 5500 Feet

N

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DESIGNED BY: BT	**Selected OE Response Actions**
DRAWN BY: BT	
CHECKED BY: DS	SCALE: As Shown — PROJECT NUMBER: 738001
SUBMITTED BY: DS	DATE: September 2004 — PAGE: 12
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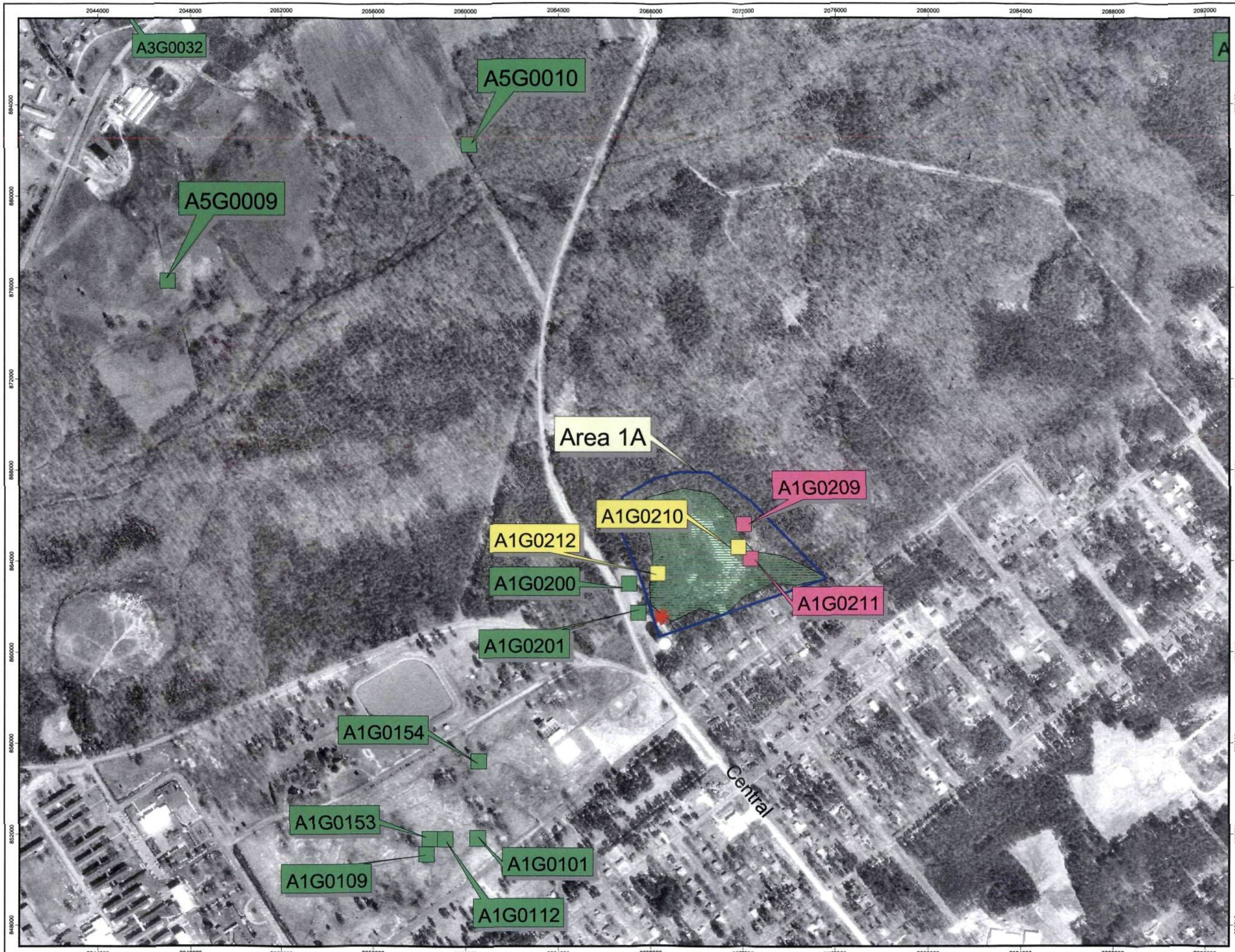
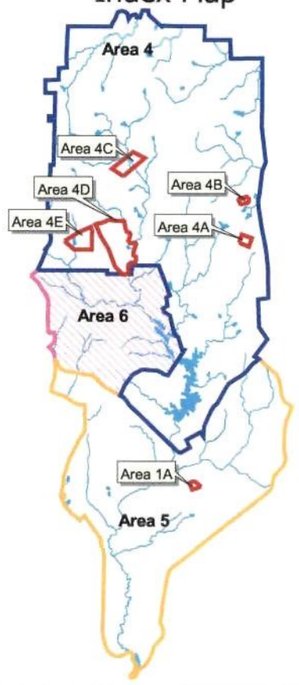


Figure 4

Area 1A - EE/CA
Grid Summary

Former Camp Butner
Butner, NC

Index Map



Legend

100'x100' Grid

- Intrusively Investigated - No OES
- Intrusively Investigated - OES Present/No UXO
- Intrusively Investigated - UXO Present

Aerial Photo Interpretation -
USACE TEC, 2001

- Ground Scar
- Recent Non-EE/CA UXO Findings

Image Source: 1995 Aerial Photo from USGS
Map Units: NAD 1983 North Carolina State Plane (Feet)

600 0 600 Feet

N

PARSONS	U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER
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DRAWN BY: BT	
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