FINAL
SITE SPECIFIC FINAL REPORT

for the

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
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Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

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September 2009

EODT
EOD TECHNOLOGY, INC.

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28 September 2009

U.S. Army Engineering and Support Center
ATTN: Doug Garretson (CEHNC-OE-DC)
4820 University Square
Huntsville, AL 35816-1822

Re: Contract W912DY-04-D-0018, Task Order 0014, MEC Removal Action at the Former Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas

EODT Document Control No.: W1261-4214-37854

Dear Mr. Garretson:

Please find enclosed the Final Site Specific Final Report for the above-referenced project. Additionally, one (1) copy has been forwarded to Ms. Rose Zeiler, LHAAP Site Manager, and seven (7) copies have been sent to Mr. John Lambert, U.S. Army Engineering and Support Center, Tulsa District, for distribution to the regulators. All Performance Work Statement (PWS) requirements were completed to the best of EODT's ability and in accordance with the PWS.

If you have any questions, please don't hesitate to email me at bgentry@eodtl.com or call me at (865) 988-6063.

Sincerely,

EOD TECHNOLOGY, INC.

Brian Gentry
Project Manager

cc: John Lambert, CESWT-EC-ER, USACE Tulsa District
Rose Zeiler, Longhorn Army Ammunition Plant
EODT Project Files

W1261 (37854)/cra

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LIST OF ACRONYMS AND ABBREVIATIONS

BIP	blow-in-place
BRAC	Base Realignment and Closure Commission
CD	Cultural Debris
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLNWR	Caddo Lake National Wildlife Refuge
DDESB	Department of Defense Explosive Safety Board
DID	Data Item Description
DoD	Department of Defense
EE/CA	Engineering Evaluation and Cost Analysis
EODT	EOD Technology, Inc.
ESS	Explosives Safety Submission
FUDS	Formerly Used Defense Sites
HAZWOPER	Hazardous Waste Operations and Emergency Response
HE	high explosive
LHAAP	Longhorn Army Ammunition Plant
LUC	Land Use Control
MD	munitions debris
MEC	Munitions and Explosives of Concern
MPPEH	material potentially presenting an explosive hazard
MRS	Munitions Response Site
NCP	National Contingency Plan
NPL	National Priority Listed
NTCRA	Non Time-critical Removal Action
OB/OD	open burn/open detonation
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PWS	Performance Work Statement
QA	Quality Assurance
QC	Quality Control
RFD	Remote Firing Device
RRD	range-related Debris
SOP	Standard Operating Procedure
SSHP	Site Safety and Health Plan

SUXOS	Senior UXO Supervisor
TAC	Texas Administrative Code
TNT	trinitrotoluene
TP	Technical Paper
USACE	U.S. Army Corps of Engineers
USAESCH	U.S. Army Engineering and Support Center, Huntsville
USFWS	U.S. Fish and Wildlife Services
UTM	Universal Transverse Mercator
UXO	unexploded ordnance
UXOQCS	UXO QC Specialist
UXOSO	UXO Safety Officer

CHAPTER 1
INTRODUCTION

1.1 GENERAL PROJECT DESCRIPTION AND OBJECTIVE

1.1.1 Description/Authorization

Munitions and Explosives of Concern (MEC) are a safety hazard and may constitute an imminent and substantial endangerment to site personnel and the local populace. This removal action at the former Longhorn Army Ammunition Plant (LHAAP), a National Priority Listed (NPL) site, was authorized by the U.S. Army, Base Realignment and Closure Commission (BRAC) Division, as set forth in the Action Memorandum signed 5 December 2007. The work associated with this Non Time-Critical Removal Action (NTCRA) was performed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 104, the National Contingency Plan (NCP), Sections 300.120 (d) and 300.400 (e), and the Action Memorandum dated August 2007. All MEC encountered during execution of this NTCRA were destroyed on-site, e.g., within the MEC investigation grids. Applicable provisions of Chapter 29 of the Code of Federal Regulations (CFR) 1910.120 applied. All activities involving work in the areas listed in the Performance Work Statement (PWS) potentially containing MEC hazards was conducted in full compliance with: U.S. Army Corps of Engineers (USACE), U.S. Army Engineering and Support Center, Huntsville (USAESCH), Department of the Army, state and local requirements regarding personnel, equipment, and procedures, and Department of Defense (DoD) Standard Operating Procedures (SOPs) and safety regulations.

EOD Technology, Inc. (EODT) conducted removal action services at LHAAP near Karnack, Texas, as a result of an Engineering Evaluation/Cost Analysis (EE/CA) conducted in 2007. Authorization for performance of this work was issued under Task Order 0014 of Contract W912DY-04-D-0018 to EODT by USAESCH on 28 September 2007. Appendix A of this report contains the PWS.

1.1.2 Objectives

The objective of this project was to provide all Land Use Controls (LUCs) and implementation of the removal action alternative recommended with the EE/CA and Action Memorandum for the following areas at the former LHAAP, Formerly Used Defense Site (FUDS) property in accordance with this PWS:

a. LHAAP-001-R (Site 27)
b. LHAAP-003-R (Site 54)

1.1.3 Report Organization

This report has been organized in a manner that is consistent with the requirements of the PWS and Data Item Description (DID) MR-030.

1.2 BACKGROUND INFORMATION

1.2.1 Site Location

The former LHAAP is located in east-central Texas in the northeast corner of Harrison County, approximately 14 miles northeast of Marshall, Texas, and approximately 40 miles west of Shreveport, Louisiana, as shown in Figure 1-1. The former LHAAP property occupies approximately 8,493 acres.

1.2.2 Current Site Use

The land use of the property still under U.S. Army ownership is as a closed ammunition plant, surrounded by the Caddo Lake National Wildlife Refuge (CLNWR). The future anticipated use will be as part of the CLNWR and that use will include hunting, fishing, wildlife observation, wildlife photography, wildlife education and wildlife interpretation, all non-intrusive activities.

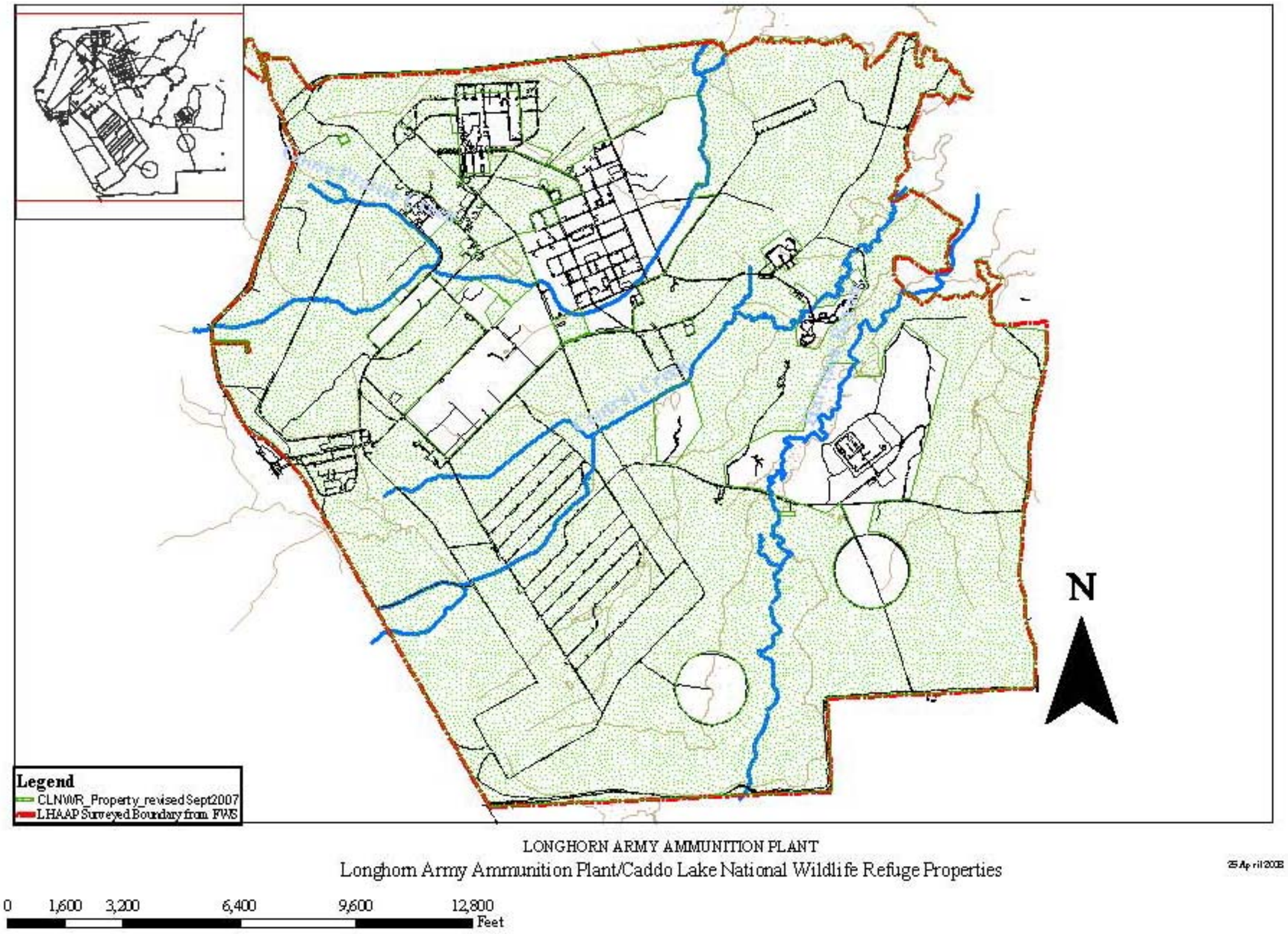
1.3 SITE HISTORY

1.3.1 The former LHAAP was established in October 1942 with the primary mission of producing trinitrotoluene (TNT) flake. TNT production continued until August 1945, when the plant was placed on standby status. Pyrotechnic ammunition (e.g., photoflash bombs, simulators, hand signals, and tracer ammunition) were later manufactured at LHAAP from 1952 until 1956.

1.3.2 A rocket motor facility began operation at LHAAP in November 1955. Production of rocket motors continued to be the primary mission of LHAAP until 1965, when the production of pyrotechnic and illuminating ammunition was reestablished. Through 1994, operations consisted of producing pyrotechnic and propellant mixtures; loading, assembling, and packing activities; accommodating receipt and shipment of containerized cargo; and maintenance or layaway of standby facilities and equipment as they applied to mobilization planning.

1.3.3 LHAAP was declared excess to the Department of the Army's needs and placed in inactive status in 1997. An initial 5,032 acres were transferred to U.S. Fish and Wildlife Services (USFWS) in May 2004. Subsequent transfers increased the total acreage transferred to USFWS to almost 7,000 acres. The Department of the Army holds the remaining property, including Sites 27 and 54, while environmental restoration takes place in preparation for transfer to USFWS.

FIGURE 1-1: FORMER LHAAP SITE LOCATION MAP



1.3.4 A MEC EE/CA performed by CAPE Environmental in 2007 revealed that Site 27, identified as the South Test Area/Bomb Test Area, contained 21 MEC Items (M112 and M123 photoflash cartridges, with 19 discovered in an area suspected of the use of open burning/open detonation [OB/OD] activities although never permitted as an OB/OD Unit; no high explosive [HE] or fuzed military munitions were discovered). Munitions debris (MD) items (remnants of munitions containing no explosive hazards) in Area 27, other than expended photoflash items of the aforementioned MEC types specified, also included numerous munition fragments, some specifically identified as bomb fragments. The EE/CA also revealed Site 54, identified as the Ground Signal Test Area, to contain MEC items (60mm, 81mm, and 4.2″ illumination mortars and mortar candles and CDU 10 components); no HE or fuzed military munitions were discovered. MD items in Area 54, other than expended items of the aforementioned MEC types specified, also included expended 40mm flare, ground illumination signal, and smoke rifle grenade debris.

1.4 STATEMENT OF PROBABILITY OF SOLUTION

The MEC Removal Action at the former LHAAP Site 27 and Site 54 was completed by EODT. The objective of this project was to provide all Land Use Controls (LUCs) and implementation of the removal action alternative recommended with the EE/CA and Action Memorandum for the following areas at the former LHAAP, Formerly Used Defense Site (FUDS) property in accordance with this PWS:

a. LHAAP-001-R (Site 27)
b. LHAAP-003-R (Site 54)

EODT is confident that all potentially hazardous MEC and MD were removed to the depth of detection of the geophysical instruments from the areas (i.e., LHAAP-001-R [Site 27] and LHAAP-003-R [Site 54]) where clearance activities were completed during this removal action.

1.5 TECHNICAL APPROACH

To perform the removal action, EODT performed vegetation removal, grid emplacement (200 ft × 200 ft), grid surface clearance activities and grid mag and dig clearance activities. EODT's professional surveyors subdivided the areas into 200 ft × 200 ft grids. Each grid had a unique grid identification number assigned to it and was identified by the southwest corner stake. EODT established 5-ft sweep lanes within each grid and performed the surface clearance and mag and dig clearance operations. EODT used the handheld Schonstedt GA-52Cx magnetometer, the Valon VMH3CS, and White's XLT metal detectors to detect ferrous and non-ferrous metal anomalies, then used hand tools and mechanical equipment (e.g., hydraulic excavator) to investigate those anomalies. The clearance was followed by, at a minimum of, a

10 percent inspection for quality control (QC) verification of each grid using the Schonstedt GA-52Cx and White's XLT metal detector. All work was performed in accordance with the approved Work Plan, government coordination, and the approved Explosives Safety Submission (ESS).

1.5.1 Technical Approach for Land Use Controls

In order to ensure risks to public health and safety are minimized, a multi-layered approach to LUCs was incorporated. The multi-layer approach is defined as deed restrictions, institutional controls (signage), safety information (pamphlets and safety video), maintenance and monitoring. These LUCs were used as a means of informing the public and protecting property owner by alerting them to the potential MEC hazards present at a site by:

- Identifying and defining the areas that could possibly contain MEC based on the results of the MEC EE/CA performed by CAPE Environmental in 2007.
- Insuring all possible personnel within the site boundaries are made aware of possible safety issues concerning MEC.
- Restricting activities that could result in explosive safety risks.

The following LUCs have been implemented consistent with recommendations of the EE/CA and Action Memorandum:

- Restriction against intrusive activities, including digging.
  This restriction will be recorded in the Harrison County Clerk's Office, with the survey, map, and language as required by the Texas Administrative Code (TAC) Citation 335.569, Appendix III once regulatory concurrence has been obtained.
- Signage at perimeters of Munitions Response Sites (MRSs).
  Signs have been installed at the perimeter of the MRSs and are visible from one to the next, with a maximum spacing of 100 feet, and serve as the physical demarcation of the controlled areas. The signs include warning of the potential presence of UXO and state the restriction against intrusive activities.
- Education program for future refuge visitors, staff, and volunteers.
  This includes informational pamphlets and safety video warning of the potential presence of UXO and presenting examples of MEC that were or may be found at the sites.

CHAPTER 2
DISCUSSION

2.1 GENERAL

2.1.1 Prior to commencement of clearance activities an advanced party arrived at the former LHAAP, Karnack, Texas to establish the site infrastructure, off load and organize equipment and supplies, start brush clearance and civil survey operations.

2.1.2 EODT utilized a local staffing agency (Onsite) to provide local hires to work as unexploded ordnance (UXO) sweep personnel for the surface clearance portion of field operations. EODT followed Department of Defense Explosive Safety Board (DDESB) Technical Paper (TP)-18 to ensure that all personnel received a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) certification, Occupational Safety and Health Administration (OSHA) physical, 3 day site-specific MEC awareness/identification training and equipment training/certification prior to being allowed to work as a UXO sweeper. EODT employed 10 local UXO sweepers, three on each team and one for standby.

2.1.3 The UXO field teams mobilized to the site on 10 August 2008. On 11 August 2008 all field personnel, including local hire sweep personnel were on site and undergoing general and site-specific training to include site indoctrination, safety briefings, and training on the proper use of personal protective equipment (PPE) as instructed by the Site Safety and Health Plan (SSHP). All new and local hire personnel also underwent classroom training and practical field training on all aspects of project to include but not limited to: EODT Policies and Procedures (as applicable), Work Practices and Procedures, Safety Policies and Procedures, Line of Authority, Emergency Procedures, Ordnance Locators, Ordnance Recognition and Hazards, Environmental Hazards and Precautions, Vehicle Safety and Policies, QC, Production Requirements, Site Emergency Recall and Action Plan, Management and Personnel Responsibilities, Ethics, Equal Opportunity, and Sexual Harassment Policy.

2.1.4 Clearance activities began 18 August 2008 and were completed on 21 November 2008. Operational photos are located in Appendix C.

2.2 SURVEYING

2.2.1 A Texas Licensed Professional Land Surveyor (Collins Surveying & Mapping, INC.) established work area boundaries for Site 54, Site 27, and Site 27 OB/OD. All boundary points were marked with wooden stakes and made visible by spray painting and flagging tape. All survey work was carried out using the Universal Transverse Mercator (UTM) system, Zone 13N,

WGS84. The actual acreage investigated for this project was 140.57 acres split into three areas: Site 27 encompassed 61.07 acres to be surface cleared of MEC, Site 27 OB/OD encompassed 13.77 acres to be intrusively cleared of MEC, and Site 54 encompassed 79.50 acres to be surface cleared of MEC,. Refer to Appendix B for site maps of each area investigated.

2.2.2 EODT's professional surveyors subdivided each of these three areas into 200 ft × 200 ft grids. All work was carried out using the NAD 83 UTM. A unique grid identification number was established and marked on each wooden stake located at the southwest corner of each grid. Each stake was made visible by spray painting and flagging tape.

2.3 BRUSH CLEARING

A MEC surface reconnaissance was conducted prior to brush clearing activities. Surveyed stakes were used to mark the boundaries of areas for clearance. EODT subcontractor, Envirogrind, accomplished brush clearing utilizing hand tools and heavy equipment. One inch and below brush was removed to allow for clearance operations to be conducted.

2.4 SURAFCE CLEARANCE OPERATIONS (SITES 27 AND 54)

Prior to conducting the surface clearance activities the EODT UXO Quality Control Specialist (UXOQCS) placed a Test Strip that consisted of seed items placed on the surface but not visible to the naked eye and required that all clearance personnel find 100% of the items. This allowed the UXOQCS to ensure that the clearance personnel were proficient with the equipment being used for the surface clearance and that the equipment being used was working properly.

2.4.1 Three MEC clearance teams conducted a magnetometer-assisted surface clearance, using White's XLT metal detectors, of Sites 27 and 54 by walking in grid lanes (not exceeding 5 ft in width) established within the 200 ft × 200 ft grids, and removed and/or disposed of all surface MEC regardless of size, and material potentially presenting an explosive hazard (MPPEH), MD, cultural debris, and range-related debris (RRD) equal to or greater than 40mm in diameter (width). The surface clearance teams consisted of one UXO Tech III, two UXO Tech IIs, one UXO Tech I, and three UXO sweep personnel (local hires). During the surface clearance all anomalies identified by the metal detectors were investigated, and if that anomaly was protruding from the surface, that anomaly was investigated and removed. All MEC/MPPEH that could not be safely moved was destroyed in place. Items deemed safe to move were moved to a consolidation area within the MRS for destruction.

2.4.2 The surface clearance operations for Sites 27 and 54 removed 102 MEC/MPPEH items and one inert item. Inert is defined as an item never having contained explosive material or,

once demolition has been performed on the item, that no explosive material remains. Within Site 54 there were 12 MEC/MPPEH items and one inert item located and destroyed. Within Site 27 there were 90 MEC/MPPEH items located and destroyed. See Appendix B Figures B-4 and B-5 for MEC/MPPEH locations for the surface clearance operation.

2.4.3 During the course of the surface clearance operations, the surface clearance teams removed enormous amounts of MD and cultural debris. At Site 54 the surface clearance teams removed 6,880 pounds of MD and 5,981 pounds of cultural debris. For Site 27 (the surface clearance portion) the EODT surface clearance teams removed 6,742 pounds of MD and 154 pounds of cultural debris. See Appendix F for the Grid Tracking Log and Appendix L for the individual grid sheets showing the amounts of MD and cultural debris that was removed from each grid.

2.4.4 During the course of the surface clearance operations for Sites 27 and 54, EODT surface clearance teams identified Cultural Debris (CD). This included large CD, such as concrete foundations, metal fence posts, power poles, and sandbag structures. The surface clearance teams investigated these areas visually insuring that no MEC/MPPEH/MD were present and left the CD in place. The EODT UXOQCS and USAESCH onsite safety representative were notified and shown the CD locations that were going to be left in place. EODT did remove over 7,000 pounds of small CD (i.e., barbed wire, scrap metal, etc.).

2.5 INTRUSIVE OPERATIONS (SITE 27 OB/OD)

Prior to conducting the subsurface clearance activities the EODT UXOQCS placed a Test Strip that consisted of seed items placed below the surface. The seed items were buried at various depths and it was required that all clearance personnel find 100% of the items. This allowed the UXOQCS to ensure that the clearance personnel were proficient with the equipment being used for the subsurface clearance and that the equipment being used was working properly. No UXO sweep personnel were used for this clearance.

2.5.1 During the course of the project, it was identified by the EODT Senior UXO Specialist (SUXOS), UXOQCS, and the USAESCH on site safety representative that the original OB/OD boundaries did not encompass the entire footprint of the OB/OD. The OB/OD boundary was identified on the ground and the boundaries were refined using the criteria of geophysical anomaly data and surface scarring indicative of OB/OD activities. The adjusted OB/OD acreage was increased from 11.02 acres to 13.77 acres. The new boundaries were then redefined by the state licensed surveyor (Collins Surveying & Mapping, Inc.) and the intrusive operations were conducted within the newly defined boundary.

2.5.2 The MEC clearance team conducted intrusive clearance operations within the OB/OD using handheld magnetometers to locate and investigate all ferrous and non-ferrous metal anomalies and removed and/or disposed of all surface and subsurface MEC regardless of size, and MPPEH, MD, cultural debris, and RRD equal to or greater than 40mm in diameter (width). The MEC clearance team consisted of one UXO Tech III, 3 UXO Tech II's and 3 UXO Tech I's. The Vallon VMH3CS and Whites XLT metal detectors were used to detect surface and subsurface anomalies. Schonstedt GA-52Cx magnetometers were used to verify deeper ferrous anomalies that were detected. As each anomaly was located, the UXO personnel excavated the anomaly until the item was located, identified, and a magnetic signature was no longer detectable at the anomaly location. Excavations were conducted with hand tools, such as long handled shovels or pick axes, or earth moving equipment, such as a small excavator. All MEC/MPPEH encountered were explosively destroyed to verify that no residual explosive hazard existed. See Table 2-1 in Section 2.8 for items that were explosively investigated.

2.5.3 The intrusive clearance for the OB/OD area within Site 27 investigated and explosively investigated 294 MEC/MPPEH items and 14 inert items. See Appendix B Figures B-4 and B-5 for MEC/MPPEH locations within the OB/OD.

2.5.4 The intrusive clearance for the OB/OD area within Site 27 investigated 46,242 anomalies that produced over 15,397 pounds of MD and 1,722 pounds of cultural debris. See Appendix F for the Grid Tracking Log and Appendix L for the individual grid sheets showing the amounts of MD and cultural debris that was removed from each grid.

2.5.5 During the intrusive clearance for the OB/OD area within Site 27 the MEC clearance team discovered a previous demolition site in grid F06 that when investigated uncovered 13 expended (inert) M485, 155mm illumination projectiles and numerous expended illumination canisters. The previous demolition site was investigated 20 feet wide and 4 feet deep. Once the MEC clearance team reached a depth of 4 feet, intrusive investigations were ceased. The UXOQCS and USAESCH OE safety representative were contacted and shown the area. The UXOQCS and UXO Clearance Team investigated the area beyond four (4) feet and determined that all the large anomalies had been removed; the USAESCH OE safety representative determined that no further investigation was required. The coordinates of the previous demolition pit are x67' and y10' for the center of the pit. See Appendix B, Figure B-8 for the detailed drawing of the demolition site.

2.6 DEMOLITION OPERATIONS

During the course for clearance operations EODT performed ten demolition events (explosive investigations). Non-electric demolition procedures in conjunction with the Remote Firing Device (RFD) were employed to maintain positive control during demolition operations. EODT communicated and coordinated with local authorities in accordance with the Work Plan during demolition operations. All operations were conducted using EODT SOPs, safety measures, and the approved ESS. The SUXOS Log, Demo Shot Records, and Explosives Accountability Records are located in Appendices D, H, and I respectively. All MEC items encountered were destroyed using the "blow-in-place" (BIP) method following approved demolition procedures.

2.7 MEC/MUNITIONS DEBRIS DISPOSITION

All MPPEH found was inspected using EODT's five-step inspection process as described in EODT SOP 120 and the Work Plan to positively confirm the presence, or absence, of MEC. All MEC items were destroyed by demolition using BIP procedures. All debris was consolidated and relocated to the site lay-down area and was stored in approved containers, inspected, verified and certified, and shipped off site for final disposition. EODT estimates that 28,980 pounds of MD and 2,100 pounds of CD have been collected for this removal action.

2.8 INVESTIGATION RESULTS

During the course of surface sweeps and intrusive operations, QC and Quality Assurance (QA) operations were conducted resulting in two QC failures and no QA failures reported. Additionally, 396 MEC items requiring disposal and 15 inert items required explosive demilitarizing (see Table 2-1) were recovered. Appendix C shows photographs of all MEC items and some of the MD discovered in each clearance area. The 396 MEC items were disposed of in accordance with the Work Plan. See Appendix H for supporting documentation. A list of MEC items located and disposed of is present in Table 2-1. Additionally, EODT submitted a statement of MEC removal and the Grid Tracking Log to USACE showing the

TABLE 2-1: MEC SUMMARY/INERT ITEMS

Item Quantity	MEC Item Description
2	M585 40mm Ground Illumination Rds.
1	M485 155mm Projectile Illumination Candle
2	M583A1 40mm Rds.
1	M206 Flare
4	M127 Flares
2	Illumination Candles
145	M62 Illumination Flares
237	M112 Illumination Flares
1	M123 Flares
1	M12 Cartridge
Total = 396	
Item Quantity	**Inert Item Description**
2	M335 4.2" Illumination Mortars
13	M485 155mm Illumination Projectiles
Total = 15	

dig results of each grid (see Appendix F). A total of 36,876 pounds of certified scrap was relocated to the approved scrap location.

2.9 QC AND QA RESULTS

During the course of MEC investigation, the EODT UXOQCS and the USAESCH QA representative conducted quality inspections of Site 54, Site 27, and Site 27 OB/OD. EODT was required to remove MEC and MPPEH (to include MD and RRD as indicated in Table 1 of the PWS). EODT UXOQCS inspected, at a minimum, 10% of each grid prior to turning the grid over to the USACE QA representative. The EODT UXOQCS found two deficiencies in Site 54 and zero deficiencies in Site 27, and Site 27 OB/OD with the work that was performed by the UXO surface clearance and intrusive clearance teams. The USACE QA representative found zero deficiencies in Site 54, Site 27, and Site 27 OB/OD with the work that was performed by the UXO surface clearance and intrusive clearance teams. The two QC grids that failed were reworked and underwent an additional QC inspection prior to be submitted for QA inspection. See Appendix J for QA 948 Forms.

2.9.1 The EODT UXOQCS developed checklists for all phases of work being conducted at the former LHAAP. These checklists allowed for the UXOQCS to have a guide for inspecting all aspects of the MEC removal process. The checklists also provided the MEC clearance teams the proper procedures for performing each task. The UXOQCS utilized the three phases of control for inspection purposes for all field activities. Prior to the field personnel performing any process in the clearance plan a preparatory inspection was conducted by the UXOQCS. During this phase of inspections the UXOQCS reviewed the section of the Work Plan, SOP, and site developed checklists with the team and ensured that everyone understood the process. The second phase of inspection is called the initial inspection. This inspection occurred soon after the team started the process. This inspection helped ensure that the team was following the Work Plan, SOPs, and site developed checklists and also gave the team an opportunity to point out better, safer, and quicker practices that were used to increase production and/or perform safer, more efficient operations. The third phase of inspection is called the follow-up inspection. This inspection occurred daily and weekly and was primarily used to ensure that the correct procedures were being used to complete the process. Follow-up inspections were written up formally or noted in the Daily UXOQCS Log.

2.9.2 Prior to clearance operations beginning the UXOQCS placed seed items at a minimum of 1 per acre within the boundaries of the clearance areas. During the course of the clearance 100% of the seed items were located and turned into the UXOQCS. See Appendix E for the Seed Tracking Log.

2.10 LAND USE CONTROL (LUC) SUMMARY

The following controls have been implemented:

- Restriction against intrusive activities, including digging.
  This restriction will be recorded in the Harrison County Clerk's Office, with the survey, map, and language as required by the TAC Citation 335.569, Appendix III once regulatory concurrence has been obtained.
- Signage at perimeters of MRSs.
  Signs have been installed at the perimeter of the MRSs and are visible from one to the next, with a maximum spacing of 100 feet, and serve as the physical demarcation of the controlled areas. The signs include a warning of the potential presence of UXO and state the restriction against intrusive activities. See Appendix N, Figure N-4 UXO Awareness Sign.
- Education program for future refuge visitors, staff, and volunteers.
  This includes 500 informational safety pamphlets and a 5 minute safety video warning of the potential presence of UXO and presenting examples of MEC that was or may be found at the sites. See Appendix N for the informational safety pamphlet and the five (5) minute Safety Video DVD.

2.11 ARCHEOLOGICAL SITES AND ENVIRONMENTALLY SENSITIVE AREAS

No archeological sites or environmentally sensitive areas were encountered.

2.12 SITE SAFETY

2.12.1 The projects UXO Safety Officer (UXOSO) monitored site safety on a daily basis to verify procedures and ensure compliance with the Work Plan, the SSHP, and applicable OSHA regulations. Each morning prior to the start of work a site-specific safety briefing was held and attended by all personnel working at the site. All operations to include demolitions were carried out with the highest regard to safety. See Appendix G for the Safety Log and Safety Reports.

2.12.2 During the course of the project, EODT encountered and addressed several safety concerns. EODT field personnel encountered numerous poisonous water snakes in the swamp area located in the northeast corner of Site 27. EODT field personnel were required to wear plastic snake chaps while working in the area where the water moccasins could be present. Poison Ivy was also present at both sites. Two personnel had to go to the hospital after duty hours to receive cortisone shots to help relieve the poison ivy that they came into contact with. The EODT UXOSO spent numerous hours developing procedures while in the field to limit the possibility of Poison Ivy exposure.

2.13 EXPOSURE DATA

2.13.1 EODT reported zero on-the-job accidents. There were no safety violations, accident reports, or corrective actions. Safety documentation is included in Appendix G of this report.

2.13.2 Personnel exposure data is summarized in Table 2-2.

TABLE 2-2: FIELD WORK ON SITE

EODT Man-Hours Worked on Site	On-The-Job Accident	Lost Work Days Resulting From On-The-Job-Accident
10,611.5	0	0

2.14 PROJECT SUMMARY AND OBSTACLES

During the course of the project, EODT met the performance requirements for surface clearance, sub-surface clearance, and LUC activities in Site 54, Site 27, and Site 27 OB/OD. The significant obstacle EODT encountered during the course of this project was an unanticipated high anomaly count during both surface (9,173 Site 54 / 8,989 Site 27) and subsurface clearance operations (46,242 Site 27 OB/OD). The project also encountered some weather-related and nature-related obstacles which included two hurricanes, a high number of poisonous snakes, and an abundant amount of Poison Ivy.

2.15 PROJECT CONCLUSION

The objective of this project was to provide all Munitions Response services necessary to remove MEC and MPPEH, including MD and RRD from the surface of Sites 54 and 27, the subsurface clearance of Site 27's open burn/open detonation (OB/OD), and the preparation of deed recordation language identifying LUCs for entry into the County Records consistent with Texas Administration Code requirements for the Longhorn Army Ammunition Plant. See Appendix B Figure B-1 for the site locations. EODT performed the Munitions Response services required without any USAESCH QA deficiencies. In accordance with the PWS Task 8 EODT was required to develop the LUCs, develop the LUC design and LUC Plan consistent with the Memorandum of the Office of the Deputy Assistant Secretary of the Army: CERCLA ROD and Post-ROD Policy, 16 January 2004 (Navy principles for Specifying LUCs). EODT was also required to place UXO awareness signs around the boundaries of Sites 27 and 54. EODT placed the UXO awareness signs every 100' or line of sight and the USAESCH QA representative found no deficiencies. Under Task 8 EODT was also required to develop 500 Safety pamphlets and a 5 minute safety awareness video. EODT has provided the safety pamphlets and the safety video and it has been accepted by the USAESCH PM. EODT has met all the requirements of Task Order 0014 of Contract W912DY-04-D-0018.

CHAPTER 3
REFERENCES

3.1 Comprehensive Environmental Response, Compensation, and Liability Act, Section 104

3.2 National Contingency Plan, Section 300.120(d)

3.3 National Contingency Plan, Section 300.400(e)

3.4 Chapter 29 of the Code of Federal Regulations 1910.120

3.5 Data Item Description MR-030

3.6 Engineering Evaluation and Cost Analysis, Parsons, 2006

3.7 Standard Operating Procedure 120 Munitions and Explosives of Concern Response Actions, EOD Technology, Inc.

3.8 MIL-STD-1916

3.9 Data Item Description MR-005-07

3.10 Sampling and Analysis Plan, CAPE, 2007

3.11 U.S. EPA Test Methods for Evaluating Solid Waste; Physical/Chemical Methods, EPA 530/SW-846, Third Edition with current revisions, June 1997

3.12 Chapter 40 of the Code of Federal Regulations 261.24

3.13 Appendix E Munitions Constituents Sampling and Analysis Plan, CAPE Environmental Management, Inc., October 2007

3.14 Assessment of Sampling Error Associated With Collection and Analysis of Soil Samples at Explosive Contaminated Sites, SR-96-15, CRREL, 1996

3.15 DDESB TP-18

3.16 Texas Administrative Code (TAC) for Deed Recordation Requirements

APPENDIX A
PERFORMANCE WORK STATEMENT

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX A
PERFORMANCE WORK STATEMENT

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE: J	PAGE OF PAGES: 1 | 22
2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE: 06-Nov-2008	4. REQUISITION/PURCHASE REQ. NO.: SEE SCHEDULE		5. PROJECT NO.(If applicable)

6. ISSUED BY	CODE: W912DY	7. ADMINISTERED BY (If other than item 6)	CODE: W912DY
US ARMY ENGINEERING & SUPPORT CENTER CEHNC-CT 4820 UNIVERSITY SQUARE HUNTSVILLE AL 35816-1822		DIRECTORATE OF CONTRACTING - HNC ATTN: SARAH TIERNEY 256-895-1219 HUNTSVILLE AL 35807	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) EOD TECHNOLOGY, INC MATT KAYE 2229 OLD HWY 95 LENOIR CITY TN 37771-6747		9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
	X	10A. MOD. OF CONTRACT/ORDER NO. W912DY-04-D-0018-0014
CODE 0NEH5 FACILITY CODE	X	10B. DATED (SEE ITEM 13) 28-Sep-2007

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer ☐ is extended, ☐ is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
See Schedule

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

☐ A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

☐ B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

☒ C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
FAR 52.243-4, Changes

☐ D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
Modification Control Number: a0ctbsmt083634
See Continuation Page.

See Continuation Page.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of Contracting Officer)	16C. DATE SIGNED

EXCEPTION TO SF 30
APPROVED BY OIRM 11-84

30-105-04

STANDARD FORM 30 (Rev. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

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SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION A - SOLICITATION/CONTRACT FORM

The total cost of this contract was increased by $37,434.80 from $801,487.55 to $838,922.35.

The following have been added by full text:

MOD 01 NARRATIVE

The purpose of modification 01 to task order 0014 is to incorporate Revision 3 of the Performance Work Statement (PWS) dated November 4, 2008. All changes to the PWS are indicated in bold type. As a result of this PWS Revision, Tasks 3 and 6 are affected as follows:

(1) Task 3, Surface Clearance: The total acreage for Task 3 is decreased by 6.95, from 147.52, to 140.57. As a result the total price for this task is decreased by $18,487.00, from $436,470.18 to $417,983.18.

(2) Task 6, Clearance of OB/OD Area: The total acreage for Task 6 is decreased by 0.46, from 11.48 to 11.02. As a result the total price for this task is decreased by $11,233.20, from $305,568.68 to $294,335.48.

(3) Task 6a, FUP for Clearance of OB/OD Area: 2.75 additional acres are funded at a unit price of $24,420.00 for a total amount of $67,155.00.

As a result of this modification, the total funded amount of the Task Order is increased by $37,434.80, from $801,487.55 to $838,922.35. All changes are shown in the table below in bold.

Task, Title, Type	Qty	Unit	Price	Funded
1, Work Plan, FFP	1.00	Ea	$7,539.06	$7,539.06
2, Final Report, FFP	1.00	Ea	$9,028.01	$9,028.01
3, Surface Clearance (**140.57** acres), FFP	1.00	Ea	**$417,983.18**	**$417,983.18**
3a, One each additional acre, FUP	1.00	Ea	$2,660.00	
4, Clearance of Site 27 (68 acres), FFP, Optional	1.00	Ea	$637,732.22	$0.00
4a, One each additional acre, FUP	1.00	Ea	$8,689.00	
5, Clearance of Site 54 (80 acres), FFP, Optional	1.00	Ea	$616,708.53	$0.00
5a, One each additional acre, FUP	1.00	Ea	$7,255.00	
6, Clearance of OB/OD Area (**11.02** acres), FFP	1.00	Ea	**$294,335.48**	**$294,335.48**
6a, One each additional acre, FUP	**2.75**	Ea	$24,420.00	**$67,155.00**
7, Perimeter Fence Installation, FFP, Optional	1.00	Ea	$17,446.39	$0.00
7a, One each additional linear foot, FUP	1.00	Ea	$7.11	
8, Land Use Controls, FFP	1.00	Ea	$42,881.62	$42,881.62
			Total	**$838,922.35**

The completion date for this Task Order is extended from 31 December 2008 to 30 April 2009. No other changes have been made.

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SECTION B - SUPPLIES OR SERVICES AND PRICES

CLIN 0003

The CLIN extended description has changed from Surface Clearance (147.52 acres) to Surface Clearance (140.57 acres).

The unit price amount has decreased by $18,487.00 from $436,470.18 to $417,983.18.

The total cost of this line item has decreased by $18,487.00 from $436,470.18 to $417,983.18.

CLIN 0004

The CLIN extended description has changed from Clearance of OB/OD Area (11.48 acres) to Clearance of OB/OD Area (11.02 acres).

The unit price amount has decreased by $11,233.20 from $305,568.68 to $294,335.48.

The total cost of this line item has decreased by $11,233.20 from $305,568.68 to $294,335.48.

CLIN 0006 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0006		2.75	Each	$24,420.00	$67,155.00
	Task 6a FFP Clearance of OB/OD Area FUP (2.75 acres) FOB: Destination PURCHASE REQUEST NUMBER: W31RYO83103631				
				MAX NET AMT	$67,155.00
	ACRN AB CIN: W31RYO831036310001				$67,155.00

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SECTION C - DESCRIPTIONS AND SPECIFICATIONS

The following have been added by full text:

Performance Work Statement (PWS)
Removal Action, Former Longhorn Army Ammunition Plant, Karnack, Texas
Revision 3, November 5, 2008

The purpose of Revision 3 is to affect the following:
- Removes the provision for mobilization/demobilization costs to be provided for Tasks 3 and Task 6 as requested in Revision 2 of the PWS.
- Revises clearance area requirements identified in Tasks 3 and 6 to be consistent with civil survey results provided by the Contractor. These changes result in an overall reduction of 6.95 acres for Task 3 and an increase of 2.29 acres for Task 6.
- The clearance area required by Task 6 was previously identified as Exhibit A, which has been superseded by Site 27 – Adjusted OB/OD Area Map.
See strikethroughs and bolded print for specific changes.

1.0 Performance Objective. The objective of this project is to provide all Munitions Response (MR) services necessary to remove Munitions and Explosives of Concern (MEC) and Material Potentially Presenting an Explosive Hazard (MPPEH), including Munitions Debris (MD)and range related debris, from specific areas of the Longhorn Army Ammunition Plant (See Exhibits A and B attached).

2.0 Introduction. Munitions and Explosives of Concern (MEC) are a safety hazard and may constitute an imminent and substantial endangerment to site personnel. All MEC encountered during this munitions response shall be destroyed on-site. Applicable provisions of Chapter 29 of the Code of Federal Regulations (CFR) 1910.120 apply. All activities involving work in areas potentially containing MEC hazards shall be conducted in full compliance with United States Army Corps of Engineers (USACE), United States Army Engineering and Support Center Huntsville (USAESCH), Department of the Army (DA), state and local requirements regarding personnel, equipment and procedures, and Department of Defense (DOD) Standard Operating Procedures (SOPs) and safety regulations.

Due to the inherent risk associated with MEC operations, UXO-qualified personnel shall be limited to a 50-hour workweek consisting of a maximum of 40 hours of munitions response actions. No single workday shall exceed ten (10) hours. Forty-eight (48) hours must separate each MEC field operation workweek. These work restrictions apply only to MEC personnel.

2.1 Project Authorization. The DOD established the Military Munitions Response Program (MMRP) within the Defense Environmental Restoration Program (DERP) in September 2001 in recognition of the requirements and the complexity posed at MMRP sites. DOD guidance directs that MMRP actions be conducted within the framework of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

This action is funded by the U.S. Army Environmental Command to restore excess property managed by the Base Realignment and Closure Commission (BRAC). The action is taken in accordance with the National Contingency Plan, 40 Code of Federal Regulations (CFR) 300, Section 120 in which DOD is identified as the removal response authority for weapons and munitions under the jurisdiction, custody, or control of the DOD.

LHAAP became a National Priority Listed (NPL) site in 1990 and entered into a Federal Facilities Agreement with EPA Region 6 and TCEQ (formerly TWC) in 1991. Work on this project will be coordinated with the Longhorn Army Ammunition Plant Site Manager. The U.S. Army BRAC is the lead DOD organization for execution and oversight of investigation and implementation of remedial activities at the former Longhorn Army Ammunition Plant (LHAAP).

2.2 Site Location. The former LHAAP is located in east-central Texas in the northeastern corner of Harrison County, approximately 14 miles northeast of Marshall, Texas, and approximately 40 miles west of Shreveport, Louisiana.

2.3 Site History. LHAAP was established in October 1942 with the primary mission of producing trinitrotoluene (TNT) flake. TNT production continued until August 1945 when the plant went on standby status. Pyrotechnic ammunition (e.g., photoflash bombs, simulators, hand signals, and tracer ammunition) were manufactured at LHAAP from 1952 until 1956.

The LHAAP rocket motor facility began operation in November 1955. Production of rocket motors continued at LHAAP until 1965, when the production of pyrotechnic and illuminating ammunition was reestablished. Through 1994, operations consisted of producing pyrotechnic and propellant mixtures; loading, assembling, and packing activities; accommodating receipt and shipment of containerized cargo; and maintenance and/or layaway of standby facilities and equipment.

LHAAP was declared excess and placed in inactive status in 1997.

2.4 Chemical Warfare Materiel (CWM). This site is not suspected of containing CWM. However, during conventional MEC operations, if the Contractor identifies or suspects CWM, the Contractor shall immediately withdraw upwind from the work area and contact the contracting officer and the appropriate point of contact in the site specific Removal Action Work Plan (RAWP)/Accident Prevention Plan (APP). The Contractor shall secure the area and provide two personnel located upwind of the suspect CWM to secure the site until relieved by the Department of the Army emergency response personnel. Additional support may be required by the emergency response personnel, e.g., construction of blast mitigation controls. Additional reporting instructions are contained in CEMP-CE Memorandum, Notification Procedures for Discovery of Recovered Chemical Warfare Materiel (RCWM) During US Army Corps of Engineers (USACE) Projects, http://www.hnd.usace.army.mil/oew/policy/IntGuidRegs/RCWM%20Notification%20memo_w_encl23%20April%2004.pdf.

2.5 Improved Conventional Munitions. The site is not suspected to contain Improved Conventional Munitions (ICM). If suspect ICM are encountered during any phase of site activities, which are not considered to be practice ICM, the Contractor shall immediately withdraw from the work area, secure the site, and contact the US Army Engineering Support Center Huntsville (USAESCH) Ordnance and Explosives (OE) Safety Office for assistance and guidance.

2.6 Required Safety Gear. The Contractor shall provide all required safety equipment such as first aid and eyewash kits, fire extinguishers, safety glasses, Wet-Bulb Globe Temperature (WBGT) instrument, personal monitoring devices, etc. to ensure compliance with EM 385-1-1 and 385-1-95a as appropriate.

2.7 Quality Control:

2.7.1 Task Order Quality Management: The Contractor shall implement quality control (QC) processes as defined in a Quality Control Plan (QCP). The Contractor is responsible for ensuring that all work under the contract is of the quality that meets contract requirements. The QCP shall be detailed and comprehensive and shall cover all aspects of the task order activities impacting quality of deliverables and services. The Contractor shall ensure that QC documentation is maintained and available for Government inspection throughout the duration of field activities, and shall be provided in the Final Report(s). The Contractors QCP shall be included in the RAWP.

2.7.2 Quality Assurance: The Government will perform quality assurance (QA) of the Contractor's performance under this task order using the method of surveillance specified in the Quality Assurance Surveillance Plan (QASP). The specific surveillance tasks performed under the surveillance plan will be defined following acceptance of the QCP. The Government reserves the right to modify the surveillance tasks in the QASP at any time. The Government reserves the right to perform QA inspections at any time. QA failure can be defined as workmanship or work products not complying with the RAWP, Performance Work Statement (PWS), or not meeting project needs and/or objectives. Failure can also be defined as workmanship not complying with basic safety concepts and other industry safety practices. If any Government QA review identifies a process failure, a workmanship failure, or a

work product failure the Contractor will be issued a Corrective Action Request (CAR). QA workmanship failures include: (1) the Contractor's failure to demonstrate QC procedures and objectives as contained within the approved QCP, and (2) the Contractor failing to remove an anomaly that can not be discriminated from an explosive hazard to 11 diameters (or widths) depth (up to the specified clearance depth), excluding anomaly sources that have been identified by the Contractor and have been left in place. A QA work product failure is defined as the recovery of an anomaly by the Government to 11 diameters (or widths) depth (up to the specified clearance depth) during the QA process that is found to contain an explosive hazard. The discovery of a workmanship failure relating to the failure to remove an anomaly that cannot be discriminated from an explosive hazard as described above, or the discovery of a work product failure as described above shall additionally result in grid failure. Upon issuance of a CAR, the Contractor shall provide full documentation detailing the root cause of the failure, why it was not detected in the Contractor's QC Program, and how the problem was corrected.

2.7.3 Re-Performance: Any service or submittal performed that does not meet task order requirements shall be corrected or re-performed by the Contractor and at no additional cost to the Government. If the Contractor performs any task unsatisfactorily and all defects are not corrected, the Government reserves the right to terminate the PWS for default. In addition, the Government reserves its rights under FAR clause 52.246-4, Inspection of Services – Fixed Price, for further remedies concerning a Contractor's failure to perform in conformance with contract requirements.

2.8 Site Access. Site access must be coordinated and approved by the Army prior to site entry.

2.9 Notification. A 14 day notification must be provided to the Army prior to any field activities.

3.0 General Conditions.

a. The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to:

(1) conditions bearing upon transportation, disposal, handling, and storage of materials, explosives, or scrap;

(2) the availability of labor, facilities, water, electric power, communications, and roads;

(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;

(4) the conformation and conditions of the ground, soil, geology, and vegetation (type, height, density) and the distribution of each;

(5) the character of equipment and facilities needed preliminary to and during work performance;

(6) the character, quality, and quantity of surface and subsurface anomalies, materials and obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government as well as from the exploratory work that the Government expected the contractor to performed during the site inspection (see a description herein) including but not limited to ferrous or non-ferrous anomalies, cultural debris, cultural features, site construction features, discarded military munitions (DMM), material potentially presenting and explosive hazard (MPPEH), burial pits, munitions and explosives of concern (MEC), munitions constituents (MC), munitions debris (MD), range-related debris, small arms ammunition, hot rocks, metallic debris, and/or other anomalies;

(7) PPE requirements including all effects on cost or production due to the requirement to use PPE;

(8) Exclusion zone requirements. Exclusion zone requirements include all effects and costs of implementing and enforcing exclusion zones. The Contractor is responsible for evaluating, identifying the requirements of, and implementing/complying with all exclusion zones;

(9) DOD, US Army, and US Army Corps of Engineers regulations or guidance in effect at the time of contract signature. The Contractor is responsible for understanding and implementing the required safety and access control requirements and factoring them into their approach and price;

(10) the availability or cost of qualified labor, material, and/or equipment;

(11) the impact of reasonable Government document reviews and quality assurance inspections;

(12) the availability or cost of housing for on-site personnel; and

(13) the availability or location of explosives storage.

b. The Government has provided the contractor with access to the site for as long as the contractor requested to become confident in their independent understanding of the site conditions and the Government expects prospective bidders to use this time to perform the requisite site assessments necessary to ascertain the site conditions to a reasonable degree of accuracy. The Government believes that the quantity and distribution of surface and subsurface anomalies, MEC, MPPEH, cultural debris, hot rocks, and other similar cost drivers are reasonably ascertainable from the contractor's inspection of the site. Bidders are expected to perform this site inspection and use their experienced judgment and reasoned interpolation and extrapolation of all the available site information to assess the general and local conditions which can affect the work or its cost. The Contractor is expected to apply due diligence in the research and development of their proposal and to know or estimate the conditions to be encountered that will affect the cost, quality, or schedule of the work included in this task order. The Government expects the contractor to assess the risk and factor this risk into their proposal. Claim of differing or changed site conditions will not be allowable for conditions that the Contractor could reasonably be expected to verify, know, anticipate, or assume or any of the above specific conditions. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government. The act of signing this task order signifies that the Contractor has been given amply opportunity to assess the conditions under which the work will be performed and the Contractor fully understands those conditions. The Contractor certifies that their proposal is not qualified or contingent upon any of the above conditions. Any estimates of such conditions included in the data provided to the Contractor by the Government or included in the Contractor's proposal are not binding contractual conditions. The Contractor accepts full and sole responsible for identifying and considering all factors that may affect the cost to execute the work. The Contractor attests that it has had sufficient opportunity to do so and has used any data or information provided to them by any party at their own risk. The Contractor attests that they have made an independent inspection of the site, have gathered the information necessary to fully understand the conditions they will encounter during execution of this task order, and have used any data provided by the Government at the Contractor's own risk.

c. Government acceptance of the proposed technical approach and/or price does not relieve the Contractor from full responsibility for the viability, productivity, and efficiency of the approach used to perform the work or for meeting the performance requirements of the PWS at the price proposed.

d. The Contractor has been provided data during the proposal process including but not limited to site data included in previous project documents. Specifically, the Contractor has been provided with the Draft Final Engineering Evaluation/ Cost Analysis (EE/CA) report that documents conditions at the site as gathered and interpreted by a third party Contractor. The purpose of the EE/CA was to identify the presence and/or the extent of a hazard, to identify the objectives of any removal action, to provide a risk-based analysis of the existing conditions, and to analyze the various alternatives that may be used to satisfy these objectives. Though it provides general information that the Government used to ascertain the relative cost of various alternatives, its use as the basis of estimate for an accurate removal action contract price proposal requires an experienced understanding of how EE/CA data is collected, analyzed, interpreted, and presented. The actual conditions that the Contractor experiences need to consider that the EE/CA was conducted under conditions that will differ from those encountered during the removal. The Contractor shall be responsible for interpreting the data provided in context of the conditions under which the data was gathered, collated, analyzed, and recognize the limitation of reasonable extrapolation typical of site

assessment of this type. The Contractor is expected to have used the pre-proposal site visit to field verify their interpretation of the data. The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

4.0 Specific Tasks: All tasks listed in this section shall be performed in accordance with the applicable requirements of Section 5.0 "General Requirements." Methods to be used to achieve task order objectives at the specified level of performance shall be determined by the Contractor. The Contractor will be evaluated periodically during each of the following tasks to ensure compliance with this PWS and to document that quality objectives, delivery schedule, and the overall completion date are being met. Failure to adequately complete any service or submittal to at least a satisfactory level of quality or timeliness may result in a repeat of the service or submittal, a poor performance evaluation, and/or a reduction in payment to cover additional expenses incurred by the Government for the Contractor's delay.

4.1 Task 1, Removal Action Work Plan (RAWP). This is a Firm Fixed-Price task.

Objective: Submit an acceptable RAWP in a timely and efficient manner that conforms to task requirements and applicable standards.

Performance Metric: The accuracy of the information provided within the document as well as the number of submissions required to obtain Government acceptance of the document will be evaluated and shall be the basis of the Contractor's performance evaluation for this task.

Measurement Method: The Government will review the RAWP for its ability to meet project objectives, DQOs, and for proper and safe application of procedures and equipment. The Government will review the RAWP and provide comments to the Contractor, which will require a written response from the Contractor and/or possible changes to the RAWP. The comments will focus primarily on areas of the RAWP that do not comply with the PWS. These comments are to be addressed. Additional comments may be provided for the Contractor's review and consideration that relate to economy and efficiency, which the Contractor may choose to incorporate; however, the Contractor is responsible for any impact this may have, positive or negative. Performance is determined by the number of submissions required to attain an acceptable document compared to the number required by Section 5.6 "Submittals". The Contractor shall attend an onboard review in Huntsville, Alabama, after receiving comments on the Draft RAWP. If the Draft version of the RAWP is submitted and approved for Draft Final production in one (1) submission, the Contractor will receive an exceptional performance rating under Quality of Product or Service and will not be required to attend the onboard review in Huntsville. If the onboard review is required and all issues are resolved and the RAWP is accepted for Draft Final production in two (2) submissions then a satisfactory rating will be given. If the Draft RAWP is rejected and returned without comments, an unsatisfactory performance rating will be given and additional submittals will be required until the RAWP is accepted.

Remedy: If non-compliance issues are noted, the Contractor shall revise and re-submit the RAWP to address all comments requiring resolution to meet the task objective.

Incentives/Disincentives:

- Fewer submissions result in cost savings to Contractor.
- Efficient task completion minimizes overall cost to Contractor.
- Affects overall performance evaluation.

Specific Task Requirements: The RAWP shall be prepared in accordance with Data Item Description (DID) MR-005-01 (Type II) and EP 1110-01-18 (Draft version dated 3 April 2006 was issued as a Military Munitions Center of Expertise (MM CX) Interim Guidance Document (IGD) 06-04 available @ http://www.usace.army.mil/inet/usace-docs/) or http://www.hnd.usace.army.mil/oew/policy/IntGuidRegs/IGD%2006-04.pdf) to support removal actions and land use controls (LUCs) in the designated area(s). The RAWP shall describe the specific work proposed in order to meet

the objectives and requirements of this PWS. The Contractor shall submit a project schedule, which demonstrates the ability to perform all tasks requirements within project timelines. The RAWP shall contain, at a minimum, those items listed under Paragraph 2 of DID MR-005-01, which are a Technical Management Plan (DID MR-005-02), an Explosive Management Plan (DID MR-005-03), Explosives Siting Plan (DID MR-005-04), Accident Prevention Plan (APP) (DID MR-005-06) and a Site Safety and Health Plan (SSHP) (EM 385-1-1), Environmental Protection Plan (DID MR-005-12), and a Quality Control Plan (QCP). The QCP shall be a detailed and comprehensive plan covering all aspects of the response. Other sub plans or elements shall be required as necessary to support the Contractor's technical approach. A property management plan will be required if the Contractor has Government furnished equipment. The Contractor shall plan for an on board review in Huntsville after receipt of comments on the draft final version. It is the intent of the Government that the Contractor shall provide a CD at the conclusion of the onboard review. This CD is in addition to the other CDs required elsewhere in the PWS.

4.2 Task 2, Site Specific Final Report (SSFR). This is a Firm Fixed-Price task.

Objective: Submit an acceptable SSFR in a timely and efficient manner that conforms to task requirements and applicable standards.

Performance Metric: The accuracy of the information provided within the document as well as the number of submissions made by the Contractor to obtain Government acceptance of the document will be evaluated and shall be the basis of the Contractor's performance evaluation for this task.

Measurement Method: The Government will review the SSFR to ensure the work effort has met project objectives, DQOs, and adequately documents project activities. The Government will review the SSFR and provide comments to the Contractor, which will require a written response from the Contractor and/or possible changes to the SSFR. The comments will focus primarily on areas of the SSFR that do not comply with the PWS. These comments are to be addressed. Additional comments may be provided for the Contractor's review and consideration, which the Contractor may choose to incorporate; however, the Contractor is responsible for any impact this may have, positive or negative. Performance is determined by the number of submissions required to attain an acceptable document compared to the number required by Section 5.6 "Submittals". The Contractor shall attend an onboard review in Huntsville, Alabama, after receiving comments on the Draft SSFR. If the Draft version of the SSFR is submitted and approved for Draft Final production in one (1) submission, the Contractor will receive an exceptional performance rating under Quality of Product or Service and will not be required to attend the onboard review in Huntsville. If the onboard review is required and all issues are resolved and the SSFR is accepted for Draft Final production in two (2) submissions then a satisfactory rating will be given. If the Draft SSFR is rejected and returned without comments, an unsatisfactory performance rating will be given and additional submittals will be required until the SSFR is accepted.

Remedy: If non-compliance issues are noted, the Contractor shall summarize the actions to be taken and re-submit a revised SSFR.

Incentives/Disincentives:

- Fewer submissions result in cost savings to Contractor.
- Efficient task completion minimizes overall cost to Contractor.
- Affects overall performance evaluation.

Specific Task Requirements: The Contractor shall prepare a SSFR in accordance with the general format presented in DID MR-030. In addition to the DID requirements, the Contractor shall include all QC, QA, and GIS documentation in the Final Report (QA documentation provided to the Contractor during the Government QA process shall be included, such as Form 948 for grid acceptance and executed CARs). The Contractor shall also include a cover letter signed by an authorized person (preferably the person who signed the Task Order) of the company certifying, on behalf of the company, that the requirements of this Task Order have been met. See Section 6.0 "SUBMITTALS AND CORRESPONDANCE" for guidance on numbers and types of submissions.

4.3 Task 3, MEC and MPPEH Surface Clearance, Optional. This is a Firm Fixed-Price task.

Objective: Remove MEC and MPPEH (to include MD and range related debris) from the surface of the areas shown on Exhibits A and B, specifically ~~67.52~~ ***61.07*** acres within Site 27 and ~~80.00~~ ***79.50*** acres within Site 54, respectively ***for a total surface clearance of 140.57 acres***. The Contractor shall provide a map of the cleared area upon completion of clearance activities in accordance with Section 4.7 "Location Surveys and Mapping."

Performance Metric: Successful performance will be measured by: (1) the Government finding, on the surface of the designated clearance areas, no MEC (regardless of size), MD, ferrous metal, and/or range related debris (including anything that may possess an explosive hazard, i.e., MPPEH) equivalent to or greater than 40 mm in diameter (or width) (2) proper staking of the clearance areas before beginning the clearance using a *Texas* licensed professional surveyor; and (3) production of a map that accurately conveys the clearance areas that is signed by the surveyor, the SUXOS, and a principal of the firm.

Measurement Method: The Contractor's conformance with the performance work statement will be evaluated by the Government during Quality Assurance (QA) inspections in accordance with the Quality Assurance Surveillance Plan (QASP).

Remedy: If any grid fails the Government QA inspection for ferrous metal items, explosive hazards, or survey/marking accuracy, the Contractor shall re-clear the area or remark the area of concern or both as is required to achieve the performance metric.

Incentives/Disincentives: All rework shall be performed at no cost to the Government. If less than ¼% of area requires rework, the Contractor will receive an exceptional performance rating, less than ½% will be very good, less than 1% will be satisfactory, and less than 2% will be marginal, greater than 2% will be unsatisfactory.

Specific Task Requirements: The Contractor shall remove MEC, MPPEH (to include MD, and range related debris), and ferrous metal in the areas indicated in Exhibits A and B. All work shall be performed in accordance with the PWS, RAWP, and all applicable standards. ~~Contractor shall provide a Fixed Unit Price for mobilization and demobilization costs.~~ At the completion of field activities, the Contractor shall submit signed clearance maps as a separate deliverable in addition to being included in the Site Specific Final Report. A per acre unit price for clearance activities shall be provided in the Contractor's proposal in case additional acreage is required to be deleted or added to the clearance effort. All MPPEH shall be processed and disposed of by the Contractor. The Contractor shall dispose of material determined by inspection not to contain an explosive hazard, as well as material remaining as MPPEH following inspection. The Contractor shall commence field work after receipt of DDESB approval of the Government prepared Explosives Safety Submission (ESS), but not before receipt of a Notice to Proceed (NTP) is issued by the Contracting Officer. Field work for this task shall be completed within 60 calendar days of receipt of the NTP. If any portion of the required work is not completed, passed QA inspection, and has been accepted by the Government by the date required, the Contractor's payment will be reduced by $1,290 per calendar day until the work is completed. If the Contractor is delayed by or through unanticipated Government actions, the completion date will be extended by a comparable number of calendar days before a reduction in compensation to the Contractor begins.

4.4 Task 4, MEC and MPPEH Clearance of Site 27, Optional. This is a Firm Fixed-Price task and is mutually exclusive of Task 3.

Objective: Remove MEC and MPPEH (to include MD and range related debris) from the area shown on Exhibit A, specifically 68 acres within Site 27 (excluding the identified OB/OD area). The Contractor shall provide a map of the cleared area upon completion of clearance activities in accordance with Section 4.7 "Location Surveys and Mapping."

Performance Metric: Successful performance will be measured by: (1) the Government finding, on the surface or within the subsurface of the designated clearance area, no MEC (regardless of size for surface items only), MD, and/or range related debris (including that which may possess an explosive hazard, i.e., MPPEH) equivalent to or greater than 40 mm in diameter (or width) to a depth of 11 times the diameter (or width); and (2) production of a

map that accurately conveys the clearance areas that is signed by the surveyor, the SUXOS, and a principal of the firm.

Measurement Method: The Contractor's conformance with the performance work statement will be evaluated by the Government during Quality Assurance (QA) inspections in accordance with the Quality Assurance Surveillance Plan (QASP).

Remedy: If any grid fails the Government QA inspection for MD items or explosive hazards, the Contractor shall re-clear the area or remark the area of concern or both as is required to achieve the performance metric.

Incentives/Disincentives: All rework shall be performed at no cost to the Government. If less than ¼% of area requires rework, the Contractor will receive an exceptional performance rating, less than ½% will be very good, less than 1% will be satisfactory, less than 2% will be marginal, greater than 2% will be unsatisfactory.

Specific Task Requirements: The Contractor shall remove MEC, MPPEH, MD, and range related debris in the area identified in Exhibit A and to the depths indicated above. All work shall be performed in accordance with the PWS, RAWP, and all applicable standards. At the completion of field activities, the Contractor shall submit signed clearance maps as a separate deliverable in addition to being included in the Site Specific Final Report. A per acre unit price for clearance activities shall be provided in the Contractor's proposal in case additional acreage is required to be deleted or added to the clearance effort. All MPPEH shall be processed and disposed of by the Contractor. The Contractor shall dispose of material determined by inspection not to contain an explosive hazard, as well as material remaining as MPPEH following inspection. The Contractor shall commence field work after receipt of DDESB approval of the Government prepared Explosives Safety Submission (ESS), but not before receipt of a NTP is issued by the Contracting Officer. Field work for this task shall be completed within 120 calendar days of receipt of the NTP. If any portion of the required work is not completed, passed QA inspection, and has been accepted by the Government by the date required, the Contractor's payment will be reduced by $1,290 per calendar day until the work is completed. If the Contractor is delayed by or through unanticipated Government actions, the completion date will be extended by a comparable number of calendar days before a reduction in compensation to the Contractor begins.

4.5 Task 5, MEC and MPPEH Clearance of Site 54, Optional. This is a Firm Fixed Price task and is mutually exclusive of Task 3.

Objective: Remove MEC and MPPEH (to include MD and range related debris) from the area shown on Exhibit B, specifically 80 acres within Site 54. The Contractor shall provide a map of the cleared area upon completion of clearance activities in accordance with Section 4.7 "Location Surveys and Mapping."

Performance Metric: Successful performance will be measured by: (1) the Government finding, on the surface or within the subsurface of the designated clearance area, no MEC (regardless of size for surface items only), MD, and/or range related debris (including that which may possess an explosive hazard, i.e., MPPEH) equivalent to or greater than 40 mm in diameter (or width) to a depth of 11 times the diameter (or width); and (2) production of a map that accurately conveys the clearance areas that is signed by the surveyor, the SUXOS, and a principal of the firm.

Measurement Method: The Contractor's conformance with the performance work statement will be evaluated by the Government during Quality Assurance (QA) inspections in accordance with the Quality Assurance Surveillance Plan (QASP).

Remedy: If any grid fails the Government QA inspection for MD items or explosive hazards, the Contractor shall re-clear the area or remark the area of concern or both as is required to achieve the performance metric.

Incentives/Disincentives: All rework shall be performed at no cost to the Government. If less than ¼% of area requires rework, the Contractor will receive an exceptional performance rating, less than ½% will be very good, less than 1% will be satisfactory, less than 2% will be marginal, greater than 2% will be unsatisfactory.

Specific Task Requirements: The Contractor shall remove MEC, MPPEH, MD, and range related debris in the area identified in Exhibit B and to the depths indicated above. All work shall be performed in accordance with the PWS, RAWP, and all applicable standards. At the completion of field activities, the Contractor shall submit signed clearance maps as a separate deliverable in addition to being included in the Site Specific Final Report. A per acre unit price for clearance activities shall be provided in the Contractor's proposal in case additional acreage is required to be deleted or added to the clearance effort. All MPPEH shall be processed and disposed of by the Contractor. The Contractor shall dispose of material determined by inspection not to contain an explosive hazard, as well as material remaining as MPPEH following inspection. The Contractor shall commence field work after receipt of DDESB approval of the Government prepared Explosives Safety Submission (ESS), but not before receipt of a NTP is issued by the Contracting Officer. Field work for this task shall be completed within 120 calendar days of receipt of the NTP. If any portion of the required work is not completed, passed QA inspection, and has been accepted by the Government by the date required, the Contractor's payment will be reduced by $1,290 per calendar day until the work is completed. If the Contractor is delayed by or through unanticipated Government actions, the completion date will be extended by a comparable number of calendar days before a reduction in compensation to the Contractor begins.

4.6 Task 6, MEC and MPPEH Clearance of OB/OD Area, Optional. This is a Firm Fixed-Price task and is mutually exclusive of Task 3.

Objective: Remove MEC and MPPEH (to include MD and range related debris) from the ~~11.48~~ ***13.77*** acre OB/OD area of Site 27 shown on ~~Exhibit A~~ ***Site 27 – Adjusted OB/OD Area Map***. The Contractor shall provide a map of the cleared area upon completion of clearance activities in accordance with Section 4.7 "Location Surveys and Mapping."

Performance Metric: Successful performance will be measured by: (1) the Government finding, on the surface or within the subsurface of the designated clearance area, no MEC (regardless of size for surface items only), MD, and/or range related debris (including that which may possess an explosive hazard, i.e., MPPEH) equivalent to or greater than 40 mm in diameter (or width) to a depth of 11 times the diameter (or width); and (2) production of a map that accurately conveys the clearance areas that is signed by the surveyor, the SUXOS, and a principal of the firm.

Measurement Method: The Contractor's conformance with the performance work statement will be evaluated by the Government during Quality Assurance (QA) inspections in accordance with the Quality Assurance Surveillance Plan (QASP).

Remedy: If any grid fails the Government QA inspection for ferrous metal items, explosive hazards, or survey/marking accuracy, the Contractor shall re-clear the area or remark the area of concern or both as is required to achieve the performance metric.

Incentives/Disincentives: All rework shall be performed at no cost to the Government. If less than ¼% of area requires rework, the Contractor will receive an exceptional performance rating, less than ½% will be very good, less than 1% will be satisfactory, and less than 2% will be marginal, greater than 2% will be unsatisfactory.

Specific Task Requirements: The Contractor shall remove MEC and MPPEH (to include munitions debris and range related debris) in the areas and depths indicated in Exhibits A and B. All work shall be performed in accordance with the PWS, RAWP, and all applicable standards. ~~Contractor shall provide a Fixed Unit Price for mobilization and demobilization costs.~~ At the completion of field activities, the Contractor shall submit signed clearance maps as a separate deliverable in addition to being included in the Site Specific Final Report. A per acre unit price for clearance activities shall be provided in the Contractor's proposal in case additional acreage is required to be deleted or added to the clearance effort. All MPPEH shall be processed and disposed of by the Contractor. The Contractor shall dispose of material determined by inspection not to contain an explosive hazard, as well as material remaining as MPPEH following inspection. The Contractor shall commence field work after receipt of DDESB approval of the Government prepared Explosives Safety Submission (ESS), but not before receipt of a NTP is issued by the Contracting Officer. Field work for this task shall be completed within 150 calendar days of receipt of the NTP. If any portion of the required work is not completed, passed QA inspection, and has been accepted by the Government

by the date required, the Contractor's payment will be reduced by $1,290 per calendar day until the work is completed. If the Contractor is delayed by or through unanticipated Government actions, the completion date will be extended by a comparable number of calendar days before a reduction in compensation to the Contractor begins.

4.7 Task 7, Perimeter Fence Installation of OB/OD Area, Optional. This is a Firm Fixed-Price task.

Objective: Install a fence with signage around the perimeter of the 11-acre OB/OD area of Site 27 shown on Exhibit A.

Performance Metric: Successful performance will be measured by completion of fence installation.

Measurement Method: The Contractor's conformance with the performance work statement will be evaluated by the Government during Quality Assurance (QA) inspections in accordance with the Quality Assurance Surveillance Plan (QASP) to ensure fence materials and installation methods meet specifications provided.

Remedy: If any portion of the fence installation fails the Government QA inspection for fence materials or installation methods, the Contractor shall repair and/or replace defective portions as is required to achieve the performance metric.

Incentives/Disincentives: All rework shall be performed at no cost to the Government. If less than 100' of fence requires rework, the Contractor will receive an exceptional performance rating, and less than 250' will be very good, less than 500' will be satisfactory, less than 750' will be marginal, and greater than 1,000' will be unsatisfactory.

Specific Task Requirements: The Contractor shall install a 4-strand barb wire fence with 6.5' metal T-posts and 2-12' metal gates with signage (as defined in Option Task 8) around the perimeter of the 11-acre OB/OD area of Site 27 shown on Exhibit A. Signs must be visible from one location to the next, with a maximum spacing interval of 100', have a minimum size of 10" x 12", printed in English only, and installed on stand alone U-channel type posts with locking nuts. The Contractor shall assume a 16' wide path must be cleared of all trees, brush, and debris on the perimeter of the OB/OD area to facilitate this effort. All work shall be performed in accordance with the PWS, RAWP, attached fence specifications, and all applicable standards. On-Site Construction Support shall be provided by the Contractor during all activities required for fence installation. Unit prices for additional fencing material, gates, signs, U-channel type posts and hardware (galvanized non-slotted carriage bolts with anti-theft locking nuts) shall be provided in the Contractor's proposal in the event additional fencing materials or signage is required to be deleted or added. The Contractor shall commence field work after receipt of DDESB approval of the Government prepared Explosives Safety Submission (ESS), but not before receipt of a NTP is issued by the Contracting Officer. Field work for this task shall be completed within 160 calendar days of receipt of the NTP. If any portion of the required work is not completed, passed QA inspection, and has been accepted by the Government by the date required, the Contractor's payment will be reduced by $1,290 per calendar day until the work is completed. If the Contractor is delayed by or through unanticipated Government actions, the completion date will be extended by a comparable number of calendar days before a reduction in compensation to the Contractor begins.

4.8 Task 8, Land Use Controls Design, Land Use Controls Plan, and Implementation, Optional. This is a Firm Fixed-Price task.

Objective: Ensure that future land use remains compatible with the land use that was used during the evaluation, selection, and implementation of the response action.

Performance Metric: The accuracy of the information provided within the documents as well as the number of submissions required to obtain Government acceptance of the documents will be evaluated and shall be the basis of the Contractor's performance evaluation for this task.

Measurement Method: The Government will review the LUC Design, LUC Plan, and associated submittals for its ability to meet project objectives. The Government will provide comments to the Contractor after review, which will require a written response from the Contractor and/or possible changes to the LUC Design and/or LUC Plan and LUCIP. The comments will focus primarily on areas of the LUC Design and/or LUC Plan that do not comply with

the PWS. These comments are to be addressed. Additional comments may be provided for the Contractor's review and consideration that relate to economy and efficiency, which the Contractor may choose to incorporate; however, the Contractor is responsible for any impact this may have, positive or negative. Performance is determined by the number of submissions required to attain an acceptable document compared to the number required by Section 5.6 "Submittals". The Contractor shall attend an onboard review in Huntsville, Alabama, after receiving comments on the Draft LUC Design and LUC Plan. If both Draft versions of the LUC Design and LUC Plan are submitted and approved for Draft Final production in one (1) submission, the Contractor will receive an exceptional performance rating under Quality of Product or Service and will not be required to attend the onboard review in Huntsville. If the onboard review is required and all issues are resolved and the LUC Design and LUC Plan are accepted for Draft Final production in two (2) submissions then a satisfactory rating will be given. If the Draft LUC Plan and LUCIP are rejected and returned without comments, an unsatisfactory performance rating will be given and additional submittals will be required until the LUC Design and LUC Plan are accepted.

Remedy: If non-compliance issues are noted, the Contractor shall revise and re-submit the LUC Design or LUC Plan to address all comments requiring resolution to meet the task objective.

Incentives/Disincentives:

- Fewer submissions result in cost savings to Contractor.
- Efficient task completion minimizes overall cost to Contractor.
- Affects overall performance evaluation.

Specific Task Requirements: The Contractor shall develop a LUC Design and LUC Plan consistent with the Memorandum of Office of the Deputy Assistant Secretary of the Army: CERCLA ROD and Post-ROD Policy, January 16, 2004 (Navy Principles for Specifying LUCs), which is attached. Items to be included in the LUC Design are specifications and drawings. The LUC Design shall be included within the RAWP if this option task is awarded as specified in the above referenced memorandum. Items to be included in the LUC Plan shall are implementation, monitoring, and reporting. The LUC Plan shall be attached to the RAWP as an appendix if this option task is awarded. Specific items to be included in the LUC Design and LUC Plan and LUCIP shall be signage for the perimeter boundaries of Site 27, Site 54, and the OB/OD area, fencing for the OB/OD area (if Option Task 7 is awarded), development of a 5 minute videotape for the USF&WS related to safety awareness training for expected recreational activities, and production of 500 safety brochures (in electronic, editable format). Signs must be visible from one location to the next, with a maximum spacing interval of 100', have a minimum size of 10" x 12", printed in English only, and installed on stand alone U-channel type posts with locking nuts. Sign procurement and installation for the OB/OD area are addressed in Task 7. All work shall be performed in accordance with the PWS, RAWP, and all applicable standards. The Contractor shall commence work on this task upon receipt of a NTP is issued by the Contracting Officer. Upon acceptance of these documents, the Contractor shall implement the proposed LUCs based upon the perimeter dimensions and/or quantities listed above. Unit prices for additional LUC materials, brochures, fencing materials, gates, signage, U-channel type posts and hardware (galvanized non-slotted carriage bolts with anti-theft locking nuts) shall be provided in the Contractor's proposal in the event additional materials or signage is required to be deleted or added. On-site Construction Support shall be provided by the Contractor during all activities required for sign installation. Work for this task shall be completed within 140 calendar days of receipt of the NTP. If any portion of the required work is not completed by the date required, the Contractor's payment will be reduced by $1,290 per calendar day until the work is completed. If the Contractor is delayed by or through unanticipated Government actions, the completion date will be extended by a comparable number of calendar days before a reduction in compensation to the Contractor begins.

5.0 General Requirements: All work under Section 4.0 Specific Tasks of this PWS shall be performed in accordance with the following general requirements:

5.1 Permits. The Contractor is responsible for obtaining all required permits, inspections, certificates, equipment, transportation, and personnel to complete the project.

5.2 MEC Disposal. The Contractor shall be responsible for the destruction of all MEC encountered during project activities.

5.3 Backfilling Excavations. All access/excavation/detonation holes shall be backfilled by the Contractor. The Contractor shall restore such areas to their prior condition.

5.4 MEC Accountability. The Contractor shall maintain a detailed accounting of all MEC items/components encountered. This accounting shall include the amounts of MEC, nomenclature and condition, location and depth of MEC, and disposition. The accounting system shall also account for all demolition materials utilized to detonate MEC on site. The Contractor shall take digital photographs of identifiable MEC found during the investigation. This accounting shall be a part of an appendix to the Final Report.

5.5 Disposal/Disposition of MPPEH. The Contractor shall handle and dispose of all MPPEH (including munitions debris and range related debris) in accordance with MM CX IGD 06-08, which is available at http://www.hnd.usace.army.mil/oew/policy/IntGuidRegs/IGD%2006-08%20MPPEH.pdf. The Contractor shall dispose of material determined by inspection not to contain an explosive hazard, as well as material remaining as MPPEH following inspection.

5.6 Vegetation Removal. The Contractor shall be responsible for performing all necessary tree/brush removal to an extent necessary to accomplish the objectives of this PWS. Controlled burns will be allowed, but must be coordinated with the Army and the US Fish and Wildlife Service (USF&WS) representatives, with notification provided to the State of Texas and local agencies, as necessary. No area burning or vegetation removal will be performed by the Government.

5.7 Location Surveys and Mapping. The Contractor shall perform civil surveys in accordance with EM 1110-1-4009 and DID MR-005-07. All data submitted shall be in the Universal Transverse Mercator (UTM) coordinate system. The Contractor shall obtain the services of a *Texas* licensed professional surveyor to interpret and delineate the boundaries to be cleared as depicted in Exhibits A and B.

5.8 Analog Geophysical Systems. The QCP shall be designed to demonstrate zero defects in workmanship. This is defined as all function tests demonstrating that systems are operational, portions of grids do not inadvertently go uninvestigated, and that no items are excavated during QC inspections that meet specified failure criteria.

5.9 Digital Geophysical Systems.

5.9.1 Should the Contractor choose to utilize digital geophysical systems, the Contractor's QCP shall be designed to demonstrate zero defects in workmanship. This is defined as all function tests demonstrating that systems are operational, portions of grids do not inadvertently go uninvestigated, no dig list anomalies remain unresolved, and that no items are excavated during QC inspections, whether selected from dig lists or not, that meet the specified failure criteria.

5.9.2 Raw Geophysical Field Data Format and Storage. Raw field data will be stored in a logical file directory (folder) structure to facilitate its management and dissemination to PDT members. Raw field data is defined as all digital data generated from the geophysical system, and includes positioning, heading, tilt, and any other peripheral or instrument measurements collected or recorded during data acquisition. All raw field data shall have a time stamp associated with each measurement event. Metadata, either in the form of a read-me file or information recorded in the project GIS, will be generated for each logical grouping of raw field data (e.g., names and contents of all files generated to map a grid, or names and contents of all files generated from a towed platform during a mapping session.) Metadata shall fully describe all measurements recorded in each data file. Metadata shall include all information necessary to successfully associate all geophysical system measurements to their correct geographical location. At the discretion of the PDT, the metadata can be limited to provide references to where this information is located. This option would typically be reserved for line and fiducial surveys where numerous field notes are required to properly position all data, and including the field notes in a digital metadata file would be time consuming and unnecessary to meet project objectives. At the discretion of the PDT, raw field data may include geophysical system data that has been checked, corrected and processed into ASCII files, either individually by instrument or merged with positioning data. Metadata shall include instructions for generating ASCII formatted data from all raw data for use in computer processing systems.

5.9.3 Final Processed Data Format and Storage. Final processed data shall be produced and presented in ASCII formatted files and/or native geophysical processing software formats; the PDT will establish which type(s) are required. Final processed data is defined as data that represents, to the best of the PDT's ability, the true potential field that exists at each actual location measured by the geophysical system. Final processed data shall have all corrections applied as needed to correct for positioning offsets, instrument bias (including instrument latency), instrument drift, yaw-angle offsets, and diurnal magnetic variations. Final processed data shall not be filtered or normalized (filtered or normalized data is addressed under Advanced Data below). All corrections will be documented. Data within the files will be delineated into individual fields for each value reported. ASCII data files shall be delineated using standard delineation protocols such as a comma (e.g. a "csv" format), a tab, or a white space. The PDT will determine which delineation protocol shall be used. Native geophysical processing software often manage and display data in spreadsheet formats not requiring specified delineation standards. Values reported in data files shall include local, geographic and/or projected coordinates for each measurement event (often referred to as x/y, latitude/longitude or easting/northing coordinates), one or more "z" values, which are the data associated with each measurement event, and a time stamp for each measurement event. Projected coordinates shall be reported in UTM/metric or State Plane/US Survey Feet coordinates and units, as determined by the PDT. Unless agreed upon otherwise by the PDT, header or metadata information shall be included in each file and describe the contents of each value field and specify its units. Data file size should be limited to 100 megabytes or less, and the file length should be limited to 600,000 lines or less. Each data file will be logically and sequentially named so that the file name can be easily correlated with the project-specific naming conventions being used by the PDT.

5.9.4 Advanced Processed Data Format and Storage. All advanced processed data shall be produced and presented in ASCII formatted files and/or native geophysical processing software formats; the PDT will establish which type(s) are required. Advanced processed data is defined as Final Processed data that has been subjected to advanced processing techniques, such as filtering or normalizing, and was used in part or in whole in the anomaly selection process. Data within the files will be delineated into individual fields for each value reported. ASCII data files shall be delineated using standard delineation protocols such as a comma (e.g. a "csv" format), a tab, or a white space. The PDT will determine which delineation protocol shall be used. Native geophysical processing software often manage and display data in spreadsheet formats not requiring specified delineation standards. Values reported in data files shall include local, geographic and/or projected coordinates for each measurement event (often referred to as x/y, latitude/longitude or easting/northing coordinates), one or more "z" values, which are the advanced-processed data associated with each measurement event, and a time stamp for each measurement event. Projected coordinates shall be reported in UTM/metric or State Plane/US Survey Feet coordinates and units, as determined by the PDT. Unless agreed upon otherwise by the PDT, header or metadata information shall be included in each file and describe all advanced processing that was applied to each value field. The Metadata shall specify the units of each value field. Data file size should be limited to 100 megabytes or less, and the file length should be limited to 600,000 lines or less. Each data file will be logically and sequentially named so that the file name can be easily correlated with the project-specific naming conventions being used by the PDT.

5.10 Geographic Information System (GIS). The Contractor shall produce concise ArcGIS map files in accordance with following guidance and submit an electronic copy of said GIS as part of every report submission. The GIS database shall be updated as needed to enable the Contractor to plan and coordinate daily, weekly, and monthly activities and for the Government to track the progress of the clearance or investigation area(s), and communicate those areas with the Government and construction contractors. The Contractor shall provide updated site maps to the Government on a weekly basis during field activities. Submittal of the weekly updates shall be by COB on Tuesday after completion of work on Friday or Saturday Close of Business (COB). The ArcGIS map file should be prepared in ArcGIS 9.x format and be compatible with ArcGIS 9.2 Personal Geodatabase. The Contractor shall apply the OE-GIS standard to the project to the extent required to create data sets that identify the following: grid identification number, grid coordinates, full or partial grid, date of mag/flag/dig and/or geophysical survey, date of QC inspection, date of QA inspection, grids containing MEC, grids containing MEC scrap, number of digs in each grid, pounds of MEC scrap, pounds of non-MEC scrap, etc. MEC items that are found and either moved or blown-in-place shall have the original coordinates documented within the GIS. Digital pictures of MEC items, items of interest, or project locations shall be digitally referenced with point locations within a Digital Picture Feature Class. The layers shall be completely independent, all spatially referenced to the appropriate UTM grid system (if not specified within the PWS) and produce a concise complete picture of all clearance or investigation activities

completed during this munitions response contract. Supporting tabular data shall be provided in ANSI SQL language format at the completion of the project, as well as in Microsoft Excel and/or Microsoft Access. All support databases shall be complete and single entities with no joins or related connections. All spatial data shall conform to the CADD/GIS Technology Center Spatial Data Standards for Facilities Infrastructure and Environment (SDSFIE) and the OE-GIS data standard. Metadata shall be created for the core OE-GIS data layers, and will be prepared in accordance with Federal Geographic Data Committee (FGDC) metadata standards. Personal Geodatabase is the preferred submittal format, contained within a single CD-ROM or DVD for submittal. Weekly reports may be conveyed electronically via email with appropriate Personal Geodatabase attached. All formal submittals shall contain a CD-ROM or DVD submittal of the supporting data set for the report being submitted to include all associated files (MXD, PDF, MDB, DBF, TIFF, JPEG, MrSID, etc.) required to support all previous field activities, findings, and conclusions stated within the report.

5.11 Project Management. The Contractor shall provide a single point of contact (POC), who is responsible for the entire project and coordination of team activities. The POC shall serve as a liaison/planner/consultant with the Government staff; advising the Government in MEC safety, as well as scheduling and execution of the operations. The POC shall attend project-planning meetings, as required, for the duration of the project. The POC shall perform project activities necessary to maintain project control, to include, but not be limited to the following:

a. Schedule. The Contractor shall develop and submit, for approval, a comprehensive project schedule for the areas being investigated. The schedule shall be updated weekly in accordance with DID MR-085 Project Status Report with changes sent directly to the USAESCH PM by e-mail in Microsoft Project. The Contractor shall be responsible for coordination and scheduling of all activities with representatives of the project to avoid conflicts with other scheduled activities.

b. Site Access and Coordination. The Contractor shall be responsible for establishing protocol for access, coordination or modification of schedules to accommodate protocol for entering and exiting the site, etc.

c. Reports/Minutes, Record of Meetings. The Contractor shall prepare and submit a report/minutes of all meetings attended in accordance with DID MR-045.

d. Telephone Conversations/Correspondence Records. The Contractor shall keep a record of telephone conversations and written correspondence, in accordance with DID MR-055. A copy of this record shall be attached to the Project Status Report.

e. Project Status Reports. The Contractor shall prepare and submit Project Status Reports in accordance with DID MR-085 to include GIS updates/information and any other items required in the PWS. The report shall also include planned and actual production curves. It shall also include planned and actual expenditure curves for time and materials tasks. If expenditures exceed the plan by more than 5%, the Contractor shall update the estimate to completion.

5.12 Time Extensions for Unusually Severs Weather. This provision specifies the procedure for determination of time extensions for unusually severe weather. In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

a. The weather experienced at the project site during the contract period must be unusually severe,

b. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

Upon acknowledgment of the NTP and continuing throughout the contract, the Contractor shall record on the daily Contractor Quality Control (CQC) report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for fifty percent (50%) or more of the Contractor's scheduled workday. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month) and be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual

adverse weather delay days impacts the Contractors completion schedule, the Contracting Officer will consider issuing a modification to the Contract to extend the allotted completion schedule by a comparable number of days.

6.0 Submittals and Correspondence:

6.1 Computer Files. All draft final, and final text files generated by the Contractor under this contract shall be furnished to the Contracting Officer in Microsoft Word 2000 or higher software. Spreadsheets shall be in Microsoft EXCEL. All CADD drawings shall be in Microstation 95 or higher. Any GIS data shall be in ESRI (Arcview/Arcinfo) format.

6.2 PDF Deliverables. In addition to the paper copies of submittals, uncompressed digital copies on CD ROM of all versions of submittal shall be provided in PDF format. The documents shall be complete with a linked table of contents, tables, photographs, graphs, figures, and appendices all of which shall be suitable for viewing on the Internet. PDF files shall be created from source documents whenever possible.

6.3 Review Comments. Various reviewers will have the opportunity to review submittals made by the Contractor under this contract. The Contractor shall review all comments received through the USAESCH Project Manager (PM) and evaluate their appropriateness based upon their merit and the requirements of the PWS. The Contractor shall issue to the USAESCH Project Manager a formal, annotated response to each in accordance with the established schedule in this PWS. The Contractor shall not non-concur with a comment without discussing the comment with the USAESCH PM. If the PM is not available then the Contractor shall contact the Technical Manager.

6.4 Identification of Responsible Personnel. Each report shall identify the specific members and title of the Contractor's staff and subcontractors that had significant and specific input into the preparation or review of the report.

6.5 Public Affairs. The Contractor shall not publicly disclose any data generated or reviewed under this contract. The Contractor shall refer all requests for information concerning site conditions to the USACE Tulsa District Public Affairs Office (PAO) with a copy furnished to the USAESCH PM. Reports and data generated under this contract are the property of the DOD and distribution to any other source by the Contractor, unless authorized by the Contracting Officer, is prohibited.

6.6 Submittals. The Contractor shall furnish copies of the plans, maps, and reports as identified as specified in this PWS, to each addressee listed below in the quantities indicated. The Contractor shall submit a CD, with each copy, of all versions of all submittals (RAWP, reports, plans, etc.). The Contractor shall submit the designated number of copies on CD of the Final Approved Versions of all submittals (RAWP, Reports, Plans, etc) in accordance with PDF Deliverables paragraph, to all addressees provided below, at the completion of the Task Order. For purposes of the PWS all days are considered calendar days. In addition to the CDs required above, the column below shows recipients in which the draft final version must be submitted also.

Addressee	Copies	CD
Commander, USA Engineering and Support Center Attn: Doug Garretson (CEHNC-OE-DC), 256-895-1066 4820 University Square Huntsville, AL 35816-1822	5	5
Department of the Army Longhorn Army Ammunition Plant Ms. Rose M. Zeiler Post Office Box 220 Ratcliff, AR 72951	6	6
U.S. Army Corps of Engineers, Tulsa District	2	2

ATTN: CESWT-EC-ER (John Lambert)
1645 S. 101st East Ave.
Tulsa, OK 74128

6.7 Submittal Due Dates.

For purposes of the PWS all days are considered calendar days.

Submittal	Due Date
Draft Removal Action Work Plan	15 days after Award
Draft Final Removal Action Work Plan	15 days after receipt of comments
Final Removal Action Work Plan	5 days after receipt of comments
Draft GPO Plan, if applicable	14 days after Award
Draft Final GPO Plan, if applicable	14 days after receipt of comments
Final GPO Plan, if applicable	5 days after receipt of comments
Draft GPO Letter Report, if applicable	5 days after completion of field activities
Draft Final GPO Letter Report, if applicable	5 days after receipt of comments
Final GPO Letter Report, if applicable	5 days after receipt of comments
Draft Site Specific Final Report	21 days after field activity completion
Draft Final Site Specific Final Report	15 days after receipt of comments
Final Site Specific Final Report	15 days after receipt of comments Final Electronic Copies provided with each Final SSFR with updated copy (if necessary) after Final SSFR approval
Clearance Progress Maps	Weekly

6.8 Project Completion Date. The Project Completion Date is **30 April 2009**.

6.9 Payment Milestone Schedule. Milestones will be considered met or completed when the appropriate QC documentation has been submitted, Government QA has been completed, and the submittal and/or product is accepted. Any payment vouchers submitted that do not coincide with the above milestones or do not have the appropriate QC documentation will be rejected. Monthly payment vouchers do not meet milestone requirements unless specific grids or acreage amounts are identified and submitted with documentation that proves Government QA has been completed. The Contractor shall submit a letter indicating milestones accomplished with each payment voucher. All payments will be made utilizing an agreed upon Payment Milestone Schedule.

Suggested Payment Milestones:

- Removal Action Work Plan (FFP), upon acceptance/approval;
- MEC and MPPEH Clearance (FFP), upon completion of identified task and/or Government acceptance of specific grids or acreage amounts;
- SSFR (FFP), upon acceptance/approval.

7.0 References.

7.1 Contract: Refer to "Basic Contract."

7.2 Data Item Descriptions (DIDs):

Data Item Descriptions are part of this contract and are available at the following:
http://www.hnd.usace.army.mil/oew/didsindex.aspx

Data Item Descriptions

Number	Title
DID MR-005-01	Type II Work Plan
DID MR-005-02	Technical Management Plan
DID MR-005-03	Explosives Management Plan
DID MR-005-04	Explosives Siting Plan
DID MR-005-05	Geophysical Investigation Plan
DID MR-005-05A	Geophysical Prove-Out (GPO) Plan and Report
DID MR-005-06	Accident Prevention Plan
DID MR-005-07	Geospatial Information and Electronic Submittals
DID MR-005-08	Work, Data, and Cost Management Plan
DID MR-005-09	Property Management Plan
DID MR-005-10	Munitions Constituents Chemical Data Quality Deliverables
DID MR-005-11	Quality Control Plan
DID MR-005-12	Environmental Protection Plan
DID MR-005-13	Investigative Derived Waste Plan
DID MR-010	Engineering Evaluation/Cost Analysis (EE/CA) Report
DID MR-015.01	Accident/Incident Reports
DID MR-025	Personnel Resume
DID MR-030	Site Specific Final Report
DID MR-040	Disposal Feasibility Letter Report
DID MR-045	Report/Minutes, Record of Meeting
DID MR-055	Telephone Conversations/Correspondence Records
DID MR-060	Conventional Explosives Safety Submission (ESS)
DID MR-080.01	Monthly Status Report
DID MR-085	Project Status Report
DID MR-100	Institutional Analysis and Institutional Control Plan

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0014
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SECTION F - DELIVERIES OR PERFORMANCE

The following Delivery Schedule item has been added to CLIN 0006:

DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
POP 28-SEP-2007 TO 30-APR-2009	N/A	US ARMY ENGINEERING & SUPPORT CENTER WANDA H HAMPTON CEHNC-CT 4820 UNIVERSITY SQUARE HUNTSVILLE AL 35816-1822 256-895-1168 FOB: Destination	W912DY

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by $37,434.80 from $801,487.55 to $838,922.35.

CLIN 0003:

AA: 21720200000 088130 25400G422149300814000 ENVR 01110 (CIN W31RYO725336150003) was decreased by $18,487.00 from $436,470.18 to $417,983.18

CLIN 0004:

AA: 21720200000 088130 25400G422149300814000 ENVR 01110 (CIN W31RYO725336150004) was decreased by $11,233.20 from $305,568.68 to $294,335.48

CLIN 0006:
Funding on CLIN 0006 is initiated as follows:

ACRN: AB

CIN: W31RYO831036310001

Acctng Data: 21920200000 088130 25405C5L7G49300813000 ENVR 01110

Increase: $67,155.00

Total: $67,155.00

(End of Summary of Changes)

APPENDIX B
SITE MAPS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

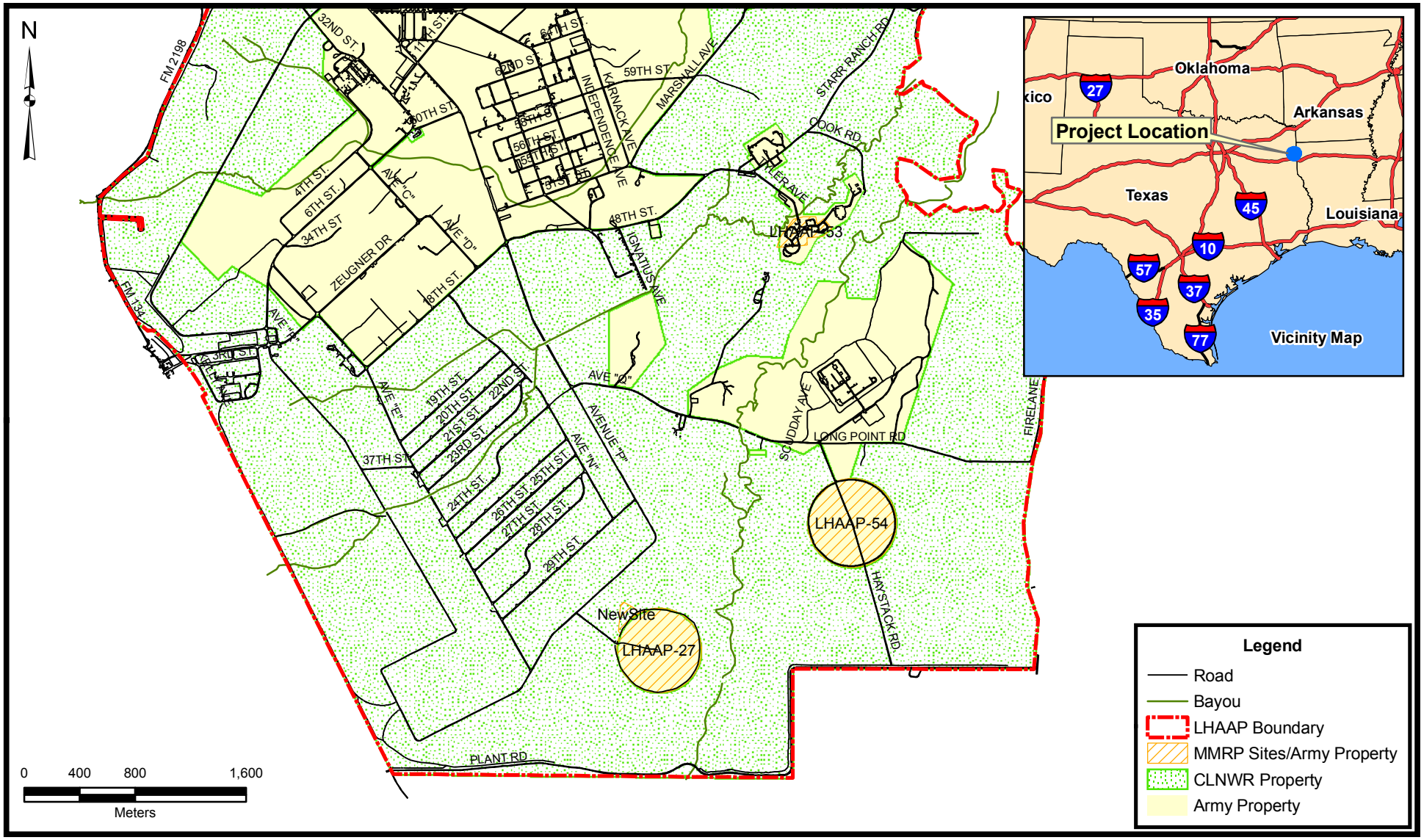


Figure B-1: Site Location Map

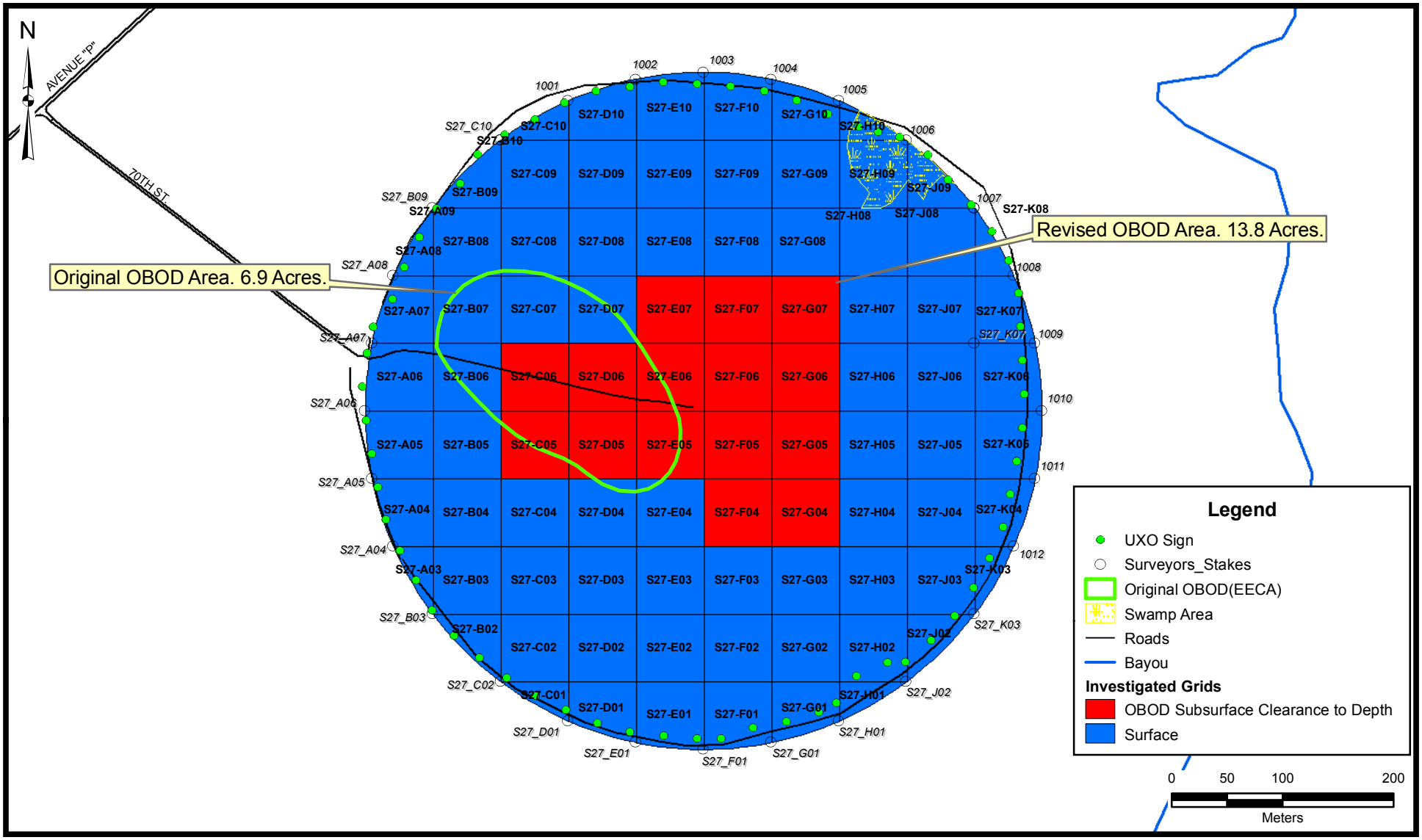


Figure B-2: Site 27 Investigation Depth/Clearance Grid Layout

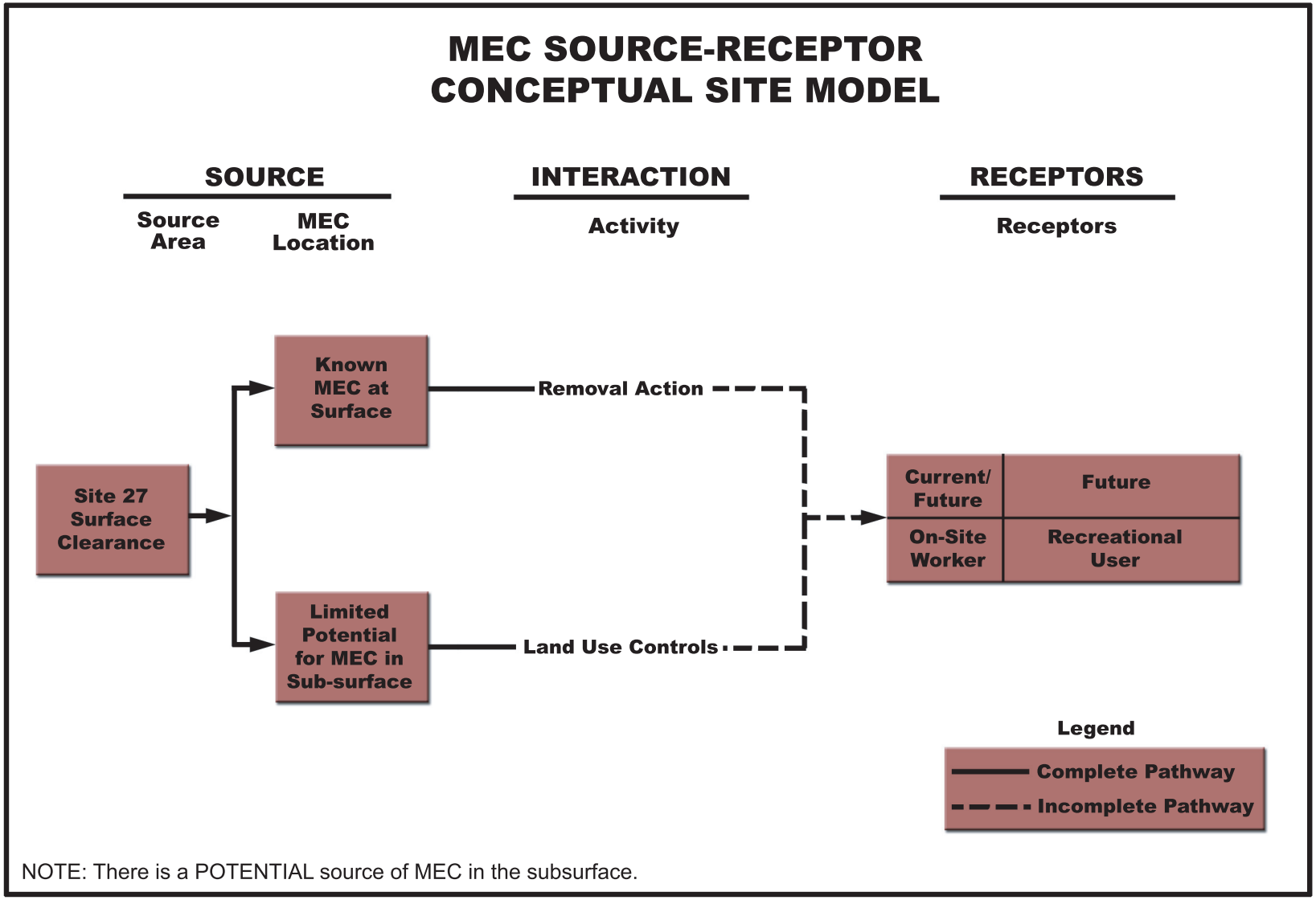


FIGURE B-2A: MEC SOURCE-RECEPTOR CONCEPTUAL SITE MODEL

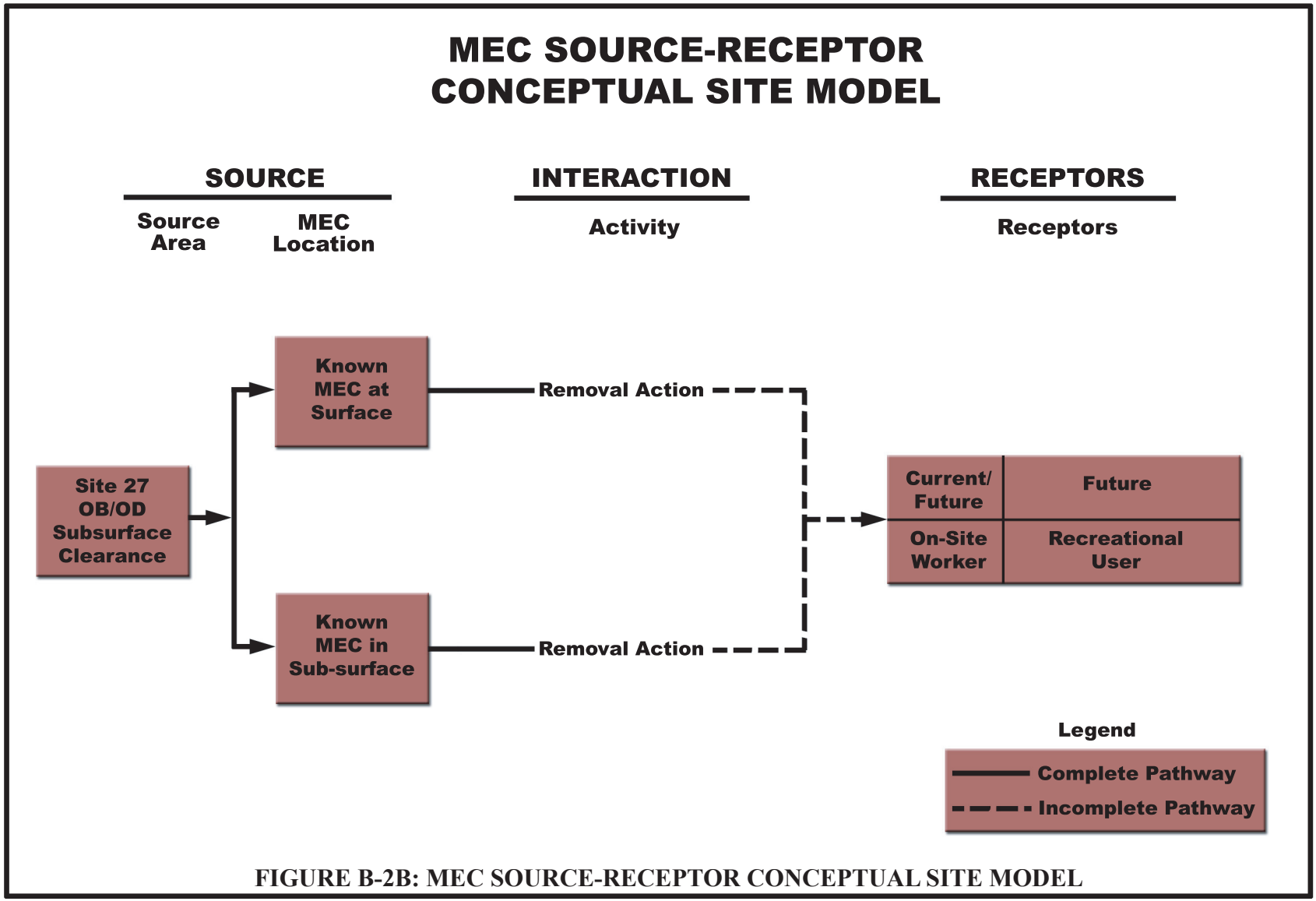


FIGURE B-2B: MEC SOURCE-RECEPTOR CONCEPTUAL SITE MODEL

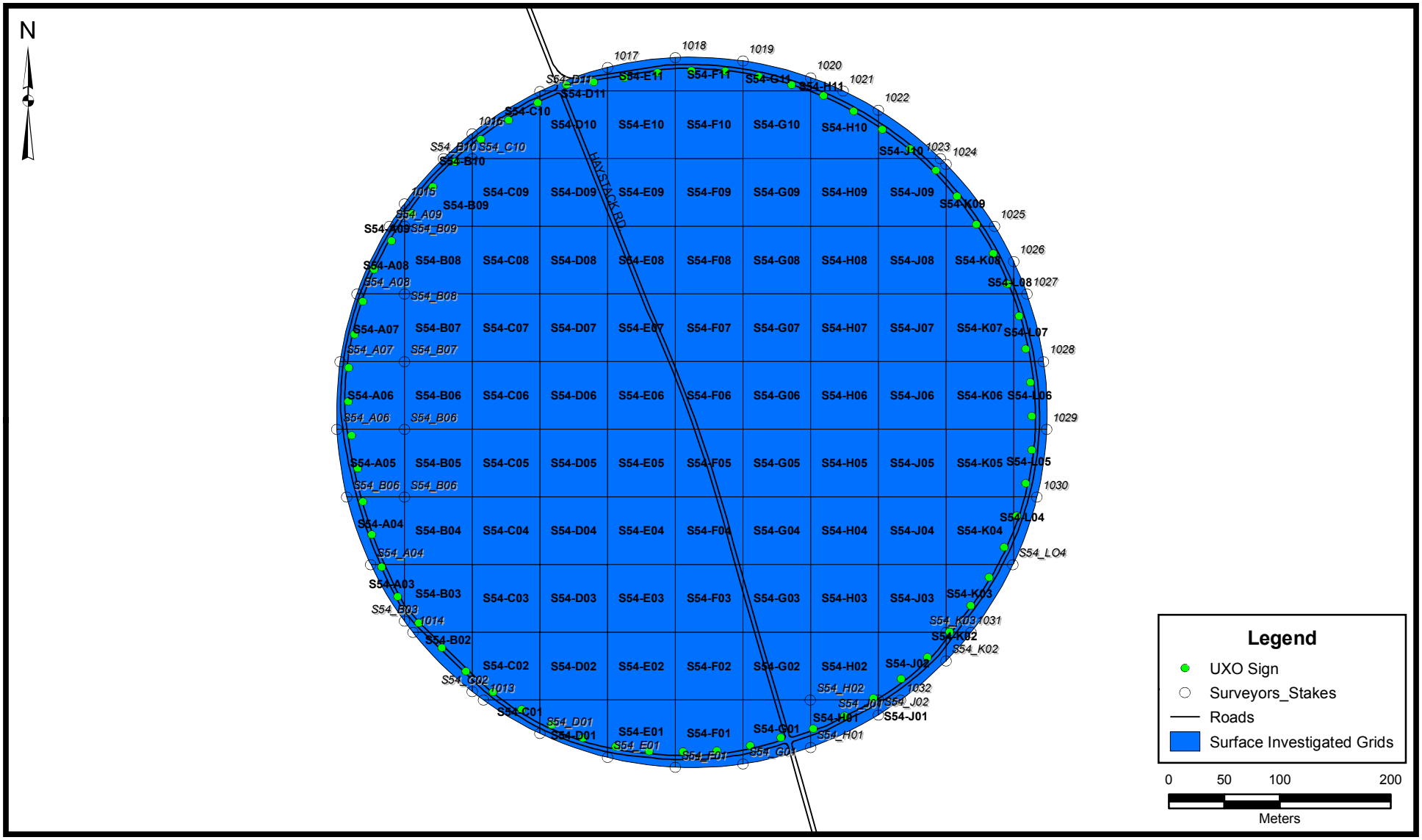


Figure B-3: Site 54 Investigation Depth/Clearance Grid Layout

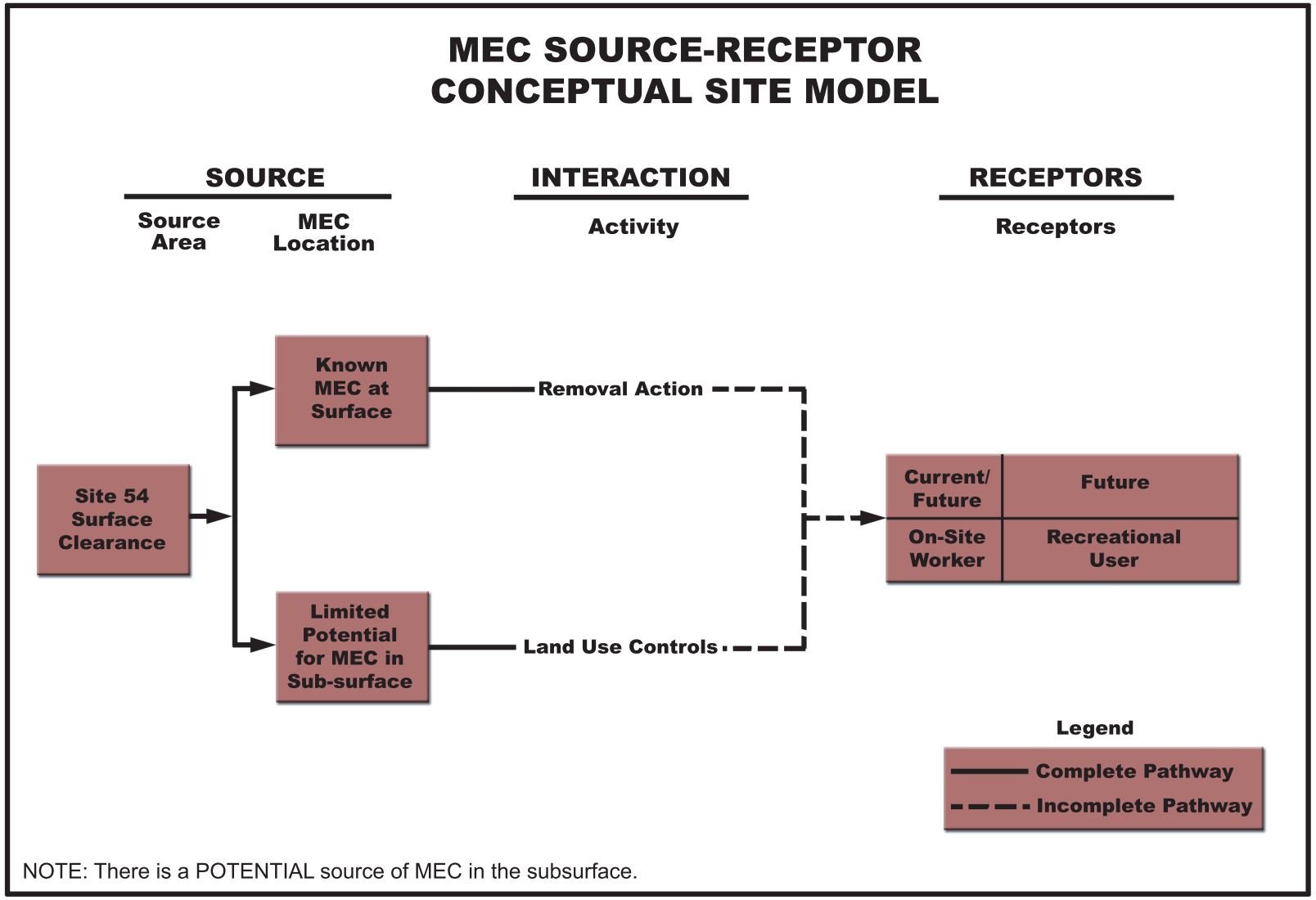


FIGURE B-3A: MEC SOURCE-RECEPTOR CONCEPTUAL SITE MODEL

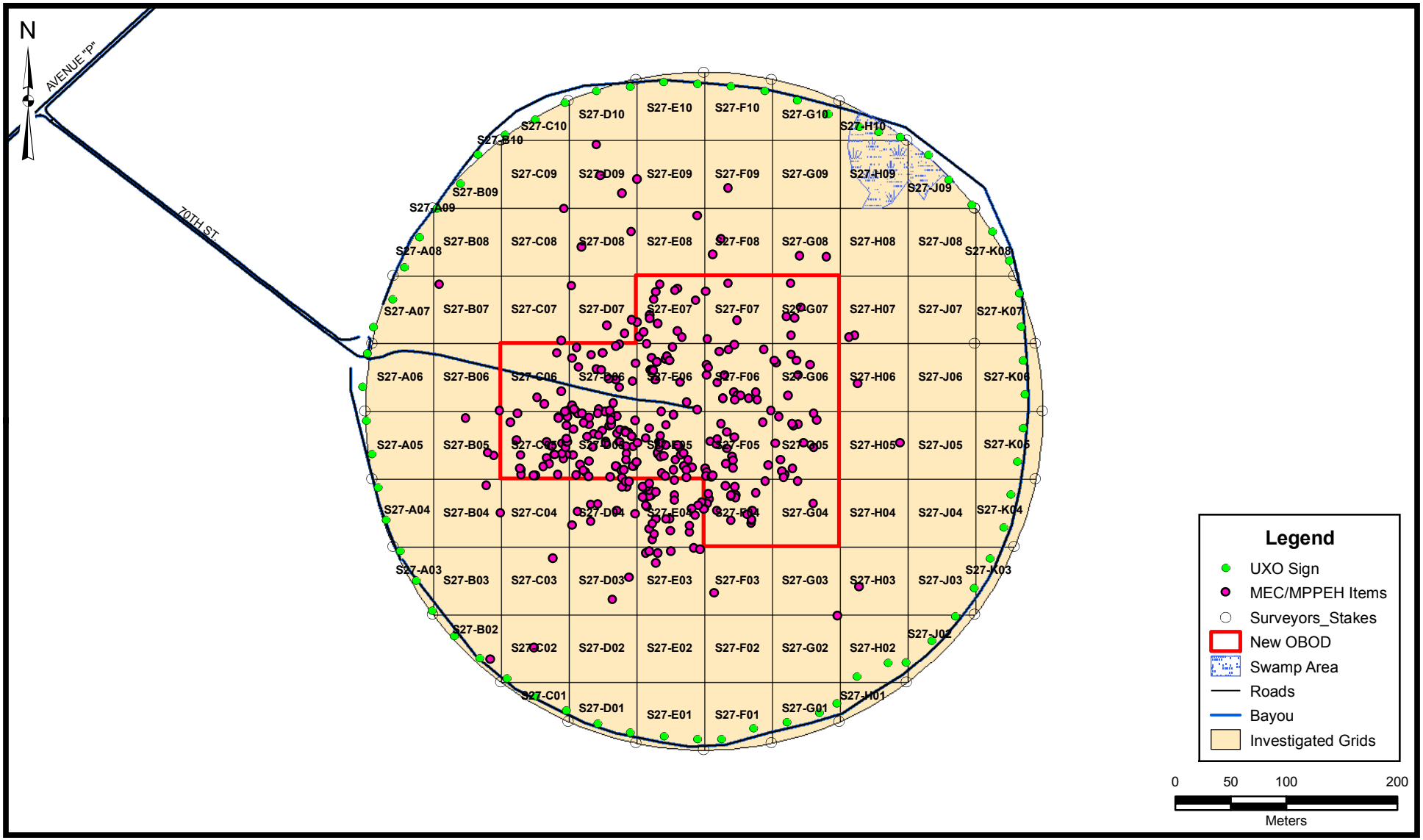


Figure B-4: Site 27 MEC/MPPEH Location Map

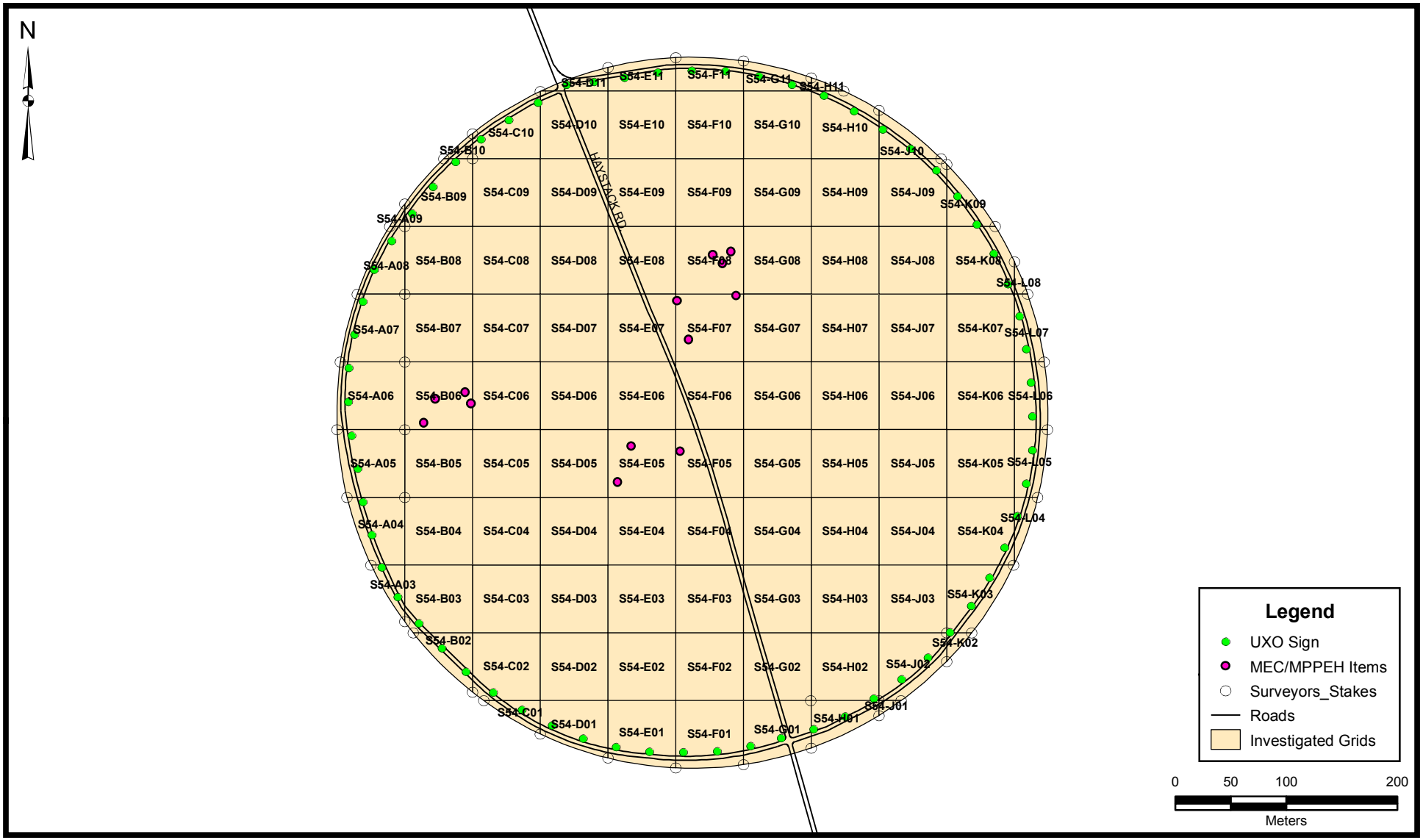
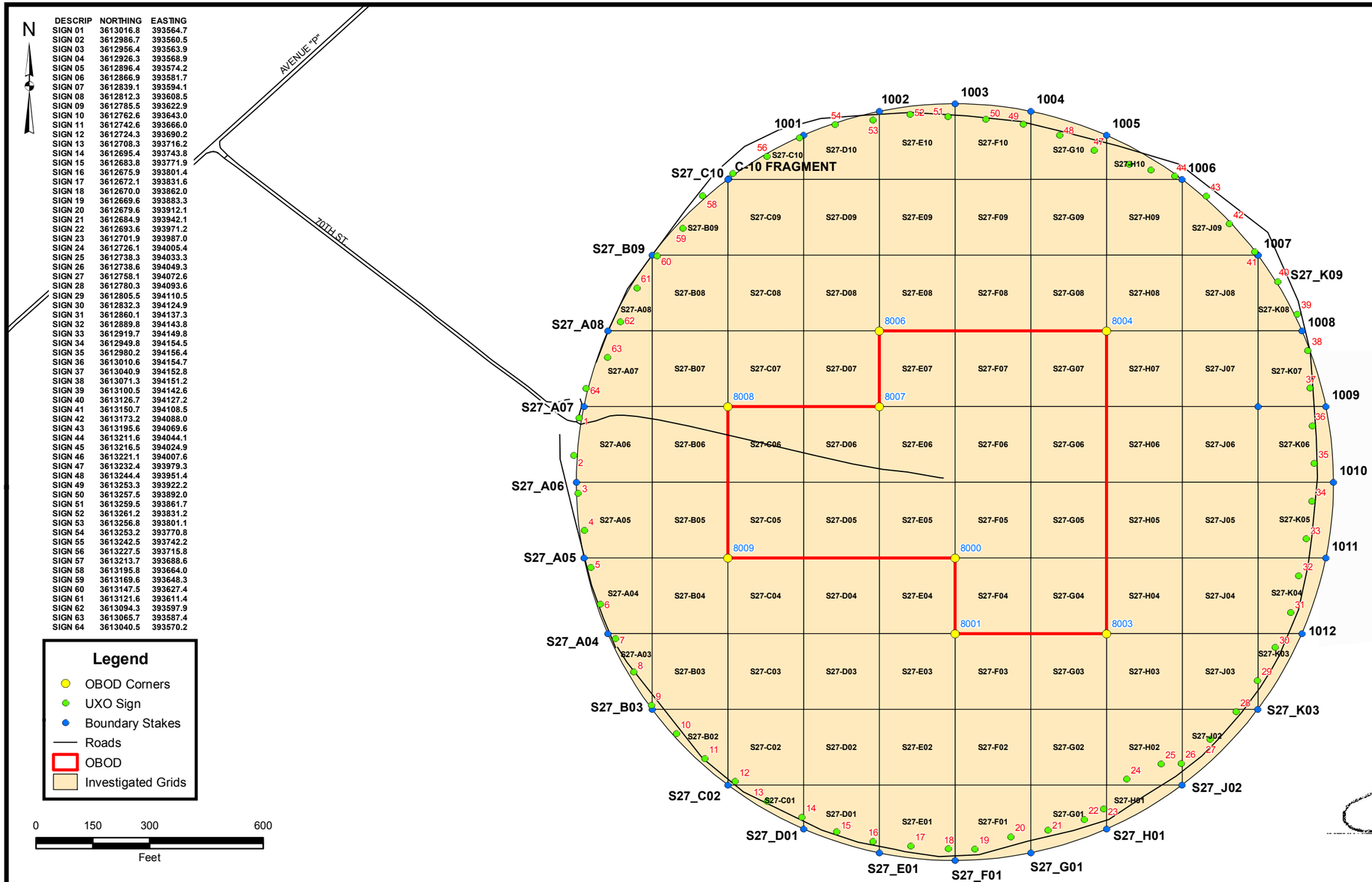


Figure B-5: Site 54 MEC/MPPEH Location Map

DESCRIP	NORTHING	EASTING
SIGN 01	3613016.8	393564.7
SIGN 02	3612986.7	393560.5
SIGN 03	3612956.4	393563.9
SIGN 04	3612926.3	393568.9
SIGN 05	3612896.4	393574.2
SIGN 06	3612866.9	393581.7
SIGN 07	3612839.1	393594.1
SIGN 08	3612812.3	393608.5
SIGN 09	3612785.5	393622.9
SIGN 10	3612762.6	393643.0
SIGN 11	3612742.6	393666.0
SIGN 12	3612724.3	393690.2
SIGN 13	3612708.3	393716.2
SIGN 14	3612695.4	393743.8
SIGN 15	3612683.8	393771.9
SIGN 16	3612675.9	393801.4
SIGN 17	3612672.1	393831.6
SIGN 18	3612670.0	393862.0
SIGN 19	3612669.6	393883.3
SIGN 20	3612679.6	393912.1
SIGN 21	3612684.9	393942.1
SIGN 22	3612693.6	393971.2
SIGN 23	3612701.9	393987.0
SIGN 24	3612726.1	394005.4
SIGN 25	3612738.3	394033.3
SIGN 26	3612738.6	394049.3
SIGN 27	3612758.1	394072.6
SIGN 28	3612780.3	394093.6
SIGN 29	3612805.5	394110.5
SIGN 30	3612832.3	394124.9
SIGN 31	3612860.1	394137.3
SIGN 32	3612889.8	394143.8
SIGN 33	3612919.7	394149.8
SIGN 34	3612949.8	394154.5
SIGN 35	3612980.2	394156.4
SIGN 36	3613010.6	394154.7
SIGN 37	3613040.9	394152.8
SIGN 38	3613071.3	394151.2
SIGN 39	3613100.5	394142.6
SIGN 40	3613126.7	394127.2
SIGN 41	3613150.7	394108.5
SIGN 42	3613173.2	394088.0
SIGN 43	3613195.6	394069.6
SIGN 44	3613211.6	394044.1
SIGN 45	3613216.5	394024.9
SIGN 46	3613221.1	394007.6
SIGN 47	3613232.4	393979.3
SIGN 48	3613244.4	393951.4
SIGN 49	3613253.3	393922.2
SIGN 50	3613257.5	393892.0
SIGN 51	3613259.5	393861.7
SIGN 52	3613261.2	393831.2
SIGN 53	3613256.8	393801.1
SIGN 54	3613253.2	393770.8
SIGN 55	3613242.5	393742.2
SIGN 56	3613227.5	393715.8
SIGN 57	3613213.7	393688.6
SIGN 58	3613195.8	393664.0
SIGN 59	3613169.6	393648.3
SIGN 60	3613147.5	393627.4
SIGN 61	3613121.6	393611.4
SIGN 62	3613094.3	393597.9
SIGN 63	3613065.7	393587.4
SIGN 64	3613040.5	393570.2



DESCRIP	NORTHING	EASTING
8000	3612904.2	393867.3
8001	3612843.2	393867.3
8003	3612843.2	393989.2
8004	3613087.0	393989.2
8006	3613087.1	393806.4
8007	3613026.1	393806.4
8008	3613026.1	393684.4
8009	3612904.2	393684.4

DESCRIP	NORTHING	EASTING
1001	393745.4	3613244.5
1002	393806.4	3613263.8
1003	393867.3	3613269.9
1004	393928.3	3613263.8
1005	393989.2	3613244.5
1006	394050.1	3613209.0
1007	394111.0	3613148.0
1008	394146.5	3613087.0
1009	394165.8	3613026.1
1010	394171.9	3612965.1
1011	394165.8	3612904.2
1012	394146.5	3612843.2
C-10 FRAGMENT	393685.2	3613209.4
S27_A04	393588.0	3612843.2
S27_A05	393568.7	3612904.2
S27_A06	393562.5	3612965.1
S27_A07	393568.6	3613026.1
S27_A08	393587.9	3613087.1
S27_B03	393623.5	3612782.3
S27_B09	393623.5	3613148.0
S27_C02	393684.6	3612721.3
S27_C10	393684.4	3613209.0
S27_D01	393745.4	3612685.9
S27_E01	393806.4	3612666.6
S27_F01	393867.3	3612660.5
S27_G01	393928.3	3612666.7
S27_H01	393989.3	3612686.0
S27_J02	394049.9	3612721.3
S27_K03	394110.9	3612782.3
S27_K07	394111.2	3613026.1
S27_K09	394111.2	3613147.9

I, David R. Collins, Registered Professional Land Surveyor No. 1954, do hereby certify that this plat correctly represents the results of a survey made under my supervision August 4 through September 23, 2008.

Principal of the firm: _____

SUXOS: _____

Datum: NAD83 UTM
Monument: Longhorn Army Ammunition Plant
Monument BG-1 with coordinates
NORTHING-3614801.46,
EASTING-395385.09

Figure B-6: Site 27 Survey Certification Map

DESCRIP	NORTH	EAST	DESCRIP	NORTHIN	EASTING
SIGN 1	3614179.4	395143.2	1013	395068.6	3613625.2
SIGN 10	3613984.2	394959.8	1014	395005.1	3613686.2
SIGN 11	3613954.6	394952.4	1015	394997.4	3614072.1
SIGN 12	3613924.6	394947.4	1016	395058.4	3614135.6
SIGN 13	3613894.1	394947	1017	395180.3	3614195.0
SIGN 14	3613863.7	394949.6	1018	395241.3	3614203.9
SIGN 15	3613833.8	394955.1	1019	395302.2	3614200.9
SIGN 16	3613803.8	394959.8	1020	395363.2	3614185.9
SIGN 17	3613774.4	394967.8	1021	395392.4	3614173.9
SIGN 18	3613745.2	394976.7	1022	395424.1	3614156.7
SIGN 19	3613718.3	394991.2	1023	395480.2	3614112.9
SIGN 2	3614163.4	395117.3	1024	395485.1	3614108.0
SIGN 20	3613694.6	395010.3	1025	395528.9	3614051.9
SIGN 21	3613672.4	395031.1	1026	395546.1	3614020.2
SIGN 22	3613651.1	395052.8	1027	395558.0	3613991.0
SIGN 23	3613632.6	395077	1028	395573.1	3613930.0
SIGN 24	3613616.8	395103.1	1029	395576.0	3613869.1
SIGN 25	3613602.8	395130	1030	395567.2	3613808.1
SIGN 26	3613591	395158.1	1031	395507.7	3613686.2
SIGN 27	3613583.5	395187.6	1032	395444.2	3613625.2
SIGN 28	3613579.1	395217.8	S54_A04	394967.3	3613747.1
SIGN 29	3613578.7	395248.2	S54_A06	394936.8	3613869.1
SIGN 3	3614147.8	395091.2	S54_A07	394939.8	3613930.0
SIGN 30	3613579.6	395278.7	S54_A08	394954.8	3613991.0
SIGN 31	3613584.2	395308.8	S54_A09	394983.9	3614051.9
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SIGN 39	3613710.2	395507.5	S54_B10	395032.6	3614112.9
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SIGN 40	3613735.9	395523.8	S54_C10	395058.4	3614112.9
SIGN 41	3613763	395537.5	S54_D01	395119.3	3613595.1
SIGN 42	3613791.2	395548.8	S54_D11	395119.4	3614173.3
SIGN 43	3613820.6	395556.7	S54_E01	395180.3	3613573.5
SIGN 44	3613850.5	395562.3	S54_F01	395241.3	3613564.6
SIGN 45	3613880.9	395562.2	S54_G01	395302.2	3613567.6
SIGN 46	3613911.3	395561	S54_H01	395363.2	3613582.6
SIGN 47	3613941.4	395556.7	S54_H02	395363.1	3613625.2
SIGN 48	3613971.3	395550.8	S54_J01	395424.1	3613611.8
SIGN 49	3613999.9	395540.5	S54_J02	395424.1	3613625.2
SIGN 5	3614110.1	395043.4	S54_K02	395485.1	3613660.5
SIGN 50	3614027.4	395527.5	S54_K03	395485.1	3613686.2
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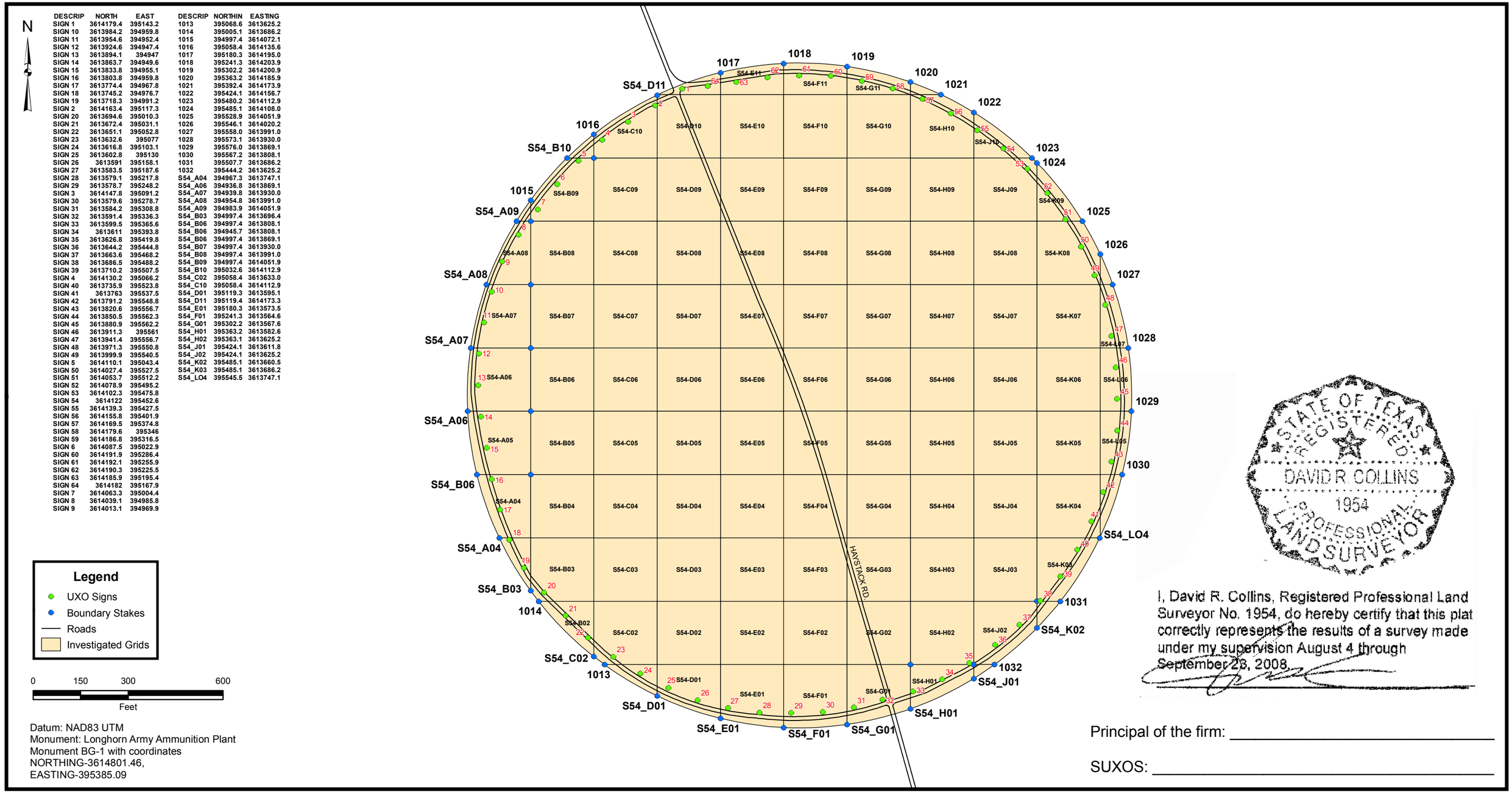

Datum: NAD83 UTM
Monument: Longhorn Army Ammunition Plant
Monument BG-1 with coordinates
NORTHING-3614801.46,
EASTING-395385.09

I, David R. Collins, Registered Professional Land Surveyor No. 1954, do hereby certify that this plat correctly represents the results of a survey made under my supervision August 4 through September 28, 2008.

Principal of the firm: _____

SUXOS: _____

Figure B-7: Site 54 Survey Certification Map

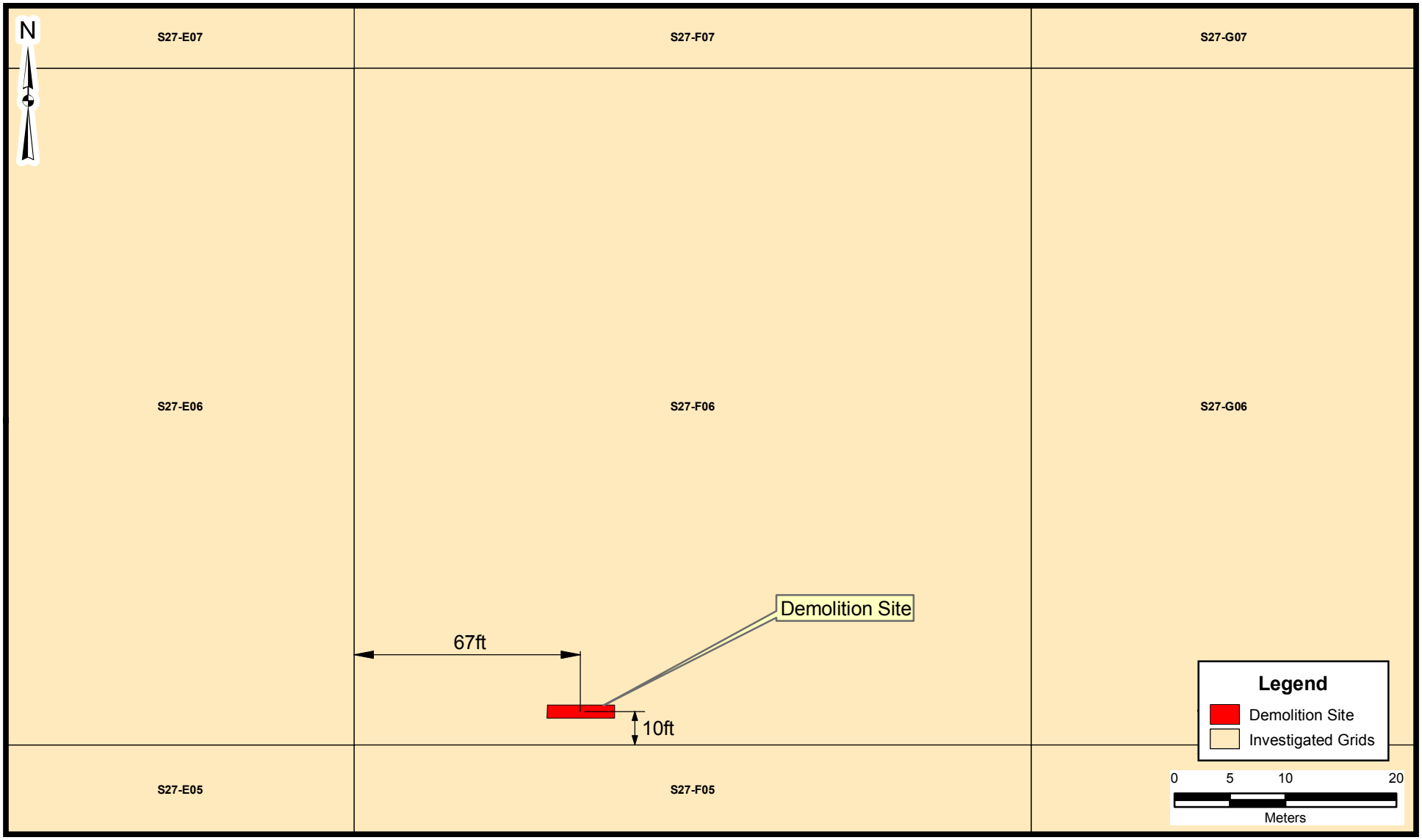

Figure B-8: Grid S27-F06 Previous Demolition Site Location - Site 27

APPENDIX C
OPERATIONS PHOTOS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX C
OPERATIONS PHOTOS

Photo 1: 155mm Illumination Rounds

Photo 2: 155mm Illumination Rounds Staged for Destruction

Photo 3: Western Half of Site 54 Before Brush Cutting

Photo 4: Western Half of Site 54 After Brush Cutting

Photo 5: S54-G08 Scrap

Photo 6: Field Crew

Photo 7: 26 Test Plot

Photo 8: Shaun Woods Testing

Photo 9: QC Check on MPPEH/MD from S54-D06

Photo 10: QC Check on Scrap

Photo 11: Survey Crew

Photo 12: 155mm Illumination Cartridges

Photo 13: 155mm Illumination Cartridges

Photo 14: OB/OD Clearance

Photo 15: OB/OD

Photo 16: Shaun Woods and Yasir Adulrahman Working Standing Body of Water

Photo 17: Working Standing Body of Water

Photo 18: Working Standing Body of Water

Photo 19: Working Standing Body of Water

Photo 20: Working Standing Body of Water

Photo 21: Working Standing Body of Water

Photo 22: Working Standing Body of Water

Photo 23: Working Standing Body of Water

Photo 24: Working Standing Body of Water

Photo 25: Site 54 MD and Scrap Metal

Photo 26: Site 54 MD and Scrap Metal

Photo 27: Site 54 MD and Scrap Metal

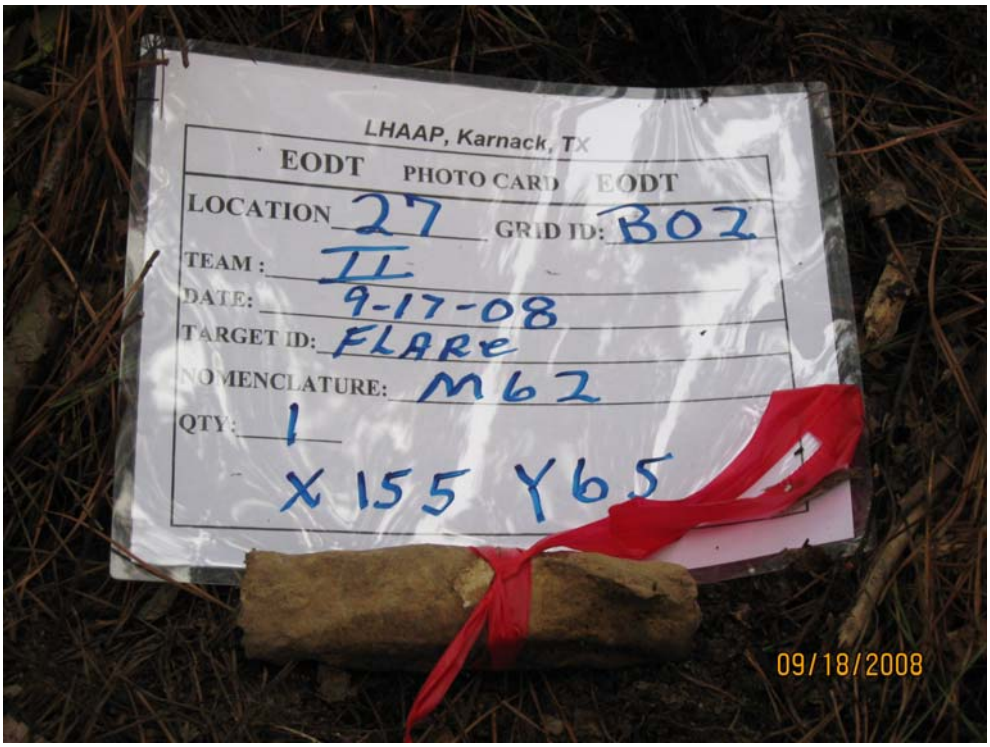

Photo 28: S27-B02 M62 Flare

Photo 29: S27-B02 M112 Flare

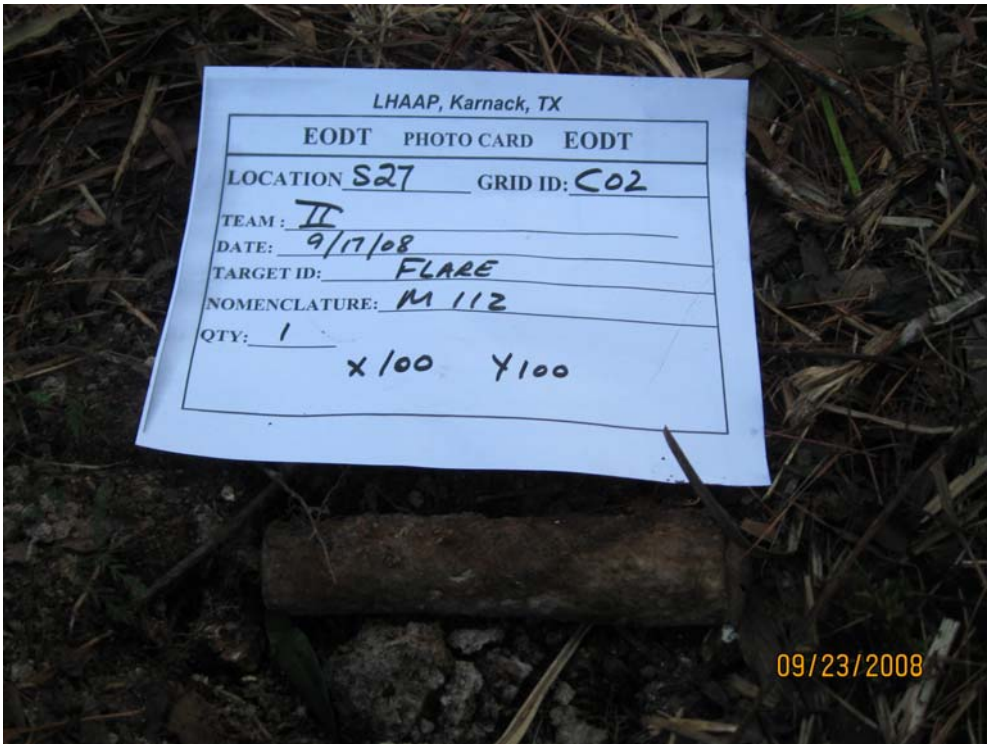

Photo 30: S27-C02 M112 Flare

Photo 31: S27-C03 M62 Flare

Photo 32: S27-D03.1 M62 Flare

Photo 33: S27-D03.2 M62 Flare

Photo 34: S27-D05.1 M112 Flare

Photo 35: S27 D05.16 M112 Flare

Photo 36: S27 E03.1 M112 Flare

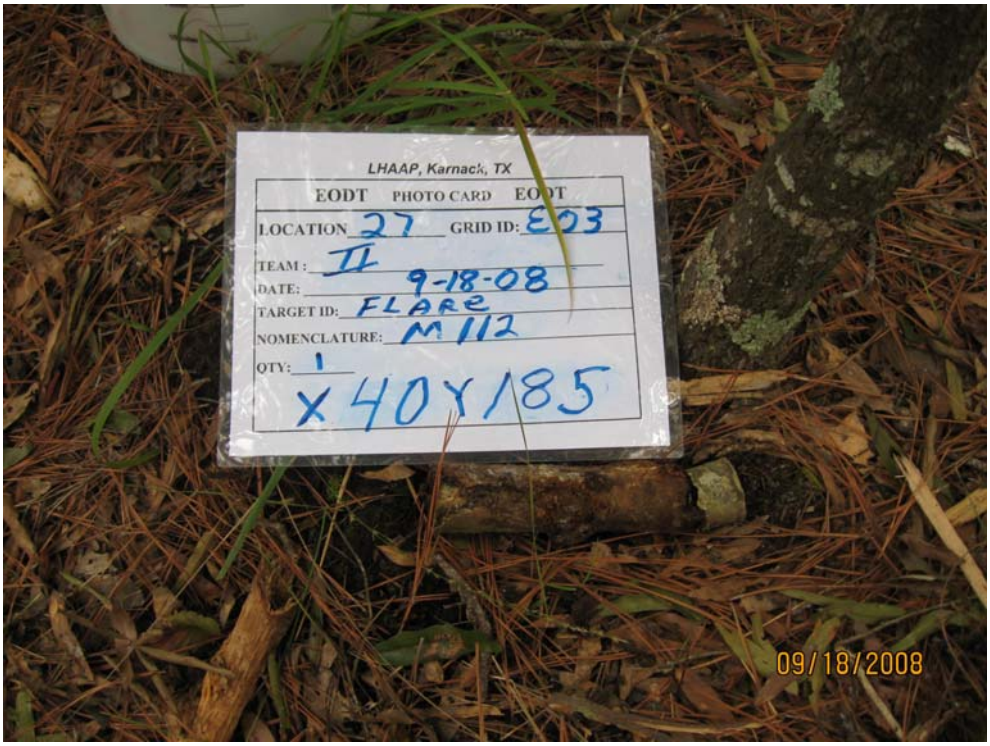

Photo 37: S27 E03.2 M112 Flare

Photo 38: S27 E03.3 M112 Flare

Photo 39: S27 E03.4 M112 Flare

Photo 40: S27 E03.5 M112 Flare

Photo 41: S27 E03.6 M112 Flare

Photo 42: S54 D06 MEC Scrap Ready for QC Check

Photo 43: MD/Scrap Metal

Photo 44: Trail to Site 27 Before Brush Cutting

Photo 45: Trail to Site 27 After Brush Cutting

Photo 46: Training Sweepers

APPENDIX D
SENIOR UXO SUPERVISOR LOG

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

EODT Senior UXO Supervisor Daily Log
OE Removal Action, Longhorn Army Ammunition Plant
Karnack, TX

Date	Time	Event
3 Aug 08 Sunday	XXXX	Mobilization to Marshall, TX
4 Aug 08 Monday	0700	Muster on site personnel at motel room. PM: **Brian Gentry** Safety: **Robert Thomas** Survey Lead: **John Clark** Survey/UXOII: **Jathan Futral** UXO III: **Charlie Overstreet** UXO III: **Jason Birchfield** UXO III: **William Czech**
	0800	Mustered Brush crew personnel.
	0820	Survey Crew arrived.
	0830	Depart for site.
	0905	Arrive at Site. No site facilities. (Awaiting storage container / site office trailer / porta johns etc.)
	0915	Site and Safety brief. Preparatory Phase inspections completed.
	0940	Brush crew and escort depart for Site 54. (1 machine and 3 ground personnel)
	0945	Survey crew and escort depart for Site 54. (One two man team)
	0940	Site tour. (Site 54, 27, magazine area)
	1050	Equipment storage container arrived (40'). Down loaded and established.
	1200	Lunch
	1230	Started down load of all equipment brought to site. (Cargo trailer and 2 ea. wood shipping containers.) Extremely Hot…106 degrees.
	1730	Site Secured.
5 Aug 08 Tuesday	0600	Morning Muster and Safety Brief.
	0620	Brush crew and Survey crew depart for Site 54, with escorts.
	0630	Continue equipment unpacking and inventory.
	0840	Out to check on Brush and Survey.
	1000	Designated area for "Test Strip". Cleared of all anomalies.
	1230	Completed establishment of "Test Strip" (10'X20'), 15 test items placed IAW requirements.

Date	Time	Event
5 Aug 08 Tuesday (cont)	1300	Lunch
	1330	Out to check on Field teams.
	1450	Working logistics for site trailer, electrical hook up, explosive storage, and met with Shaw and Fish and Wild Life personnel. Having problems with Enterprise Rental….unable to accommodate our request for three mid size SUVs
	1628	Brush crew in from the field. Debriefed and secured. Survey having problems, will need to stay for a while longer.
	1910	Survey crew secured.
	1920	Site Secured.
6 Aug 08 Wednesday	0600	Muster and Safety Brief.
	0620	Brush and Survey departed for Site 54, with escort.
	0850	Site trailer arrives (23', very small. Need to pass on to who ever arranges these to consult with SUXOS)
	0902	Jim Craig (Electrician for power hook up) arrives on site.
	0910	Site trailer off load and set up and electrical hook up in progress.
	1005	We now have our equipment properly stowed and we have an office to establish.
	1030	Moving office equipment and supplies in. Enterprise Rental has 1 SUV and two 4 door pickups. Will pick up at 1200.
	1205	Picked up rental vehicles at the Super 8 motel. 1 ea. mid size SUV and 2 ea. four door pickups. (SUXOS, Safety, QC)
	1230	Lunch
	1320	Continue to set up office spaces and re-organize equipment storage container.
	1350	Out to check on field teams.
	1630	Secured Site
7 Aug 08 Thursday	0600	Muster and Safety Brief
	0615	Brush crew departs for Site 54, with escort.. (Survey crew late)
	0650	Survey crew on site. Given safety brief.
	0700	Survey crew departs for Site 54, with escort.
	0710	Continue working equipment, supplies and setting up site trailer. Internet is no functional. This will be a problem.
	0920	Out to check on crews.
	1135	Back at office.

Date	Time	Event
	1200	Lunch
7 Aug 08 Thursday	1625	Crews in from the field
	1630	Secured site.
8 Aug 08 Friday	0600	Muster and Safety Brief (Safety, Brush crew and escort)
	0615	Brush crew departs for Site 54, with escorts.
	0900	Out to check on Brush.
	1105	Received call from driver bringing in the explosive magazine. He about 45 minutes out. Provided directions and meeting place.
	1135	Received call from driver bringing forklift. He about 20 minutes out. Provided same.
	1203	Magazine at main gate.
	1205	Forklift at main gate.
	1207	Safety and I escort trucks to magazine storage area.
	1235	Magazine in place, drivers escorted back to main gate.
	1245	Checked on Brush crew.
	1410	Departed site.
9 Aug 08 Saturday	0600	Muster and Safety Brief (Safety, Brush crew and escort)
	0610	Brush crew departs for Site 54, with escorts. Envirogrind has brought in an additional machine and three additional personnel.
	0920	Checked on Brush crew.
	1200	Lunch
	1425	Checked on Brush crew. Doing OK.
	1630	Secured Site.
11 Aug 08 Monday	0600	Muster and Safety Brief (All personnel, Brush, Survey, UXO Techs, and Sweep personnel on site – see weekly for list of personnel).
	0615	Brush and Survey depart for Site 54, with escorts.
	0645	Start administrative processing of all new personnel. See Initial Training outline for details.
	0800	Start Indoctrination and Training for all new personnel.
	1200	Lunch
	1235	Continue Indoctrination and Training
	1630	Secured Site.

Date	Time	Event
	1755	Departed Site.
12 Aug 08 Tuesday	0600	Weather…Rain and scattered Thunder storms forecasted for the day. Cancelled all training activities. All personnel who came in were given 2 hrs credit for work. Brush clearance team and sub-contractor crew have elected to work, provided two UXO II escorts. Management staff working on much needed paperwork backlog.
	1020	Checked on crews in the field (Brush and Survey). Rain sporadic, no lightning yet.
	1230	Lunch
	1305	Continue administrative paperwork establishment. (SUXOS. Safety. (QC and FOA.)
	1440	Checked on crews in field (Brush and Survey).
	1620	Crews in from the field (Brush and Survey).
	1630	Secured Site.
13 Aug 08 Wednesday	0600	Muster and Safety Brief (All personnel, Brush, Survey, UXO Techs, and Sweep personnel)
	0615	Brush and Survey depart for Site 54, with escorts.
	0630	Passed out team assignments.
	0645	Continue Indoctrination and field training.
	1200	Lunch
	1230	Continue Indoctrination and field training.
	1630	Secured Site.
	1810	Depart Site.
14 Aug 08 Thursday	0600	Muster and Safety Brief (All personnel, Brush, Survey, UXO Techs, and Sweep personnel)
	0630	Team field training
	0840	Out to check on crews and training evolutions.
	1200	Lunch
	1230	Started Locator test strip testing. (T/Ls and UXO techs)
	1310	Three Gator (AT/UV) delivered by RSC. One without seat belts and one with two bald tires. Called RSC and they will correct the deficiencies.
	1335	Continue Locator test strip testing. (Sweep personnel)
	1400	Gator training. (Inspection, pre-start, basic controls and operation)

Date	Time	Event
	1420	RSC service truck on site. Seat belts installed on deficient unit.
	1430	Started Gator practical driving training and qualification.
14 Aug 08 Thursday	1500	Vehicle Inspections / final equipment check out by teams, while remainder complete Gator practical.
	1535	Safety told me there was a problem with Team 2's truck. Two of the rear seat belts are broken and non-functional. It had been identified during inspection. Requested that safety confirm and take appropriate actions.
	1545	Gator training completed.
	1600	Final training out brief. Reviewed next weeks schedule with crew.
	1630	Secured Site.
	1720	Received 2,500' of line from Logistics, waiting when I got back to Motel.
15 Aug 08 Friday	0600	Muster and Safety Brief (Safety, Brush escort and Brush crew) Safety: Tom Hinote / Escort: Jathan Futral
	0900	Took EODT Ford 150 to local dealership to have defected rear seat belts replaced. Must have been a mix up between Site Safety and who ever he talked with. Wrong dealership, called Safety and he wasn't sure who he talked to. Local dealership placed belts on order and I will take the truck back tomorrow morning.
	1100	Working on site paperwork.
	1330	Call IMR regarding scrap bins. Problems with their trucks. Delivery re-scheduled for Monday mid-morning. PM advised.
	1500	Check with Tom Hinote, everything going well with Brush cutters.
	1630	Secured Site.
16 Aug 08 Saturday	0600	Muster and Safety Brief (Safety, Brush escort and Brush crew) Safety: Chuck Overstreet / Escort: Manny Repollett
	0830	Billy Czech and I depart for local Ford dealership to get seatbelts replaced.
	1020	Truck ready for pick up. Billy Czech and I depart motel to pick up truck.
	1050	Truck back at motel…turned over to Team Leader, assigned to Team 2 (Billy Czech)
	1100	Depart for site.
	1135	On site. Brush crew doing OK.
	1155	During check of equipment discovered the "Gator" with "reported bald tires" had a flat on the driver's front tire. Called RSC with no luck. We can not expect support until possibly late Monday morning, at the best.

Date	Time	Event
	1240	Working on daily reports, Monday's team assignments, and finalizing required supporting paperwork and grid sheets.
	1510	Brush crew departs for the day. (Early day)
16 Aug 08 Saturday (continued)	1535	Safety and brush escort secured.
	1730	Secured Site. Departed for motel.
18 Aug 08 Monday	0505	Arrived at site trailer
	05XX	Received call from Tom Hinote….Reported that one of our company trucks had been involved in an accident at the intersection in front of the main gate to the Former Longhorn Army Ammunition Plant. Tom said all involved were walking around and appeared OK.
	0535	Departed for accident scene. Talking with ACOE Safety Specialist, advised him of situation, he is following sheriffs vehicle to main gate.
	0540	Arrived at accident site. Truck flipped and was lying upside down. All 4 passengers were walking around and coherent but appeared to have potential injuries. Driver of second vehicle was also walking around and coherent. County Sheriffs on scene.
	XXXX	Ambulance arrives
	XXXX	Accident victims being looked at by medical personnel on scene.
	XXXX	Second party and Kevin Klein being transported to Marshal Hospital. Second ambulance in route. Safety departs for hospital with first group.
	XXXX	Matt Abbott and Bill Jones transport to Marshall hospital. Pat Hinote road in ambulance with personnel.
	XXXX	Took William Czech (driver) to ER. He had earlier declined medical treatment. He was showing signs of pain/injury.
	XXXX	Talked with State Trooper at ER and verified he had no concerns with DUI issues. Verified a citation for Failure to Yield ROW issued to William Czech. Got personal information on second party
	1030	Instructed Tom Hinote (QC) to get teams in the field and start working assigned grids.
	XXXX	Checked with medical staff…They have indicated all personnel involved were OK with the exception of William Czech who has fractured ribs. He will be released with limitations on lifting.
	XXXX	Departed hospital with Pat Hinote (FOA) and Anita Thomas (UXOI) who was assisting with personnel, returned to site. Robert Thomas remaining back to support and transport personnel as required.

Date	Time	Event
	XXXX	All personnel released from hospital. Told Safety to let them stop off get some chow.
18 Aug 08 Monday	1205	All accident personnel on site. Safety getting statements and working on required paperwork. Guys are sore and a bit banged up. Not putting them in the field, after required interviews and paperwork sending them home to rest and recuperate.
	1450	Accident victims being transport back to motels. Those that had vehicles drove home.
	1520	Out to check on teams and provide update.
	1605	All personnel in from the field
	1630	Site secured
	1840	Depart site
19 Aug 08 Tuesday	0600	Muster and Safety Brief
	0615	Brush crew and escort depart for Site 54
	0630	Teams depart for Site 54
	0850	Out to check on teams (Advised Billy Czech that his driving privilege of EODT vehicles has been suspended until further notice by Corporate)
	1130	Back at office
	1205	Lunch
	1235	Out to check on teams
	1455	Back at office
	1515	Admin
	1610	Teams in from the field
	1635	Secured site
	1820	Depart site
20 Aug 08 Wednesday	0600	Muster and Safety Brief
	0615	Brush crew departs fro Site 54 with escort.
	0633	Teams depart for Site 54.
	0915	Out to check on teams
	1120	Back at office
	1130	Admin duties
	1200	Lunch
	1230	Out to check on teams

Date	Time	Event
	1435	Back at office
	1530	Paperwork
20 Aug 08 Wednesday (continued)	1620	Teams in from the field
	1630	Site Secured
	1740	Depart site.
21 Aug 08 Thursday	0600	Muster and Safety Brief / Vehicle Inspections. (Verbally counseled Billy Czech on his unsafe driving and his responsibilities to insure all personnel in company vehicles wear seat belts. He acknowledged his responsibilities and his suspension of driving privileges. Advised Billy that any further safety violations would result in my recommendation for his termination). (Verbally counseled Kevin Klein on his violation of company seat belt policy and warned that any future violation would result in my recommending his termination. He acknowledged this warning and indicated he would comply with all company safety policies)
	0615	Brush crew and escort depart for Site 54
	0630	Teams depart for Site 54
	0800	Start follow-up on internet and repeater activation
	0830	Escorted 1 brush machine out magazine area to clear around magazine (Required by USACE Safety Rep)
	0905	Brush machine and escorts depart for Site 27
	0945	Out to check on teams
	1115	Back at office
	1200	Lunch
	1230	Out to check on teams
	1245	Safety put site on lightning hold as a result of indications on lightning meter (Thunderbolt) None seen or heard.
	1315	Safety lifted lightning hold. Seems meter doesn't work well in the vehicle when it is running. Picking up EMRs and giving false readings.
	1350	Assigned second brush escort on Site 54. Hand cutting crews area separating.
	1600	Brought all crews in from the field. Weekly out brief, weekend driving/safety. Issued EODT shirts.
	1630	Site Secured
	1700	Call from Vanessa of Fish and Wildlife, we have a package that was dropped off. After a brief conversation it turned out to be an explosive delivery.

Date	Time	Event
	1710	Tom Hinote and I depart to pick up package and place in magazine. Turned out to be 50 ea. perforators. Items secured and paperwork completed.
	1745	All management personnel depart.
21 Aug 08 Thursday	1850	Depart site. Nothing heard from Windstream who were suppose to be on their way to hook up internet.
22 Aug 08 Friday	1750	Depart for Hospital to check on Chuck Overstreet was has gone to the ER to have his Poison Ivy rash/reaction checked out.
25 Aug 08 Saturday	0600	Muster and Safety Brief
	0615	Brush crew and escort out (Site 54 and 27)
	0630	Teams out to Site 54. Have combined Teams 1 and 2. Billy Czech (T/L Team 2) back on site. (Verbal counseling regarding the accident as well as his responsibilities as Team Leader in regards to Safety. Let him know I have been told by PM that he is not to drive EODT or rental vehicles for 1 year. But he is still allowed to operate our "Gators" and any other off road vehicle/equipment on site.)
	0650	Meeting with Safety and QC.
	0715	Working with FOA on expense reports.
	0905	Out to check on teams and get expense reports signed.
	1010	Call from Austin Power, driver inbound with booster.
	1030	Escorting driver to magazine, Safety with us.
	1045	Received and stored 60 Black Cap Boosters
	1055	Safety escorting driver out. Depart for Site 27.
	1130	Call checking status of repeater activation……pending.
	1150	Brush crew on Site 27 doing OK.
	1210	Depart for office.
	1315	Out to Site 54 to check on crews. Still no repeater. And it looks like we will have to start over on the internet issue.
	1440	Back at office.
	1455	Repeater activated and working. Switched all personnel to repeater channel for radio checks, we now have solid communication at all sites, even in the Marshall area. Safety was in town and I had good communications with him.
	1610	Teams in from the field.
	1625	FEDEX arrives with detonating cord.
	1630	Site secured.

Date	Time	Event
	1640	Tom Hinote and I depart for magazine to place det cord in magazine.
	1820	Depart Site.
25 Aug 08 Saturday	1945	Completed daily report and sent out.
	1950	End of the Day.
26 Aug 08 Sunday	0600	Muster and Safety Brief
	0615	Brush crew departs for Site 27.
	0630	Teams out to Site 54.
	0700	Admin
	0855	Out to check on the teams.
	1145	Returned to office.
	1200	Lunch
	1310	Out to check on teams.
	1655	Returned to office.
	1510	FedEx arrives with blasting caps and shock tube.
	1520	Safety and I depart to place items in magazine.
	1545	Back at office.
	1610	Crews in from the field.
	1630	End of the day.
27 Aug 08 Monday	0600	Muster and Safety Brief
	0615	Brush crew departs for Site 27.
	0630	Teams out to Site 54.
	0750	Out to check on teams.
	1015	Back at office.
	1120	Stopped by Fish & Wildlife to arrange receipt of "Icebox" commo package tomorrow.
	1200	Depart site / fueled truck / sent out yesterday's daily report from my room.
	1300	Picked up John Clark at motel and departed for airport.
	1335	Dropped John Clark off at airport. Returning to site.
	1420	Arrived back on site.
	1500	Jonathan McCarty (1st Choice Sweep personnel) brought in from the field. He had complained of feeling light headed and felt like he was going to faint. Team Leader took correct actions by putting him in a vehicle w/ AC, water and

Date	Time	Event
		monitoring him. Safety was contacted and in route.
27 Aug 08 Monday (continued)	1530	Jonathan arrived at office. Indicated he was fine. His mother is in route to take him home. Note: Jonathan has been a substandard performer since day one. Considerable time has been spent by management, Team leaders, and UXO Techs, trying to help him come up to a minimal acceptable level of work and quality. He has required constant supervision and seems to do as little as he can. Frequent and long restroom (porta-john) trips, excessive requirements for breaks, and constant reminders to get back to work have been a daily issue. I contacted 1st Choice earlier before this event and we were discussing the very real possibility of placing Jonathan on the standby list and bring in someone more suited for this type of work.
	1545	Directed Jonathan to report to 1st Choice first thing in the morning. Jonathan departs site with his mother. I explained to his mother what happened and actions taken.
	1550	Called 1st Choice and briefed on situation.
	1600	Notified PM of situation.
	1610	Crews in from the field.
	1630	Site secured.
	1655	Call from Trae Brown (1st choice). Discussed situation with Jonathan; she will contact individuals on standby-list for potential training Tuesday, 2 Sep 08)
	1720	Depart Site.
28 Aug 08 Tuesday	0600	Muster and Safety Brief
	0615	Brush crew departs for Site 27.
	0630	Teams out to Site 54.
	0735	Explosive inventory (SUXOS/QC)
	0815	Working on PSR with FOA
	0840	Call from 1st Choice…Jonathan McCarty will be moved to the back-up list.
	0900	Out to check on teams.
	1210	Back at office
	1230	Called 1st Choice regarding the excessive absences of two individuals.
	1300	Call back from 1sr Choice. One was in jail (traffic tickets) the other was suffering from a stomach virus. Was assured both will be here next Tuesday. We will be conducting training for the two back up personnel on Tuesday.
	1320	Out to check on teams
	1535	Back at office

Date	Time	Event
	1610	All field teams in
28 Aug 08 Tuesday (continued)	1625	Out brief / Weekend safety
	1630	Site Secured
	1800	Departed site. ("Icebox system not delivered here as planned.)
	1840	At Motel. "Icebox" system delivered to the motel.
	1900	End of the Day.
29 Aug 08 Wednesday	0700	Received e-mail from Jet Research regarding shipment and receipt of demo materials. They dropped both shipments off without getting anyone signing for them. (perforators and det cord). Printed out paperwork and will FAX out this morning.
	1130	Call from Manny Repollet, he has not been paid. All other personnel have received earned pay. E-mail to Gina Grizzard, cc to Brian Gentry. Call into Gina, not available yet. Also have call into Stuart regarding per diem payments due today. Will continue to pursue; crew is working hard and one thing they depend on is being paid on time for their efforts.
	1210	Called Kelly Walker regarding per diem. She assured me that despite the delays that all per diem would be posted by COB today.
	1800	Guess corporate has different values and priorities than those in the field. No Per Diem. E-mail sent to Kelly and cc: PM. This is totally UNSAT. 4 day weekend and the working crew goes without AGAIN. Will follow up Tuesday morning. .NOT happy with corporate / PM concern and support.
	1900	Final check on e-mail etc. End of the Day
1 Sep 08 Monday	0845	In preps for Gustav. At Site to check on facilities/Magazine. All OK.
	0930	Working on White's program to possibly reduce amount of smaller anomalies during sweeps.
	1120	Depart site, not a lot of luck on modifying program.
	1530	Attempted to call Team Leaders on work cells….no luck. Did get in touch with Safety. He is in-route and will be available tomorrow. Talked with Brush crew and they are on the road in bound.
	1545	Winds are increasing and rain has started sporadic, heavy/light.
	1600	Doesn't look good for tomorrow. Heavy rains, thunder storms, tornados, and high winds predicted. Will continue to contact Team Leaders in case I need to call tomorrow off early. Want Team Leaders to be able to shut down their people before they get on the road and it causes the project un-productive costs. Guess I have to remind all that they have responsibilities along with their positions. Greenhorn field personnel and Greenhorn Team Leaders. QC and

Date	Time	Event
		FOA in Pensacola; will try to get here sometimes tomorrow afternoon. Out of here.
1 Sep 08 Monday (continued)	1830	Finally contacted all three team leaders. Advised them I will be contacting them later tonight or early tomorrow morning and making a decision on whether we will be working.
	1840	Contacted Trae @ 1st Choice and briefed her on weather concerns. She agrees that in light that the center of the storm passing over us may be a good reason to call tomorrow off, (over 3 million people evacuated from the Gulf coast.)
	1930	Notified team leaders to call all assigned personnel and advise them we will NOT be coming in tomorrow (Tuesday, 2 Sept 08). Also told them to standby and wait for calls Tuesday night or Wednesday morning. Contacted Robert Thomas (Safety) and let him know I am calling tomorrow. Will see how Wednesday pans out.
2 Sep 08 Tuesday	0930	Out to site with Brush cutter crew who need to do maintenance on equipment.
	1020	Working on setting up "Ice box" internet system.
	1240	Brush cutting crew depart.
	1300	Have internet system set up and all systems seem to be working. Due to weather not able to receive a strong enough signal to actually log on. Weather should clear up in a few days.
	1335	Depart site.
	1500	Checking e-mail and notifying personnel that we will be coming in tomorrow unless they are called tomorrow am.
	1720	End of the Day. (Charging 5 hours)
3 Sep 08 Wednesday	0600	Muster and Safety Brief
	0615	Brush crew departs for Site 27.
	0630	Teams out to Site 54.
	0845	Out to check on teams
	1020	Back at office
	1030	Admin work
	1210	Lunch
	1305	Out to check on the teams
	1445	Out to Site 27 to check on Brush/Survey.
	1535	Back at office
	1610	All field teams in

Date	Time	Event
	1625	Daily 0ut brief
	1630	Site Secured
	1820	Departed site
4 Sep 08 Thursday	0600	Muster and Safety Brief. New personnel on site: Ricky Brown and Derrick Black, (1st Choice back up personnel) They are here for training and integration into the teams as a result of our recent personnel losses. (Two, 1st Choice moved from active to standby status due to excessive absences and/or poor performance).
	0615	Brush crew departs for Site 27.
	0630	Teams out to Site 54.
	0645	Conducted in brief for new personnel.
	0820	Turned new personnel over to Safety.
	1005	Provided White's locator training for new personnel.
	1115	Took new personnel out on a site tour and had them observe field operations.
	1150	Received call from Team 1 team leader requesting I come to his location. He has issues with one of his team members. Depart Site 27.
	1205	Brought new personnel back to site office for lunch.
	1215	Out to Team 1's location to remove Dajuan Wollen (sweep personnel) from the grid. Team leader indicated that his insubordination and work performance today has finally reached a point where he feels the individual is becoming a liability and negatively impacting production, safety, and quality. His performance, quality of work, attitude, and his overall ability to meet the basic minimum standards of what is expected and which has been achieved by the other 1st Choice personnel is extremely substandard. His insubordination displayed to his Team Leader and his constant failure to comply with basic safety standards along with his overall lack of work ethics is having a negative effect within his assigned team as well as production and quality. He will be directed to report to 1st Choice for counseling and his status will be pending.
	1245	Drove Dajuan Wollen to the main gate where his ride will pick him up.
	1525	Call from 1st Choice (Trea). Dajuan has been counseled by her and the company's safety manager. I indicated that I am reluctant to bring him back on site tomorrow. Will discuss matter with PM and make my decision on Monday, 8 Sep 08.
	1610	All teams in from the field.
	1630	Site secured.
	1720	Depart site.

Date	Time	Event
5 Sep 08 Friday	0600	Muster and Safety Brief
	0615	Brush crew departs for Site 27.
	0630	Teams out to Site 54.
5 Sep 08 Friday (continued)	0650	Meeting with CEHNC Safety Specialist regarding QA procedures. Based on his discussion with Huntsville PM the issues have been resolved and will have no impact on the project, at this time.
	0730	Meeting with Safety and QC. General overview of where we are and where we need to be going, etc.
	0840	Out to check on teams.
	0920	Notified by Team 1 that they have items that will required demolition procedures applied.
	0940	Items have been identified as: 1 ea. 4.2" mortar (illumination), 2 ea. 40mm ground signal, 1 ea. 155mm illumination candle. CEHNC Safety Specialist notified. Scheduled Demo Ops for this afternoon.
	1035	Together with Safety and planning this afternoons Demo Ops.
	1200	Lunch
	1240	Tested RFD and consolidated Demo support equipment/materials.
	1330	Issued demolition materials.
	1400	Demo Brief to all personnel. All personnel consolidated. Advised QC that scrap removal operations could be conducted during demo preps.
	1445	Demo Ops start.
	1615	Shot fired.
	1620	Sent all non-essential personnel back to site office…secured for the day under QC's supervision. Demo Sup down range to check shot.
	1625	Shot cleared. (4.2" is inert).
	1645	All personnel off Site 54.
	1700	All Demo materials returned to magazine. Weekly inventory. Paperwork completed.
	1740	Demo paper work completed and Site secured.
	1830	Departed Site.
6 Sep 08 Saturday	0720	Working on site paperwork. Daily report for yesterday out. We have Brush removal operations going on at Site 27.
	1120	Secured for the day. (only added 5 additional hours in order to keep my time to a 40 hour week)

Date	Time	Event
	1620	Washed vehicle.
8 Sep 08 Monday	0630	Muster and Safety Brief (Adjusted working hours)
	0645	Brush crew departs for Site 27.
8 Sep 08 Monday (continued)	0655	Teams out to Site 54. (Matt Abbott reported to Safety that he had pain on his right side, lower back. And indicated he wanted to have it checked out. Safety will take him in town to the Occupational medical facility for exam.
	0940	Safety reported that Matt Abbott has been placed on limited duty until 12 Sep 08 and prescribed pain medicine. Doctor has attributed the muscle spasms to the auto accident three weeks ago. Matt Abbott to remain off site until he is capable/fit to resume normal duties.
	1005	Completed Saturday's daily and PSR with FOA. She is trying to send it out. Internet system very slow……
	1045	Out to check on the teams.
	1200	Lunch
	1235	Call to Enterprise regarding new contracts for vehicles.
	1300	Call to Super 8 to check on delivery of Schonstedts. They have arrived.
	1320	Depart for Marshall to: drop off FEDEX, get rental contracts, pick up locators.
	1510	Back on site.
	1600	Picked up Derrick Black and Leotis Webb. They need to leave early to pick their kids up from their babysitters.
	1645	Teams in from the field.
	1700	Site secured.
	1825	Depart site
9 Sep 08 Tuesday	0630	Muster and Safety Brief
	0645	Brush crew departs for Site 27.
	0650	Teams out to Site 54. (Matt Abbott back to work)
	0710	Working on Daily report.
	0825	Out to check on teams at Site 54.
	1035	Out to Site 27 to check on Brush.
	1210	Back at office.
	1250	Checked out Schonstedts. QC is running personnel through test strip one at a time as to not impact production.
	1400	Out to check on the teams

Date	Time	Event
	1610	Back at office
	1645	Teams in from the field
	1700	Out brief / Site secured
	1820	Depart site
10 Sep 08 Wednesday	0630	Muster and Safety Brief
	0645	Brush crew departs for Site 27.
	0650	Teams out to Site 54.
	0700	Survey crew departs for Site 27. Surveying in LUC sign points.
	0720	Working on daily report.
	0850	Out to check on the teams.
	1215	Lunch
	1340	Out to Site 27 to check on teams.
	1520	Back at office
	1645	Teams in from the field.
	1700	Out brief / Site secured
	1830	Depart site
11 Sep 08 Thursday	0630	Muster and Safety Brief
	0645	Brush and survey crews depart for Site 27.
	0650	Team 1 out to Site 54, Team 2 out to Site 27.
	0710	Daily report
	0850	Out to check on teams.
	1230	Explosive inventory
	1410	Out to check on teams
	1600	Back at office.
	1645	All teams in from the field. Survey completed LUC requirements on Site 27. Will schedule their return for Site 54.
	1700	Out brief / Site secured
	1820	Depart site.
12 Sep 08 Friday	1000	Out to site to meet scrap dealer (River City iron and metal) and await delivery of replacement 4×4 Gator.
	1120	Met with Mike of River City……He will be delivering containers once he finalizes with Jason Kidd.

Date	Time	Event
	1220	RSC not able to deliver Gator…..everyone is preparing for Hurricane IKE.
	1400	Departed site.
13 Sep 08 Saturday	XXXX	Hurricane Ike has hit the area. Power out….Strong winds and heavy rains. Everyone hunkered down. Super 8 filled to capacity.
14 Sep 08 Sunday	XXXX	IKE is moving away. Tom and Pat stopped by to take a cold shower. They have no power and no water. Power back on at 1700. Most of the crew (Techs) have checked in….all OK.
	XXXX	Notified all we will work on Monday.
15 Sep 08 Monday	0630	Muster and Safety Brief
	0650	Teams out to Site 54. Site 27 access blocked due to downed trees in roadway. Combined Teams 1, 2, & 3 to work Site 54.
	0720	Working on Daily report and PSR with FOA.
	0915	Daily and PSR reports sent out.
	0925	Out to check on the teams.
	1010	Sorting scrap with QC…on the grid.
	1130	Scrap run back to the office.
	1205	Lunch
	1240	Out check on Magazine.
	1320	On site 54. Check on teams and assist with scrap/QC & QA support.
	1625	Back at office.
	1645	Teams in from the field.
	1700	Site secured.
	1750	Depart site.
16 Sep 08 Tuesday	0630	Muster and Safety Brief
	0645	Brush crew and Team 2 depart for Site 27 to clear trees from road.
	0650	Teams 1 and 3 out to Site 54.
	0700	Working with FOA on Daily report.
	0940	Daily sent out. Depart to escort RSC driver to site trailer with replacement "Gator"
	1000	RSC driver departs.
	1020	Drive Gator out to Site 27 to deliver to Brush escort.
	1050	Checked on Team 2 and general site conditions.

Date	Time	Event
	1110	Gator has a flat tire. Called RSC; they will be back out to correct problem. We are getting junk that has not been properly prepped prior to delivery.
	1300	Lunch
	1340	Out to check on teams.
	1550	Back at office
16 Sep 08 Tuesday (continued)	1645	All teams in from the field.
	1700	Out brief / Site secured
	1850	Depart site
17 Sep 08 Wednesday	0630	Muster and Safety Brief (Combined personnel from teams 1, 2, 3 into two teams)
	0645	Brush crew and Team 2 depart for Site 27.
	0650	Teams 1 out to Site 54.
	0700	Team 1 finishing up last grid in Site 54. This is a very high density grid.
	1200	Lunch
	1400	Out to check on teams. Team 1 bogged down on grid.
	1500	Team 2 making progress at Site 27
	1550	Brush Removal ops completed on Site 27. Brush crew and Jathan Futral packing up fro demo tomorrow.
	1615	Team 1 reports they will need a few hours tomorrow in order to complete last grid.
	1645	All teams in from the field
	1700	Out brief / Site secured
	1805	Depart site
18 Sep 08 Thursday	0630	Morning Muster and Safety Brief
	0645	Team 1 departs for Site 54 / Team 2 departs for Site 27.
	0830	Team 1 completed final grid on Site 54.
	0850	Notified QC and QA that final grid was ready for inspection.
	0935	Final QC and QA completed on Site 54.
	0955	Sent Team 1 personnel to Site 27 to set up and get ready to start work on 27. Demo team making preps for final demo cleanup shot on Site 54.
	1020	Start Demo Ops Site 54
	1050	Shot fired

Date	Time	Event
	1107	Shot cleared.
	1120	Demo Ops completed
	1145	Team 1 personnel reunited on site 27.
18 Sep 08 Thursday (continued)	1220	Lunch. Pizza and Wings for the crew. Trae Brown (1st Choice) on site for lunch and morale. All personnel advised of current manning changes, 1st Choice personnel's last day is 25 Sep 08. I will have to down size UXO crew after 25 Sep 08, unless we are behind schedule. Which we already are, due to constant changes to schedule and a very poorly bid project. .I refused to not tell the crew the truth…they deserve it. Will see what we have Monday…
	1310	Continue ops on Site 27.
	1645	Teams in from the field.
	1701	Out brief / Site secured.
	1830	Depart site.
21 Sep 08 Sunday	1000	Call from Woog, he is rescheduling the site audit until 6 Oct 08 to coincide with his filling in for Tom Hinote and Pat's vacation starting 10 Oct 08. (*I will need to schedule at least one trip home before project ends in order to get my stuff home since I will be flying from Lenoir City back home.)*
22 Sep 08 Monday	0630	Morning Muster and Safety Brief
	0650	Teams 1 and 2 depart for Site 27.
	0810	Completed daily report and PSR.
	0825	Out to check on the teams.
	0920	Weekly check of magazine.
	1030	Back at Site 27.
	1205	Lunch (Returned to office)
	1255	Out to check on the teams.
	1530	Back at office.
	1645	Teams in from the field.
	1700	Out brief / site secured
	1750	Departed site.
23 Sep 08 Tuesday	0630	Morning Muster and Safety Brief
	0650	Teams 1 and 2 depart for Site 27. Survey and escort depart for Site 54. (LCU points)
	0900	River City Iron and Metal dropped off scrap containers. They will be our new scrap dealer.

Date	Time	Event
	1015	Out to check on the teams.
	1200	Lunch
	1230	USACOE Rep, QC and my self looking at areas for the re-delineation of the OBOD.
23 Sep 08 Tuesday (continued)	1520	Completed OBOD delineation survey.
	1535	Checked on teams
	1615	LUC survey points completed by survey team.
	1645	Teams in from the field
	1700	Out brief / site secured
	1755	Depart site.
24 Sep 08 Wednesday	0630	Morning Muster and Safety Brief
	0650	Teams 1 and 2 depart for site 27.
	0800	Finalized OBOD recommendation with USACOE Rep for submission to respective PMs.
	0945	Out to check on the teams.
	1200	Lunch
	1340	Highway 59 Environmental on site to pick up MD & RRD. FOA and QC completed required paperwork.
	1435	Verified scrap paperwork. Had QC escort scrap to destination for official transfer.
	1645	Teams in from the field.
	1705	Our brief / site secured
	1800	Departed site.
25 Sep 08 Thursday	0630	Morning Muster and Safety Brief (only 3 of 7 local hires showed up). This is their last day.
	0650	Teams 1 and 2 depart for Site 27. (Combined teams)
	0900	Demo team breaks off from Team 1
	0910	Start initial Demo preps.
	1005	Issue explosives. Depart for site.
	1020	Demo Ops
	1120	Shot fired
	1140	Shot cleared.

Date	Time	Event
	1130	Demo Ops complete
	1200	Lunch
	1210	Back at office. Paperwork
	1400	Out to check on the teams
25 Sep 08 Thursday (continued)	1600	Return to office. Last day for Ken Barnett (USACOE). All QC/QA completed to date.
	1645	Teams in from the field
	1700	Out brief / site secured
	1810	Depart site
26 Sep 08 Friday	0830	Started cleaning the two rental vehicles in preps for turn in.
	1015	Started getting calls from the crew regarding no per diem.
	1040	Called Kelly Walker on per diem issue. She said it should be paid today.
	1200	Completed vehicle cleaning.
	1220	Called Enterprise to arrange pick up. They are busy.
	1300	Took first vehicle down.
	1320	Call to Brian Gentry (PM) advising him of per diem problem.
	1425	Turned in both vehicles and was taken back to motel.
	1520	On my time now.
28 Sep 08 Sunday	0900	William Czech stopped by my room and let me know he was going to the Emergency Room to have his Poison Ivy Rash looked at. It had progressively gotten worse over the weekend spread to his left eye, which was badly swollen earlier. Based on Billy's concern I saw no other option.
	XXXX	Late entry: I failed to contact Safety and advise, and as a result this was not reported to Corporate until Monday morning. My mistake.
29 Sep 08 Monday	0630	Morning Muster and Safety Brief
	0640	Combine all personnel into one team. Tom Hinote is taking both QC and Safety as of this morning.
	0655	Team departs for Site 27.
	0730	Working on PSR with FOA
	0910	All reports out. Out to check on crew.
	1200	Lunch
	1230	Continuing working with crew.
	1630	Back at office

Date	Time	Event
	1645	Team in from the field
	1705	Out brief / secured site
	1820	Depart site.
30 Sep 08 Tuesday	0630	Morning Muster and Safety Brief
	0645	Team departs for Site 27.
	0730	Paperwork completed / Out to check on team.
	1200	Lunch
	1230	Continuing working with team.
	1510	Stung on the nose by a bee. Hurt like heck….I'll live.
	1620	Depart site 27 and returned to office. Reported bee sting to QC/Safety. (nose is red a little swollen and painfull)
	1650	Team in from the field.
	1710	Out brief / Site secured
	1740	Depart site.
1 Oct 08 Wednesday	0630	Muster and Safety Brief
	0645	Team departs for Site 27.
	0710	Assisted Tom Hinote (QC/Safety) with reorganizing the mess that Robert Thomas (former Safety) left.
	0830	Reports out / Safety files will need a little administrative repairs for continuity purposes. Tom will take care of it.
	0845	Out to check on the team.
	0940	Assisted QC with OBOD seeds.
	1030	Continued working with the team.
	1200	Lunch
	1230	Continue working with the team.
	1600	Returned to office.
	1645	Team in from the field.
	1705	Out brief / Site secured
	1805	Depart site
2 Oct 08 Thursday	0630	Muster and Safety Brief
	0645	Team departs for site 27. All 4 grids remaining were originally in the initial OBOD and expect heavy contamination.

Date	Time	Event
	0720	Reports out / Out to check on the team
	1200	Lunch
	1230	Continue working with the team.
2 Oct 08 Thursday (continued)	1420	Completed last grid. Surface clearance completed pending QC and final QA inspections. (30 grids are pending QA)
	1425	Call to PM to advise of status.
	1440	Team gathering all equipment and line and setting up on first OBOD subsurface grid.
	1610	Team in from the field. Reorganized equipment for shift to intrusive Ops.
	1645	Out brief / secured site early
	1740	Departed site
3 Oct 08 Friday	0630	Muster and Safety Brief (**down to 5 field personnel**)
	0645	QC/SUXOS conducted Preparatory Phase Inspection on team for Intrusive Ops.
	0720	Vallon assignments and training. (All field personnel have little to no experience with the Vallon)
	0840	Completed subsurface Test Strip with Vallons. Everyone passed.
	0845	Team departs for site 27.
	0905	Start Intrusive operations Site 27
	0910	Working on getting a Tech I replacement for Kevin Klein. He let me know yesterday that today was his last day.
	0920	Fish and Wildlife personnel dropped by for an update. Briefed them on current status. Provided a picture of the LUC signs that will be installed. Also let them know I would assist them with info or whatever for next weeks meeting. We still assume we are not involved as of yet; They left pleased.
	1020	Out to check on the team. Used a Schonstadt behind the team to identify additional ferrous anomalies below White's detection depth. Team is using White's ("compent out") in order to eliminate the many small anomalies through out the grid.
	1115	Used a Vallon to check swept lanes. Found far too many anomalies that were within the failure criteria.
	1200	Lunch
	1230	Working with QC and Team Leader on a solution to increase production and still maintaining quality.
	1605	Return to office

Date	Time	Event
	1645	Team in from the field. Team cleared over 1,400 surface/subsurface anomalies on their first pass of about 50% of the grid. This won't work.
	1700	Out brief / site secured
	1810	Departed site
6 Oct 08 Monday	0630	Muster and Safety Brief New personnel: J.R. Castor UXO II and Pat Milling UXO I
	0650	Team minus new personnel departs for Site 27.
	0700	New personnel indoc/training.
	0920	J. R Castor out with QC to join team. Pat Milling back at office working on required ESS training.
	0930	Moved team from grid E07 to F06. I made a mistake putting team in E06 Friday. It has not officially been added to the OBOD. I wasted a half a day with that move.
	1030	Took Pat Milling out to join team. Working with the team.
	1200	Lunch
	1230	Continue intrusive ops.
	1640	Returned to office.
	1706	Out brief / site secured
	1715	PSR out.
	1800	Depart site.
	1930	Depart for Airport to pick up Woog.
	XXXX	Back at Motel. End of the Day.
7 Oct 08 Tuesday	0630	Muster and Safety Brief. Eugene Mikell (EODT Safety Manager) on site to conduct Site Safety/QC Audit.
	0655	Team departs for Site 27. (Light rain, possible T-Storms in forecast)
	0730	Start Audit
	0900	Daily report out.
	0930	Out to check on the team and delivery "large head" for Vallon.
	1005	Stopped by Fish & Wildlife to confirm mailing address and arrange for them to be receiving our shipment.
	1035	Back with teams. Identifying our first areas needing backhoe support.
	1200	Lunch
	1230	Continue Audit

Date	Time	Event
	1320	Out to site to check on team
	1440	Back to office
	1645	Team in from the field
7 Oct 08 Tuesday (continued)	1700	Out brief / Site secure
	1730	Depart site.
8 Oct 08 Wednesday	0630	Muster and Safety Brief
	0645	Team out
	0700	Continue audit
	0800	2 visitors from USACE Tulsa District stopped by office. Advance party for today's site visit.
	0820	Visitors depart to pick up additional visitors.
	0850	Visiting party arrives. 4 personnel (TCEQ, EPA, USACE Tulsa district)
	0855	Site brief, safety brief, question and answer period. Tour off compound / Scrap containers and procedure brief.
	0940	Depart with visitors for Site 27.
	0945	Site tour. (Briefed on OBOD area, procedures, and observation of team working "mag & flag)
	1030	Visitors depart.
	1040	Back at office.
	1200	Lunch
	1230	Back at Site 27. Working with team and QC.
	1645	Depart Site 27.
	1705	Out brief / site secured
	1730	Depart site.
9 Oct 08 Thursday	0630	Muster and Safety Brief (In depth brief on new Bio Hazard Procedures provided by Eugene Mikell)
	0700	Team out
	0710	Audit continues.
	1000	Audit Out Brief.
	1100	FOA depart on Admin run.
	1200	Lunch
	1230	Out to check and work with the team & QC.

Date	Time	Event
	1615	Return to office.
	1645	Team in from the field.
9 Oct 08 Thursday (continued)	1705	Out brief / site secured
	1720	Departed site.
10 Oct 08 Friday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin work
	1000	Start initial Demo preps
	1115	Issued demo materials / weekly explosive inventory
	1212	Demo shot fired.
	1218	Shot cleared. Disposed of 66 ea. MEC items.
	1230	Post Demo paperwork.
	1520	Out to check on team
	1615	Back at office
	1645	Team in from the field.
	1700	Out brief / site secured.
13 Oct 08 Monday	0630	Muster and Safety Brief (New UXOI on site, Yasir Abdulrahman)
	0655	Team out to Site 27
	0700	Yasir starting site indoc/training.
	1215	Safety took new UXO I out to join team.
	1240	Weekly magazine inspection.
	1255	Out to Site 27 to check on and work with team
	1605	Back at office. Re-sent PSR to PM
	1645	Team in from the field.
	1700	Out brief / Site secured.
14 Oct 08 Tuesday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0715	Paperwork (Time sheets and daily report)
	0845	Out to Site 27 to check on team and assist QC and work with team. Snake reported to be active this morning.
	1210	Back at office. Sent follow-up e-mail on explosive request and status of OBOD

Date	Time	Event
		and our expected UASCOE Safety Rep.
	1230	Lunch
	1340	Out to check on the team.
14 Oct 08 Tuesday (continued)	1520	Back at office.
	1645	Team in from the field
	1700	Out brief / site secured
	1730	Depart site
15 Oct 08 Wednesday	0630	Muster and Safety Brief
	0640	Conducted some testing with the Vallon (sensitivity) in order to see if we can reduce the amount of small anomalies detected. Initial testing indicates we need to be on 3 in order to detect 40mm and larger at 12 inches.
	0735	Team out to Site 27
	0800	Daily report out.
	0805	E-mail response from Dough Royster regarding explosive request. He is working it.
	0810	Working with QC on White's setting to assist in speeding up initial clearance prior to Vallon checks.
	0930	Out with the teams and assisting QC.
	1230	Took Chuck Overstreet back to his place, he was feeling and looking ill. Manny Repolett assumed T/L position.
	1315	Back with team
	1610	Return to office
	1645	Team in from the field
	1700	Out brief / site secured
	1715	Depart site
16 Oct 08 Thursday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin work
	1040	Out to check on the team.
	1230	Installed fire code sign at entrance to magazine access road.
	1400	Admin work
	1645	Team in from the field

Date	Time	Event
	1700	Out brief / site secured
	1720	Depart site.
17 Oct 08 Friday	0630	Muster and Safety Brief
	0655	Team out to Site 27
17 Oct 08 Friday (continued)	0710	Admin work
	0830	Call to Austin Powder to verify and set up delivery.
	1115	Austin Powder truck at magazine. Driver forgot paperwork. Will return.
	1210	Bought Pizza for the team. (On PM)
	1240	Sign for and received 60 ea. Black Cap Boosters. Placed in magazine. Conducted weekly explosive inventory.
	1320	At site 27 to check and work with the team.
	1630	Return to office.
	1705	Out brief / site secure
	1745	Depart site.
20 Oct 08 Monday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0710	Admin work (PSR etc.)
	0900	Out to conduct weekly check on magazine
	0940	At Site 27 to check and work with QC/team
	1215	Lunch
	1245	Continue working with team.
	1615	Return to office.
	1645	Team in from the field
	1700	Out brief / site secured
	1740	Depart site
	1820	At Wal-Mart for site supplies. (no water)
	1850	At Kroger's for water
	1920	End of the day.
21 Oct 08 Tuesday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin (daily and verify anomaly count to date. (16,840 total / daily adjusted to

Date	Time	Event
		reflect corrected count))
	0820	Advised by PM that we will be receiving two additional UXO Techs next week.
	0850	Out to Site 27 to work with QC/Team.
	1200	Lunch
21 Oct 08 Tuesday (continued)	1240	Back at office. Helped off load LUC signs and posts.
	1320	Out to site to work with team.
	1635	Returned to office.
	1645	Team in from the field
	1705	Out brief / site secured.
22 Oct 08 Wednesday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin work
	0815	Picked up Auger that had been delivered to Fish & Wildlife yesterday. Did not come with the one tool we need to assemble.
	0950	Issued explosives for Demo Ops.
	1120	Demo shot (59 MEC items)
	1126	Shot clear
	1200	Lunch
	1230	Continue working with team.
	1540	Back at office.
	1645	Team in from the field.
	1700	Out brief / site secured.
23 Oct 08 Thursday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin work
	0920	Off to Marshall to obtain supplies/materials for scrap bins and magazine sign.
	1200	Lunch
	1230	Continue working on scrap bin covers.
	1425	Out to check and work with team
	1630	Return to office

Date	Time	Event
	1645	Team in from the field
	1700	Out brief/site secured
	1800	Depart site
24 Oct 08 Friday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin work
24 Oct 08 Friday (continued)	0920	Out to site to work with team.
	1200	Lunch
	1230	Continue working with team
	1440	Call from PM regarding working swamp area. We will be required to clear area one way or the other.
	1450	Out to issue explosives
	1520	Start Demo Ops.
	1600	Shot fired
	1605	Shot clear
	1645	Team in from the field
	1700	Out brief / site secured
	1730	Depart site
27 Oct 08 Monday	0630	Muster and Safety Brief (2 New personnel on site: Bob Chandler and Jacob Payton, UXO IIs)
	0655	Team out to Site 27
	0700	Admin work / New personnel briefings, indoctrination and training.
	1015	New personnel taken to join team.
	1040	Out to check on and work with team.
	1200	Lunch
	1230	Continue with team
	1400	Tim Bohannon (USACE Safety Specialist) on site. SUXOS and Safety/QC In briefings.
	1645	Team in from the field.
	1705	Out brief / site secured.
28 Oct 08 Tuesday	0630	Muster and Safety Brief
	0655	Team out to Site 27

Date	Time	Event
	0700	Admin work
	0820	Out to site to work with team.
	0845	Checked on "swamp area" with QC. Area has dried up with very little standing water remaining. We will be able to complete surface sweep as planned without requiring any special procedures. Info passed on to PM.
	0940	Corps Safety on site. Provided site indoc/walk around.
	1000	Escorted Corps Safety to swamp area for assessment.
28 Oct 08 Tuesday (continued)	1010	Received verification that Steve Voland and Ron Madden will be visiting site tomorrow.
	1020	Corps Safety and QC started QA activities in OBOD area.
	1200	Lunch with Corps Safety and QC. 4 of the 6 completed grids in the OBOD have passed QA inspection.
	1250	Back on site. QA activities continue. Working with the team.
	1445	Remaining two completed grids have passed QA inspection. (6 of 6)
	1610	Returned to office with QC to work on scrap process corrections.
	1650	Team in from the field.
	1710	Out brief / site secured.
	1810	Departed site.
29 Oct 08 Wednesday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin work
	0950	Out to check on the team and check progress of swamp conditions.
	1040	Escorted Steve Voland and Ron Madden to site trailer.
	1230	Escorted Steve Voland and Ron Madden to Site 27.
	1415	Escorted Steve Voland and Ron Madden out. They departed for Airport.
	1650	Team in from the field.
	1700	Out brief / site secured
	1820	Departed site.
30 Oct 08 Thursday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Admin work
	0850	Out to check on the team and "Swamp area". Swamp area has dried up and

Date	Time	Event
		will be workable with out special controls.
	1200	Lunch
	1230	Continue working with team
	1650	Team in from the field
	1700	Out brief / site secured
	1755	Depart site
31 Oct 08 Friday	0630	Muster and Safety Brief
	0700	Team out to Site 27
	0930	Took a 3 man team to complete surface sweep in the swamp area.
	1130	Surface sweep of swamp area completed.
	1200	QC and QA inspection complete on swamp area. Area passed both.
	1500	Demo operations preps.
	1630	Demo Ops completed
	1700	Out brief / site secured
	1815	Depart site
3 Nov 08 Monday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0820	Out to check on and work with the team.
	1125	Back at office - Admin
	1200	Lunch
	1230	Working with UXOSO/UXOQC on LUC sign installation on Site 27.
	1650	Team in from the field
	1700	Out brief / site secured
	1830	Depart site
4 Nov 08 Tuesday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0750	Out to check on and work with the team.
	1035	Working with UXOSO/UXOQC on LUC sign installation.
	1200	Lunch
	1230	Continue working on LUC sign installation.
	1650	Team in from the field

Date	Time	Event
	1700	Out brief / site secured
	1800	Depart site
5 Nov 08 Wednesday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0745	Out to check on and work with the team.
	0820	Continue LUC sign installation.
	1200	Lunch
5 Nov 08 Wednesday (continued)	1230	Continue Intrusive and LUC Ops.
	1540	All LUC signs installed and QC'd. Site 27 LUC completed.
	1650	Team in from the field
	1700	Out brief / site secured
	1740	Depart site
6 Nov 08 Thursday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0710	Lightning Hold
	0810	Crew back to work.
	0825	Out to check on and work with the team.
	0830	Crew started LUC sign installation on Site 54.
	1015	Backhoe arrived on site. Inspected and ready for use.
	1045	Start backhoe ops on Site 27 OBOD area. Started LUC sign installation on Site 54.
	1200	Lunch
	1230	Continue Intrusive and started LUC Ops on Site 54.
	1650	Team in from the field
	1700	Out brief / site secured
	1745	Depart site
7 Nov 08 Friday	0630	Muster and Safety Brief
	0700	Team out to Site 27
	0805	Out to check on and work with the team.
	1200	Lunch
	1230	Continue Intrusive Ops.

Date	Time	Event
	1500	Demo Op preps
	1635	Demo Ops completed.
	1650	Team in from the field
	1700	Out brief / site secured / 2 personnel will demob tomorrow)
	1715	Depart site
10 Nov 08 Monday	0630	Muster and Safety Brief (1 five man team remaining)
	0700	Team out to Site 27
	0805	Out to check on and work with the team.
10 Nov 08 Monday (continued)	1200	Lunch
	1230	Continue Intrusive Ops.
	1650	Team in from the field
	1700	Out brief / site secured
	1715	Depart site
11 Nov 08 Tuesday	XXXX	Field work cancelled due to extreme inclement weather. Thunderstorms and very heavy rain.
12 Nov 08 Wednesday	0630	Muster and Safety Brief
	0655	Team out to Site 27
	0700	Shifted team to another grid. Working grid is 1/3rd underwater due to storm.
	0710	Continue Intrusive Ops.
	1200	Lunch
	1230	Continue Intrusive Ops.
	1650	Team in from the field
	1700	Out brief / site secured
	1725	Depart site
13 Nov 08 Thursday	0630	Muster and Safety Brief
	0655	Team out to Site 27 / Continue Intrusive Ops.
	0725	Out to check on and work with the team.
	1200	Lunch
	1230	Continue Intrusive Ops.
	1420	All LUC signs have been installed at Site 54. All LUC signs have been installed at both sites and have passed final QC/QA.

Date	Time	Event
	1650	Team in from the field
	1700	Out brief / site secured
	1735	Depart site
14 Nov 08 Friday	0630	Muster and Safety Brief
	0655	Team out to Site 27 / Continue Intrusive Ops.
	0725	Out to check on and work with the team.
	1200	Lunch
	1230	Continue Intrusive Ops.
	1500	Demo Op preps
14 Nov 08 Friday (continued)	1635	Demo Ops completed.
	1650	Team in from the field
	1700	Out brief / site secured / Chuck Overstreet UXO III to demob tomorrow.
	1725	Depart site
17 Nov 08 Monday	0630	Muster and Safety Brief / Assumed additional position of Team Leader.
	0655	Team out to Site 27 / Continue Intrusive Ops.
	1200	Lunch
	1230	Continue Intrusive Ops.
	1520	Completed work on “Pit” area, grid F06 has the potential for anomalies below 4 feet. Area marked and documented.
	1650	Team in from the field
	1700	Out brief / site secured /
	1715	Depart site
18 Nov 08 Tuesday	0630	Muster and Safety Brief / Assumed additional position of Team Leader.
	0655	Team out to Site 27 / Continue Intrusive Ops.
	0910	Three members from the USACE, Tulsa district stopped-by to discuss LHAAP clean-up effort and progress to date. Members were given a short briefing and they indicated they would stop by tomorrow for a tour of Site 27 and the OB/OD area.
	1200	Lunch
	1230	Continue Intrusive Ops.
	1650	Team in from the field
	1700	Out brief / site secured /

Date	Time	Event
	1715	Depart site
19 Nov 08 Wednesday	0630	Muster and Safety Brief / Assumed additional position of Team Leader.
	0655	Team out to site 27 / Continue Intrusive Ops.
	1035	Visitors at site 27. All were briefed and given a tour as requested. LUC signs were inspected and found to be within required standards.
	1200	Lunch
	1230	Continue Intrusive Ops.
	1650	Team in from the field
	1700	Out brief / site secured /
	1715	Depart site
20 Nov 08 Thursday	0630	Muster and Safety Brief / Assumed additional position of Team Leader.
	0655	Team out to Site 27 / Continue Intrusive Ops.
	1200	Lunch
	1230	Continue Intrusive Ops.
	1540	Completed mag and dig operations in las grid, Grid F05 which completes all intrusive work in Site 27 OBOD, and commenced field clean-up.
	1650	Team in from the field
	1700	Out brief / site secured
	1745	Depart site
21 Nov 08 Friday	0630	Muster and Safety Brief
	0655	Team out to Site 27 to conduct final demolition operations, clean up and close out Site 27.
	1700	Demolition operations complete; disposed/de-milled all remaining MEC and shapes (empty rounds/carts); expended all remaining explosives. Crew to de-mobilize tomorrow. River City Iron & Metal picked-up all scrap and signed all required documents. Conducted a final sweep of Sites 54 & 27 to ensure the sites were properly policed up and ready for turnover.
	1800	Depart site
22 Nov 08 Saturday	**XXXX**	**Demobilization of all personnel. Project completed.**

APPENDIX E
SURVEILLANCE REPORTS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX E
SURVEILLANCE REPORTS

This appendix is included on CD-ROM at the front of this report.

APPENDIX F
GRID TRACKING LOGS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

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1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

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Lenoir City, TN 37771

September 2009

APPENDIX F
GRID TRACKING LOGS

This appendix is included on CD-ROM at the front of this report.

APPENDIX G
SAFETY DOCUMENTS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX G
SAFETY DOCUMENTS

This appendix is included on CD-ROM and DVD at the front of this report.

APPENDIX H
DEMOLITION SHOT RECORDS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
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Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
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Lenoir City, TN 37771

September 2009

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 11/21/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid F-06	Demolition Supervisor: Mick Doak	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned (24 ea) M112 Flares, de-milled (1) 155mm (empty) illumination round. First shot to dispose/de-mill; second shot to expend remaining explosives.	Firing Method: RFD / NONEL	Time of Shot: Two (2) shots (1)1055 & (2) 1145
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 MILES	Temp: 41f Wind Dir./Speed: NW/10 mph Ceiling: Unlimited Clouds/% Sun: 70%	
Type and Amount of Tamping Used: N/A	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X☐	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	35	Time Fuze	0
Det Cord	375FT	Squibs	0
Boosters	32	Black / Smokeless Powder	0
Non-El Shock Tube	2000Ft	Two Component	
Non-El Detonator	15 ea	Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: M Doak Date: 11/21/08

Site Name/Location:		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable):
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No ☐	Readings / Results:	

NOT USED

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Time Fuze	
Det Cord		Squibs	
Electric Detonator		Black / Smokeless Powder	
Non-electric Detonator		Two Component	
Non-El Detonator		Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Date:

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 11/14/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid E-05	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned (36 ea) M112 Flares, de-milled (13) 155mm (empty) illumination rounds	Firing Method: RFD / NONEL	Time of Shot: 1555
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 MILES	Temp: 67f Wind Dir./Speed: NW/10 mph Ceiling: Unlimited Clouds/% Sun: 70%	
Type and Amount of Tamping Used: N/A	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X☐	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	13	Time Fuze	0
Det Cord	30FT	Squibs	0
Boosters	20	Black / Smokeless Powder	0
Non-El Shock Tube	100Ft	Two Component	
Non-El Detonator	2 ea	Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Chuck Ott Date: 11/14/08

Site Name/Location:		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable):
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No ☐	Readings / Results:	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Time Fuze	
Det Cord		Squibs	
Electric Detonator		Black / Smokeless Powder	
Non-electric Detonator		Two Component	
Non-El Detonator		Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

NOT USED

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 11/07/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid E-05	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned (50 ea) M112 Flares, (1ea) M62 Flares,	Firing Method: RFD / NONEL	Time of Shot: 1600
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 MILES	Temp: 64f Wind Dir./Speed: NW/10 mph Ceiling: Unlimited Clouds/% Sun: 100%	
Type and Amount of Tamping Used: N/A	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X☐	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	0	Time Fuze	0
Det Cord	15FT	Squibs	0
Boosters	20	Black / Smokeless Powder	0
Non-El Shock Tube	50Ft	Two Component	
Non-El Detonator	1 ea	Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Charlie Dirt Date: 11/07/08

Site Name/Location:		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable):
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No ☐	Readings / Results:	

NOT USED

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Time Fuze	
Det Cord		Squibs	
Electric Detonator		Black / Smokeless Powder	
Non-electric Detonator		Two Component	
Non-El Detonator		Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 10/31/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid E-05	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned (60 ea) M112 Flares, (2ea) M62 Flares,	Firing Method: RFD / NONEL	Time of Shot: 1600
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 MILES	Temp: 72f Wind Dir./Speed: Light Ceiling: Unlimited Clouds/% Sun: 100%	
Type and Amount of Tamping Used: N/A	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X☐	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	0	Time Fuze	0
Det Cord	15FT	Squibs	0
Boosters	25	Black / Smokeless Powder	0
Non-El Shock Tube	50Ft	Two Component	
Non-El Detonator	1 ea	Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Chuck Overstreet Date: 10/31/08

Site Name/Location:		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable):
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: Wind Dir./Speed: Ceiling: Clouds/% Sun:	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No ☐	Readings / Results:	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Time Fuze	
Det Cord		Squibs	
Electric Detonator		Black / Smokeless Powder	
Non-electric Detonator		Two Component	
Non-El Detonator		Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

NOT USED

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 10/24/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid E-05	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned 17 ea) M112 Flares.	Firing Method: RFD / NONEL	Time of Shot: 1600
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 MILES	Temp: 65f Wind Dir./Speed: Light Ceiling: Unlimited Clouds % Sun: 100%	
Type and Amount of Tamping Used: N/A	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X☐	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	0	Time Fuze	0
Det Cord	10FT	Squibs	0
Boosters	10	Black / Smokeless Powder	0
Non-El Shock Tube	50Ft	Two Component	
Non-El Detonator	1 ea	Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Charles Overstreet Date: 10/24/08

Site Name/Location:		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable):
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No ☐	Readings / Results:	

NOT USED

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Time Fuze	
Det Cord		Squibs	
Electric Detonator		Black / Smokeless Powder	
Non-electric Detonator		Two Component	
Non-El Detonator		Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 10/22/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid E-05	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned: (~~55~~ 4 ea) M112 Flares, (~~55~~ 4 ea) M62 Flares	Firing Method: RFD / NONEL	Time of Shot: 1130
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 MILES	Temp: 76 f Wind Dir./Speed: Light Ceiling: Unlimited Clouds/% Sun: 60%	
Type and Amount of Tamping Used: N/A	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X☐	Readings / Results: N/A	

Demolition Materials Used			
Description	Amount	Description	Amount
Perforator	0	Time Fuze	0
Det Cord	15FT	Squibs	0
Boosters	25	Black / Smokeless Powder	0
Non-El Shock Tube	50Ft	Two Component	0
Non-El Detonator	1 ea	Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Chalin Dott Date: 10/22/08

Site Name/Location:		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable):
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No ☐	Readings / Results:	

Demolition Materials Used			
Description	Amount	Description	Amount
Perforator		Time Fuze	
Det Cord		Squibs	
Electric Detonator		Black / Smokeless Powder	
Non-electric Detonator		Two Component	
Non-El Detonator		Other (list)	

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

NOT USED

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 10/10/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid E-05	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned: (63 ea.) M62 illumination flares, (2 ea) M112 illumination flares, (1 ea.) M12 Photoflash Cart	Firing Method: RFD / NONEL	Time of Shot: 1212
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 miles	Temp: 82 F Wind Dir./Speed: Light Ceiling: Unlimited Clouds/% Sun: 95%	
Type and Amount of Tamping Used: None	Mat or Other Protection Used (list): N/A	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	N/A	Other (list)	
Booster	20 ea.		
Det Cord	10 ft.		
Non-El Detonator	1 ea.		
Non-El Shock Tube	50 ft.		

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Chuck O'H Date: 10 Oct 2008

Site Name/Location: : Longhorn Army Ammunition Plant, Karnack, TX		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Other (list)	
Booster			
Det Cord			
Non-El Detonator			
Non-El Shock Tube			

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

NOT USED

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 9/25/08
Shot Location (OB/OD Range or Grid No.): Site 27 / Grid E-05	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned: (24 ea.) M62 illumination flares, (44 ea) M112 illumination flares, (1 ea.) M123 flare	Firing Method: RFD / NONEL	Time of Shot: 1115
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 1.5 miles	Temp: 85 F Wind Dir./Speed: Light & Variable Ceiling: Unlimited Clouds/% Sun: 95%	
Type and Amount of Tamping Used: None	Mat or Other Protection Used (list): N/A	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

Demolition Materials Used			
Description	Amount	Description	Amount
Perforator	N/A	Other (list)	
Booster	20 ea.		
Det Cord	10 ft.		
Non-El Detonator	1 ea.		
Non-El Shock Tube	50 ft.		

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Charlie Dart Date: 25 Sep 2008

Site Name/Location: : Longhorn Army Ammunition Plant, Karnack, TX		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

Demolition Materials Used			
Description	Amount	Description	Amount
Perforator		Other (list)	
Booster			
Det Cord			
Non-El Detonator			
Non-El Shock Tube			

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

NOT USED

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 9/18/08
Shot Location (OB/OD Range or Grid No.): Site 54	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned: (2 ea.) M583A1 40mm, (1 ea.) M206 Flare, (4 ea) M127 Flare, (2 ea.) Flare Candle	Firing Method: RFD / NONEL	Time of Shot: 1050
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 3,960 ft	Temp: 65 F Wind Dir./Speed: Light & Variable Ceiling: Unlimited Clouds/% Sun: 75%	
Type and Amount of Tamping Used: None	Mat or Other Protection Used (list): N/A	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	1 ea.	Other (list)	
Booster	4 ea.		
Det Cord	10 ft.		
Non-El Detonator	1 ea.		
Non-El Shock Tube	25 ft.		

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Charlie Overstreet Date: 9/18/2008

Site Name/Location: : Longhorn Army Ammunition Plant, Karnack, TX		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: _____ Wind Dir./Speed: _____ Ceiling: _____ Clouds/% Sun: _____	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

NOT USED

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Other (list)	
Booster			
Det Cord			
Non-El Detonator			
Non-El Shock Tube			

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

EODT DEMOLITION SHOT RECORD

Site Name/Location: Longhorn Army Ammunition Plant, Karnack, TX		Date: 9/5/08
Shot Location (OB/OD Range or Grid No.): Site 54	Demolition Supervisor: Chuck Overstreet	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned: (1 ea.) 4.2" mortar, illumination, (2 ea.) 40 mm illumination, (1 ea) 155mm illumination candle	Firing Method: RFD / NONEL	Time of Shot: 1631
Direction and Distance to Nearest Building, Road, Utility Line, etc.: 3,960 ft	Temp: 85 F Wind Dir./Speed: Light & Variable Ceiling: Unlimited Clouds/% Sun: 95%	
Type and Amount of Tamping Used: None	Mat or Other Protection Used (list): N/A	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator	1 ea.	Other (list)	
Booster	4 ea.		
Det Cord	10 ft.		
Non-El Detonator	1 ea.		
Non-El Shock Tube	75 ft.		

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: Chuck Overstreet Date: 9-5-2008

Site Name/Location: : Longhorn Army Ammunition Plant, Karnack, TX		Date:
Shot Location (OB/OD Range or Grid No.):	Demolition Supervisor:	State License # (if applicable): N/A
Type of UXO/OE Destroyed, Vented or Burned:	Firing Method:	Time of Shot:
Direction and Distance to Nearest Building, Road, Utility Line, etc.:	Temp: Wind Dir./Speed: Ceiling: Clouds/% Sun:	
Type and Amount of Tamping Used:	Mat or Other Protection Used (list):	
Seismographic / Sound Level Meter Used: Yes ☐ No X	Readings / Results: N/A	

Demolition Materials Used

Description	Amount	Description	Amount
Perforator		Other (list)	
Booster			
Det Cord			
Non-El Detonator			
Non-El Shock Tube			

Certification

I certify that the explosives listed were used for their intended purpose, and that the UXO/OE listed were rendered inert/destroyed.
Signature of Demolition Supervisor: _____ Date: _____

APPENDIX I
EXPLOSIVES ACCOUNTABILITY RECORDS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
HES-APRV-004	Charges, Shaped			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: 1	
EX1996080028	1.45	0441		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
8/21/08	804319734	HAlliburton	50 ea	—	Initial Receipt	50 ea	JMD	TBH
8/28/08	—	—	—	—	Inventory	50 ea	JMD	TBH
9/5/08	—	—	—	1 ea.	C. Overstreet.	49 ea	JMD	CEO
9/11/08	—	—	—	—	Inventory	49 ea	JMD	CEO
9/18/08	—	—	—	1 ea	C Overstreet	48 ea	JMD	CEO
9/18/08	—	—	—	—	Inventory	48 ea	JMD	CEO
9/25/08	—	—	—	—	Inventory	48 ea	JMD	DMW
10/3/08	—	—	—	—	Inventory	48 ea	JMD	TBH
10/10/08	—	—	—	—	Inventory	48 ea	JMD	MAR
10/17/08	—	—	—	—	Inventory	48 ea	JMD	TMM
10/24/08	—	—	—	—	Inventory	48 ea	JMD	CEO
10/31/08	—	—	—	—	Inventory	48 ea	JMD	
11/07/08	—	—	—	—	Inventory	48 ea	TBH	CEO

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
HES-APRV-004	Charges, Shaped			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: 1	
EX1996080028	1.4S	0441		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
11/14/08	———	Balance brought Forward			———	48	TBH	CEO
11/14/08	—	—	—	13	Chuck Overstreet	35	TBH	CEO
11/21/08	—	—	—	35	JR Castor	Ø	TBH	
					LAST ENTRY			

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
05189	Black Cap Booster			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: 1	
19FE04C2	1.1D	0042		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
8/25/08	0606459-00	Austin Powder	60ea	—	Initial Receipt.	60ea	[illegible]	[illegible]
8/28/08	—	—	—	—	Inventory	60	TBH	[illegible]
9/5/08	—	—	—	4ea	C. Overstreet.	56ea	[illegible]	CEO
9/11/08	—	—	—	—	Inventory	56ea	[illegible]	[illegible]
9/18/08	—	—	—	4ea.	C. Overstreet	52ea	[illegible]	CEO
9/18/08	—	—	—	—	Inventory	52ea	[illegible]	CEO
9/25/08	—	—	—	20ea	C. Overstreet	32ea	[illegible]	CEO
9/25/08	—	—	—	—	Inventory	32ea	[illegible]	DMW
10/3/08	—	—	—	—	Inventory	32ea	[illegible]	TBH
10/10/08	—	—	—	20ea.	C. Overstreet	12ea	[illegible]	CEO
10/10/08	—	—	—	—	Inventory	12ea	[illegible]	MAR
10/17/08	0618535-00	Austin Powder	60ea	—	Re-Supply	72ea	[illegible]	TMM
10/17/08	—	—	—	—	Inventory	72ea	[illegible]	TMM
10/22/08	—	—	—	25	C. Overstreet	47ea.	[illegible]	CEO

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
05189	Black Cap Booster			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case:	
19FE04C2	1.1D	0042	1	

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
10/24/08	—	Balance Brought Forward			—	47 ea	[illegible]	[illegible]
10/24/08	—	—	—	10 ea	C. Overstreet	37 ea	[illegible]	[illegible]
10/24/08	—	—	—	~	Inventory	37 ea	[illegible]	[illegible]
10/31/08	—	—	—	25 ea	C. Overstreet	12 ea	[illegible]	[illegible]
10/31/08	—	—	—	—	Inventory	12 ea	[illegible]	[illegible]
11/6/08	2531983	Austin Powder	60 ea	—	Re-Supply	72 ea	[illegible]	TBH
11/07/08	—	—	—	20 ea	C. Overstreet	52 ea	TBH	[illegible]
11/14/08	—	—	—	20 ea	Chuck Overstreet	32 ea	TBH	[illegible]
11/21/08	—	—	—	32 ea	JR Castore	0	TBH	[illegible]

LAST ENTRY

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: Longhorn Army Ammunition Plant
1010016777	Cord, Detonating			Address: Karnack, Texas
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: 1	
EX2005180221	1.4D	0289		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
8/25/08	6791-5804-8562	Halliburton	500'	—	Initial Issue	500'	[illegible]	BH
8/28/08	—	—	—	—	Inventory	500'	BH	[illegible]
9/5/08	—	—	—	10'	C. Overstreet	490'	[illegible]	CEO
9/11/08	—	—	—	—	Inventory	490'	[illegible]	[illegible]
9/18/08	—	—	—	10'	C. Overstreet	480'	[illegible]	CEO
9/18/08	—	—	—	—	Inventory	480'	[illegible]	CEO
9/25/08	—	—	—	10'	C Overstreet	470'	[illegible]	CEO
9/25/08	—	—	—	—	Inventory	470'	[illegible]	DMW
10/3/08	—	—	—	—	Inventory	470'	[illegible]	BH
10/10/08	—	—	—	10'	C. Overstreet	460'	[illegible]	CEO
10/10/08	—	—	—	—	Inventory	460'	[illegible]	MAR
10/17/08	—	—	—	—	Inventory	460'	[illegible]	EMH
10/22/08	—	—	—	15'	C. Overstreet	445'	[illegible]	CEO
10/24/08	—	—	—	10'	C Overstreet	435'	[illegible]	CEO

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
101001677	Cord, Detonating			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: 1	
EX2005100221	1.4D	0289		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
10/24/08	—	Balance brought Forward			—	435'	DE	CEO
10/24/08	—	—	—	—	Inventory	435'	DE	CEO
10/31/08	—	—	—	15'	C. Overstreet	420'	DE	CEO
10/31/08	—	—	—	—	Inventory	420'	DE	[illegible]
11/07/08	—	—	—	15'	C. Overstreet	405'	TBH	CEO
11/14/08	—	—	—	30'	C. Overstreet	375'	TBH	CEO
11/21/08	—	—	—	375'	JR Castro	0	TBH	[illegible]

LAST ENTRY

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
BNA-YEL-2500FT	Shock Tube Lead Line			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: Roll	
05DEC0752	1.4S	0349		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
8/26/08	139645	Omni Explosives	2500 ft	—	Initial Receipt	2500ft	[illegible]	[illegible]
8/28/08	—	—	—	∅	INVENTORY	2,500'	BH	[illegible]
9/[illegible]/08	—	—	—	75'	C. Overstreet	2,425'	[illegible]	CEO
9/11/08	—	—	—	—	Inventory	2,425'	[illegible]	[illegible]
9/18/08	—	—	—	25'	C. Overstreet	2400'	[illegible]	CEO
9/18/08	—	—	—	—	Inventory	2400'	[illegible]	CEO
9/25/08	—	—	—	50'	C. Overstreet	2350'	[illegible]	CEO
9/25/08	—	—	—	—	Inventory	2350'	[illegible]	DMW
10/3/08	—	—	—	—	Inventory	2350'	[illegible]	BH
10/20/08	—	—	—	50'	C. Overstreet.	2300'	[illegible]	CEO
10/16/08	—	—	—	—	Inventory	2300'	[illegible]	MAR
10/17/08	—	—	—	—	Inventory	2300'	[illegible]	CMM
10/22/08	—	—	—	50'	C. Overstreet.	2,250'	[illegible]	CEO
10/24/08	—	—	—	50'	C. Overstreet	2,200	[illegible]	CEO

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
BINA-YEL-250FT	Shock Tube, Lead Line			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: Roll	
05DEC0752	1.4S	0349		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
10/24/08	—	Balance brought Forward			—	2,200'	MP	CW
10/24/08	—	—	—	—	Inventory	2,200'	MP	CW
10/31/08	—	—	—	50'	C. Overstreet	2,150	MP	CW
10/31/08	—	—	—	—	Inventory	2,150	MP	[illegible]
11/07/08	—	—	—	50'	C. Overstreet	2,100'	BH	CW
11/14/08	—	—	—	100'	C. Overstreet	2,000'	BH	CW
11/21/08	—	—	—	2,000'	JR Castor	0	BH	[illegible]

LAST ENTRY

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: Longhorn Army Ammunition Plant
BN16-INST-25	Blasting Cap, Shocktube, 16'			Address: Karnack, Texas
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case: BX	
09JUL2008	1.4S	0500		

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials	
							Issuer	Receiver
8/26/08	Q139645	Omni Explosives	25ea	—	Initial Receipt	25ea	[illegible]	[illegible]
8/26/08	—	—	∅	∅	INVENTORY	25ea	TBH	[illegible]
9/5/08	—	—	—	1ea.	C. Overstreet	24ea	[illegible]	CEO
9/11/08	—	—	—	—	Inventory	24ea	[illegible]	[illegible]
9/18/08	—	—	—	1ea	C. Overstreet	23ea	[illegible]	CEO
9/18/08	—	—	—	—	Inventory	23ea	[illegible]	CEO
9/25/08	—	—	—	1ea.	C. Overstreet	22ea	[illegible]	CEO
9/25/08	—	—	—	—	Inventory	22ea.	[illegible]	DMW
10/3/08	—	—	—	—	Inventory	22ea.	[illegible]	TBH
10/10/08	—	—	—	1ea	C. Overstreet	21ea	[illegible]	CEO
10/10/08	—	—	—	—	Inventory	21ea.	[illegible]	MAB
10/17/08	—	—	—	—	Inventory	21ea	[illegible]	CMM
10/22/08	—	—	—	1ea.	C. Overstreet	20ea	[illegible]	CEO
10/24/08	—	—	—	1ea	C. Overstreet	19ea	[illegible]	CEO

EODT Explosives Accountability Record

(Magazine Data Card)

Product Code / FSN:	Nomenclature:			Site Name: **Longhorn Army Ammunition Plant**
BN16-1NST-25	Blasting Cap, Shock Tube, 16'			Address: **Karnack, Texas**
Date Code / Lot Number:	Hazard Class	UN or NA	Quantity / Case:	
09JULY2008	1.4S	0500	~~PK~~	

Date	Bill of Lading / Voucher Number	Received From	Quantity Received	Quantity Issued	Issued To	Current Balance	Initials Issuer	Initials Receiver
10/24/08	—	Balance brought Forward			—	19 ea	XXX	CEO
10/24/08	—	—	—	—	Inventory	19 ea	XXX	CEO
10/31/08	—	—	—	1	C. Overstreet	18 ea	XXX	CEO
10/31/08	—	—	—	—	Inventory	18 ea	XXX	[illegible]
11/07/08	—	—	—	1	C. Overstreet	17 ea	BH	CEO
11/14/08	—	—	—	2	C. Overstreet	15 ea	BH	CEO
11/21/08	—	—	—	15	JR Castro	0	BH	[illegible]

LAST ENTRY

APPENDIX J
QA 948s

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

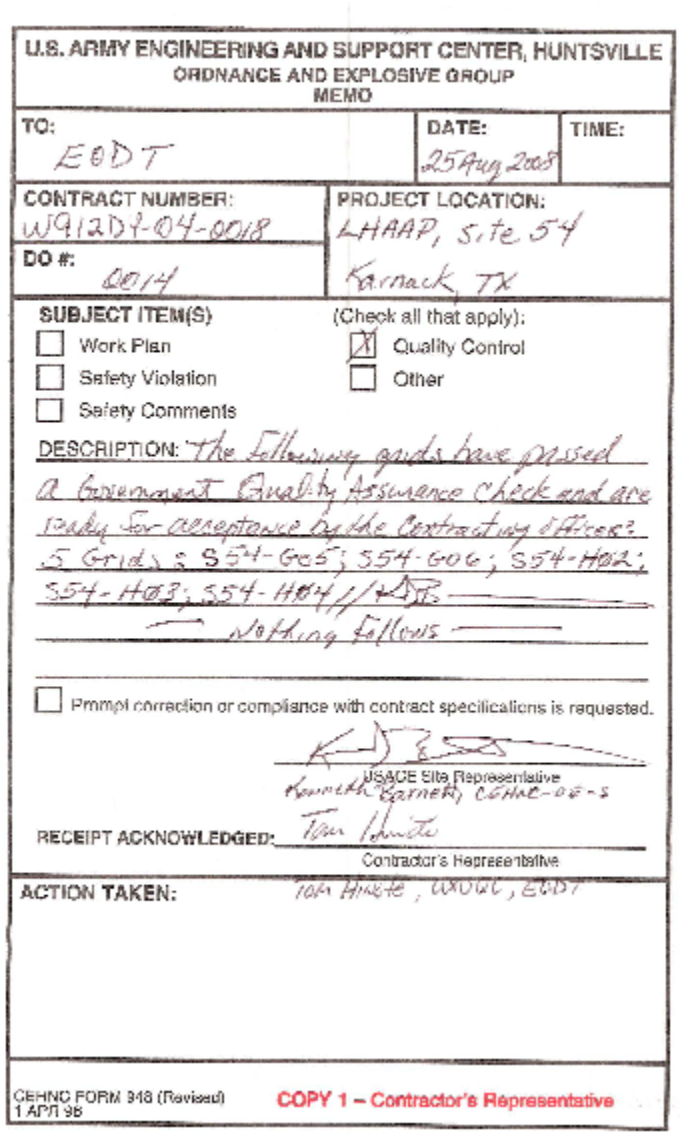
Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX J
QA 948S

This appendix is included behind this page.



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT
DATE: 25 Aug 2008
TIME:

CONTRACT NUMBER: W912DY-04-D-0018
PROJECT LOCATION: LHAAP, Site 54 Karnack TX
DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [X] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting Officer: 5 Grids: S54-G05; S54-G06; S54-H02; S54-H03; S54-H04 // KDB
— Nothing Follows —

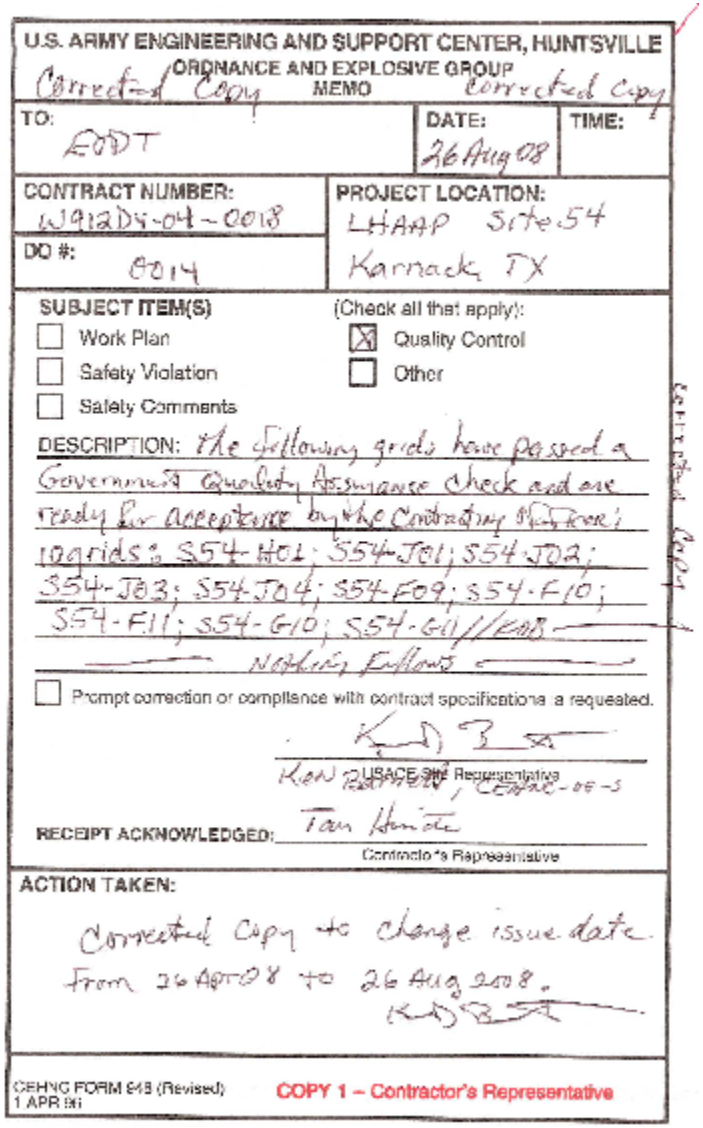
[ ] Prompt correction or compliance with contract specifications is requested.

KDB
USACE Site Representative
Kenneth Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hinote
Contractor's Representative

ACTION TAKEN: Tom Hinote, UXOQC, EODT

CEHNC FORM 848 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
Corrected Copy
ORDNANCE AND EXPLOSIVE GROUP
MEMO
Corrected Copy

TO: EODT
DATE: 26 Aug 08
TIME:

CONTRACT NUMBER: W912DY-04-D-0018
PROJECT LOCATION: LHAAP Site 54 Karnack TX
DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [X] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting Officer; 10 grids: S54-H01; S54-J01; S54-J02; S54-J03; S54-J04; S54-E09; S54-F10; S54-F11; S54-G10; S54-G11 // KDB
— Nothing Follows —

[ ] Prompt correction or compliance with contract specifications is requested.

KDB
USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hinote
Contractor's Representative

ACTION TAKEN: Corrected Copy to change issue date from 26 Aug 08 to 26 Aug 2008. KDB

CEHNC FORM 848 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	26APR08	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting Officer: 10 Grids: S54-H01; S54-J01; S54-J02; S54-J03; S54-J04; S54-F09; S54-F10; S54-F11; S54-G10 S54-G11//K08

Nothing follows

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hinote
Contractor's Representative

ACTION TAKEN: Tom Hinote, UXOSO, EODT

CEHNC FORM 948 (Revised) 1 APR 98 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	8/27/2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting Officer: 10 grids: S54-G07; S54-K05; S54-K06; S54-K07; S54-K08; S54-K09; S54-L05; S54-L06; S54-L07; S54-L08//K08

Nothing follows

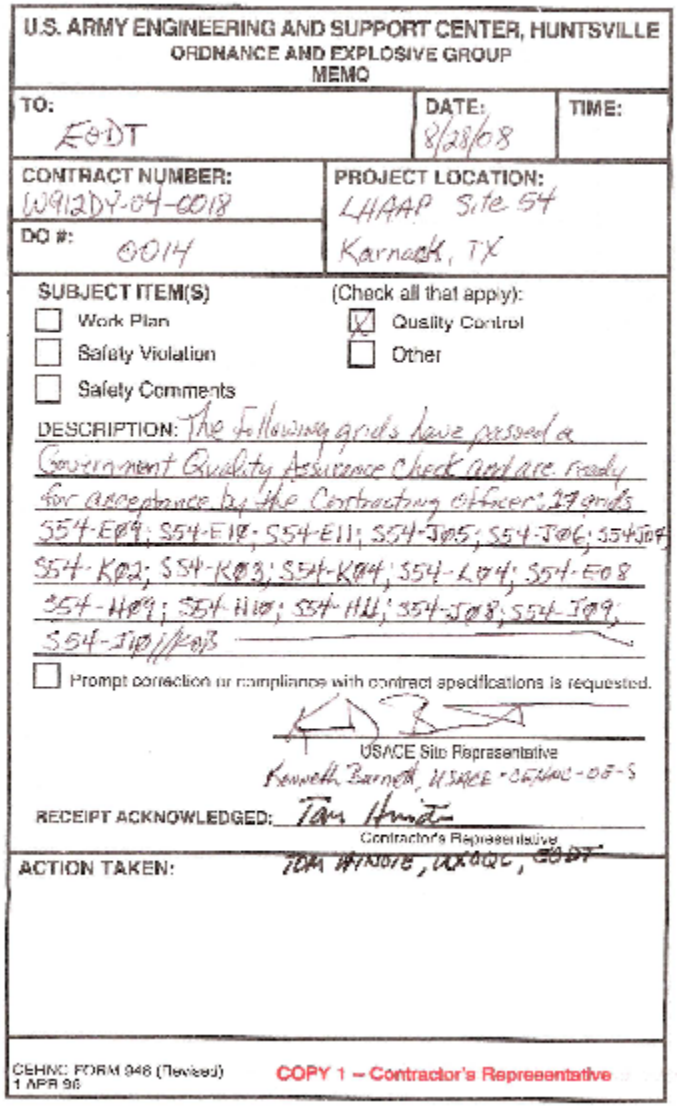
☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, USACE-CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hinote
Contractor's Representative
Tom Hinote, UXOSO, LHAAP

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 98 — COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	8/28/08	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☑ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting officer: 29 grids 554-E09; 554-E10; 554-E11; 554-J05; 554-J06; 554-J07; 554-K02; 554-K03; 554-K04; 554-L04; 554-E08 554-H09; 554-H10; 554-H11; 554-J08; 554-J09; 554-J10 // K03

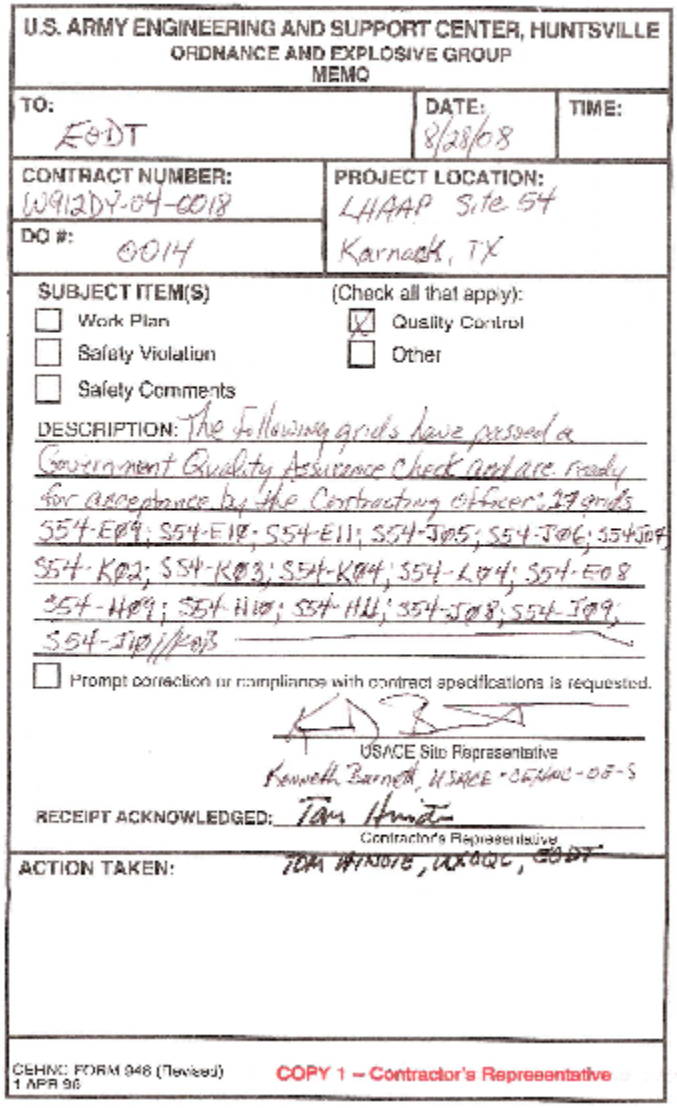
☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Kenneth Barnett, USACE - CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hunter
Contractor's Representative

ACTION TAKEN: TOM NOTIFIED, QA&QC, EODT

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	8/28/08	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☑ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting officer: 29 grids 554-E09; 554-E10; 554-E11; 554-J05; 554-J06; 554-J07; 554-K02; 554-K03; 554-K04; 554-L04; 554-E08 554-H09; 554-H10; 554-H11; 554-J08; 554-J09; 554-J10 // K03

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Kenneth Barnett, USACE - CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hunter
Contractor's Representative

ACTION TAKEN: TOM NOTIFIED, QA&QC, EODT

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	4 Sep 2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-0018	LHAAP, Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☑ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting Officers 15 grids: 554-E01; 554-E02; 554-E04; 554-E04; 554-E01; 554-F02; 554-F03; 554-F04; 554-G02; 554-G03; 554-G04; 554-H05; 554-H06; 554-H04; 554-B05
Nothing Follows

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Contractor's Representative

ACTION TAKEN:

CEHNC FORM 843 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	5 Sep 08	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-0018	LHAAP - Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a government Quality Assurance check and are ready for acceptance by the Contracting officers 10 grids: 554-B02; 554-B03; 554-B04; 554-B05; 554-D01; 554-D02; 554-D09; 554-D10; 554-D11; 554-G01
Nothing Follows

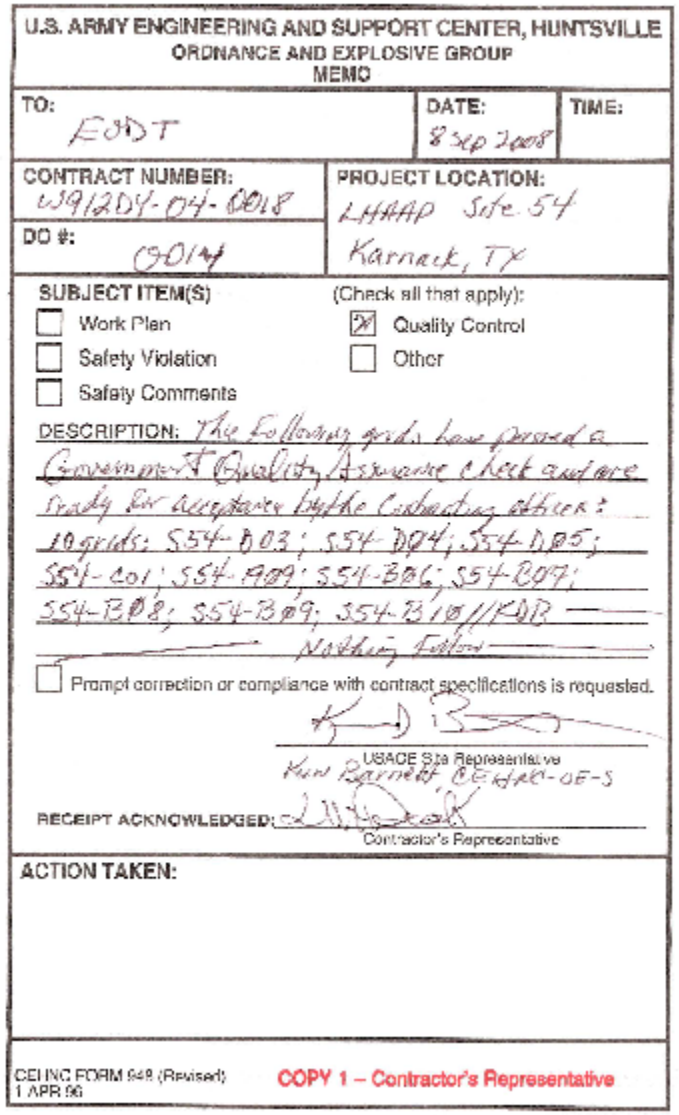
☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Smith
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 843 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT
DATE: 8 Sep 2008
TIME:

CONTRACT NUMBER: W912DY-04-D0018
PROJECT LOCATION: LHAAP Site 54 Karnack, TX
DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [X] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting officer:
10 grids: S54-D03; S54-D04; S54-D05; S54-C01; S54-B09; S54-B06; S54-C07; S54-B08; S54-B09; S54-B10//KDB
Nothing Follows

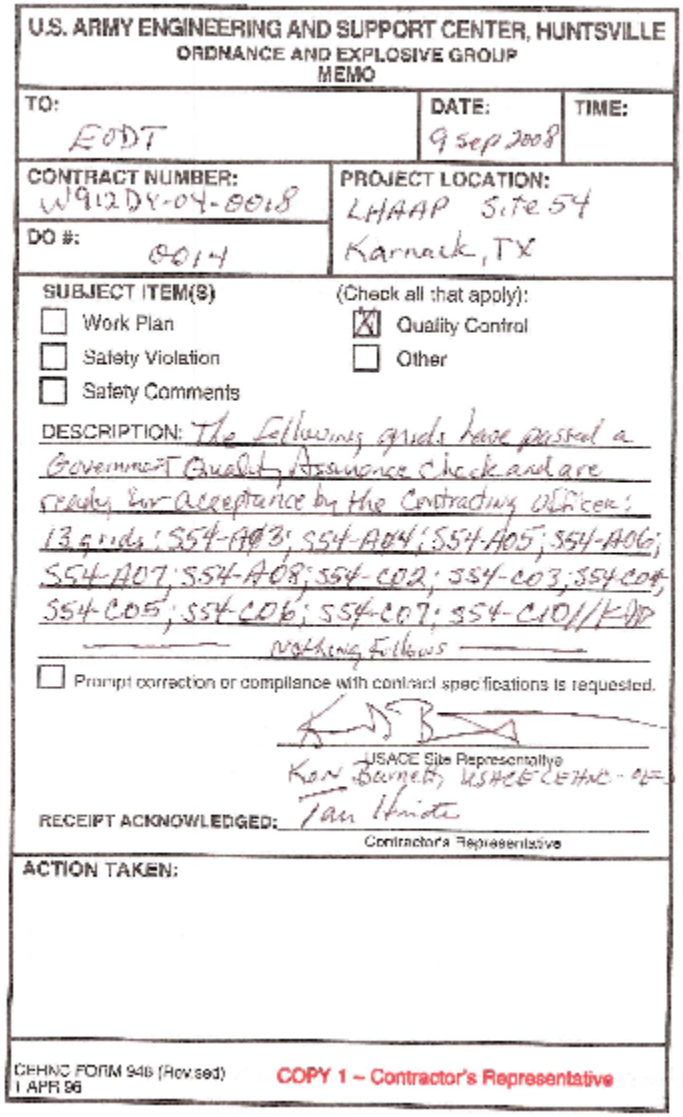
- [ ] Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett CEHNC-OE-S

RECEIPT ACKNOWLEDGED:
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT
DATE: 9 Sep 2008
TIME:

CONTRACT NUMBER: W912DY-04-D0018
PROJECT LOCATION: LHAAP Site 54 Karnack, TX
DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [X] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting Officer:
13 grids: S54-A03; S54-A04; S54-A05; S54-A06; S54-A07; S54-A08; S54-C02; S54-C03; S54-C04; S54-C05; S54-C06; S54-C07; S54-C10//KDB
Nothing Follows

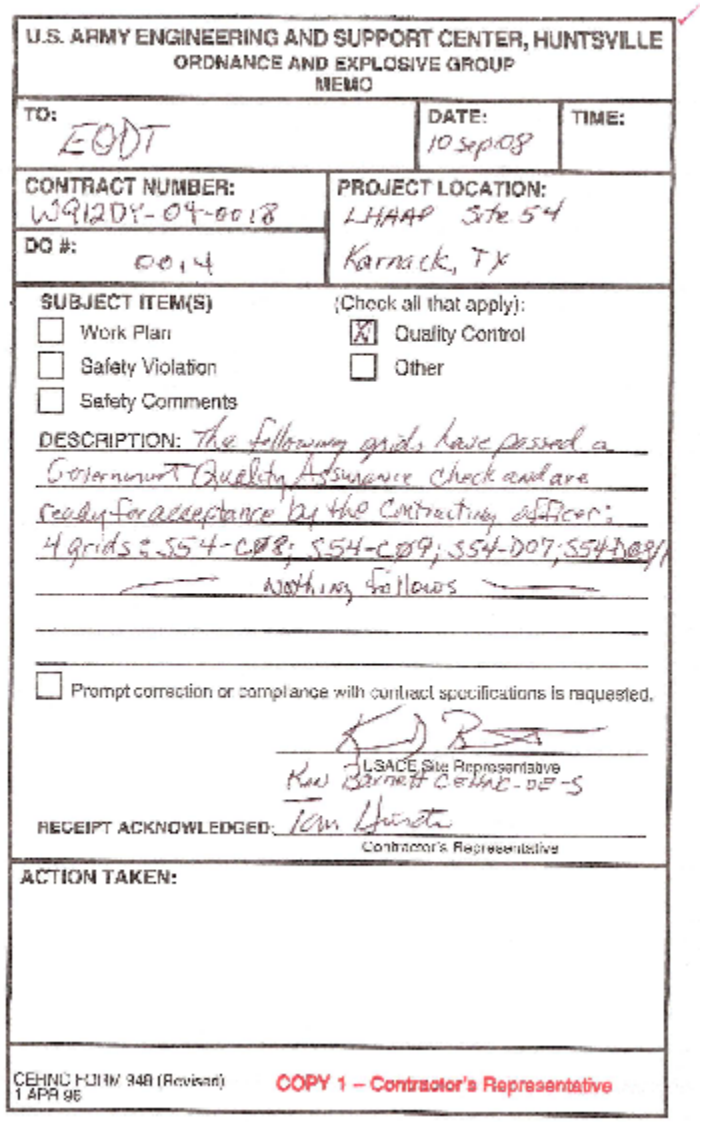
- [ ] Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, USACE CEHNC-OE-S

RECEIPT ACKNOWLEDGED:
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 10 Sep 08 | TIME:

CONTRACT NUMBER: W912DY-04-D-0018 | PROJECT LOCATION: LHAAP Site 54 Karnack, TX

DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [X] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting officer: 4 grids: 554-C08; 554-C09; 554-D07; 554-D09// Nothing follows

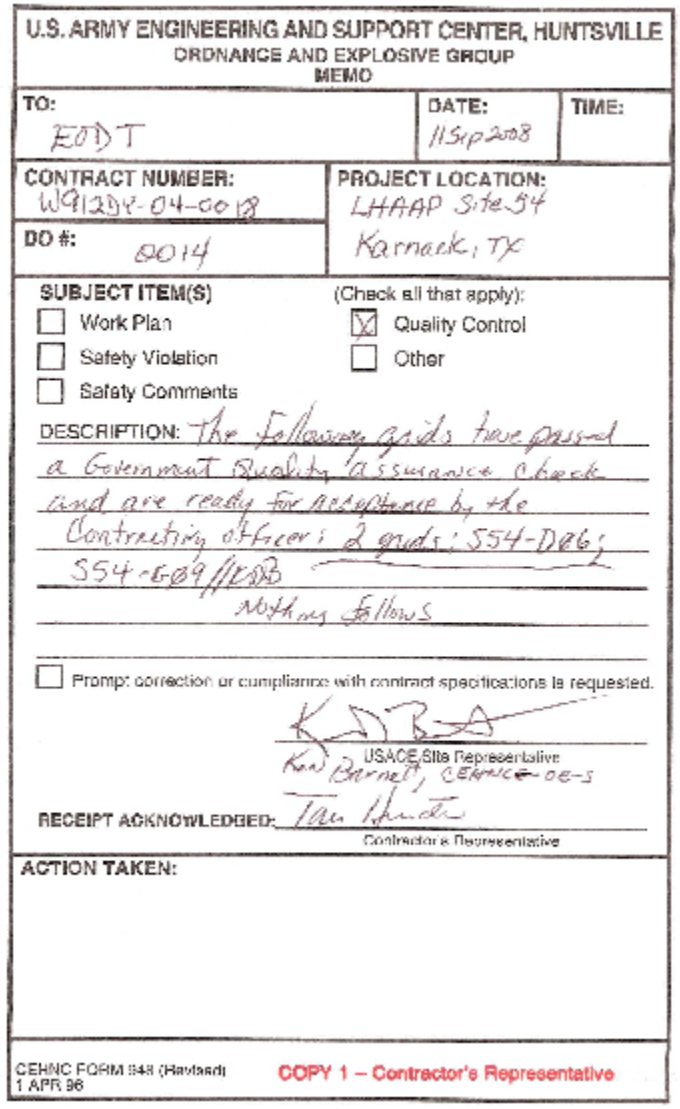
[ ] Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tan Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 348 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 11 Sep 2008 | TIME:

CONTRACT NUMBER: W912DY-04-D-0018 | PROJECT LOCATION: LHAAP Site 54 Karnack, TX

DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [X] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting officer: 2 grids: 554-D06; 554-C09// EOD Nothing follows

[ ] Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tan Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 348 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	16 Sep 2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 27
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting officer:
4 Grids: S27-C01; S27-D01; S27-E01; S27-F01/KDB
Nothing follows

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett CEHNC-OE-S

RECEIPT ACKNOWLEDGED:
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	16 Sep 2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting officer:
5 grids: S54-G08; S54-E06; S54-F05; S54-F06; S54-F07/KDB
Nothing follows

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED:
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	17 Sep 2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 54
DO #: 0014	Karnack TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: the following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting officer.
2 grids: 554-E05; 554-E07//KDB
Nothing Follows

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hinote
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 848 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	17 Sep 2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 27
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: the following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting Officer: 5 grids: S27-G01; S27-G02; S27-H01; S27-H02; S27-I02//KDB
Nothing Follows

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tom Hinote
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 848 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	18Sep2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 54
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following Grid has passed a Government Quality Assurance Check and is ready for acceptance by the Contracting Officer: 1 grid: 554-F08//E08
— Nothing follows —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tau Unite
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	18Sep2008	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D0018	LHAAP Site 27
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the contracting officer; 5 grids: S27-B02; S27-C02; S27-D02; S27-E02; S27-F02//E03
— Nothing Follows —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED:
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	22 Sep 08	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP Site 27
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):

- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [x] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting Officer: 5 grids: S27-A03; S27-B03; S27-C03; S27-D03; S27-F06//KOB
Nothing Follows

[ ] Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-06-S

RECEIPT ACKNOWLEDGED: Ian Hinote
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	23 Sep 08	

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP Site 27
DO #: 0014	Karnack, TX

SUBJECT ITEM(S) (Check all that apply):

- [ ] Work Plan
- [ ] Safety Violation
- [ ] Safety Comments
- [x] Quality Control
- [ ] Other

DESCRIPTION: The following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting Officer: S27-E03; S27-F03; S27-G03; S27-H03; S27-K03; S27-G06; S27-H06; S27-J06; S27-K06// 9 grids// KO13
Nothing Follows

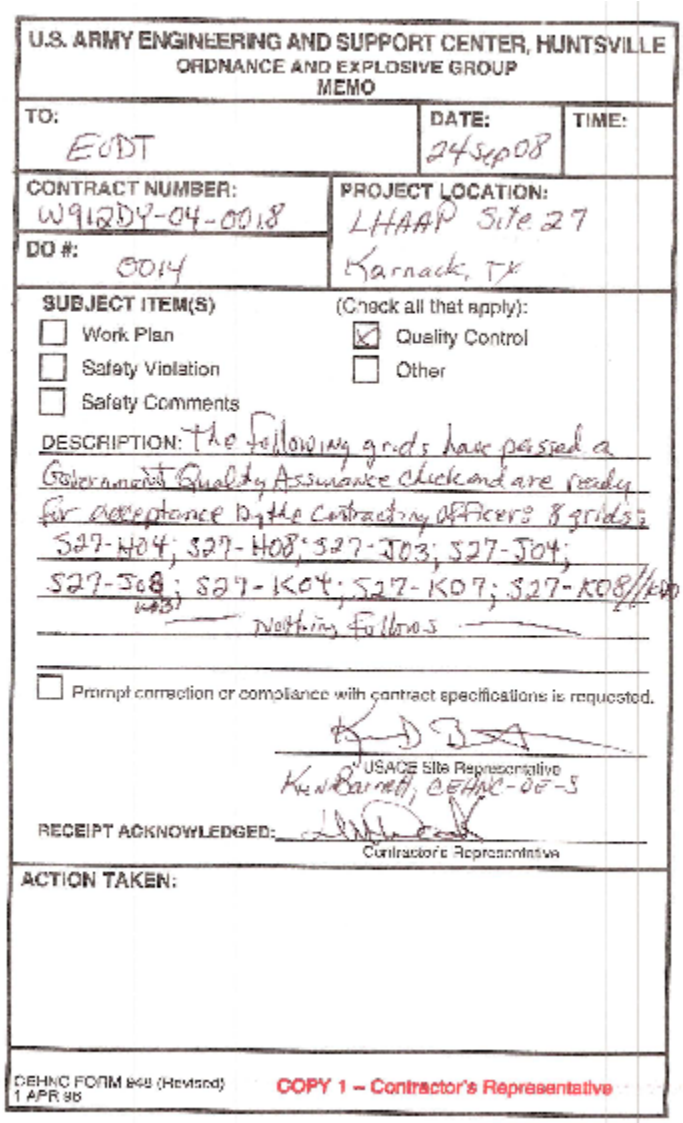
[ ] Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-06-S

RECEIPT ACKNOWLEDGED: Ian Hinote
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 24Sep08 | TIME:

CONTRACT NUMBER: W912DY-04-0018 | PROJECT LOCATION: LHAAP Site 27 Karnack, TX

DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Government Quality Assurance check and are ready for acceptance by the Contracting Officer: 8 grids: S27-H04; S27-H08; S27-J03; S27-J04; S27-J08; S27-K04; S27-K07; S27-K08//(K09 was) Nothing Follows

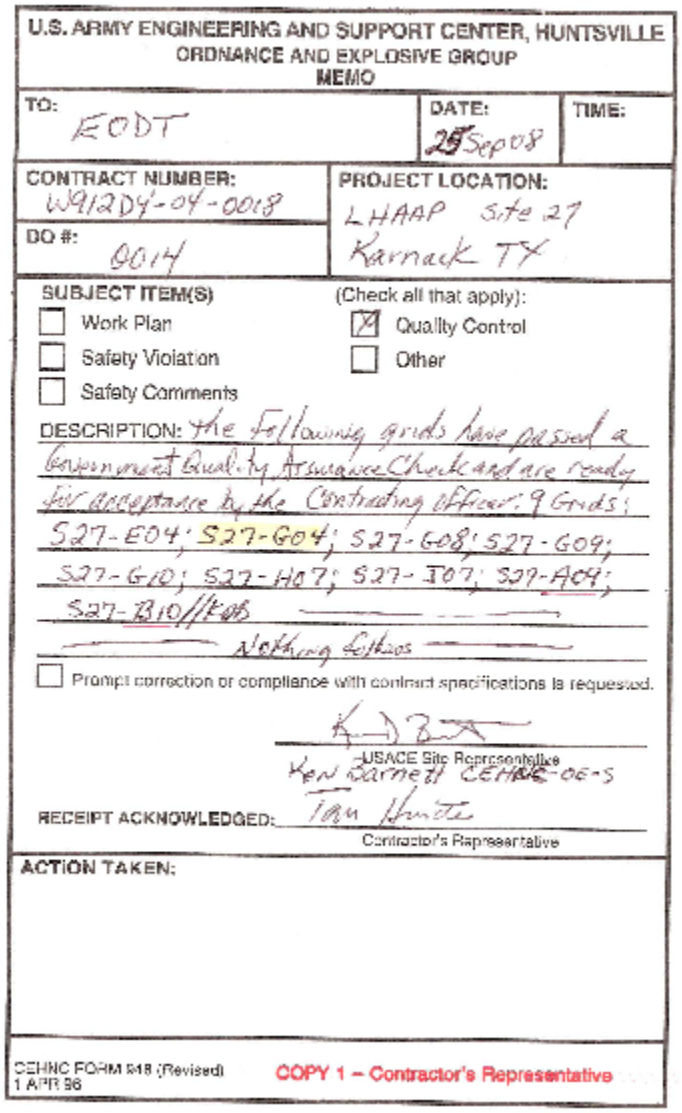
☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Contractor's Representative

ACTION TAKEN:

CEHNC FORM 848 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative



U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 25Sep08 | TIME:

CONTRACT NUMBER: W912DY-04-0018 | PROJECT LOCATION: LHAAP Site 27 Karnack TX

DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The Following grids have passed a Government Quality Assurance Check and are ready for acceptance by the Contracting Officer: 9 Grids: S27-E04; S27-G04; S27-G08; S27-G09; S27-G10; S27-H07; S27-I07; S27-A04; S27-B10//(K08 was) Nothing Follows

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Tan Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 848 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 25Sep08 | TIME:

CONTRACT NUMBER: W912DY-04-D-0018
DO #: 0014
PROJECT LOCATION: LHAAP Site 27 Karnack, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The portions of the following grids, which are not in the Swamp Area, delineated by EODT Surveyor and verified by me, has passed a Government Quality Assurance check and are ready for acceptance by the Contracting Officer: 3 grids: S27-H09; S27-H10; S27-I09//KOB

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative
Ken Barnett, CEHNC-OE-S

RECEIPT ACKNOWLEDGED: Ian Whittle
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 548 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 10-29-08 | TIME: 1600

CONTRACT NUMBER: W912DY-04-D-0018
DO #: 0014
PROJECT LOCATION: Longhorn AAP KARNAK, TX S-27

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a Surface only govt QA INSP: A-04, B-04, C-04, D-04, A05, B-05, A-06, B-06, A-07, B-07, C-07, D-07, A-08, B-08, C-08, D-08, E-08, F-08 /—NOTHING FOLLOWS—/

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 548 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 10-30-08 | TIME: 1620

CONTRACT NUMBER: W912DY-04-D-0018 | PROJECT LOCATION: LHAAP SITE 27

DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a govt QA inspection:
Surface - B-09, C-09, D-09, E-09, F-09, C-10, D-10, E-10, F-10
Sub-Surface - D-05
NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Thomas Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 98 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 10-31-08 | TIME: 0800

CONTRACT NUMBER: W912DY-04-D-0018 | PROJECT LOCATION: LHAAP SITE 27

DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a surface govt QA Check: H-05, J-05, K-05
NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Thomas Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 98 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 11-3-08 | TIME: 0730

CONTRACT NUMBER: W912DY-04-D-0018 | PROJECT LOCATION: LHAAP KARNAK, TX

DO #: 0018

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a govt surface QA inspection: H-09, H-10, J-09. Portions of these grids were previously QA'd by Ken Barnett but couldn't be completed due to Swampy Conditions. // NOTHING Follows //

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: [signature]
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 843 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: EODT | DATE: 11-6-08 | TIME: 1610

CONTRACT NUMBER: W912DY-04-D-0018 | PROJECT LOCATION: LHAAP SITE 27

DO #: 0014

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grid has passed a govt QA INSPECTION: D-06 // NOTHING Follows //

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tim Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 843 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	13-NOV-08	1600

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP KARNACK, TX
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grid has passed a gov't QA inspection E-05 — NOTHING FOLLOWS —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tom Hinton
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 95 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	11-17-08	1530

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAD KARNACK, TX
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a gov't QA Inspection: E-06, E-07, F-06. — NOTHING FOLLOWS —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tom Hinton
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 95 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	11-19-08	1600

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP KARNACK, TX
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grids have passed a govt QA Inspection: F-87, G-07 — NOTHING FOLLOWS —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tom Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	11-21-08	1200

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP KARNACK, TX
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: All grids located within Sites 54 and 27 have passed a govt QA inspection. — NOTHING FOLLOWS —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tom Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	11-21-08	1200

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP
DO #: 0014	KARNACK, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The following grid has passed a gov't QA inspection: F-05 /—Nothing Follows—/

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tan Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 949 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	11-7-08	1600

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP
DO #: 0014	KARNAK, TX

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The Land Use Control Signage has passed a gov't QA inspection. Site 27 Only. /—NOTHING FOLLOWS—/

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tan Hunter
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 949 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	11-14-08	0730

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP KARNACK, TX
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: The site 54 Land use Control Signage has passed a gov't QA inspection. — NOTHING FOLLOWS —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tam Hinton
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
EODT	11-21-08	1200

CONTRACT NUMBER:	PROJECT LOCATION:
W912DY-04-D-0018	LHAAP KARNACK, TX
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):
- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

DESCRIPTION: Located at X-67, Y-10 in grid F-06 is a suspected burn/burial pit with anomalies below Four feet. This pit produced 13 155mm empty projectiles and many expended candles. No hazardous items were discovered. The Coordinates to the pit are: N 32°38'57.4" W 094°07'53.4"

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: Tam Hinton
Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 — COPY 1 – Contractor's Representative

APPENDIX K
GEOGRAPHIC INFORMATION SYSTEM DATA

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX K
GEOGRAPHIC INFORMATION SYSTEM DATA

This appendix is included on CD-ROM at the front of this report.

APPENDIX L
GRID SHEETS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX L
GRID SHEETS

This appendix is included on CD-ROM at the front of this report.

APPENDIX M
SCRAP CERTIFICATION

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX M
SCRAP CERTIFICATION

This appendix is included behind this page.

LHAAP Scrap Shipment Log

# Trucks	Date	Continer ID	Contents/Serial #'s	Ship to	Gross Weight	TARE	Adjustment	Net Weights	Driver	Container Type	Comments
1	9/24/2008	4014-S54/S27-0001	RRD and Munitions Debris	TX Scrap & Salvage	45,280	37,600		7,680	White	25 yd. Roll-off Box	Long Iron
2		4014-S54/S27-0002	Munitions Debris	TX Scrap & Salvage	44,740	39,460	1,200	4,080	Green	25 yd. Roll-off Box	Aluminum
3	11/21/2008	USACE/LHAAP/EODT/0001	MD Steel / ULINE 2870731	River City Iron &Metal				0	R. Babb	8 x 16 Roll-off Box	
4		USACE/LHAAP/EODT/0002, 0003, 0004	Non-MEC Steel / ULINE 2870732 Non-MEC Steel / ULINE 2870733 Non-MEC Steel / ULINE 2870734	River City Iron &Metal				0	M. W. Emery	3 each 4 x 6 Roll-off Boxes	
					90,020	77,060	1,200	11,760			

Texas Scrap & Salvage, Inc.

Commercial & Industrial Recycling
100 Ward Street, Marshall, TX 75670
(903) 935-7891

MEMORANDUM

To: EOD Technology (EODT), 2229 Old Highway 95, Lenoir City, TN 37771
(ATTN: Brian Gentry)

From: Texas Scrap & Salvage Inc., 100 Ward Street, Marshall, TX 75670

Date: September 26, 2008

Re: DISPOSITION OF SCRAP MATERIAL RECEIVED FROM EODT AT THE FORMER LONGHORN ARMY AMMUNITION PLANT (LHAAP)

This memorandum is provided in accordance with the contractual requirements between EODT and USAESCH; (Contract: W912DY-04-0018; Task Order: 0014).

I affirm that the containers of scrap received from **EODT at LHAAP on September 24, 2008** will not be sold, traded or otherwise given to another party until they are processed by crushing, shredding, or smelting (only identifiable by their basic content) prior to being released for resale. I further affirm that this will be done in a timely manner, not to exceed 30 days. Proof of final disposition (the RRD and MD Inspection, Certification and Chain of Custody Form) has been signed, dated and returned to the EODT UXOQCS.

I confirm that the scrap was disposed in accordance with your needs and requirements.

Name of Recycler: Texas Scrap & Salvage, Inc.

Address: 100 Ward Street, Marshall, TX 75670

Phone: (903) 935-7819

Printed Name: ALLEN C. PETEET

Signature: Allen C. Peteet

DOC	IDE	FROM	MOS	UNIT	ISS	QUANTITY	SEA	SUPPLEMENTARY ADDRESS	SIC	FUND	DISTRIBUTION	PROJECT	PRI	AEOD	DELL	DRTL	ADV	N	OI	COND	NOT

UNIT PRICE $0.00 DOLLARS	CTS	1. TOTAL PRICE $0.00 DOLLARS	CTS	2. SHIP FROM	3. SHIP TO
$0	00	$0	00	EOD Technology, Inc. LHAAP, Karnack, TX	Texas Scrap and Salvage, Marshall, TX

4. MARK FOR: RECYCLING

5. DOC Date	6. MMPC	7. PRT RATE	8.TYPE CARGO	9. PS
9/24/2008				

10. QTY. REC'D	11UP	12. UNIT WEIGHT	13.UNITCUBE	14.LOC	15.SL
0		pounds			

16. PRODUCT CLASSIFICATION NOMENCLATURE: RRD and Munitions Debris

17. ITEM NOMENCLATURE: RRD and Munitions Debris

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
25 yd. Roll-off Box	1	7,680 pounds	

22. RECEIVED BY	23. DATE RECEIVED
	9/24/2008

1

& SUFFIX (30-44)

STOCK NO. & ADD (8-22)

UI (23-24) QTY (25-29) COND CODE (71) DIST (54-56) UP (74-80)

Container Identification:

4014-S54/S27-001

Certified by:

Mick Doak, SUXOS
EODT Home Office (865)988-6063
LHAAP Field Office (256) 689-1268

Verified by:

Ken Barnett, USAESCH COE Safety
USAESCH OE Safety Office (256)895-1582/1598

This certifies and verifies that the material listed has been 100 percent properly inspected and to the best of our knowledge and belief, free of explosive hazards, engine fluids, illuminating dials and other visible liquid HTRW materials.

DD FORM 1348-1A

RRD and MD INSPECTION, CERTIFICATION AND CHAIN OF CUSTODY FORM

Project Location: LHAAP Karnack, TX		Contract No: W912DY-04-0018			Page 2 of 2
Line	Description	Source (eg., Grid or Range Identifier)	Container/Serial Number	Container Type	Unit WT/Vol.
1	RRD and Munitions Debris	S27 and ~~S27~~ S54	4014-S54/S27-001	25yd roll-off	7,680 lbs
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

NFE

Inspector's certification: I certify that the items or items listed hereon have been inspected by me and to the best of my knowledge and belief, contain no items of a dangerous or hazardous nature. I also certify that all items inspected were properly segregated.

Printed/Typed Name: Mick Doak, SUXOS 256 689-1628	Signature:	Date: 9/24/2008

QCS certification: I certify that the items or items listed hereon have been inspected by me and to the best of my knowledge and belief, contain no items of a dangerous or hazardous nature. I also certify that all items inspected were properly segregated.

Printed/Typed Name: Tom Hinote, UXOQCS 256 689-0353	Signature:	Date: 9/24/2008

Transporter(s)	Transporter 1: Acknowledgement of materials properly sealed/secured.		
	Printed/Typed Name: GUY LAMON, JR.	Signature:	Date: 9/24/2008
	Transporter 2: Acknowledgement of materials properly sealed/secured.		
	Printed/Typed Name:	Signature:	Date:
Final Disposition	Facility owner or operator: Certification of receipt of RRD and Munitions debris, except as noted above. Acknowledgement of materials properly sealed/secured.		
	Printed/Typed Name: GREG MCCLELLAN	Signature:	Date: 9/24/08

RRD and MD Chain of Custody Rev 0 10/03

DOC	IDE	FROM	MOS	UNIT	ISS	QUANTITY	SEA	SUPPLEMENTARY ADDRESS	SIC	FUND	DISTRIBUTION	PROJECT	PRI	AEOD	DELTL	ADV	N	OI	COND	NOT

1. TOTAL PRICE	2. SHIP FROM	3. SHIP TO
$0.00	EOD Technology, Inc. LHAAP, Karnack, TX	Texas Scrap and Salvage, Marshall, TX

UNIT PRICE $0.00 DOLLARS	CTS	DOLLARS	CTS
$0	00	$0	00

4. MARK FOR: RECYCLING

5. DOC Date	6. MMPC	7. PRT RATE	8.TYPE CARGO	9. PS
9/24/2008				

10. QTY. REC'D	11UP	12. UNIT WEIGHT	13.UNITCUBE	14.LOC	15.SL
0		pounds			

16. PRODUCT CLASSIFICATION NOMENCLATURE: Munitions Debris

17. ITEM NOMENCLATURE: Munitions Debris

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
25 yd. Roll-off Box	1	5,280 pounds	

22. RECEIVED BY: Todd Meidenbauer

23. DATE RECEIVED: 9/24/2008

& SUFFIX (30-44)

STOCK NO. & ADD (8-22)

UI (23-24) QTY (25-29) COND CODE (71) DIST (54-56) UP (74-80)

Container Identification:

4014-S54/S27-002

Certified by:

Mick Doak, SUXOS
EODT Home Office (865)988-6063
LHAAP Field Office (256) 689-1268

Verified by:

Ken Barnett, USAESCH COE Safety
USAESCH OE Safety Office (256)895-1582/1598

1

This certifies and verifies that the material listed has been 100 percent inspected and to the best of our knowledge and belief, are inert and/or free of explosives or related materials.

DD FORM 1348-1A

RRD and MD INSPECTION, CERTIFICATION AND CHAIN OF CUSTODY FORM

Project Location: LHAAP Karnack, TX		Contract No: W912DY-04-0018			Page 1 of 2
Line	Description	Source (eg., Grid or Range Identifier)	Container/Serial Number	Container Type	Unit WT/Vol.
1	Munitions Debris	S27 and ~~S27~~54	4014-S54/S27-001	25yd roll-off	5,280 lbs
2					
3					
4					
5					
6					
7					
8					
9		NFE			
10					
11					
12					
13					
14					
15					
16					

Inspector's certification: I certify that the items or items listed hereon have been inspected by me and to the best of my knowledge and belief, contain no items of a dangerous or hazardous nature. I also certify that all items inspected were properly segregated.

Printed/Typed Name: Mick Doak, SUXOS 256 689-1628	Signature:	Date: 9/24/2008

QCS certification: I certify that the items or items listed hereon have been inspected by me and to the best of my knowledge and belief, contain no items of a dangerous or hazardous nature. I also certify that all items inspected were properly segregated.

Printed/Typed Name: Tom Hinote, UXOQCS 256 689-0353	Signature: Tom Hinote	Date: 9/24/2008

Transporter(s)	Transporter 1: Acknowledgement of materials properly sealed/secured.			
	Printed/Typed Name: Richard ~~Mendenhall~~ Mendenhall	Signature:		Date: 9/24/2008
	Transporter 2: Acknowledgement of materials properly sealed/secured.			
	Printed/Typed Name:	Signature:		Date:
Final Disposition	Facility owner or operator: Certification of receipt of RRD and Munitions debris, except as noted above. Acknowledgement of materials properly sealed/secured.			
	Printed/Typed Name: Gregg McClellan	Signature:		Date: 9/24/08

River City

iron & metal inc.

P.O. Box 29100
Shreveport, LA 71149-9100
(318) 686-6905

To: EOD Technology (EODT), 2229 Old Highway 95, Lenoir City, TN 37771
(ATTN: Brian Gentry)

From: River City Iron & Metal Inc

Date:

Re: DISPOSITION OF SCRAP MATERIAL RECEIVED FROM EODT AT THE FORMER LONGHORN ARMY AMMUNITION PLANT (LHAAP)

As directed by Chapter 14 of EM 1110-1-4009, this letter is provided in accordance with the contractual requirements between EODT and USAESCH; (Contract: W912DY-04-0018; Task Order: 0014).

By my signature below, I agree with the provided supporting documentation (DD Form 1348 and Chain of Custody Form) that the sealed containers contain no explosive hazards.

I affirm that the scrap received from **EODT at LHAAP on** 11/21/08 will be processed by smelting, shredding, or flashing, only identifiable by it's basic contents, prior to being released for resale, trade or otherwise given to another party.

Name of Recycler: River City Iron & Metal, Inc.

Address: P.O. Box 29100, Shreveport, LA 71149 (8245 W. Antoine Loop, S'pt, LA 71129)

Phone: 318-688-3476

Printed Name: Mike W. Emery, Sr

Signature: Mike W Emery Sr

DOC	IDE	FROM	MOS	UNIT	ISS	QUANTITY	SEA	SUPPLEMENTARY ADDRESS	SIC	FUND	DISTRIBUTION	PROJECT	PRI	AEOL	DERT	ADV	N	OI	COND	NOT
														D	L					

1. TOTAL PRICE $0.00	2. SHIP FROM	3. SHIP TO
UNIT PRICE $0.00 DOLLARS $0 CTS 00	EOD Technology, Inc. LHAAP, Karnack, TX Site 27 & 54	River City Iron & Metal Inc. PO Box 29100 Shreveport, LA 71149-9100
DOLLARS $0 CTS 00		
	4. MARK FOR RECYCLING	

& SUFFIX (30-44)

Location: Longhorn Army Ammunition Plant, Karnack, TX
Contractor: EOD Technology, Inc.

Container / Seal Identification:

USACE / LHAAP / EODT / 0001

ULLINE 2870731

5. DOC Date	6. MMPC	7. PRT RATE	8.TYPE CARGO	9. PS
11/21/2008				

10. QTY. REC'D	11UP	12. UNIT WEIGHT	13.UNITCUBE	14.LOC	15.SL
0		pounds			

16. PRODUCT CLASSIFICATION NOMENCLATURE

Munitions Debris - steel

17. ITEM NOMENCLATURE

Munitions Debris - steel

18. FY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
8 x 12 Roll-off	1	15,760	

22. RECEIVED BY	23. DATE RECEIVED
	11/21/2008

STOCK NO. & ADD (8-22)

Certified by:

Mick Doak, SUXOS
EODT Home Office (865)988-6063
LHAAP Field Office (256) 689-1268

UI (23-24) QTY (25-29) COND CODE (71) DIST (54-56) UP (74-80)

Verified by:

Tim Bohannon, USAESCH COE Safety
USAESCH OE Safety Office (256)895-1582/1598

2

This certifies and verifies that the material listed has been 100 percent inspected and to the best of our knowledge and belief, are inert and/or free of explosives or related materials.

DD FORM 1348-1A

EODT
EOD TECHNOLOGY, INC.

AEDA/RANGE RESIDUE INSPECTION, CERTIFICATION, AND CHAIN OF CUSTODY FORM 120G

Project Location: LHAAP Karnack, TX		Contract No: W912DY-04-0018		Task Order No.: 0014	Page 1 of 1
Line	Description	Source (e.g., Grid or Range) Identifier)	Container/Serial Number	Container Type	Unit Wt./Vol.
1	Munitions Debris - Steel Scrap	LHAAP Site 54 and Site 27	USACE / LHAAP / EODT / 0001 WUNE 287731	8 X 12 Roll-off	15,760
2					
3					
4					
5					
6					

Inspector's certification: This certifies that the AEDA residue, Range Residue, and/or Explosive Contaminated Property listed has been 100 % properly inspected and, to the best of our knowledge and belief, are free of explosive hazards.

Printed/typed name: Tom Hinote	Signature: Tom Hinote	Date: 11/21/2008

Verifier certification: This certifies that the AEDA residue, Range Residue and/or Explosive Contaminated Property listed has been 100 % properly inspected and to the best of our knowledge and belief, are free of explosive hazards.

Printed/typed name: Mick Doak	Signature: Mick Doak	Date: 11-21-08

Transporter(s)			
	Transporter 1 acknowledgment of receipt of materials properly sealed/secured		
	Printed/typed name: Ralph BABB JR.	Signature: Ralph A. Babb	Date: 11-21-08
	Transporter 2 acknowledgment of receipt of materials properly sealed/secured		
	Printed/typed name:	Signature:	Date:

Final Disposition			
	Facility owner or operator: Certification of receipt of AEDA/Range Residue materials, except as noted above. Acknowledgment of receipt of materials properly sealed/secured.		
	Printed/typed name: M. Wade Mike Wade Emer	Signature: M. Wade	Date:

DOC	IDE	FROM	MOS	UNIT	ISS	QUANTITY	SEA	SUPPLEMENTARY ADDRESS	SIC	FUND	DISTRIBUTION	PROJECT	PRI	AEOD	DELT	ADV	N	OI	COND	NOT

UNIT PRICE $0.00		DOLLARS	CTS
DOLLARS	CTS	$0	00
$0	00		

1. TOTAL PRICE $0.00

2. SHIP FROM
EOD Technology, Inc.
LHAAP, Karnack, TX
Site 27 & 54

3. SHIP TO
River City Iron & Metal Inc.
PO Box 29100
Shreveport, LA

4. MARK FOR
RECYCLING

5. DOC Date	6. MMPC	7. PRT RATE	8.TYPE CARGO	9. PS
11/21/2008				

10. QTY. REC'D	11UI	12. UNIT WEIGHT	13.UNITCUBE	14.LOC	15.SL
0		pounds			

16. PRODUCT CLASSIFICATION NOMENCLATURE
Munitions Debris - Aluminum

17. ITEM NOMENCLATURE
Munitions Debris - Aluminum

18. FY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
4 x 6 Roll-off	1	260	

22. RECEIVED BY

23. DATE RECEIVED
11/21/2008

& SUFFIX (30-44)

STOCK NO. & ADD (8-22)

UI (23-24) QTY (25-29)
COND CODE (71)
DIST (54-56)
UP (74-80)

Location: Longhorn Army Ammunition Plant, Karnack, TX
Contractor: EOD Technology, Inc.

Container / Seal Identification:

USACE / LHAAP / EODT / 0002

ULINE 287732

Certified by:

Mick Doak, SUXOS
EODT Home Office (865)988-6063
LHAAP Field Office (256) 689-1268

Verified by:

Tim Bohannon, USAESCH COE Safety
USAESCH OE Safety Office (256)895-1582/1598

2

This certifies and verifies that the material listed has been 100 percent inspected and to the best of our knowledge and belief, are inert and/or free of explosives or related materials.

DD FORM 1348-1A

DOC	IDE	FROM	MOS	UNIT	ISS	QUANTITY	SEA	SUPPLEMENTARY ADDRESS	SIC	FUND	DISTRIBUTION	PROJECT	PRI	AEOD	DELT	DERT	ADV	N	OI	COND	NOT

UNIT PRICE $0.00		DOLLARS	CTS
DOLLARS	CTS		
$0	00	$0	00

1. TOTAL PRICE $0.00

2. SHIP FROM
EOD Technology, Inc.
LHAAP, Karnack, TX
Site 27 & 54

3. SHIP TO
River City Iron & Metal Inc.
PO Box 29100
Shreveport, LA

4. MARK FOR
RECYCLING

Location: Longhorn Army Ammunition Plant, Karnack, TX
Contractor: EOD Technology, Inc.

Container / Seal Identification:

USACE / LHAAP / EODT / 0003

ULINE 2870733

5. DOC Date	6. MMPC	7. PRT RATE	8.TYPE CARGO	9. PS
11/21/2008				

10. QTY. REC'D	11UF	12. UNIT WEIGHT	13.UNITCUBE	14.LOC	15.SL
0		pounds			

16. PRODUCT CLASSIFICATION NOMENCLATURE
Non MEC - steel

17. ITEM NOMENCLATURE
Non MEC - steel

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
4 x 6 roll-off	1	1,660 pounds	

22. RECEIVED BY	23. DATE RECEIVED
M. Wade	11/21/2008

Certified by:

Mick Doak, SUXOS
EODT Home Office (865)988-6063
LHAAP Field Office (256) 689-1268

Verified by:

Tim Bohannon, USAESCH COE Safety
USAESCH OE Safety Office (256)895-1582/1598

1

& SUFFIX (30-44)

STOCK NO. & ADD (8-22)

UI (23-24) QTY (25-29) COND CODE (71) DIST (54-56) UP (74-80)

This certifies and verifies that the material listed has been 100 percent inspected and to the best of our knowledge and belief, are inert and/or free of explosives or related materials.

DD FORM 1348-1A

DOC	IDE	FROM	MOS	UNIT	ISS	QUANTITY	SEA	SUPPLEMENTARY ADDRESS	SIC	FUND	DISTRIBUTION	PROJECT	PRI	AEOD	DELT	ADV	N	OI	COND	NOT

UNIT PRICE		DOLLARS	CTS
DOLLARS	CTS		
$0	00	$0	00

1. TOTAL PRICE $0.00

2. SHIP FROM
EOD Technology, Inc.
LHAAP, Karnack, TX
Site 27 & 54

3. SHIP TO
River City Iron & Metal Inc.
PO Box 29100
Shreveport, LA

4. MARK FOR
RECYCLING

Location: Longhorn Army Ammunition Plant, Karnack, TX
Contractor: EOD Technology, Inc.

Container / Seal Identification:

USACE / LHAAP / EODT / 0004

ULINE 2870734

Certified by:

Mick Doak, SUXOS
EODT Home Office (865)988-6063
LHAAP Field Office (256) 689-1268

Verified by:

Tim Bohannon, USAESCH COE Safety
USAESCH OE Safety Office (256)895-1582/1598

5. DOC Date	6. MMPC	7. PRT RATE	8.TYPE CARGO	9. PS
11/21/2008				

10. QTY. REC'D	11UF	12. UNIT WEIGHT	13.UNITCUBE	14.LOC	15.SL
0		pounds			

16. PRODUCT CLASSIFICATION NOMENCLATURE
Non MEC - steel

17. ITEM NOMENCLATURE
Non MEC - steel

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
4 x 6 roll-off	1	440 pounds	

22. RECEIVED BY	23. DATE RECEIVED
M. Wade	11/21/2008

1

& SUFFIX (30-44)

STOCK NO. & ADD (8-22)

UI (23-24) QTY (25-29) COND CODE (71) DIST (54-56) UP (74-80)

This certifies and verifies that the material listed has been 100 percent inspected and to the best of our knowledge and belief, are inert and/or free of explosives or related materials.

DD FORM 1348-1A

EODT
EOD TECHNOLOGY, INC.

AEDA/RANGE RESIDUE INSPECTION, CERTIFICATION, AND CHAIN OF CUSTODY FORM 120G

Project Location: LHAAP Karnack, TX		Contract No: W912DY-04-0018		Task Order No.: 0014	Page 1 of 1
Line	Description	Source (e.g., Grid or Range) Identifier)	Container/Serial Number	Container Type	Unit Wt./Vol.
1	Munitions Debris - Aluminum	LHAAP Site 54 and Site 27	USACE / LHAAP / EODT / 0002 LLINE 2870732	4 x 6 Roll-off	260
2	Non-MEC Steel	LHAAP Site 54 and Site 27	USACE / LHAAP / EODT / 0003 LLINE 2870733	4 x 6 Roll-off	1660
3	Non-MEC Steel	LHAAP Site 54 and Site 27	USACE / LHAAP / EODT / 0004 LLINE 2870734	4 x 6 Roll-off	440
4					
5					
6					

Inspector's certification: This certifies that the AEDA residue, Range Residue, and/or Explosive Contaminated Property listed has been 100 % properly inspected and, to the best of our knowledge and belief, are free of explosive hazards.

Printed/typed name: Tom Hinote	Signature: Tom Hinote	Date: 11/21/2008

Verifier certification: This certifies that the AEDA residue, Range Residue and/or Explosive Contaminated Property listed has been 100 % properly inspected and to the best of our knowledge and belief, are free of explosive hazards.

Printed/typed name: Mick Doak	Signature:	Date: 11-21-08

Transporter(s)	Transporter 1 acknowledgment of receipt of materials properly sealed/secured		
	Printed/typed name: Mike Wade Emery Jr.	Signature: M. Wade E	Date: 11-21-08
	Transporter 2 acknowledgment of receipt of materials properly sealed/secured		
	Printed/typed name:	Signature:	Date:
Final Disposition	Facility owner or operator: Certification of receipt of AEDA/Range Residue materials, except as noted above. Acknowledgment of receipt of materials properly sealed/secured.		
	Printed/typed name: Mike Wade Emery	Signature: M. Wade E	Date: 11/21/08

APPENDIX N
LAND USE CONTROLS

FOR THE

MEC REMOVAL ACTION AT THE FORMER LONGHORN ARMY AMMUNITION PLANT LHAAP-001-R (SITE 27) AND LHAAP-003-R (SITE 54) KARNACK, TEXAS

Prepared for:

U.S. Army Engineering and Support Center, Huntsville
Attn: CEHNC-OE-DC (Mr. Doug Garretson)
4820 University Square
Huntsville, Alabama 35816-1822

U.S. Army Corps of Engineers, Tulsa District
Attn: CESWT-EC-ER (Mr. John Lambert)
1645 S. 101st East Avenue
Tulsa, Oklahoma 74128-4609

Contract: W912DY-04-D-0018
Task Order: 0014
Project Number: K06TX000503

Prepared by:

EODT
EOD TECHNOLOGY, INC.
2229 Old Highway 95
Lenoir City, TN 37771

September 2009

APPENDIX N
LAND USE CONTROLS

Section **Page**

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

CERCLA	Comprehensive Environment Response, Compensation, and Liability Act
CLNWR	Caddo Lake National Wildlife Refuge
LHAAP	Longhorn Army Ammunition Plant
LUC	Land Use Control
MEC	Munitions and Explosives of Concern
MRS	Munition Response Site
NCP	National Contingency Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Services
UXO	unexploded ordnance

1.0 GENERAL

Following is the Land Use Controls (LUCs) report for the former Longhorn Army Ammunition Plant (LHAAP) Military Munitions Response Program sites, LHAAP-001-R (Site 27) and LHAAP-003-R (Site 54). The goal of the LUC report is to define the process to identify, design, implement, and maintain LUCs, which will promote ongoing protection to human safety following the munitions and explosives of concern (MEC) removal action. The LHAAP LUC report specifies in detail the controls that were applied at the LHAAP to ensure LUCs were effective. The LUC Plan was part of the site-wide LUC Management Plan

2.0 PURPOSE

The final remedies specified herein were chosen in accordance with Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). They are for the protection of human safety under the current and anticipated future land use of the site.

The LUC implementation and maintenance actions described herein will be effective immediately upon approval of the Work Plan as the primary document by the U.S. Army and U.S. Environmental Protection Agency (USEPA) Region VI with the concurrence of the Texas Commission on Environmental Quality (TCEQ), and was subject to the enforcement provisions of the September 11, 1991 Federal Facility Agreement. The requirements set forth in the Remedial Design addendum remained applicable to Site 27 and Site 54 during the Army's administrative control and that of subsequent transferees.

3.0 DESCRIPTION OF THE SITES

The site of the former LHAAP is located in east-central Texas in the northeastern corner of Harrison County, approximately 14 miles northeast of Marshall, Texas, and approximately 40 miles west of Shreveport, Louisiana. The former LHAAP property occupied more than 8,000 acres, approximately 7,000 of which have been transferred to the U.S. Fish and Wildlife Services (USFWS) as the Caddo Lake National Wildlife Refuge (CLNWR). The two Munitions Response Sites (MRSs), Site 27 and Site 54, are located within Army-retained land. Site 27, also known as the South Test Area, covers 74.84 acres and Site 54, also known as the Ground Signal Test Area, covers 79.5 acres. (See Figure N-1.)

The land use of the remaining property still under U.S. Army ownership, including Site 27 and Site 54, is as a closed ammunition plant, surrounded by the CLNWR. The most reasonably anticipated future land use of the MRS locations is incorporation into the existing wildlife refuge and will be used for the big six: hunting, fishing, wildlife observation, wildlife photography,

wildlife education, and wildlife interpretation. Another possibility for future land use is for oil and gas exploration.

Numerous studies and investigations sponsored by the Army have been conducted at the LHAAP dating back to the early 1980s. Data collected during the earlier studies may be reviewed in the Administrative Record located at the Marshall, Texas library. The most recent study at the MRSs addressed under this effort was a site inspection completed in June 2005 (e2M, 2005).

3.1 Site 27 (LHAAP-001-R) South Test Area

This area encompasses approximately 74.84 acres (see Figure N-2) and is located in the south-central portion of LHAAP. Site 27 was used for testing photoflash bombs and demilitarization of illuminating devices and leaking production items. The site was constructed in 1954 and used until the early 1980s. USFWS personnel indicated a 155-mm white phosphorous projectile was confirmed on the site in March 2004 and was disposed of by the local explosives ordnance disposal unit. The item was identified as a 155-mm smoke, white phosphorous, M825 canister. The item was found armed and was blown in place. The identification of this round as white phosphorous has been questioned by the Army. The historical record reviews conducted during previous investigations confirmed the production of 155-mm illumination rounds at LHAAP but no record of production of 155-mm white phosphorous rounds (other than metal projectile component) at LHAAP has been identified. According to USATHAMA (1989), white phosphorous operations at LHAAP were assembly and pack-out operations only; no loading of this material was conducted at the site.

According to the HRR, the following MEC are potentially associated with this site:

- M120A1 photoflash bombs
- Pyrotechnic illuminating devices
- XM 40E5 anti-intrusion mines
- Leaking white phosphorous munitions
- Photoflash cartridges (0.5 and 1 pound)

3.2 Site 54 (LHAAP-003-R) Ground Signal Test Area

This area encompasses approximately 79.5 acres (see Figures N-3a and N-3b). It is located in the southeast portion of LHAAP. Site 54 served as a test area for pyrotechnic munitions, a test and demilitarization area for rocket motors, and possibly a demolition area for XM40E5 anti-intrusion mines. A site visit conducted by the CESWF in December 2004 found a Mortar Test Area and numerous expended mortar rounds (munitions debris) were identified on the surface inside and outside the berm.

The following MEC are potentially associated with this site:

- Red phosphorus smoke wedges
- Infrared flares
- Pyrotechnic signal devices
- 60-mm illuminating mortars
- 81-mm illuminating mortars
- 4.2-inch illuminating mortars
- Illuminating munitions ranging from 40 mm to 155 mm
- Leaking White Phosphorous munitions
- XM40E5 anti-intrusion mines
- Nike rocket motors
- Sergeant rocket motors
- Pershing missile rocket motors.

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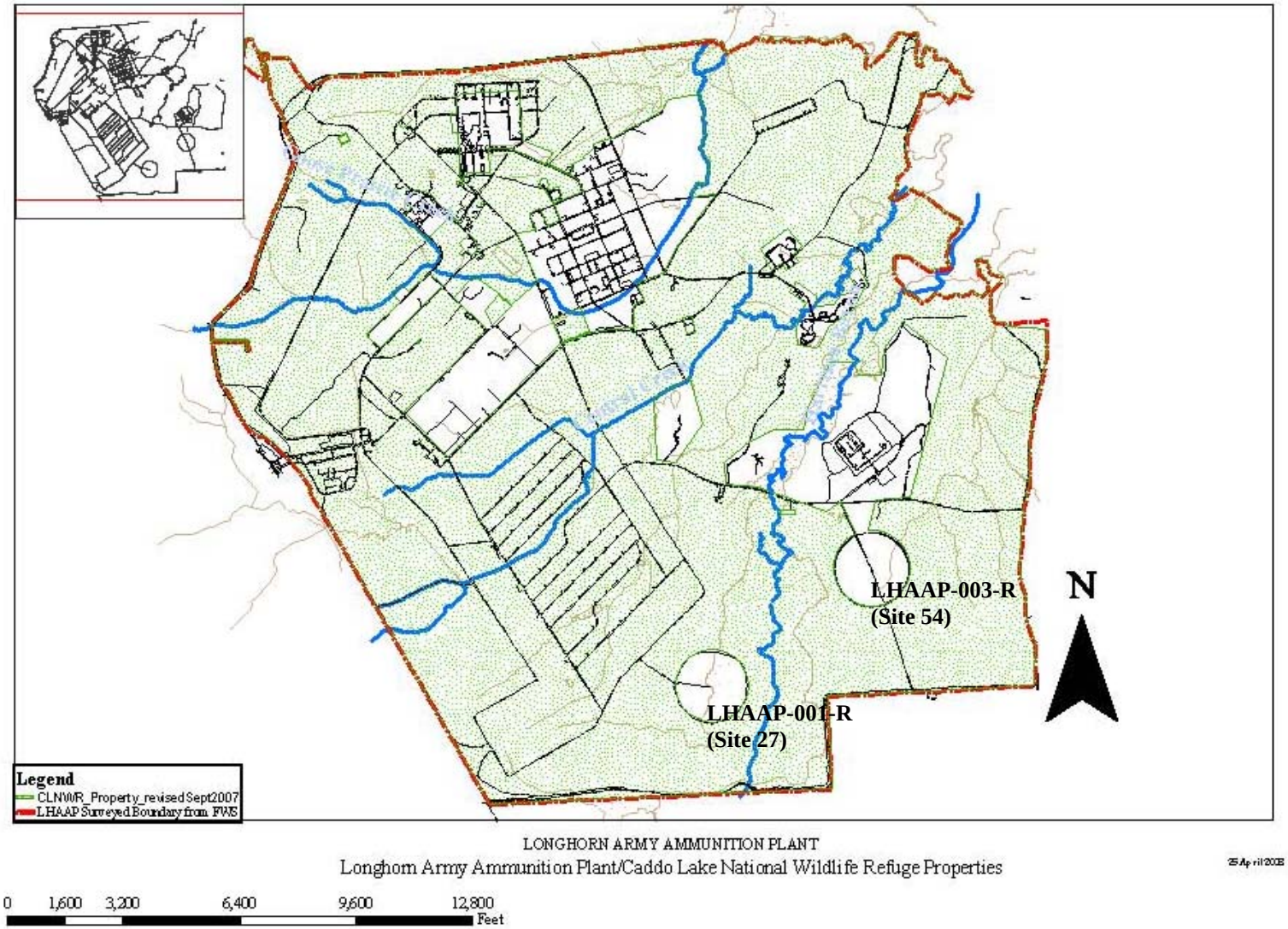
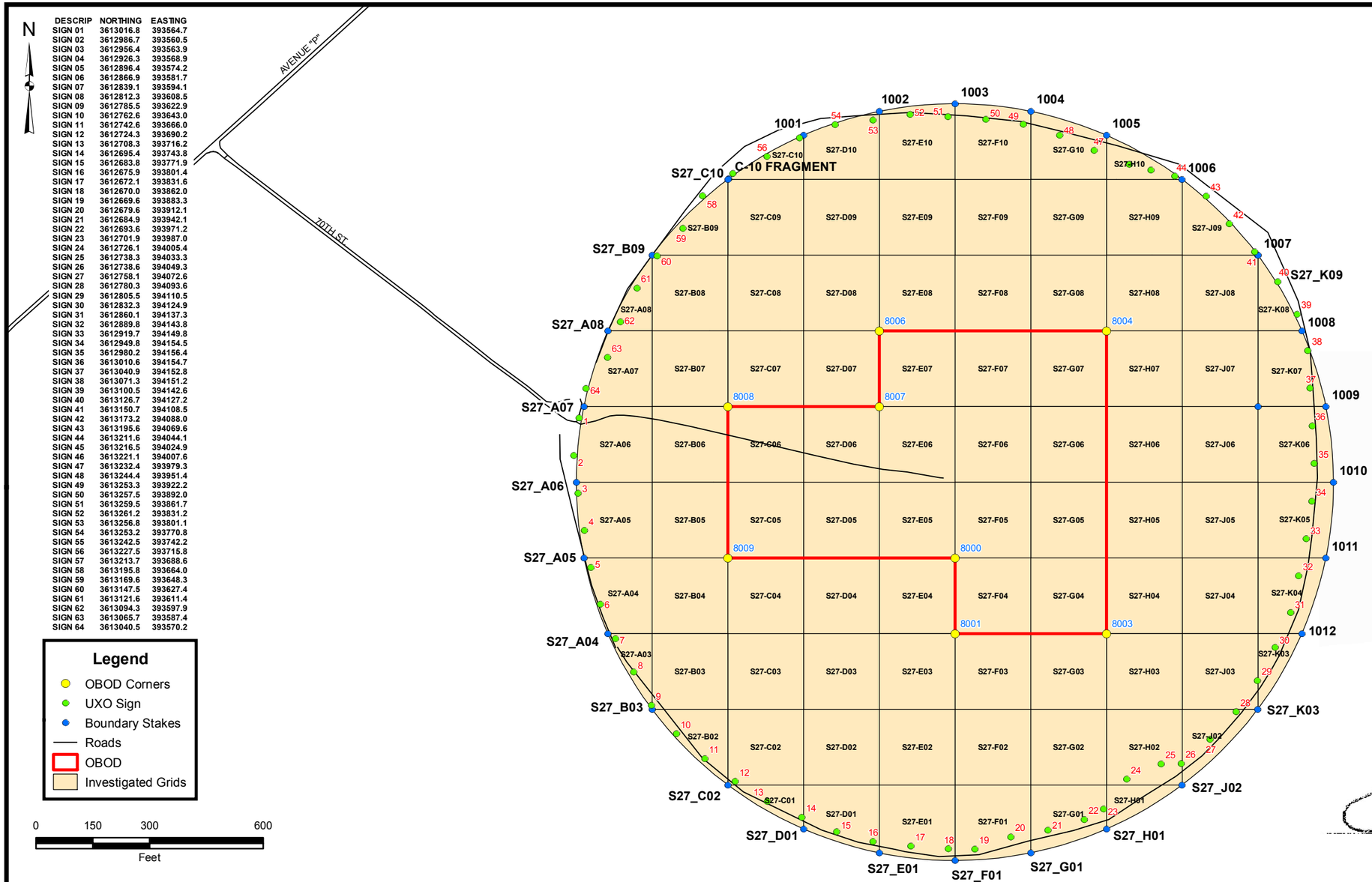


Figure N-1: Site Location Map

DESCRIP	NORTHING	EASTING
SIGN 01	3613016.8	393564.7
SIGN 02	3612986.7	393560.5
SIGN 03	3612956.4	393563.9
SIGN 04	3612926.3	393568.9
SIGN 05	3612896.4	393574.2
SIGN 06	3612866.9	393581.7
SIGN 07	3612839.1	393594.1
SIGN 08	3612812.3	393608.5
SIGN 09	3612785.5	393622.9
SIGN 10	3612762.6	393643.0
SIGN 11	3612742.6	393666.0
SIGN 12	3612724.3	393690.2
SIGN 13	3612708.3	393716.2
SIGN 14	3612695.4	393743.8
SIGN 15	3612683.8	393771.9
SIGN 16	3612675.9	393801.4
SIGN 17	3612672.1	393831.6
SIGN 18	3612670.0	393862.0
SIGN 19	3612669.6	393883.3
SIGN 20	3612679.6	393912.1
SIGN 21	3612684.9	393942.1
SIGN 22	3612693.6	393971.2
SIGN 23	3612701.9	393987.0
SIGN 24	3612726.1	394005.4
SIGN 25	3612738.3	394033.3
SIGN 26	3612738.6	394049.3
SIGN 27	3612758.1	394072.6
SIGN 28	3612780.3	394093.6
SIGN 29	3612805.5	394110.5
SIGN 30	3612832.3	394124.9
SIGN 31	3612860.1	394137.3
SIGN 32	3612889.8	394143.8
SIGN 33	3612919.7	394149.8
SIGN 34	3612949.8	394154.5
SIGN 35	3612980.2	394156.4
SIGN 36	3613010.6	394154.7
SIGN 37	3613040.9	394152.8
SIGN 38	3613071.3	394151.2
SIGN 39	3613100.5	394142.6
SIGN 40	3613126.7	394127.2
SIGN 41	3613150.7	394108.5
SIGN 42	3613173.2	394088.0
SIGN 43	3613195.6	394069.6
SIGN 44	3613211.6	394044.1
SIGN 45	3613216.5	394024.9
SIGN 46	3613221.1	394007.6
SIGN 47	3613232.4	393979.3
SIGN 48	3613244.4	393951.4
SIGN 49	3613253.3	393922.2
SIGN 50	3613257.5	393892.0
SIGN 51	3613259.5	393861.7
SIGN 52	3613261.2	393831.2
SIGN 53	3613256.8	393801.1
SIGN 54	3613253.2	393770.8
SIGN 55	3613242.5	393742.2
SIGN 56	3613227.5	393715.8
SIGN 57	3613213.7	393688.6
SIGN 58	3613195.8	393664.0
SIGN 59	3613169.6	393648.3
SIGN 60	3613147.5	393627.4
SIGN 61	3613121.6	393611.4
SIGN 62	3613094.3	393597.9
SIGN 63	3613065.7	393587.4
SIGN 64	3613040.5	393570.2



DESCRIP	NORTHING	EASTING
8000	3612904.2	393867.3
8001	3612843.2	393867.3
8003	3612843.2	393989.2
8004	3613087.0	393989.2
8006	3613087.1	393806.4
8007	3613026.1	393806.4
8008	3613026.1	393684.4
8009	3612904.2	393684.4

DESCRIP	NORTHING	EASTING
1001	393745.4	3613244.5
1002	393806.4	3613263.8
1003	393867.3	3613269.9
1004	393928.3	3613263.8
1005	393989.2	3613244.5
1006	394050.1	3613209.0
1007	394111.0	3613148.0
1008	394146.5	3613087.0
1009	394165.8	3613026.1
1010	394171.9	3612965.1
1011	394165.8	3612904.2
1012	394146.5	3612843.2
C-10 FRAGMENT	393685.2	3613209.4
S27_A04	393588.0	3612843.2
S27_A05	393568.7	3612904.2
S27_A06	393562.5	3612965.1
S27_A07	393568.6	3613026.1
S27_A08	393587.9	3613087.1
S27_B03	393623.5	3612782.3
S27_B09	393623.5	3613148.0
S27_C02	393684.6	3612721.3
S27_C10	393684.4	3613209.0
S27_D01	393745.4	3612685.9
S27_E01	393806.4	3612666.6
S27_F01	393867.3	3612660.5
S27_G01	393928.3	3612666.7
S27_H01	393989.3	3612686.0
S27_J02	394049.9	3612721.3
S27_K03	394110.9	3612782.3
S27_K07	394111.2	3613026.1
S27_K09	394111.2	3613147.9

I, David R. Collins, Registered Professional Land Surveyor No. 1954, do hereby certify that this plat correctly represents the results of a survey made under my supervision August 4 through September 23, 2008.

Principal of the firm: _____

SUXOS: _____

Datum: NAD83 UTM
Monument: Longhorn Army Ammunition Plant
Monument BG-1 with coordinates
NORTHING-3614801.46,
EASTING-395385.09

Figure N-2: Site 27 Survey Certification Map

DESCRIP	NORTH	EAST	DESCRIP	NORTHIN	EASTING
SIGN 1	3614179.4	395143.2	1013	395068.6	3613625.2
SIGN 10	3613984.2	394959.8	1014	395005.1	3613686.2
SIGN 11	3613954.6	394952.4	1015	394997.4	3614072.1
SIGN 12	3613924.6	394947.4	1016	395058.4	3614135.6
SIGN 13	3613894.1	394947	1017	395180.3	3614195.0
SIGN 14	3613863.7	394949.6	1018	395241.3	3614203.9
SIGN 15	3613833.8	394955.1	1019	395302.2	3614200.9
SIGN 16	3613803.8	394959.8	1020	395363.2	3614185.9
SIGN 17	3613774.4	394967.8	1021	395392.4	3614173.9
SIGN 18	3613745.2	394976.7	1022	395424.1	3614156.7
SIGN 19	3613718.3	394991.2	1023	395480.2	3614112.9
SIGN 2	3614163.4	395117.3	1024	395485.1	3614108.0
SIGN 20	3613694.6	395010.3	1025	395528.9	3614051.9
SIGN 21	3613672.4	395031.1	1026	395546.1	3614020.2
SIGN 22	3613651.1	395052.8	1027	395558.0	3613991.0
SIGN 23	3613632.6	395077	1028	395573.1	3613930.0
SIGN 24	3613616.8	395103.1	1029	395576.0	3613869.1
SIGN 25	3613602.8	395130	1030	395567.2	3613808.1
SIGN 26	3613591	395158.1	1031	395507.7	3613686.2
SIGN 27	3613583.5	395187.6	1032	395444.2	3613625.2
SIGN 28	3613579.1	395217.8	S54_A04	394967.3	3613747.1
SIGN 29	3613578.7	395248.2	S54_A06	394936.8	3613869.1
SIGN 3	3614147.8	395091.2	S54_A07	394939.8	3613930.0
SIGN 30	3613579.6	395278.7	S54_A08	394954.8	3613991.0
SIGN 31	3613584.2	395308.8	S54_A09	394983.9	3614051.9
SIGN 32	3613591.4	395336.3	S54_B03	394997.4	3613696.4
SIGN 33	3613599.5	395365.6	S54_B06	394997.4	3613808.1
SIGN 34	3613611	395393.8	S54_B06	394945.7	3613808.1
SIGN 35	3613626.8	395419.8	S54_B06	394997.4	3613869.1
SIGN 36	3613644.2	395444.8	S54_B07	394997.4	3613930.0
SIGN 37	3613663.6	395468.2	S54_B08	394997.4	3613991.0
SIGN 38	3613686.5	395488.2	S54_B09	394997.4	3614051.9
SIGN 39	3613710.2	395507.5	S54_B10	395032.6	3614112.9
SIGN 4	3614130.2	395066.2	S54_C02	395058.4	3613633.0
SIGN 40	3613735.9	395523.8	S54_C10	395058.4	3614112.9
SIGN 41	3613763	395537.5	S54_D01	395119.3	3613595.1
SIGN 42	3613791.2	395548.8	S54_D11	395119.4	3614173.3
SIGN 43	3613820.6	395556.7	S54_E01	395180.3	3613573.5
SIGN 44	3613850.5	395562.3	S54_F01	395241.3	3613564.6
SIGN 45	3613880.9	395562.2	S54_G01	395302.2	3613567.6
SIGN 46	3613911.3	395561	S54_H01	395363.2	3613582.6
SIGN 47	3613941.4	395556.7	S54_H02	395363.1	3613625.2
SIGN 48	3613971.3	395550.8	S54_J01	395424.1	3613611.8
SIGN 49	3613999.9	395540.5	S54_J02	395424.1	3613625.2
SIGN 5	3614110.1	395043.4	S54_K02	395485.1	3613660.5
SIGN 50	3614027.4	395527.5	S54_K03	395485.1	3613686.2
SIGN 51	3614053.7	395512.2	S54_LO4	395545.5	3613747.1
SIGN 52	3614078.9	395495.2			
SIGN 53	3614102.3	395475.8			
SIGN 54	3614122	395452.6			
SIGN 55	3614139.3	395427.5			
SIGN 56	3614155.8	395401.9			
SIGN 57	3614169.5	395374.8			
SIGN 58	3614179.6	395346			
SIGN 59	3614186.8	395316.5			
SIGN 6	3614087.5	395022.9			
SIGN 60	3614191.9	395286.4			
SIGN 61	3614192.1	395255.9			
SIGN 62	3614190.3	395225.5			
SIGN 63	3614185.9	395195.4			
SIGN 64	3614182	395167.9			
SIGN 7	3614063.3	395004.4			
SIGN 8	3614039.1	394985.8			
SIGN 9	3614013.1	394969.9			

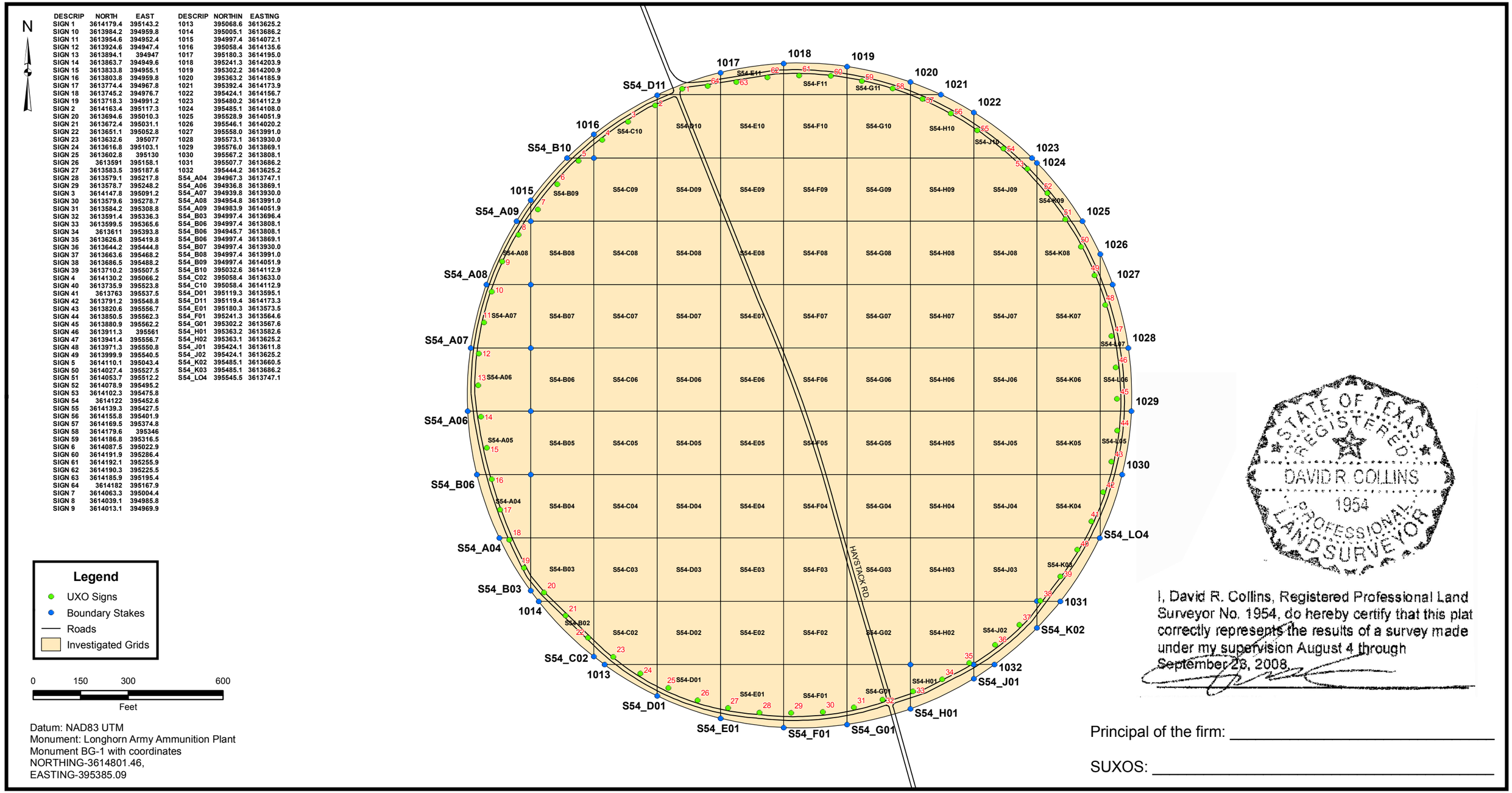


Figure N-3: Site 54 Survey Certification Map

4.0 LUC PERFORMANCE OBJECTIVES

The overall goal of the LUC was the protection of human safety against explosive hazards that may have remained at the site in the subsurface. The LUC performance objectives were as follows:

- Identify areas that could possibly contain MEC
- Ensure all possible personnel within the site boundaries were made aware of possible safety issues concerning MEC
- Restrict activities that could result in explosive safety risks

5.0 LUCs FOR THE SITES

- Restriction against intrusive activities, including digging
- Signage at perimeters of MRSs
- Education program

Once regulator concurrence has been received, the restriction against intrusive activities, including digging in the controlled areas, will be recorded in the Harrison County Clerk's Office, with the survey, map, and language as required by the Texas Administrative Code (TAC) Citation 335.569, Appendix III. The big six activities planned for the refuge visitors after transfer to USFWS are non-intrusive activities and, as mentioned in Section 3.0, include hunting, fishing, wildlife observation, wildlife photography, wildlife education, and wildlife interpretation.

The signage at the perimeters of MRSs was visible from one to the next and served as the physical demarcation of the controlled areas in the field. The signs included warning of the potential presence of unexploded ordnance (UXO), stated the restriction against intrusive activities, and provided a contact number.

The education program for future refuge visitors, staff and volunteers, is in the form of pamphlets and video warning of the potential presence of UXO and presenting examples of MEC that was or may be found at the sites.

6.0 LUC IMPLEMENTATION DETAILS

Until Site 27 and Site 54 are transferred, the Army or its representatives will be responsible for LUC implementation, maintenance, inspection, reporting and enforcement. The Army shall address LUC problems within its control that are likely to impact remedy integrity and shall address problems as soon as practicable. If periodic LUC inspections and maintenance are

required to address site-specific risks, the Army will be responsible for making the results available to the appropriate regulators.

As a condition of property transfer, the Army may require the transferee to assume responsibility for various implementation actions, as indicated below. Although the Army may transfer responsibility for various implementation actions, the Army shall retain its responsibility for remedy integrity. This means that the Army is responsible for addressing substantive violations of performance objectives that would undermine the Army's CERCLA remedy. The Army also will be responsible for: 1) incorporating Work Plan information and outlining the transferee's LUC obligations into property transfer documentation; 2) recording survey plat and notice of restrictions for both Site 27 and Site 54.

6.1 LUC Documentation

A restriction on intrusive activities will remain with Site 27 and Site 54 upon transfer. Notification of this restriction is to remain with these sites as provided within an Environmental Condition of Property Document to be developed prior to transfer of these sites. The restriction against intrusive activities, including digging, has been recorded in the Harrison County Clerk's Office with the survey, map, and language as required by TAC Citation 335.569. A copy of the recordation can be found in Attachment 1.

The signs were installed as described in the Performance Work Statement and the Work Plan. A photograph of the UXO awareness sign used for Site 27 and Site 54 is presented in Figure N-4. Site 27 had 64 safety signs and Site 54 also had 64 safety signs.

(This space intentionally left blank.)

Figure N-4: Signage

6.2 LUC Maintenance

- *Signs and Perimeter*: The boundaries of both sites were maintained by mowing the outer perimeter of the boundaries of Site 27 and Site 54 and insuring that the signs were visible and in place. Signs at a minimum were 10" × 12" and printed in English only. Signs will be maintained and replaced as needed.
- *Education Program*: Electronic copies of the safety brochures and safety video have been provided so additional copies can be made as needed.

6.3 LUC Monitoring and Reporting

6.3.1 Annual Inspections and Reporting

The U.S. Army will undertake annual physical inspections and reporting to confirm continued compliance with all LUC objectives. The Army will maintain copies of the annual inspections on-site and make them available to USEPA and TCEQ with an annual LUC Compliance Inspection document consistent with the forms attached here to as Figure N-5 (Site 27) and Figure N-6 (Site 54). In addition, should any deficiency(ies) be found during the annual inspection, the U.S. Army will provide to USEPA and TCEQ, along with the document, a separate written explanation indicating the specific deficiency(ies) found and what efforts or measures have or will be taken to correct those deficiencies. The need to continue annual inspections will be revisited at five year reviews.

Monitoring details would include, but not be limited to, periodic inspections of signs insuring that signs are in place and legible and mowing the perimeter, ensuring the boundary is identifiable. Inspections would also include walking the interior of the sites, inspecting for possible intrusive activities from visitors to the sites and conducting the annual inspections.

(This space intentionally left blank.)

Figure N-5: Sample Annual Land Use Control for Site 27 Compliance Inspection Documentation

In accordance with the LUC Plan dated _____ for Site 27, an inspection of site was conducted by _____ on _____.

A summary of land use control mechanisms is as follows:

- Perimeter signage
- Dig and intrusive activities restriction
- Education program

A summary of compliance with land use and restriction covenants is as follows:

- The posted signs are properly maintained at Site 27
- The perimeter is properly maintained around Site 27
- No digging or intrusive activities have taken place within the boundaries identified for Site 27
- Pamphlets and safety awareness video are being used to educate visitors

I, the undersigned, do document that the inspection was performed as indicated above, and that the above information is true and correct to the best of my knowledge, information, and belief.

Date: _____

Name: _____

Signature: _____

Completed annual compliance inspections shall be conducted no later than March 1 of each year for the previous calendar year and filed on site.

Figure N-6: Sample Annual Land Use Control for Site 54 Compliance Inspection Documentation

In accordance with the LUC Plan dated _____ for Site 54, an inspection of site was conducted by _____ on _____.

A summary of land use control mechanisms is as follows:

- Perimeter signage
- Dig and intrusive activities restriction
- Education program

A summary of compliance with land use and restriction covenants is as follows:

- The posted signs are properly maintained at Site 54
- The perimeter is properly maintained around Site 54
- No digging or intrusive activities have taken place within the boundaries identified for Site 54
- Pamphlets and safety awareness video are being used to educate visitors

I, the undersigned, do document that the inspection was performed as indicated above, and that the above information is true and correct to the best of my knowledge, information, and belief.

Date: _____

Name: _____

Signature: _____

Completed annual compliance inspections shall be conducted no later than March 1 of each year for the previous calendar year and filed on site.

6.3.2 CERCLA Five-Year Reviews

The U.S. Army shall conduct five-year reviews of the LHAAP-001-R and LHAAP-003-R remedies, as required by CERCLA and NCP, because the potential for MEC in the subsurface remains and could present a risk to human safety as a result of explosive hazard. As part of the CERCLA Section 1221© Five-Year Review, the U.S. Army shall prepare a report certifying the continued effectiveness of the remedy including all LUCs implemented at LHAAP-001-R and LHAAP-003-R. The report will include the information contained in the annual reports and an evaluation of LUCs to determine if the LUCs or the inspection and reporting requirements need modification and that an inspection of the sites to document that the basis for the MEC risk assessment remains unchanged.

7.0 NOTICE OF PLANNED PROPERTY CONVEYANCE

The U.S. Army shall provide notice to USEPA and TCEQ of such intended property conveyance. The notice shall describe the mechanism by which LUCs will continue to be implemented, maintained, inspected, reported, and enforced.

8.0 LUC ENFORCEMENT

The U.S. Army, in accordance with CERCLA, will ensure the LUCs are specified, implemented, monitored, reported on, and enforced in an efficient, cost-effective manner that ensures long-term protectiveness. The U.S. Army will be responsible for enforcement of the LUC. Enforcement objectives are listed below:

- Conduct CERCLA five-year remedy review
- Conduct periodic monitoring or visual inspections of LUC
- Report inspection results
- Notify regulators prior to any changes in the risk, remedy or land use, including any LUC failures, with proposed corrective action
- Include a map of the site where LUCs are implemented

ATTACHMENT 1
RECORDATION

The recordation information can be found behind this page.

STATE OF TEXAS

(Harrison) COUNTY

INDUSTRIAL SOLID WASTE

NOTICE OF LAND USE CONTROLS AT Site LHAAP-027 (LHAAP-001-R) AND Site-LHAAP-054 (LHAAP-0003-R)

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the TCEQ pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Harrison County, Texas in compliance with the recordation requirements of said rules:

I

The U.S. Army has performed a removal of munitions and explosives of concern at the former Longhorn Army Ammunition Plant (LHAAP) for the land described herein. The removal site is formerly known as Site 27, South Test Area/Bomb Test Area (LHAAP-001-R) and the Site 54, Ground Signal Test Area (LHAAP-003-R). Site 27 encompasses approximately 79 acres and was used for testing photoflash bombs and demilitarization of illuminating devices and leaking production items. Site 54 encompasses approximately 80 acres and was used as a test area for pyrotechnic munitions and the testing and demilitarization of rocket motors. The LHAAP installation was placed on the National Priorities List (NPL) in August 1990. After its listing on the NPL, the U.S. Army, United States Environmental Protection Agency (USEPA) and TCEQ (formerly known as the Texas Water Commission) entered into an agreement under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) Section 120 for remedial activities. The CERCLA Section 120 Agreement referred to as the Federal Facility Agreement (FFA), became effective on December 30, 1991. Removal activities at Sites 27 and 54 were performed in accordance with the FFA requirements. The MEC Removal Action included the removal of all detected items at the surface of Sites 27 and 54 and the removal of

all detected items in the subsurface of a 13.7 acre OBOD Area of Site 27, using best available technology and methods. Although not detected, there is the possibility that MEC remains in the subsurface and the sites can not be considered suitable for unrestricted use. Therefore, land use controls (LUCs) restricting intrusive activities is required. Munitions chemical constituents are characterized not to present a risk to human health and the environment. Further information may be found by examination of the Administrative Record available at the Marshall Public Library, 300 S. Alamo Blvd, Marshall, Texas 75760, (903) 935-4465, Monday through Thursday 10:00 a.m. to 8:00 p.m., Friday and Saturday 10:00 a.m. to 5:30 p.m.

The Texas Commission on Environmental Quality (TCEQ) derives its authority to review the remediation of this tract of land from Texas Health and Safety Code, §361.002, which enables the TCEQ to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, §5.012 and §5.013, Texas Water Code, Annotated, Chapter 5, the TCEQ is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TCEQ requires certain persons to provide recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TCEQ of the suitability of this land for any purpose nor does it constitute any guarantee by the TCEQ that the remediation standards specified in this certification have been met by U. S. Army.

II

The Site 27 parcel is a 79 acre tract, more or less, and Site 54 is an 80 acre tract, more or less, located at the former LHAAP in Harrison County, Texas, near the town of Karnack, being more particularly described with the survey plat and metes and bounds established in Exhibit A. LUC boundaries are designated and presented for the entire tract as described in Exhibit A.

Future use of the parcels is intended as a national wildlife refuge consistent with non-residential use. The United States Department of the Army has undertaken careful environmental study of Sites 27 and 54 and concluded that the LUCs set forth below are required to ensure protection of human health and the environment.

(1) No Digging Restriction -Restriction against intrusive activities, including digging in the controlled areas, will be recorded in the Harrison County Clerk's Office, with the survey, map, and language as required by the Texas Administrative Code (TAC) Citation 335.569

(2) Warning Signage - The signage will be placed at the perimeters of Sites 27 and 54. They will be visible from one to the next and serve as the physical demarcation of the controlled areas in the field. The signs include warning of the potential presence of unexploded ordnance (UXO), the restriction against intrusive activities, and provide a contact number.

(3) Educational Awareness Training -Will be provided in the form of pamphlets and video warning of the potential presence of UXO and presenting examples of MEC that was or may be found at the sites.

The owner of the site is the Department of the Army, and its address where more specific information may be obtained is as follows:

ATTN: DAIM-ODB-LO (R. Zeiler)

Post Office Box 220

Ratcliff, AR 72951

or

Assistant Chief of Staff for Installation Management

ATTN: DAIM-BDO (T. Lederle)

600 Army Pentagon

Washington D.C. 20310-0600

Rose M. Zeiler

Longhorn AAP Site Manager

Notary

EXECUTED this day _____ day of September, 2009

BEFORE ME, on this the __day of _____personally appeared Rose M. Zeiler, of the United States Army, United States Department of Defense, known to me to be the person and agent of said agency whose name is subscribed to the foregoing instrument, and she acknowledged to me that she executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF FIICE, THIS THE __DAY OF ____, 2009

ATTACHMENT 2
PUBLIC INFORMATION PAMPHLET

This pamphlet can be found behind this page.

Investigation Results

During the course of the Removal Action at the former Longhorn Army Ammunition Plant (LHAAP) EODT removed several types of Illumination Munitions. There were no High-Explosive munitions found during the removal action performed by EODT.

Below is a list with nomenclature and quantity of the MPPEH and Inert items that were found with the boundaries of Sites 27 and 54.

MPPEH

40mm ground signal illumination rounds		2
155mm illumination candle		1
M583 A1 40mm		2
M206 Flare		1
M127 Flare		4
Flare Candles		2
M62 illumination flares		145
M112 illumination flares		237
M123 Flare		1
M12 Cartridge		1
		0
TOTAL:		396

INERT/ Empty

4.2" illumination mortar		1
155mm Illumination Rounds (empty)		12
4.2" illumination mortar		1
155mm Illumination Rounds (empty)		1
Total:		15

EODT also removed over 30,000 lbs of Munitions Debris (MD) and scrap metal or range related Debris (RRD) from within the boundaries of Sites 27 and 54.

EODT
EOD TECHNOLOGY, INC.

Recognize– If you think you have found an Unexploded Ordnance, Do not touch it!

Retreat-Leave the area the same way you entered.

Report-Contact the local law enforcement office or fire department.

CONTACT YOUR LOCAL AUTHORITIES:

U.S. FISH AND WILDLIFE
903-679-9144
POLICE DEPARTMENT
903-923-4000
FIRE DEPARTMENT
903-923-4000

What you should know about Unexploded Ordnance (UXO) Hazards

at the Former Longhorn Army Ammunition Plant (LHAAP)

Karnack, Texas

The History of the Former Longhorn Army Ammunition Plant

The Former Longhorn Army Ammunition Plant (LHAAP) was established in October 1942 with the primary mission of producing trinitrotoluene (TNT) flake. TNT production continued until August 1945 when the plant went on standby status. When operations resumed at LHAAP in 1952, the plant began manufacturing pyrotechnic ammunition, which included photoflash bombs, simulators, hand signals, and tracer ammunition.) This continued until 1956.

However, in 1955 the LHAAP rocket motor facility had begun operations, and production of these motors continued to be the primary mission of LHAAP until 1965, when the production of pyrotechnic and illuminating ammunition was reestablished. From that time through 1994, operations consisted of producing pyrotechnic and propellant mixtures; loading, assembling and packing equipment as they applied to mobilization planning and demilitarization/demolition of leaking ordnance containing white phosphorous (WP) filler.

LHAAP was declared excess and placed in inactive status in 1997.

Recognize, Retreat, and Report if a Suspicious Object is Found!

Possible UXOs at LHAAP

The LHAAP is land that was formerly owned, leased, possessed, or operate by the Department of Defense (DoD.)

Over the years, most of the DoD sites were used for various military training exercises involving explosives or, like LHAAP, were used to manufacture explosives. Whether used as live fire ranges, bombing practice or explosive manufacturing, these sites have the potential for containing explosive hazards, called Unexploded Ordnances (UXOs.)

Most of the sites requiring these types of cleanups are no longer operational and have not been for many years, but the threat of the explosives remains. It is estimated that for every 100 bombs that exploded, 10 did not, and those items, or ordnances, still remain active and can extremely dangerous if disturbed or moved.

The explosives come in many shapes and sizes and can appear in many forms after years of being buried, so it is advised that if a suspicious item is found on or near one of these sites, you should **Recognize, Retreat and Report.**

What is being done to protect you?

Congress committed funding in the 1980s to clean up properties that the DoD once used but no longer controls. The Army is the executive agent that manages the projects, and the Army is the organization that executes the projects, which includes former Army, Navy, and Air Force, and other defense agency sites.

There is a significant number of sites that potentially qualify for funding, but first information about the origin and extent of the contamination, land transfer issues, past and present property ownership, and program policies must be evaluated for each site to determine if it meets the criteria for clean-up efforts.

Below demonstrates the general phases of a cleanup project:

Phase 1- Inventory

Determine if property was used by DoD, and if its contaminated from DoD activity.

→

Phase 2- Investigation

If the answer is yes, an investigation is conducted to determine the nature and extent of contamination.

→

Phase 3- Cleanup

Once complete, the cleanup efforts begin in order to protect human health, safety and the environment

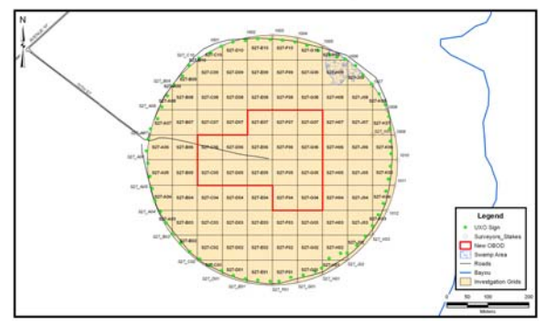
Cleanup Efforts at LHAAP

In 2005, the United States Army conducted an investigation (Phase 1) and determined there was, in fact, contamination on the LHAAP site. Because of the findings, the Army ordered an Engineering Evaluation/Cost Analysis (EE/CA) to determine the nature and extent of the contamination (Phase 2); that effort was completed in 2006. Phase 3 of the cleanup efforts were completed in November of 2008.

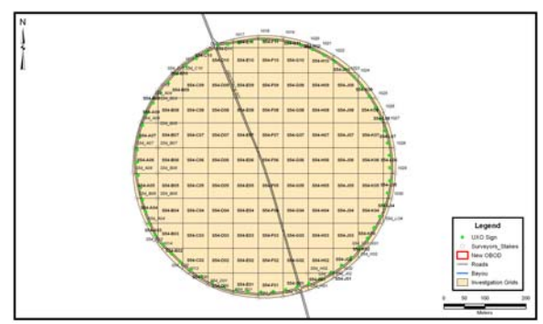
With Phase 3 now completed, the LHAAP site is now a lot safer. This site still continue to pose a potential threat because there is no way to guarantee that ALL ordnances were removed. Therefore, it is important to remember to always remember the 3 Rs—Recognize, Retreat, Report.

Below are examples of the various shapes and sizes of UXOs that were found during the Phase 3 cleanup.

LHAAP Site Map



Site 27



Site 54