Final Site Inspection Report

MILITARY MUNITIONS RESPONSE PROGRAM

FINAL SITE INSPECTION REPORT

Fort Bliss
El Paso, Texas

March 2011

U.S. Army
Corps of Engineers

TLI Solutions

TLI Solutions

March 31, 2011

Ms. Young Chong
U.S. Army Corps of Engineers
CESPK-PM-H
1325 J Street
Sacramento, CA 95814-2922

RE: General Services Administration Schedule Number GS-10F-03435, Delivery Order No. W91238-08-F-0011; Transmittal of Final Site Inspection (SI) Report for Fort Bliss, El Paso, Texas

Dear Ms. Chong:

Enclosed is one copy of the Final Site Inspection (SI) Report for Fort Bliss, El Paso, Texas. We have submitted additional copies of the Final SI Report, as noted below. All comments that were received on the Draft SI Report have been addressed. However, any remaining questions on the responses have been requested to be sent to you no later than April 7, 2011 (1 week).

If you have any questions or comments concerning this submittal, please call me at (303) 763-8881.

Sincerely,

Gene Barber
Project Manager

Enclosures

cc: Mr. Scott Reed, USAEC (1 copy)
Mr. Ron Baca, Fort Bliss (1 copy)
Mr. Carlos Rincon, USEPA Region 6 (1 copy)
Ms. Lorinda Gardner, TCEQ (1 copy)
Ms. Joanna Manning, TCEQ (1 copy)
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Mr. Burton Minton, Texas General Land Office (1 copy)
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Ms. Becky Dean-Walker, Hudspeth County (1 copy)
Ms. Liza Ramirez-Tobias, City of El Paso (1 copy)
Mr. James Aguirre, Montana Vista (1 copy)
Ysleta del Sur Pueblo (1 copy)
Mescalero Apache Tribe (1 copy)
Comanche Nation (1 copy)
Kiowa Tribe of Oklahoma (1 copy)
Ms. Judy Ackerman, Franklin Mts. Wilderness Coalition (1 copy)
Mr. Richard Teschner, Frontera Land Alliance (1 copy)

TRANSMITTAL SHEET

US Army Corps
of Engineers
Sacramento District

DATE: 31 March 2011

TO: **Fort Bliss, El Paso, Texas Final**
(see attached)

PROJECT: **Site Inspection under the Military Munitions Response Program**
Final Site Inspection Report
CONTRACT NO: **GS-10F-03435, Delivery Order No. W91238-08-F-0011**
INSTALLATION**:** **Fort Bliss, El Paso, Texas**

THE ENCLOSED DOCUMENTS ARE BEING TRANSMITTED TO YOU FOR:

[ ] COORDINATION [ ] REVIEW & COMMENTS [ ] INCORPORATION [X] INFORMATION

DOCUMENTS ENCLOSED:
- Final Site Inspection Report for Fort Bliss, El Paso, Texas, dated March 2011 by TLI Solutions, Inc.

REMARKS: All,

Included is the Final Site Inspection Report for Fort Bliss for your use. All comments that were received on the Draft SI Report have been addressed. However, any remaining questions on the responses should be sent to me electronically (young.s.chong@usace.army.mil), or by fax or mail, no later than April 7, 2011
(1 week).

Sincerely,

Young Chong

If you have any questions, please let me know.

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FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

MARCH 2011

Prepared For:

U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J Street
Sacramento, California 95814-2922

Prepared By:

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FINAL SITE INSPECTION REPORT
FORT BLISS, EL PASO, TEXAS

General Services Administration (GSA) Schedule Number: GS-10F-03435
Delivery Order No. W91238-08-F-0011

Reviewed and Approved by:

Gene Barber
Project Manager
TLI Solutions, Inc.

Mary Franquemont
Technical Team Lead
TLI Solutions, Inc.

TLI Solutions, Inc. prepared this report at the direction of the U.S. Army Corps of Engineers (USACE). This document should be used only with the approval of USACE. This report is based, in part, on information provided in other documents and is subject to the limitations and qualifications presented in the referenced documents.

March 2011

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EXECUTIVE SUMMARY

SITE BACKGROUND

The Former Maneuver Area Munitions Response (MR) site was used for various training purposes from approximately 1939 into the 1970s. Based on the historical research, munitions reported to have been used at the site included aerial rockets (smoke and white phosphorus), practice guided missiles, bombs, and small arms (M1 - .30 caliber, M2 - .50 caliber, M16 – 5.56 mm, and M14 – 7.62 mm) blanks and live fire. Smoke grenades, pyrotechnics of various unidentified types, and other types of simulators were used during training activities in this area.

The area was to be available for anti-aircraft artillery maneuvers and portions of the Former Maneuver Area MR site were portrayed in historical documents as tactical maneuver areas for high-level bombing and strafing missions. Battle conditioning of troops was accomplished within maneuver areas. Infiltration courses were constructed to provide an area of ground on which troops could crawl under barbed wire while being subjected to nearby explosions and overhead machine gun fire.

SITE INSPECTION ACTIVITIES AND RESULTS

SI field activities conducted at the Former Maneuver Area in support of the Military Munitions Response Program (MMRP) included a visual survey of the collection of four surface soil composite samples and 16 incremental samples (IS), including two quality control (QC) samples. It was determined prior to the start of field activities that visual surveys would be conducted within 16 locations within the site. Approximately 133 line miles of visual surveys were conducted at twelve of the sixteen areas (Areas 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, and 15). The field team was unable to access the remaining four areas (1, 3, 8a, and 12) due to road conditions or locked gates. The results of these activities are summarized below:

- No MEC was identified during the visual survey
- MD identified at the site in Areas 4, 5, 6, 9, 10, 11, and 14 included:
  - HE detonation fragment
  - Fragments and fuzes from 4.2-inch mortar shells
  - .30-06 blank shell casings
  - 5.56 mm blank shell casings
  - 7.62 mm blank shell casings
  - .30 caliber blank shell casings
  - The top from an expended smoke grenade
  - ’03 Springfield Stripper Clips
  - M104 illuminating flare canister lid
  - Machine gun links (.30-06, M60, .30 caliber)
  - Belt starter tabs
  - M14 Rifle Clip
  - M1 Garand Clips

- A live small arms round (.30-06 complete ball cartridge) was identified in Area 11
- Evidence of military activity including a military tent stake, chemical lights, communication wire, and a grounding rod for a generator was identified in Area 14 of the site
- No subsurface anomalies were identified
- Analytical results for metals indicated that all concentrations were below the applicable screening criteria
- No explosive compounds were detected in any of the samples

FUDS MMRP ELIGIBILITY

Based on the available historical records, it appears that the majority of the property associated with the Former Maneuver Area MR site was relinquished from use by the Army by 1980. The only exception is a tract of land (Block 79, Township 2, Sections 15, 16, and 21) that was under lease from the State of Texas from 1978 through 1987. Therefore, because the majority of the site was not under control or being used by the Army as of the October 1986, this area is eligible for the Formerly Used Defense Sites (FUDS) MMRP. However, the tract of land that was leased from the State until the end of 1987 is not eligible for the FUDS MMRP.

RECOMMENDATIONS

Table ES-1 presents a summary of the SI recommendations for the Former Maneuver Area MR site and the corresponding Army Environmental Database-Restoration (AEDB-R) numbers and site acreages. In general, it is recommended that this site be identified as a Munitions Response Area (MRA) and divided into two MR sites, the area adjacent to the installation boundary (Former Maneuver Area A) and the remainder of the Former Maneuver Area (Former Maneuver Area B). Former Maneuver Area A is recommended for additional investigation for MEC based on the identification of a mortar impact area, a firing position, and a fighting position. Former Maneuver Area A is recommended No Further Action (NFA) for MC based on the results of the field activities conducted for this SI. Former Maneuver Area B is recommended for NFA for MEC and MC based the results of the field activities conducted for this SI.

Table ES-1: Site Inspection Results and Recommendations

MR Area/Site	Range Inventory Acreage	HRR Acreage	SI Acreage	Recommendation	Basis for Recommendation (MEC)	Basis for Recommendation (MC)
Former Maneuver Area Munitions Response Area (MRA) (FTBLS-002-R)	73,538.6	72, 520.82 Based on the review of the available land acquisition documents and more accurate GIS data, the acreage associated with the MR site was revised.				
Former Maneuver Area A MR site (FTBLS-002-R-01)			24,459.18	Former Maneuver Area A **is recommended for additional investigation for MEC and recommended for NFA for MC.** Based on the historical information that indicates the property associated with the Former Maneuver Area A MR site was relinquished by the Army by 1980, it **is recommended that the site be further investigated under the FUDS MMRP.**	MD was identified during the visual survey at the MR site. Evidence of military activities, including a mortar impact area, firing position, and fighting position, was identified.	Analytical results for metals indicate that all sample concentrations are below applicable screening criteria and no explosive compounds were detected.
Former Maneuver Area B MR site (FTLBS-002-R-02)			48,061.64	Former Maneuver Area B **is recommended for NFA for MEC and MC**.	No MEC was identified during the visual survey. Only small arms MD was observed at the site.	Analytical results for metals indicate that all sample concentrations are below applicable screening criteria and no explosive compounds were detected.

ACRONYMS AND ABBREVIATIONS

AEDB-R	Army Environmental Database – Restoration
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CLP	Contracts Laboratory Program
COC	Contaminant of Concern
CSM	Conceptual Site Model
CTC	Cost to Complete
CTT	Closed, Transferred, and Transferring
DERP	Defense Environmental Restoration Program
DMM	Discarded Military Munitions
DNT	Dinitrotoluene
DoD	Department of Defense
DoD QSM	Department of Defense Quality Systems Manual, Version 3
DOE	Department of Energy
DQO	Data Quality Objective
ELAP	Environmental Laboratory Accreditation Program
EM	Engineering Manual
EOD	Explosive Ordnance Disposal
FS	sulfur-trioxide chlorosulfonic acid solution
FSP	Field Sampling Plan
FUDS	Formerly Used Defense Site
FTBLS	Fort Bliss
GPS	Global Positioning System
GSA	General Services Administration
HMX	Octogen
HRR	Historical Records Review
HTRW	Hazardous, Toxic, and Radioactive Waste
ICS	Interference Check Sample
INPR	Inventory Project Report
IS	Incremental Sample
J	Estimated Value
kg	Kilograms
LQ	Laboratory Qualifier
M	Manual integrated compound
MC	Munitions Constituent
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
MDL	Method Detection Limit
mg/kg	Milligram Per Kilogram
mm	Millimeter
MMRP	Military Munitions Response Program
MR	Munitions Response
MRA	Munitions Response Area
MRS	Munitions Response Site

ACRONYMS AND ABBREVIATIONS (concluded)

MRSPP	Munitions Response Site Prioritization Protocol
MS	Matrix Spike
MSD	Matrix Spike Duplicate
msl	Mean Sea Level
NA	Not Applicable
NC	Nitrocellulose
NELAP	National Environmental Laboratory Accreditation Program
NFA	No Further Action
NG	Nitroglycerin
OE	Ordnance and Explosives
PA	Preliminary Assessment
PETN	Pentaerythritol tetranitrate
Q	One or more quality control criteria failed
QA	Quality Assurance
QC	Quality Control
RDX	Cyclotrimethylene trinitramine
RI/FS	Remedial Investigation/Feasibility Study
ROE	Right-of-Entry
RSD	Relative Standard Deviation
RSL	Regional Screening Levels
SARA	Superfund Amendment and Reauthorization Act
SI	Site Inspection
SW	Solid Waste
TAL	Target Analyte List
TCEQ	Texas Commission on Environmental Quality
TCL	Target Compound List
Tetryl	Trinitrophenylmethylnitramine
TLI	TLI Solutions, Inc.
TNB	Trinitrobenzene
TNT	Trinitrotoluene
TPP	Technical Planning Process
U	The analyte was not detected above the reporting limit
UJ	Non-detected results qualified as estimated
U.S.	United States
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Command
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
UXO	Unexploded Ordnance
VQ	Validation Qualifier

GLOSSARY OF TERMS

Closed Range – A military range that has been taken out of service as a range and that either has been put to new uses that are incompatible with range activities or is not considered by the military to be a potential range area. A closed range is still under the control of a Department of Defense (DoD) component.

Defense Site – Locations that are or were owned by, leased to, or otherwise possessed or used by the DoD. The term does not include any operational range, operating storage or manufacturing facility, or facility that is used for or was permitted for the treatment or disposal of military munitions.

Discarded Military Munitions (DMM) – Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance (UXO), military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of, consistent with applicable environmental laws and regulations.

Explosive Ordnance Disposal (EOD) – The detection, identification, on-site evaluation, rendering safe, recovery, and final disposal of UXO and of other munitions that have become an imposing danger, for example, by damage or deterioration.

Explosives Safety – A condition where operational capability and readiness, people, property, and the environment are protected from the unacceptable effects of risks of potential mishaps involving military munitions.

Formerly Used Defense Site (FUDS) – A DoD program that focuses on compliance and cleanup efforts at sites that were formerly used by the DoD. A FUDS property is eligible for the Military Munitions Response Program if the release occurred prior to October 17, 1986; the property was transferred from DoD control prior to October 17, 1986; and the property or project meets other FUDS eligibility criteria.

Military Munitions – All ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the DoD, United States Coast Guard, Department of Energy (DOE), and National Guard. The term includes confined gaseous, liquid, and solid propellants; explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents; chemical munitions; rockets; guided and ballistic missiles; bombs; warheads; mortar rounds; artillery ammunition; small arms ammunition; grenades; mines; torpedoes; depth charges; cluster munitions and dispensers; demolition charges; and devices and components thereof. The term does not include wholly inert items; improvised explosive devices; and nuclear weapons, nuclear devices, and nuclear components other than nonnuclear components of nuclear devices that are managed under the nuclear weapons program of the DOE after all required sanitization operations under the Atomic Energy Act of 1954 (42 United States Code [U.S.C.] 2011 et seq.) have been completed.

GLOSSARY OF TERMS (continued)

Munitions Constituents (MC) – Any materials originating from unexploded ordnance, DMM or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.

Munitions Debris (MD) – Remnants of munitions (e.g., fragments, penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal.

Munitions and Explosives of Concern (MEC) – This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks means: (A) UXO, as defined in 10 U.S.C. 101 (e)(5); (B) DMM, as defined in 10 U.S.C. 2710(e)(2); or munitions constituents (e.g.. Trinitrotoluene [TNT], Cyclotrimethylene trinitramine [RDX]), as defined in 10 U.S.C. 2710(e)(3), present in high enough concentrations to pose an explosive hazard.

Munitions Response – Response actions, including investigation, removal actions and remedial actions to address the explosives safety, human health, or environmental risks presented by unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC), or to support a determination that no removal or remedial action is required.

Munitions Response Area (MRA) – Any area on a defense site that is known or suspected to contain UXO, DMM, or MC. Examples include former ranges and munitions burial areas. A munitions response area is comprised of one or more munitions response sites.

Munitions Response Site (MRS) – A discrete location within an MRA that is known to require a munitions response.

Operational Range – A range that is under the jurisdiction, custody, or control of the Secretary of Defense and that is used for range activities or, although not currently being used for range activities, that is still considered by the Secretary to be a range and has not been put to a new use that is incompatible with range activities. Also includes: “military range”, “active range”, and “inactive range” as those terms are defined in 40 Code of Federal Regulations (CFR) 266.201.

Other Than Operational Range – Applies to all lands within the installation boundaries that are not designated as "Operational Range". These lands may include, but are not limited to, Closed and Transferring Munitions Response (MR) sites, housing areas, administrative areas, schools, recreation areas, etc.

GLOSSARY OF TERMS (concluded)

Range – A designated land or water area set aside, managed, and used for range activities of the DoD. The term includes firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas. The term also includes airspace areas designated for military use in accordance with regulations and procedures prescribed by the Administrator of the Federal Aviation Administration.

Transferred Range – A range that is no longer under military control and had been leased by the DoD, transferred, or returned from the DoD to another entity, including federal entities. This includes a military range that is no longer under military control, but that was used under the terms of an executive order, special-use permit or authorization, right-of-way, public land order, or other instrument issued by the federal land manager. Additionally, property that was previously used by the military as a range, but did not have a formal use agreement, also qualifies as a transferred range.

Transferring Range – A range that is proposed to be leased, transferred, or returned from the DoD to another entity, including federal entities. This includes a military range that was used under the terms of a withdrawal, executive order, special-use permit or authorization, right-of-way, public land order, or other instrument issued by the federal land manager or property owner. An active range will not be considered a transferring range until the transfer is imminent (generally defined as the transfer date is within 12 months and a receiving entity has been notified).

Unexploded Ordnance (UXO) – Military munitions that: (a) have been primed, fused, armed, or otherwise prepared for action; (b) have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (c) remain unexploded either by malfunction, design, or any other cause.

Section 1

1.0 ACKNOWLEDGMENTS

TLI Solutions, Inc. (TLI) would like to acknowledge and extend our gratitude to the following individuals who supported the Site Inspection (SI) activities for this project:

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Franklin Mountains Wilderness Coalition

Judy Ackerman

Fronterra Land Alliance

Richard Teschner

Section 2

2.0 INTRODUCTION

The United States (U.S.) Congress established the Military Munitions Response Program (MMRP) under the Defense Environmental Restoration Program (DERP) to address unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) located on current and former defense sites. Properties classified as operational military ranges, permitted munitions disposal facilities, or operating munitions storage facilities are not eligible for the MMRP.

The U.S. Army's inventory of closed, transferred, and transferring (CTT) military ranges and defense sites (also known as the Phase 3 Range/Site Inventory) with munitions and explosives of concern (MEC) (which includes both UXO and DMM) and/or MC that are eligible for action under the MMRP. Five sites associated with Fort Bliss were initially identified during the Phase 3 Range/Site Inventory: Dona Ana Range-McNew Surplus, Former Maneuver Area (previously known as Maneuver Areas No. 1 and No. 2), Winfree's Nose, Closed Castner Firing Range, and Castner Range-XD. A sixth site, Fort Bliss Dona Ana Range, was identified during the Phase 3 Range/Site Inventory as being associated with the New Mexico National Guard enclave located in the northern portion of Fort Bliss; however, through subsequent evaluation, it was determined that this site was part of an operational range area and therefore not eligible for the MMRP. An SI was completed for the remaining five Munitions Response (MR) sites in April 2007 (*Final Site Inspection Report, Fort Bliss, Texas* by e2M, dated January 2007 [revised April 2007]). During the 2007 e2M SI, four sites were determined to be eligible for the Formerly Used Defense Sites (FUDS) MMRP, including the Former Maneuver Area MR site; Castner Range-XD, Winfree's Nose, and Dona Ana Range-McNew Surplus. Subsequent to the 2007 e2M SI, it was determined that only a portion of the Former Maneuver Area MR site was eligible for FUDS. As a result, it was determined that an SI would be completed for the Former Maneuver Area MR site under the active Army MMRP.

The Department of Defense (DoD) is currently establishing policy and guidance for munitions response actions under the MMRP. However, key program drivers developed to date conclude that munitions response actions will be conducted under the process outlined in the National Contingency Plan (40 Code of Federal Regulations 300) as authorized by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 United States Code (U.S.C.) 9605, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499 (hereinafter CERCLA). The two Phase 3 Range/Site Inventory Reports for Fort Bliss (Range Inventory Reports), completed in November 2002 by TechLaw, Inc. and January 2003 by e2M, mark the completion of the Preliminary Assessment (PA) phase of work under CERCLA. The SI is the next step of the CERCLA process and will complete the PA/SI requirement for the Former Maneuver Area MR site.

This report presents the results of the MMRP SI conducted at Fort Bliss by TLI. The SI was conducted in support of USACE-Sacramento District and USAEC under Delivery Order No. W91238-08-F-0011. Overall coordination of the SI and contract management

was provided by the USACE–Sacramento District/South Pacific Division Range Support Center.

The SI was completed in two phases. The Historical Records Review (HRR) was the initial step in the MMRP SI process. In October 2009, TLI submitted the Final HRR to Fort Bliss and all stakeholders. The primary goal of the HRR was to perform a records search to document historical and other known information for the Former Maneuver Area MR site at Fort Bliss in order to supplement the information developed during the Phase 3 Range/Site Inventory and to support the Technical Project Planning (TPP) process. As a result of the HRR, the site boundary was modified from the 73,538.6 acres identified in the Range Inventory Report to 72,520.82 acres. The information presented in the HRR helped to facilitate decision-making processes to determine the next steps to be taken in the SI process for the Former Maneuver Area MR site at Fort Bliss. The information obtained during the HRR is summarized in Section 3.0 of this report.

The second phase of the SI was the completion of field activities from October 4 – 8, 2010. Field activities included visual surveys and surface soil sampling. The approach used during the field activities and results of the field activities are presented in Sections 4.0 and 5.0 of this report.

2.1 SITE OVERVIEW

Fort Bliss is located in El Paso County in western Texas (Figure 2-1). The installation also encompasses training and maneuver areas that extend into Otero and Dona Ana counties of New Mexico. The Sacramento Mountains lie along the installation's northernmost boundary; the city of El Paso, the Franklin Mountains, the Organ Mountains, and San Andreas Mountains are located to the west; the Otero Mesa, McGregor Range and Hueco Mountains run through the eastern portion of the installation; the Tularosa Valley runs through the western portion; and Carlsbad Highway (U.S. Highway 62) runs along the southern boundary. The installation consists of approximately 1,088,000 acres of land and is the Army's second largest installation.

The primary mission of Fort Bliss is to train, sustain, mobilize, and deploy members of the joint team to conduct global, full spectrum operations in support of the national military strategy while providing for the well-being of the regional military community. Furthermore, Fort Bliss is one of DoD's flagship installations comprised of state-of-the-art training areas, ranges, and facilities; led by adaptive, innovative, and warrior focused professionals concentrated on individual and unit readiness, leaders development, deployment, security, and the well-being of its members.

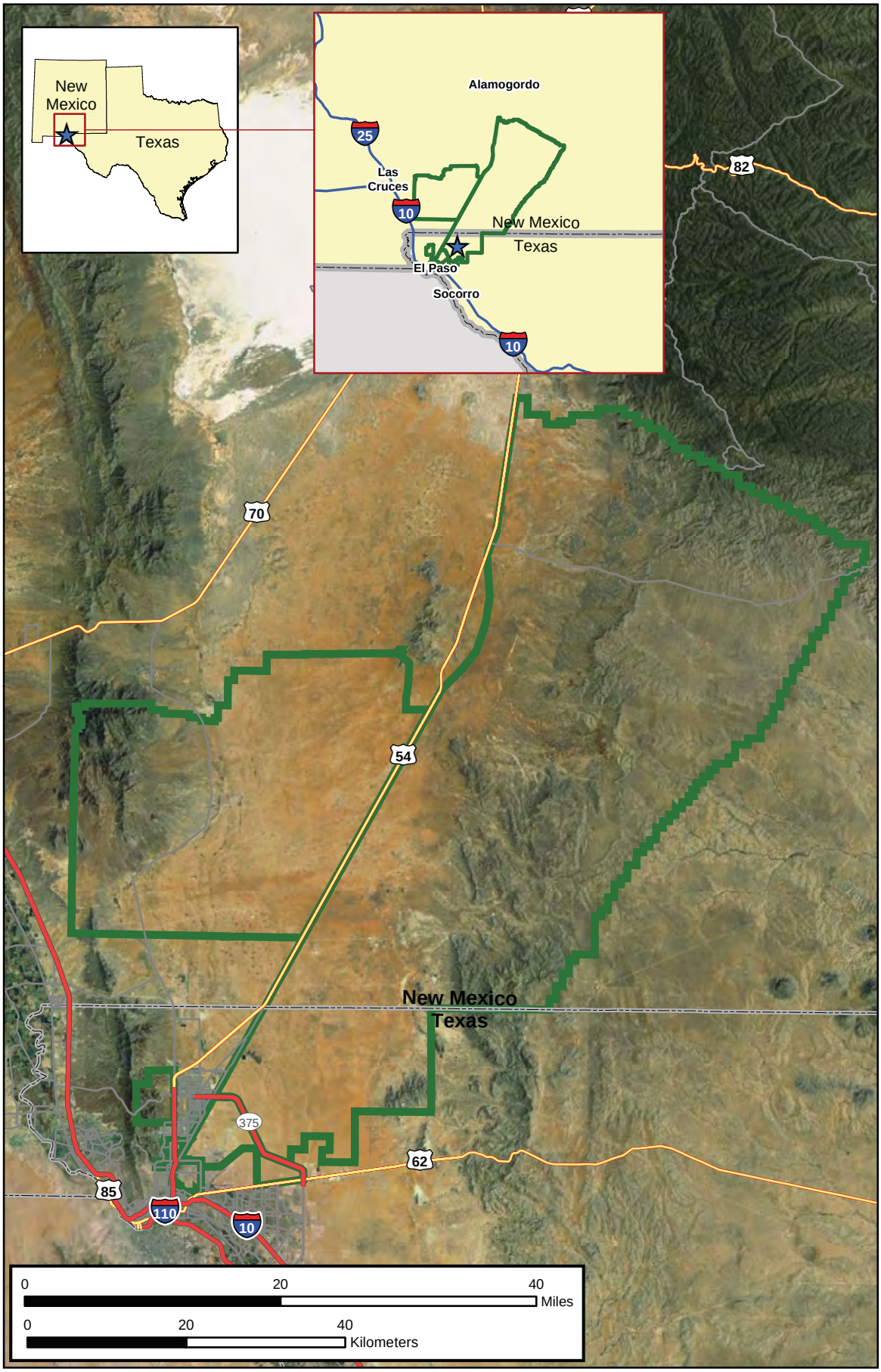
The Former Maneuver Area MR site at Fort Bliss, a transferred site comprised of portions of two adjacent former maneuver areas that encompasses 72,520.82 acres, is located east of the Fort Bliss cantonment area and adjacent to the southeastern installation boundary of Fort Bliss. The MR site is located in the Basin and Range physiographic province which is characterized by isolated, nearly parallel mountain ranges separated by broad, flat basins. The Hueco Mountains are located in the eastern portion of the Former

Site Inspection
Fort Bliss, TX

TLI Solutions

Figure 2-1

Installation Location Map



Legend

- Installation Boundary
- State Lines

Major Roads

Road Classification

- Limited Access
- Highways
- Secondary Roads

N
W E
S

Aerial:
Source: Copyright:© 2009 ESRI, i-cubed, GeoEye
Date: 2008

Edition: Final Report

Date: March 2011

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Maneuver Area MR site with Hueco Tanks State Park and Historic Site being located west of the Hueco Mountains. Hueco Tanks are an area of large natural rock basins or "huecos" that furnish a supply of trapped rain water. Commercial property, a large tank farm, residential property, Hueco Tanks State Park and Historic Site, and two quarry operations also comprise portions of the site.

2.2 PURPOSE, SCOPE, AND OBJECTIVES

The purpose of the SI is to determine if there is sufficient evidence to determine the presence or absence of UXO, DMM, or MC related to past military activities at the site. The goal of the SI is not to confirm all types of UXO or DMM present, nor to define the nature and extent of contamination at a particular site. The primary goal of the MMRP SI is to collect the appropriate amount of information necessary to make one of the following decisions:

1) Whether further investigation, such as a Remedial Investigation/Feasibility Study (RI/FS), is required at a site;
2) Whether an immediate response is needed; or
3) Whether the site qualifies for No Further Action (NFA).

The secondary goals of the SI are to collect the necessary information required to improve Cost to Complete (CTC) estimates for the remediation of MR sites and to complete the Munitions Response Site Prioritization Protocol (MRSPP). The MRSPP assigns a priority to each site based on the overall conditions at each location, taking into consideration various factors relating to safety and environmental hazard potential. The priority assigned to each site is based on the scores of three hazard evaluation modules. The scores for the Former Maneuver Area MR site are summarized in Table E-1, included in Appendix E of this SI report. The complete MRSPP evaluation forms are also included electronically in Appendix E.

The Scope of Work for the MMRP activities at Fort Bliss designated that the following tasks were to be completed:

- Conduct HRR and produce report
- Coordinate all efforts with stakeholders/follow USACE TPP process
- Develop Site-specific Work Plan for SI activities
- Conduct SI field activities
- Develop SI report

Records reviewed for the HRR delineated the site boundaries, training areas, and various munitions types. This information was developed through historical records review conducted at multiple document repositories and by conducting interviews with individuals knowledgeable about the operations conducted at these sites. The scope for the SI field activity was developed based on information discussed during the TPP meeting held with the Fort Bliss stakeholders in October 2009 as well as the information summarized in the October 2009 *Final Historical Records Review Fort Bliss, El Paso,*

Texas and the May 2010 *Final Site Inspection Work Plan, Fort Bliss, El Paso, Texas*. Field activities included visual surveys conducted with the use of hand-held metal detectors and collection of surface soil samples. No intrusive work was conducted during this phase of the field activities.

2.3 REPORT ORGANIZATION

This SI Report has the following sections:

Section 1 – Acknowledgements
Section 2 – Introduction
Section 3 – Site Description
Section 4 – Site Inspection Tasks
Section 5 – Site Inspection Findings
Section 6 – Conceptual Site Model
Section 7 – Summary and Conclusions
Section 8 – Recommendations
Section 9 – References

The following supporting information and analyses are appended to this SI Report:

Appendix A – Analytical Data
Appendix B – Data Validation Reports
Appendix C – Photographic Log
Appendix D – Field Notes
Appendix E – Munitions Response Site Prioritization Protocols
Appendix F – Munitions Response Site Prioritization Protocol Notification Letter and Public Announcement
Appendix G – Technical Project Planning Meeting Minutes
Appendix H – Public Meeting Summary Notes
Appendix I – Summary of Rights of Entry Contacts
Appendix J – Electronic Files

Section 3

3.0 SITE DESCRIPTION

The following sections provide a description of the Former Maneuver Area MR site at Fort Bliss. Figure 3-1 depicts the location of the MR site identified as a result of the Final HRR and the Final Work Plan. A brief description of the site is included below. Additional information regarding the site, along with the supporting documents, is included in the Final HRR.

3.1 FORMER MANEUVER AREA MR SITE (FTBLS-002-R-01)

According to the 2003 Range Inventory Report, the Former Maneuver Area MR site was a transferred site comprised of portions of two adjacent former maneuver areas that encompassed 73,528.6 acres. The 2003 Range Inventory Report indicates that the MR site is located east of the Fort Bliss cantonment area, adjacent to the southeastern installation boundary of Fort Bliss. Portions of the historic maneuver areas associated with the MR site are located within the installation boundary of Fort Bliss and are still (as of November 2010) designated as operational range area. Data collected for the 2003 Range Inventory Report indicated that this site was used for various training purposes from approximately 1939 into the 1970s. Munitions reported to have been used at the site included aerial rockets (smoke and white phosphorous), practice guided missiles, bombs, and small arms. It should be noted that information regarding the use of the aerial rockets, practice guided missiles, and bombs within the Former Maneuver Area MR site was not substantiated during the review of historical records for the HRR.

According to the 2007 e2M SI, portions of the MR site are currently used as commercial property and as part of the airport for the city of El Paso. However, according to information obtained in support of the HRR, it has been determined that the airport is not part of the MR site; whereas commercial property, a large tank farm, residential property, Hueco Tanks State Park and Historic Site, and two quarry operations do comprise portions of the site.

Based on information obtained during research for the HRR, there were several modifications made to the Former Maneuver Area MR site boundary. As a result of these modifications, the acreage of the MR site has been decreased from 73,528.6 acres to 72,520.82 acres.

3.1.1 Munitions Response Site Description

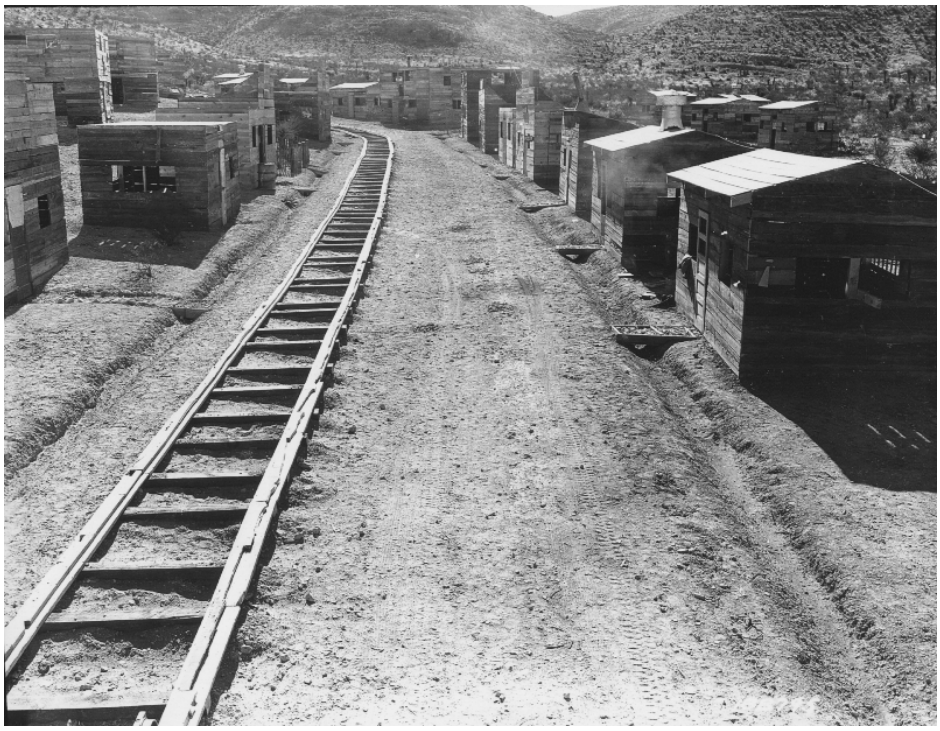
Property associated with the Former Maneuver Area MR site was first acquired by Fort Bliss as early as 1936. The land was acquired in association with historical training areas known as the Expansion of Facilities Area (also known as Maneuver Area No. 1) and Maneuver Area (also known as Maneuver Area No. 2).

During the early part of 1943, critical training regarding battle conditioning of troops was accomplished within maneuver areas at various posts under the Antiaircraft Command, including Fort Bliss. Infiltration courses were constructed at maneuver areas to provide an

area of ground on which troops could crawl under barbed wire while being subjected to nearby explosions and overhead machine gun fire.

Several landing strips, which may have been used for military training activities, have been identified within the Former Maneuver Area MR site during its period of operation. An emergency landing strip and landing strips designated as Landing Strip Number 2 (which is not located within the MR site but is located within Maneuver Area No. 2), Landing Strip Number 3, and Landing Strip Number 4 appeared on maps and aerial photographs dated from 1943 to 1964.

Two locations identified in the historic documents as Little Tokyo and Yokohama Mock-up Fortification were located north of the boundary of the Former Maneuver Area MR site (within what is currently the operational range area of Fort Bliss) and were used for small arms and divisional artillery training in the 1940s and 1950s. In addition, techniques for attacking houses and villages were used. Weapons used at the Yokohama site are known to have included M1 rifles and .30 caliber live ammunition. Photographs 3-1 through 3-3 depict these training areas and activities. Although these two sites are located just north of the MR site boundary, due to the scale and nature of the training activities that occurred here, it is possible that similar activities occurred within the nearby MR site.



Photograph 3-1: Little Tokyo (1943)

Site Inspection
Fort Bliss, TX

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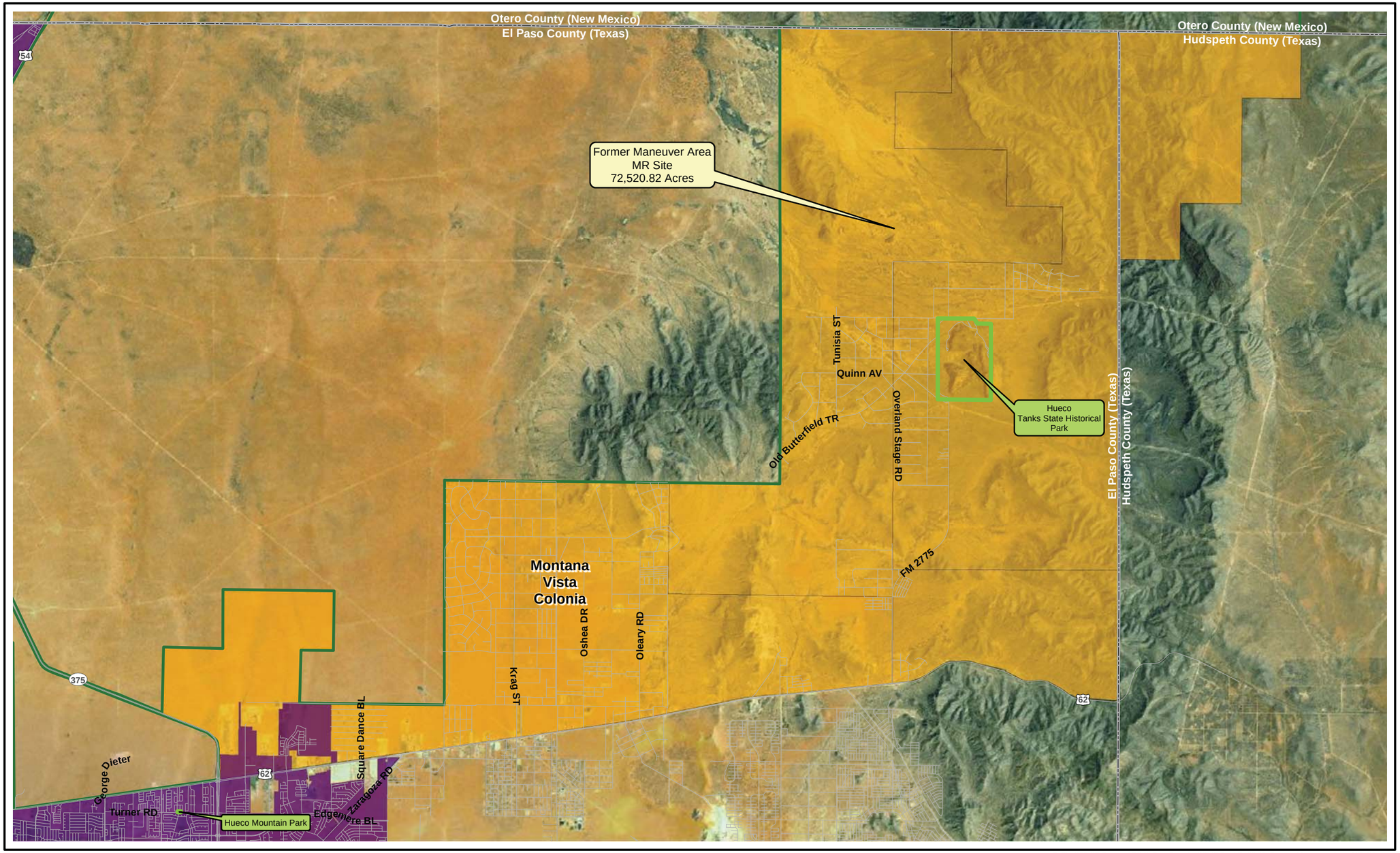
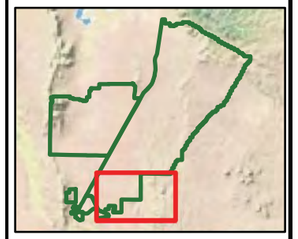
Figure 3-1

Former Maneuver Area MR Site Location Map





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- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site

2 1 0 2
Kilometers

1 0.5 0 1
Miles

Aerial:
Source: Copyright:© 2009 ESRI, i-cubed, GeoEye
Date: 2008

Edition: Final Report

Date: March 2011

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Photograph 3-2: Training in Mock Village (1951)

Photograph 3-3: Firing at Target in Mock Village (1951)

When the Maneuver Area was reacquired in 1949, the area was to be available for anti-aircraft artillery maneuvers. Prior to acquisition of the land, it was indicated that there would be no firing of live ammunition on or over the area so as not to cause interference to existing air lanes. According to a letter dated 1949, the maneuver areas at Fort Bliss were considered adequate at the time for tactical field training of units and that unspecified previous restrictions in conducting tactical field exercises had been eliminated. In another letter from 1949, it was stated that the equipment to be used during anti-aircraft

maneuvers would include track-type vehicles, trucks, jeeps, and staff cars. No firing of live ammunition on or over the range was to be allowed.

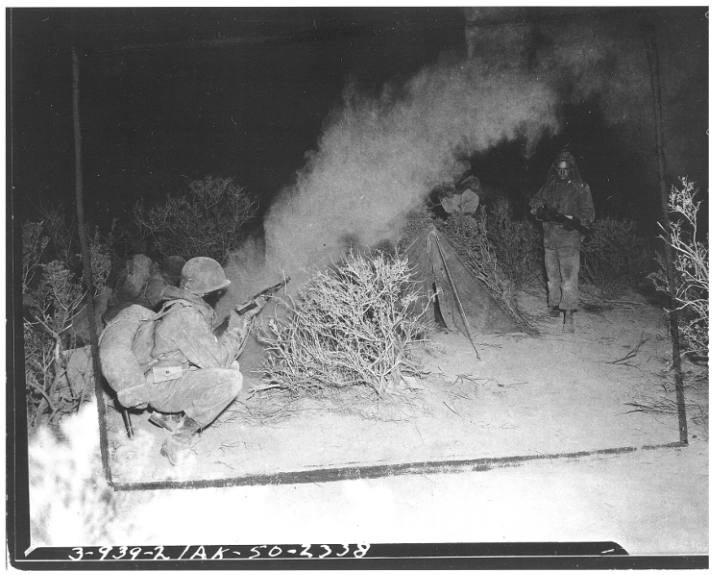
In December 1951, portions of the Former Maneuver Area MR site were portrayed in historical documents as tactical maneuver areas for high-level bombing and strafing missions. According to the historical documents, the only portion of the MR site designated for high-level bombing training was the westernmost area of the site. It is unlikely that this area would have been used for bombing training based on its proximity to Highway 62 and the presence of ranching activities. Strafing is the practice of attacking ground targets from low-flying aircraft; usually applied to attack with aircraft-mounted automatic weapons. The term is sometimes applied to the firing of non-airborne automatic weapons while moving. The types of weapons used in strafing practice would only use small arms munitions. Specific descriptions of these events actually occurring within the MR site do not appear in the historical documents. However, a historical photograph from 1951 (Photograph 3-4) depicts a Browning M2 .50 caliber machine gun set up in an anti-aircraft emplacement in the vicinity of Hueco Tanks (an area of large natural rock basins or "huecos" that furnish a supply of trapped rain water [Note: unless otherwise stated, use of the term “tanks” in this report refers to areas comprised of “huecos”.]).

Photograph 3-4: Anti-aircraft Artillery Training at Hueco Tanks (1951)

Based on available information, it is possible that aircraft would fly to the landing strip by Hueco Tanks and anti-aircraft artillery troops on the ground would fire at targets towed by the aircraft. Current information provided by the Hueco Tanks State Park and Historic Site Superintendent indicates that no evidence of the anti-aircraft emplacement is still visible. The Superintendent provided a current photograph of the area depicted in the historical photograph (Photograph 3-5).

Photograph 3-5: Area Previously Used for Anti-aircraft Artillery Training at Hueco Tanks (October 2009)

Additional training conducted in the vicinity of Hueco Tanks during the 1940s and 1950s involved M1 .30 caliber rifles. Based on a historical photograph (Photograph 3-6), it is assumed that smoke grenades and other types of simulators were also used during training activities in this area.



Photograph 3-6: Training Activity at Hueco Tanks (1951)

According to a 1963 letter, much of the unit training conducted at Fort Bliss consisted of air defense artillery training. An important part of this training – the detection, identification, tracking, and simulated engagement of aerial targets – was conducted in the maneuver areas. Maneuver Area No. 2 was described as providing the best site for air

defense artillery training because of its location. Maneuver Area No. 2 provided the necessary dispersion for field training of air defense battalions, simulated nuclear warfare training, black-out motor marches, and prevented interference between units during aggressor ground and air activities. It also provided better terrain variations than any other training area available at the time and was particularly valuable for field training of units in the reconnaissance, selection, and occupation of position.

Figure 3-2 depicts the locations of Landing Strips No. 1-4, Little Tokyo, Yokohama Mock Up Village, and the Anti-aircraft Artillery Training at Hueco Tanks.

Munitions that may have been used at the Former Maneuver Area MR site include weapons such as the M1 (.30 caliber), M2 (.50 caliber), M16 (5.56 mm), M14 (7.62 mm), small arms blanks, and pyrotechnics of various unidentified types. Table 4-4 at the end of this section summarizes this information in detail.

3.1.2 Previous Investigations

According to a Dud Disposal Team Operations Report dated May 13, 1946, the Maneuver Area was searched and cleared of duds along with several other areas, totaling 73,000 acres. In this search, 106 high explosive duds and 3.5 tons of scrap were removed from the total 73,000 acres. No specific items were listed for the Maneuver Area in the historical document. Of the 73,000 total acres surveyed, only 1,280 acres of the Maneuver Area were surveyed for decontamination. At this time, the Maneuver Area consisted of approximately 125,000 acres. There is no indication in the historical document about which portion of the Maneuver Area was cleared. As a result of the clearance, a signed Certificate of Clearance was requested for the 118,677-acre surplus portion. The Certificate of Clearance subsequently provided by the Officer in Charge of the Bomb Disposal Team that performed the clearance (dated August 22, 1946) stated that the area that was surface-searched for duds is the area on which firing has taken place and that the cost to the government in searching the remaining portion of the area would exceed the value of the land.

Volunteers from post units, Fort Bliss Rod and Gun Club, and 41st Explosive Ordnance Disposal (EOD) conducted a survey for levels of dud contamination of two areas; the Lake Tank Area, and the Three Buttes Area, according to the installation's Annual Historical Summary for 1978. The areas were to be used during bird hunting season. The Lake Tank Area was completely cleared of any contamination, but only a small section of the Three Buttes Area was considered clear of munitions contamination.

According to a November 1992 order regarding Operation Range Cleanup, units at Fort Bliss were scheduled to conduct a cleanup of "hot spots" at McGregor maneuver ranges between November 1992 and February 1993. This historical document is the same source document referred to for previous reports' assertions that several "hot spots" within Maneuver Area No. 1 and No. 2 were cleared in 1992 and 1993. However, upon further review it is apparent that the areas cleared were unrelated to the Former Maneuver Area MR site, but instead were portions of Maneuver Area No. 1 and Maneuver Area No. 2 that lay outside the MR site boundary and within the operational range area of Fort

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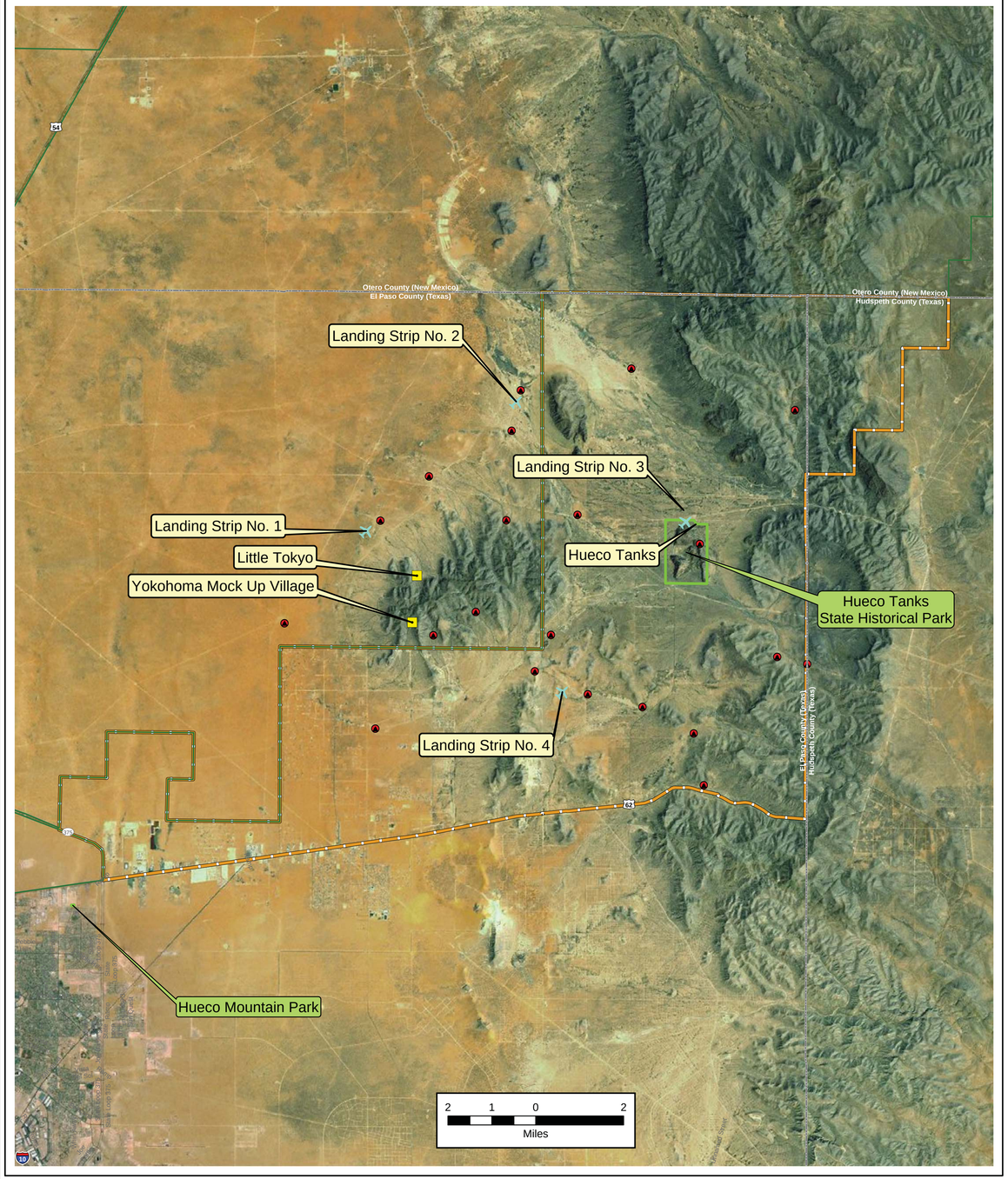
Fort Bliss, TX



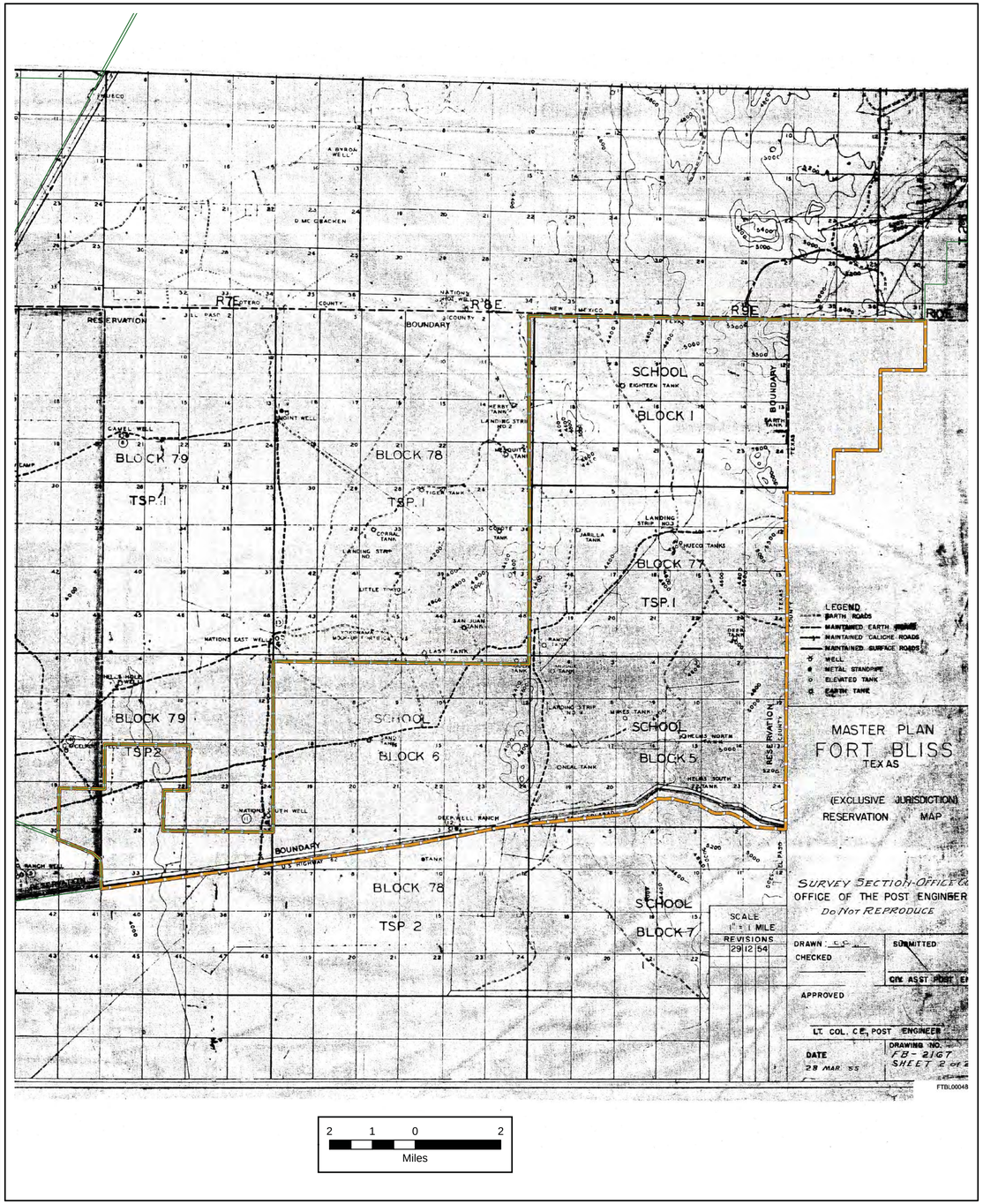
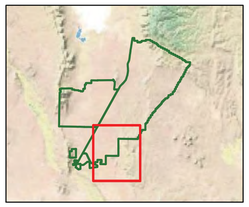


Figure 3-2

Features within the Former Maneuver Area MR Site



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- Current Installation Boundary
- Airstrip
- Water Tank
- Mock Fortification
- Former Maneuver Area MR Site

Aerial:
Source: Copyright:© 2009 ESRI, i-cubed, GeoEye
Date: 2008

Source Documents:
FTBL00048 (2/28/1955)

Edition: Final Report

Date: March 2011

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Bliss. Four of the forty-five designated "hot spots" were located within Maneuver Area No. 1, and eight were located on Maneuver Area No. 2.

Information provided by the Archeology Survey Team Leader, Texas Parks and Wildlife Department indicates that between 1999 and 2001 an intensive pedestrian survey was conducted on approximately 500 acres of level terrain surrounding North Mountain, West Mountain, East Mountain, and East Spur at Hueco Tanks State Park and Historic Site. The survey was conducted by archeologists from the Texas Parks and Wildlife Department. In addition to the surface survey, several shovel excavations were conducted. As a result of the pedestrian survey and shovel excavations, eight small arms munitions related items were uncovered (three on the surface and 5 in the shovel excavations). In addition, 28 small arms munitions items had previously been collected at the Hueco Tanks and are included in the park's collection of artifacts. The state archeologists identified 19 of the total 36 items as being potentially related to military activities. In order to protect the locations of artifacts within the state park, the exact locations where munitions were found were not provided by the state archeologist. However, two-thirds of the finds were identified in the area to the northeast of North Mountain within the state park. Several items were also identified within the central area of the mountains to the east of the earthen dam that is located between North and West mountains.

The earliest munitions item identified by the state archeologists as being potentially associated with military activities was a centerfire cartridge case fragment from a 45-70 caliber cartridge that was adopted by the U.S. military as the official service cartridge for the "Trapdoor" Springfield single shot rifle from 1873 to 1892. Two military items dating from the World War II period in the 1940s were identified by the state archeologists. One was a .50 caliber machine gun shell casing and the other was a .30-06 cartridge. The most recent piece of military ammunition identified by the state archeologists was an unfired 5.56 mm centerfire cartridge from the early 1970s. The munitions items identified during the pedestrian survey were removed from the site by the state archeologist and added to the artifacts collection at the state park.

In December 2009, Fort Bliss received information from two property owners located south and southwest of the Hueco Tanks State Park and Historic Site that indicated they had munitions items located on their property. On one property, a rocket was observed (Photograph 3-7). Although TLI was unable to identify the specific type of rocket, it was determined that the item was approximately 6 feet long and 3 inches in diameter. This item appeared to have been expended and the nose cone was missing from the rocket; however, it was not possible to determine if the item contained any explosives. Fort Bliss contacted the El Paso Police Department Bomb Squad regarding the item and the Bomb Squad visited the site on December 9, 2009. According to the Senior Bomb Squad Technician, it was determined that the possible rocket had no explosive material inside. It was completely hollow. The item did not contain any labels or distinguishing features. The item was determined to be safe for transport and was removed from the property by the Bomb Squad. Based on the historical information regarding the MR site, there is no indication that rockets such as this one were ever used at the Former Maneuver Area MR

site. Therefore, it is likely that this item was transported to the property by the previous owner.

Photograph 3-7: Rocket (type undetermined) (December 2009)

The second property owner had found several munitions items on property that he had recently purchased south of the Hueco Tanks State Park and Historic Site. He did not know how the items originally were brought to the property. The munitions items included two ammunition cans containing .30 caliber blank M1909 bandoleers (Photograph 3-8). According the property owner, both cans were completely sealed when he found them; however, he had opened one of the cans to determine what it contained. The ammunition cans were transported by Fort Bliss personnel to the installation and were turned over to the Range Control liaison.

The other items found by the property owner included several types of simulators and smoke grenades. These items were unfired and appeared to be in poor condition (Photographs 3-9 and 3-10). The El Paso Police Department Bomb Squad visited the site on December 9, 2009 and identified three M116A1 Simulators, Hand Grenade; three AHM8 or ANM18 White Smoke Grenades; and three plastic cylinders that appeared to be simulators with electric matches as initiators. All the items appeared to be in poor condition. No lot numbers or nomenclature was visible. The Bomb Squad determined these items could not be transported safely; therefore, they were blown in place using a counter charge.

Photograph 3-8: Ammunition Cans containing .30 caliber blank rounds (December 2009)

Photograph 3-9: White Smoke Grenade (December 2009)

Photograph 3-10: Simulator (December 2010)

3.1.3 FUDS MMRP Eligibility

According to the 2007 e2M SI, the Former Maneuver Area MR site was identified as FUDS eligible in the "Transmittal of Active Military Munitions Response Program (MMRP) Sites to the Formerly Used Defense Site (FUDS) Program" memorandum dated July 1, 2005. Therefore, the site was determined to require no further investigation under the Active Army MMRP and the site was not addressed during the 2007 e2M SI.

In September 2007, an Inventory Project Report (INPR) was developed for the USACE-Fort Worth District by the USACE-St. Louis District. The purpose of the INPR was to determine if any property associated with Former Maneuver Area MR site, that was no longer under the control of DoD, was eligible for inclusion in the FUDS MMRP. The INPR identified two non-contiguous, FUDS eligible parcels within the historical Former Maneuver Area MR site properties being addressed as a single FUDS property (FUDS Property Number K06TX1386). The 2007 INPR contained an FDE that indicated that, based on the Findings of Fact presented in the INPR, the property was determined to have been under the jurisdiction of the Secretary of Defense and owned by, leased to, or otherwise possessed by the United States prior to October 17, 1986. This property was therefore eligible for inclusion into the DERP-FUDS. The INPR identified an additional parcel of land potentially eligible for FUDS; however, the INPR did not contain any additional information regarding this additional parcel. Following the completion of the INPR, the FUDS program identified a discrepancy between the FUDS eligible property identified in the INPR and the MR site boundary. Because the Munitions Response site (MRS) included land that was not FUDS eligible, the entire site was not accepted into the FUDS MMRP. Therefore, to facilitate the evaluation of this MRS in a timely manner, the Army decided to perform the SI under the Active Army MMRP and postpone the determination of FUDS vs. Active Army eligibility until after the SI was completed. Based on the available historical records, it appears that the majority of the property associated with the Former Maneuver Area MR site was relinquished from use by the Army by 1980. The only exception is a 1,920-acre tract of land (Block 79, Township 2,

Sections 15, 16, and 21) that was under lease from the State of Texas from 1978 through 1987. Therefore, because the majority of the site was not under control or being used by the Army as of the October 1986, this area is eligible for the FUDS MMRP. However, the tract of land that was leased from the State until the end of 1987 is not eligible for the FUDS MMRP. These areas are depicted on Figure 3-3.

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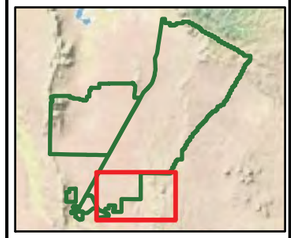
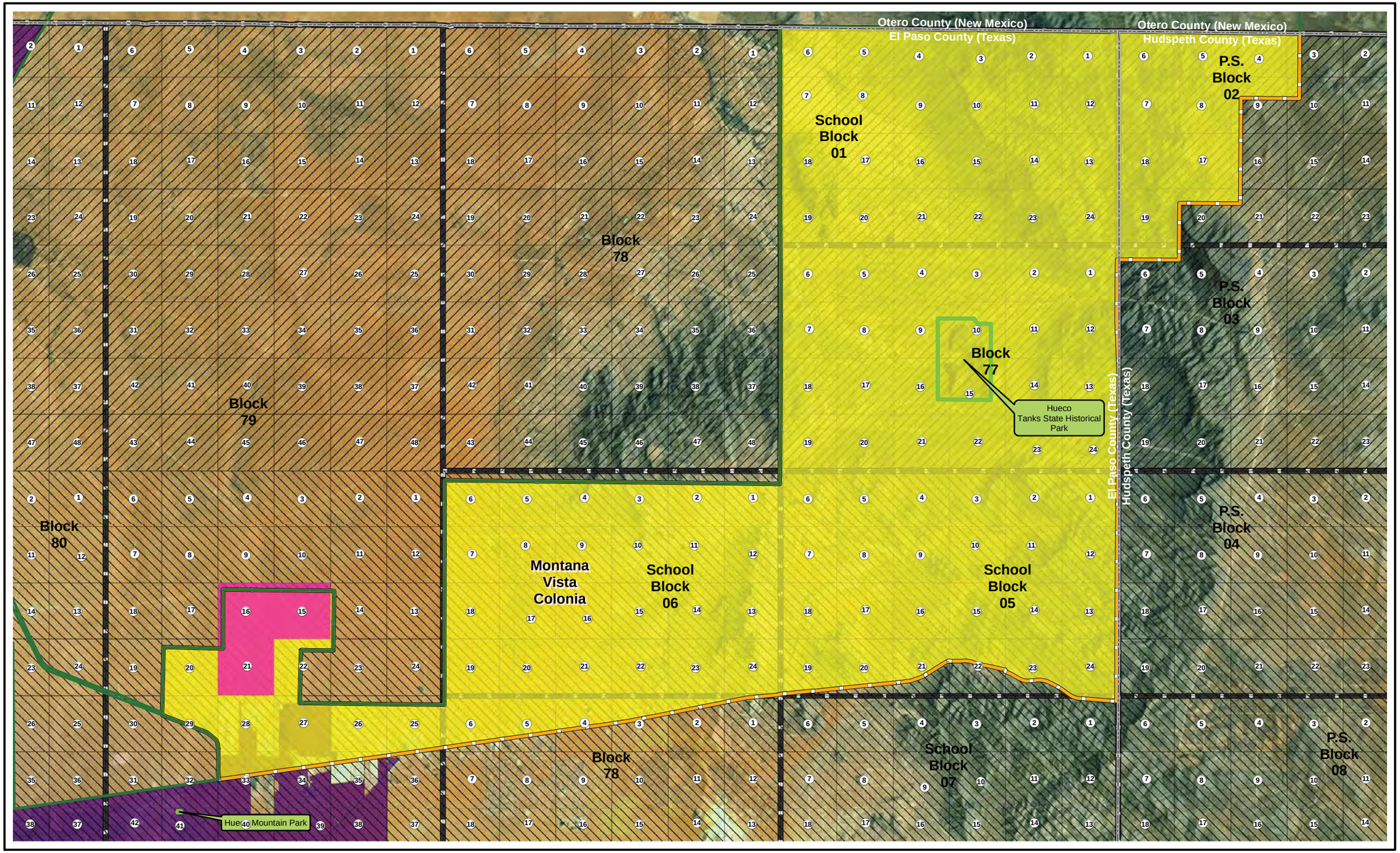
Figure 3-3

FUDS MMRP Eligibility





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- Current Installation Boundary
- City of El Paso
- Blocks
- Sections
- 6 Section Number

Township

- 01
- 02
- Sections Eligible for FUDS MMRP
- Sections Ineligible for FUDS MMRP

2 1 0 2
Kilometers

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Aerial:
Source: Copyright:© 2009 ESRI, i-cubed, GeoEye
Date: 2008

Edition: Final Report

Date: March 2011

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Section 4

4.0 SITE INSPECTION TASKS

The following subsections provide a brief summary of the tasks that were completed under the SI at the Former Maneuver Area MR site associated with Fort Bliss. The results of the work performed at the site are summarized in Section 5.0 of this report. The SI field activities were conducted from October 4 through October 8, 2010. SI field activities included visual surveys and the collection of surface soil samples. Three Technical Planning Process (TPP) meetings were held in support of the SI; one kick-off meeting and two planning meetings. The meeting notes from the two planning meetings are included in Appendix G. In addition, two public meetings were held to provide landowners within the MRS information regarding the SI project. A summary of each of these meetings is included in Appendix H.

The field activities were performed by TLI personnel and all work was conducted in accordance with the May 2010 Final Work Plan. However, adjustments to transects and sample locations were made in the field based on visual observations and findings, accessibility to areas within the site, and field conditions, such as unsafe terrain and obstructions. No significant safety or Quality Assurance (QA) or Quality Control (QC) issues were encountered during the course of the SI.

DATA QUALITY OBJECTIVES

All Data Quality Objectives (DQOs) for this project as outlined in the May 2010 Final Work Plan have been met. The DQOs for this SI were developed in accordance with USACE guidance for developing DQOs as presented in the engineering manual (EM) *Technical Project Planning (TPP) Process*, EM-200-1-2, August 1998.

As indicated in Section 4.0 of the Generic Work Plan (Appendix F of the May 2010 Final Work Plan), the purpose of the site-specific investigation is not to fully characterize the nature and extent of all MEC and MC contamination. Therefore, the DQO thresholds for this project were lower than for an RI/FS project.

The generic DQO for this project was to collect an appropriate amount of data at the site to determine if the primary and secondary Project Objectives, defined in Section 3.0 of the Work Plan, have been met. In order to provide the information necessary to determine if the project objectives were obtained, the following site-specific DQOs were implemented.

Data Quality Objectives for Munitions and Explosives of Concern

The Former Maneuver Area MR site was evaluated to determine if it was impacted by the use, storage, or disposal of military munitions resulting in the potential for contamination by MEC.

- Visual surveys were conducted to determine the presence of MEC at the site. An appropriate portion of the site was covered by the survey in a meandering path to determine the presence of MEC with an emphasis on known areas of interest, such as firing points, target areas, areas where maneuvers were suspected to have been conducted, and previously identified MEC. The line miles of visual survey for the site are listed in Table 4-1 of this SI Report.
- If MEC was identified at the site as a result of SI field activities, the whole site or the affected portion of the site would be recommended for further investigation of MEC.
- If no evidence of MEC was observed on the surface, but subsurface anomalies were identified in an area where historical or visual evidence reflects military use of munitions, this would also warrant a recommendation for further investigation.

Data Quality Objectives for Munitions Constituents

The Former Maneuver Area MR site at Fort Bliss was evaluated to determine if it was impacted by the use, storage, or disposal of military munitions resulting in the potential for contamination by MC.

- Surface soil samples were collected from the site to evaluate for the presence of MC.
- Collection of surface soil samples were biased based on the presence of military munitions or the location of known areas of interest, such as firing points, target areas, detonation areas, areas where maneuvers are suspected to have taken place, and disposal areas.
- Samples were collected based on the criteria and procedures outlined in Section 3.2 of the Field Sampling Plan (FSP) in Appendix A of the Final Work Plan.
- Samples were analyzed for analytes defined in Tables 3-2 and 3-3 of the FSP in Appendix A of the Final Work Plan. The number of samples collected from each area is listed in Table 4-2 of this SI Report.
- The presence of any exceedance of the screening criteria identified in Section 3 and as defined in Tables 3-2 and 3-3 of the FSP in Appendix A of the Final Work Plan would warrant a recommendation for further investigation of MC at the site.
- Any detection of explosives will be evaluated to determine the need for further investigation of the site.

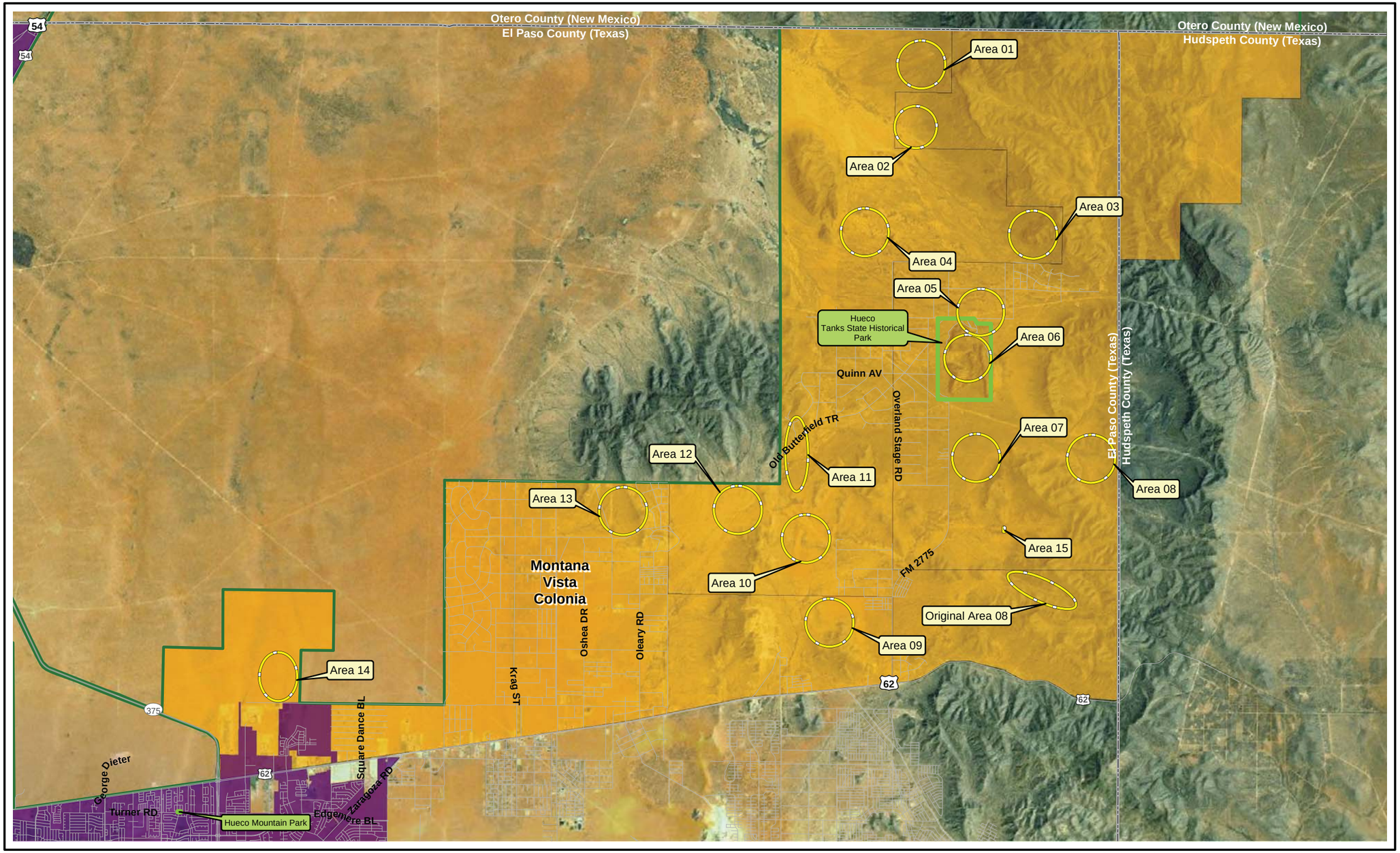
4.1 VISUAL SURVEY

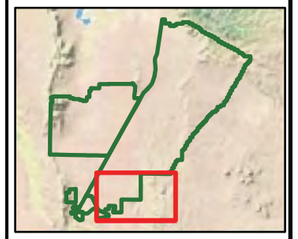
Visual surveys were conducted at the Former Maneuver Area MR site to delineate site features and to identify MEC, MD, or munitions-related materials. The May 2010 Final Work Plan identified 16 investigative areas where visual surveys were to be conducted (Figure 4-1). Prior to the field work, USACE-Sacramento requested Rights of Entry (ROEs) to all parcels within each of the 16 areas. Only a limited number of ROEs were approved by the property owners. A summary of the ROE information is included in Appendix I.

Site Inspection
Fort Bliss, TX

Figure 4-1

Investigation Areas
Former Maneuver Area
MR Site





N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Areas

2 1 0 2
Kilometers

1 0.5 0 1
Miles

Aerial:
Source: Copyright:© 2009 ESRI, i-cubed, GeoEye
Date: 2008

Edition: Final Report

Date: March 2011

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During the SI field activities, the field teams were able to complete transects within twelve of the survey areas located within the MR site boundary. A total of approximately 132.5 line miles were completed at the Former Maneuver Area MR site as depicted on Figure 5-1 in Section 5 of this report. Table 4-1 delineates the number of line miles completed. Details regarding the field team's effort to access the 16 areas are included in Section 5.1, below.

Table 4-1: Completed Visual Surveys

MRS	Survey Date	Total Line Miles
Former Maneuver Area MR Site – Area 1	Not accessible	-
Former Maneuver Area MR Site – Area 2	October 7, 2010	8.66
Former Maneuver Area MR Site – Area 3	Not accessible	-
Former Maneuver Area MR Site – Area 4	October 7, 2010	8.70
Former Maneuver Area MR Site – Area 5	October 5 – 6, 2010	12.68
Former Maneuver Area MR Site – Area 6	October 6, 2010	10.48
Former Maneuver Area MR Site – Area 7	October 5, 2010	22.47
Former Maneuver Area MR Site – Area 8	October 8, 2010	9.74
Former Maneuver Area MR Site – Area 8a	Not accessible	-
Former Maneuver Area MR Site – Area 9	October 4, 2010	24.08
Former Maneuver Area MR Site – Area 10	October 4, 2010	4.01
Former Maneuver Area MR Site – Area 11	October 5, 2010	11.98
Former Maneuver Area MR Site – Area 12	Not accessible	-
Former Maneuver Area MR Site – Area 13	October 7, 2010	8.82
Former Maneuver Area MR Site – Area 14	October 8, 2010	9.21
Former Maneuver Area MR Site – Area 15	October 6, 2010	1.68
Total Line Miles		132.51

During the visual survey, each team member walked individual transects, nominally spaced at approximately 30-foot intervals (based on terrain, ground cover, and vegetation). Points of interest, including, terrain, vegetation, and other MR site features (i.e. topography, fencing, etc.), dictated the actual survey transects taken by each team member. All munitions-related items or other evidence of military use observed along the transects were identified, recorded, and located using handheld global positioning system (GPS) units. GPS units accurate to within 5 to 10 meters, depending on the satellite coverage available throughout the day, were used to record the track of each individual transect. Field personnel were also equipped with hand-held electromagnetic metal detectors to aid in their search for munitions and related debris on the ground surface. Groundcover such as leaves, deadfall, grass, or weeds, was removed as necessary to expose the ground surface in order to determine if metal detector anomaly sources could be identified. However, no intrusive investigation of subsurface anomalies was pursued (i.e., no soil was removed to investigate anomaly sources). Results of the visual surveys are presented in Section 5.1.1 of this report.

Maps of individual survey areas within the MR site were provided to each survey team member to record all relevant finds, relative anomaly density of an area, and/or identify potential soil sample locations. The maps allowed the survey team to track their location through the identification of terrain features such as roads, drainages, hillsides/slopes, or

other recognizable topographic or cultural features. Additionally, each GPS unit was up-loaded with map coordinates for each visual survey area. This allowed team members to identify visual survey area boundaries and to navigate to specific points or areas. The GPS units also allowed team members to track their locations using known GPS coordinates.

Photographs were taken of all munitions-related items and the other points of interest. They were then downloaded, correlated with the field map, and archived. Section 5.0 includes a series of photographs that are representative of the munitions-related evidence and other points of interest identified during the field surveys. Additional site photographs are presented in Appendix C of this report. Each member of the field team maintained a field log documenting all relevant items observed and any issues encountered during the visual survey. A copy of the field logs, as well as the daily field reports submitted by the field team to the USACE Project Manager, are provided in Appendix D of this report.

4.2 SAMPLING ACTIVITIES

The primary purpose of collecting surface soil composite samples and incremental samples (IS) at the Former Maneuver Area MR site at Fort Bliss was to assess a possible worst-case situation by focusing sampling on areas that were most likely to have MC contamination due to past uses of military munitions. The planned sampling was intended to determine if further investigation at the MR site is warranted and utilized a dynamic approach to selecting locations for sampling. Potential sample locations were evaluated in the field to determine if any potential releases may have occurred at the site. If there was no evidence of a potential release, the field team selected a location for sampling that generally represented the overall characteristics of the investigation area. Figure 5-1 depicts the locations of the individual soil samples collected at the MR site.

Both surface soil composite samples and IS were collected during the field investigation. Samples were taken only after a UXO Technician had determined that the area contained no surface MEC items or sub-surface anomalies that could present a hazard during the sampling activities. Field notes documented all areas selected for sampling locations, the rationale for selecting the location, and a determination of whether the MR site was safe for sampling. Soil sampling locations were chosen based on review of the visual survey data, such as evidence of MD or other military activities. Specific information on soil sample locations and results are provided in Section 5.0, along with photographs of sampling activities. Table 4-2 summarizes the samples collected.

Table 4-2: Soil Samples Collected

MRS	Sample Collection Date	Number of Samples				
		Incremental		Surface Soil		Total
		Field Samples	Field Duplicates	Field Samples	Field Duplicates	
Former Maneuver Area MR Site – Area 1	Not accessible	-	-	-	-	-
Former Maneuver Area MR Site – Area 2	October 7, 2010	1	0	0	0	1
Former Maneuver Area MR Site – Area 3	Not accessible	-	-	-	-	-
Former Maneuver Area MR Site – Area 4	October 7, 2010	0	0	2	1	3
Former Maneuver Area MR Site – Area 5	October 6, 2010	3	0	0	0	3
Former Maneuver Area MR Site – Area 6	October 6, 2010	3	0	0	0	3
Former Maneuver Area MR Site – Area 7	October 5, 2010	1	0	0	0	1
Former Maneuver Area MR Site – Area 8	October 8, 2010	1	0	0	0	1
Former Maneuver Area MR Site – Area 8a	Not accessible	-	-	-	-	-
Former Maneuver Area MR Site – Area 9	October 4, 2010	1	1	0	0	2
Former Maneuver Area MR Site – Area 10	October 4, 2010	1	0	0	0	1
Former Maneuver Area MR Site – Area 11	October 5, 2010	1	0	1	0	2
Former Maneuver Area MR Site – Area 12	Not accessible	-	-	-	-	-
Former Maneuver Area MR Site – Area 13	October 7, 2010	1	0	0	0	1
Former Maneuver Area MR Site – Area 14	October 8, 2010	1	0	0	0	1
Former Maneuver Area MR Site – Area 15	October 6, 2010	1	0	0	0	1
Total Sampling Activities Conducted		**15**	**1**	**3**	**1**	**20**

Composite surface soil samples and IS samples were collected in conformance with the U.S. Army Corps of Engineers EM 200-1-3 and Interim Guidance 09-02. Soil samples were collected, handled, and analyzed in accordance with the protocols defined in the Field Sampling Plan in the May 2010 Final Work Plan.

Composite surface soil samples were taken at locations in proximity to significant MD finds. These sample were collected using a spoke and hub layout (radial perimeter method), centered on the suspected impacted soils. The sample was a composite of seven discrete locations within the area of the designated sampling location. The six perimeter samples were collected along a radius of 0.5 meters from the center sample. Soil collected for each individual sample was thoroughly homogenized (mixed) prior to placing them in a sterile sampling container and sent to an analytical laboratory for analysis.

IS were collected from areas in which MD was scattered over a wide area or where no evidence of military munitions was observed. After the location of the sampling unit was determined, a corner was marked with a flag and a GPS waypoint was collected. Using the GPS unit to determine how far apart the corners should be (based on the size of the sampling unit), the next corner was flagged and a GPS waypoint was collected at the appropriate distance. All corners were flagged and had a GPS waypoint collected in this manner. Flags were placed at the beginning and end of each row, spaced appropriately as the size of the sampling unit dictated, to aid the field team visually in collecting the increments from the appropriate locations. The field team then began at a corner and wove back and forth across the sampling unit, with a UXO technician sweeping each increment location, collecting increments at equally spaced intervals, as dictated by the size of the sampling unit. A duplicate and a triplicate sample were collected from two of the sampling units, Areas 5 and 6. The duplicate and triplicate increment locations were selected in the field by stepping out from the original location approximately two feet in two different directions. These increments were collected using an incremental sampling tool over areas ranging from one-half acre to one acre with the number of increments ranging from 30 to 50 per sampling unit. Approximately one kilogram (kg) of soil was collected for each sample. This sealable plastic bag was placed in another sealable plastic bag to better protect the sample. Details on sampling methods used for each location are described in Section 5.0.

Soil samples collected during field activities were analyzed by TestAmerica Laboratories, Inc. in Arvada, Colorado, a National Environmental Laboratory Accreditation Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP) certified laboratory. Quality control samples were collected in the field and also sent to TestAmerica for analysis.

Surface soil and IS were analyzed for a subset of the Target Analyte List (TAL) metals by Method Solid Waste (SW) 6010. The stakeholders agreed to an abbreviated list of metals at the October 15, 2009 Technical Project Planning meeting. Metals were selected for analysis based on metals that were known to be associated with the munitions used at

the areas associated with the Former Maneuver Area MR site. The analysis for metals included antimony, barium, copper, lead, magnesium, potassium, and zinc. Metals were assessed in comparison to the TCEQ state background levels multiplied by a factor of three. The TCEQ state background levels for the metal analytes to be tested for are presented in Table 4-3.

Table 4-3: Project Analyte List for Metals and TCEQ State Background Levels for Soil Samples[(a)]

Analyte	TCEQ State Median Background Levels (mg/kg)	3 x TCEQ State Background Levels (mg/kg)
Metals (Preparation: SW 3050B; Analysis: SW 6010) (mg/kg)		
Antimony	30,000	90,000
Barium	300	900
Copper	15	45
Lead	15	45
Magnesium	NA	NA
Potassium	NA	NA
Zinc	30	90

Notes:
(a) TCEQ State Background Levels (March 2007) have been used.
mg/kg = milligrams per kilogram
SW = Test Method Solid waste (EPA 1997)
NA = Not Applicable

The analysis also included Target Compound List (TCL) explosives by Method SW8330. In general, the Active Army MMRP SI process compares the soil sampling results for explosives to the U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs). However, for the Former Maneuver Area MR site, any detection of explosives will be evaluated to determine the need for further investigation of the site. The RSLs for the explosive analytes to be tested for are presented in Table 4-4. The results of the sampling activities are presented in Section 5.0 of this report.

Table 4-4: Project Analyte List for Explosives and USEPA Regional Screening Levels for Soil Samples[(a)]

Analyte	Residential (mg/kg)
Explosives: Nitroaromatics and Nitramines (Extraction & Analysis: SW8330)	
1,3-Dinitrobenzene	6.1
1,3,5-Trinitrobenzene (sym-TNB)	2,200
2,4,6-Trinitrotoluene (TNT)	19
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	150
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	150
2,4-Dinitrotoluene	1.6
2,6-Dinitrotoluene	61
2-Nitrotoluene (o-Nitrotoluene)	2.9
3-Nitrotoluene (m-Nitrotoluene)	1,200
4-Nitrotoluene (p-Nitrotoluene)	30

Table 4-4: Project Analyte List for Explosives and USEPA Regional Screening Levels for Soil Samples[(a)] (concluded)

Analyte	Residential (mg/kg)
Explosives: Nitroaromatics and Nitramines (Extraction & Analysis: SW8330)	
Octogen (HMX)	3,800
Nitrobenzene	4.4
Cyclotrimethylene trinitramine (RDX)	5.5
Tetryl	240
Nitroglycerin (NG)	6.1
Pentaerythritol tetranitrate (PETN)	NA

Notes:
(a) U.S. EPA Regional Screening Levels (April 2009) have been used
mg/kg = milligrams per kilogram
SW = Test Method Solid Waste (EPA 1997)

In general, any contaminant of concern that exceeds the screening criteria will prompt the initiation of further studies at the site. Not all metals or explosives compounds have RSLs. If contaminants are present at the MR site below the levels presented in the RSL table, they are generally considered not to present a risk. However, RSLs are designed to be used as a guide in an investigation and do not necessarily mean that a particular contaminant or suite of contaminants do or do not present a risk to the environment. Analytical results for each sample are presented in Table 5-4 at the end of Section 5.0.

Section 5

5.0 SITE INSPECTION FINDINGS

The following subsections provide the results of the SI field work conducted at the Former Maneuver Area MR site, Fort Bliss from October 4 through 8, 2010. A brief summary of the tasks conducted during the field activities has been provided in the previous section (Section 4.0) of this report. Photographs of the field activities are included in Appendix C of this report. In addition, copies of field logs and daily field reports are included in Appendix D.

Level IV data validation was conducted for 10% of the samples collected for the Former Maneuver Area MR site. The remaining analytical data underwent Level III data validation. The validation qualifiers (VQs) and a summary of all analytical results are provided in Table 5-4 located at the end of Section 5.0. Complete analytical data reports are provided in Appendix A and detailed data validation reports are provided in Appendix B of this report. Based on the data validation that was conducted and the information provided by the laboratory, the data was determined to be acceptable with minor qualifications noted in the tables and validation reports.

5.1 FORMER MANEUVER AREA MR SITE

Activities conducted at the Former Maneuver Area MR site included a visual survey and surface soil composite sampling and incremental sampling. The results of these activities are presented below.

5.1.1 Visual Survey Results

This 72,520.82 acres site is located east of the Fort Bliss cantonment area, adjacent to the southeastern installation boundary of Fort Bliss. The majority of the site is undeveloped and consists of land used for cattle ranching, recreational purposes (i.e., hunting, camping, hiking, rock climbing, and ecological, cultural, and historic resources), education, and wildlife preserve (Hueco Tanks State Park and Historic Site). The Former Maneuver Area is also used for residential housing, gravel mining operations at two quarries, a large tank farm, and some light industry and commercial areas. The field team observed signs of use by ranchers and recreational users (trash, roads, and fences); however, it was evident that the majority of the site is minimally accessed by the public.

The site topography varies from generally flat to steep, hilly terrain. The Hueco Mountains area located in the eastern portion of the Former Maneuver Area MR site with Hueco Tanks being located west of the Hueco Mountains. Elevation at the site ranges from 3,900 feet to 6,000 feet above mean sea level (msl).

Vegetation at the site consisted mainly of a low-growing, sparse shrub layer, agave, various cacti, mesquite, and grasses. The areas containing low, sparse vegetation allowed the team members to walk 30 or more feet apart, enabling each team member to survey approximately 15 to 20 feet of surface area to either side. In areas where the vegetation changed density and height visibility was reduced the team spacing narrowed.

It was determined prior to the start of field activities that visual surveys would be conducted within 16 investigative areas within the site. These areas were generally selected based on historical information, anticipated accessibility, and proximity to populated areas. The stakeholders agreed to this approach during the October 2009 TPP meeting.

Approximately 132.5 line miles of visual surveys were conducted at 12 of the 16 areas (Areas 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, and 15) using a meandering path approach within the Former Maneuver Area MR site (Figure 5-1). In some areas, visual survey was conducted outside the area originally planned. This occurred when an area had access issues, such as Area 11 where only a portion of the planned area had executed Rights-of-Entry (ROE), and the field team meandered outside the planned boundary of the investigative area, but within the properties for which ROEs were obtained, in an attempt to collect more data. This also occurred when the field team was accessing a planned area, as in Area 10. Area 15 was an incremental sampling unit only and the location and parameters were selected based on field conditions and in proximity to a previous detonation location. ROEs were in place for all areas the field team accessed outside of the planned investigative areas. The field team was unable to access the remaining four Investigative Areas (1, 3, 8a, and 12) due to road conditions or locked gates as shown on Figure 5-2 and described below. The field team discussed the access issues with the Fort Bliss point of contact and documented the information in the Daily Field Reports.

- Area 1 – The field team attempted access via two routes. One dirt track ended within Area 2. The other dirt track ended at a washout. The field team did not attempt to hike to the area because the distance was too far and they could not determine if they were on state owned or privately-owned land for which they did not have an ROE.

- Area 3 – TLI attempted to access this area via a dirt track along the fence that borders state-owned land. Within about ½ mile of the gate, the track became impassable where it washed out. The field team did not attempt to hike to the area because the distance was too far and they could not determine if they were on state owned or privately-owned land for which they did not have an ROE.

- Area 8a – Area 8a was inaccessible due to a locked gate. TLI did not know who owned the property; therefore, the field team was unable to contact the property owner to request access.

- Area 12 – Although the Old Butterfield Trail is supposed to allow for public access across the area, a locked gate prevented access from the north (near Area 11). Mr. Don Meier provided the field team with the name of the property owner; however, the gate was actually put in by ranchers leasing the land. TLI attempted to contact the property owner, but there was no answer. The field team also attempted to access this area from Hwy 62. Another locked gate is located there. The field team made several attempts (and spent over 2 hours) trying to find access to the investigative area from the west. TLI spoke with residents in the

area and they indicated to the field team where the best access was; however, the dirt track that was located along the fence denoting the southern installation boundary of Fort Bliss was washed out within about ½ mile of accessing it from the neighborhood to the west.

Figure 5-1 depicts the sixteen areas as well as the visual survey transects, sample locations and locations of MD. Figure 5-2 depicts areas that could not be accessed due to road conditions, locked gates, and fencing. Figures 5-3 through 5-9 depict the visual survey transects, sample locations, and locations of the MD for the areas where there was evidence of military activity. Figures 5-10 through 5-14 depict the visual survey transects and sample locations for the areas where there was no evidence of military activity. Due to the number of figures required to effectively depict the results of the SI field work, all figures are located at the end of this section.

Although no MEC items were observed during the visual survey, MD was identified in Investigative Area 4 as shown on Figure 5-1 and summarized below. In addition, small arms debris and evidence of military activity was observed in Areas 5, 6, 9, 10, 11, and 14.

An apparent impact area with 4.2-inch mortar shells was observed in Investigative Area 4 in the northwestern portion of the site (Photographs 5-1 to 5-4). Locations where MD was observed are depicted on Figure 5-3. Based on the number of fragments observed in the area, it is presumed that this location was the impact area for mortar training activities. The field team evaluated the surrounding area; however, they were not able to determine the most likely location for the firing line. Based on the type of fragments observed, it is possible the mortars contained white phosphorus, which would have been commonly used for spotting during mortar training activities. The nomenclature observed on the 4.2-inch mortar shell fragments was as follows: “X Shell M2A… Fuze M2-xx-Lot P-236-1 and CH.M.Shell M2 P255-22-HYDRIL-R”. In addition, based on an analysis of the fragments by the UXO technicians participating in the field activities, it appears that some of the fragments were created by the anticipated function of the mortars upon impact. However, the shearing of some of the fragments indicated that they were created by an external detonation. This may indicate that a UXO clearance was previously conducted in this area and that UXO may have been disposed by an explosive charge.

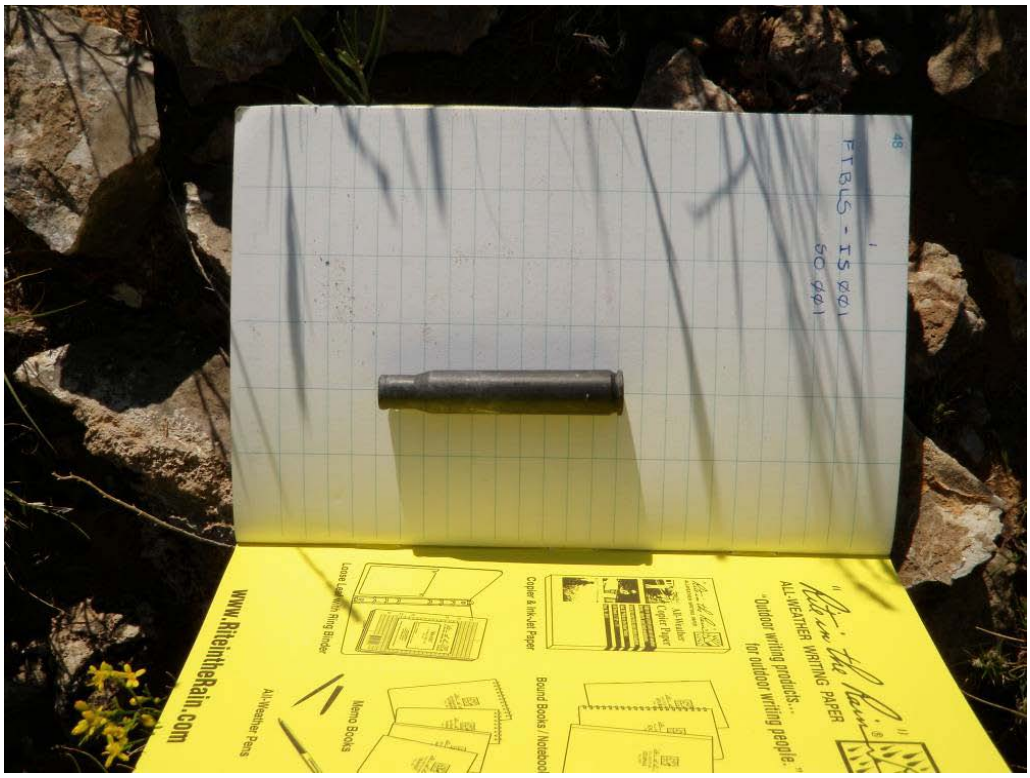
Photograph 5-1: Obturator/rotating band from 4.2-inch mortar shell (October 7, 2010)

Photograph 5-2: Rotating band and fragments from 4.2-inch mortar shell(s) (October 7, 2010)

Photograph 5-3: Several fragments from multiple 4.2-inch mortar shells (October 7, 2010)

Photograph 5-4: Fuze from 4.2-inch mortar shell (October 7, 2010)

Investigative Area 10 (Figure 5-4) appeared to have had a firing position located on top of a hill with the crest approximately 20 feet above the surrounding area. The field team identified a machine gun link pile with an estimated 50 links, approximately one dozen blank shell casings (Photograph 5-5), various clips, a starter tab, and an illuminating flare canister lid.



Photograph 5-5: .30 Caliber blank shell casing (October 4, 2010)

Investigative Area 11 (Figure 5-5) appeared to have been used as a fighting position. The field team observed multiple locations of small amounts of small arms MD. It appeared as though troops were engaged in mock skirmishes where a few rounds were fired and then the troops moved on to another location. The field team identified a large pile of machine gun links (approximately 500) as shown in Photograph 5-6, various caliber blank shell casings, additional machine gun links, Communication wire, M1 Garand clips, and 3 belt starter tabs in various locations throughout the visual survey area. A live 1943 .30-06 complete ball cartridge was also identified in Area 11 (Photograph 5-7).

Photograph 5-6: Browning machine gun link pile (~500 links) and 3 belt starter tabs (October 5, 2010)

Photograph 5-7: 1943 .30-06 complete ball cartridge (October 5, 2010)

Investigative Area 14 (Figure 5-6) appeared to have been a bivouac area. The field team identified tent stakes, chemical lights, a grounding rod for a generator, communication wire, and a 5.56 mm blank shell casing.

At Investigative Areas 5, 6, and 9 (Figures 5-7, 5-8, and 5-9, respectively), the field team identified blank shell casings, the fuze body from a smoke grenade (Photograph 5-8), '03 Springfield stripper clips, and a Winchester Repeating Arms Co. .30 caliber shell casing from the late 1800s.

Based on the dates stamped on the munitions debris and the knowledge of the UXO technicians, the dates of military use of the Former Maneuver Area MR site range from the late 1800s to the mid to late 1970s. The chemical lights observed in Investigative Area 14 (Figure 5-6) date into the 1970s as does the expended smoke grenade.

Photograph 5-8: Top from an expended smoke grenade (October 5, 2010)

During the visual survey in Area 6, Ms. Olszewski indicated that the dam located on the western side of Hueco Tanks was created by scraping soil from within the central area between the north, eastern, and southern mountains into a mound. The dam was created in the early 1960s; therefore, any munitions items that would have been located on the surface of the central area would probably be now buried in the dam. Therefore, the field team focused the survey of the area long the extent of the dam. Ms. Olszeweski also stated that paths were cut into the north and south ends of the dam to allow access into the central area. During this operation, the soils were screened to search for artifacts. No munitions items were found during this screening activity.

Following completion of the visual survey in Areas 5 and 6, the field team visited the Hueco Tanks State Park and Historic Site visitor's center to see other munitions items that had been found within the historic site. According to Wanda Olszewski, Superintendant, all munitions items contained within a display case in the visitor's center were found by park personnel and visitors. The munitions items identified within Hueco Tanks include a signal flare from the 1960s or 1970s and a .45-70 Government Cartridge from the mid to late 19th century. Based on observations made by the UXO technicians on the field team, it was determined that the munitions items held within the glass case in the visitor's center no longer contained any explosive hazards. However, the UXO technicians did not actually handle any of the items.

No MD or evidence of military activity was identified within Investigative Areas 2, 7, 8, 13, or 15 (Figures 5-10 – 5-14).

Table 5-1 provides a summary of the MD and other evidence of military activity in these areas.

Table 5-1: Summary of Finds

Investigative Area	Find(s)
Area 4	HE detonation fragment
	Fragments and fuzes from 4.2-inch mortar shell
Area 5	.30-06 blank shell casings from 1934, 1943, and 1945
	Top from a (possible M18) expended smoke grenade
	'03 Springfield Stripper Clips
Area 6	W.R.A. Co. .30 caliber shell casing (late 1800s)
Area 9	'03 Springfield Stripper Clip
Area 10	M104 illuminating flare canister lid
	.30-06 blank shell casings from 1943-1944 and 1951-1952
	Machine gun links
	Starter tab from .30 caliber Browning machine gun belt
	M14 Rifle Clip
	M1 Garand Clip

Table 5-1: Summary of Finds (concluded)

Investigative Area	Find(s)
Area 11	.30-06 blank shell casings from 1948 and 1954
	Communication wire
	M1 Garand clips
	.30 caliber Browning machine gun link
	Browning machine gun link pile (~ 500 links)
	3 belt starter tabs
	1943 .30-06 complete ball cartridge
	M60 link
	5.56 mm blank shell casing from 1972
	7.62 mm blank shell casing from 1974
Area 14	Military tent stake
	Chemical Lights
	Communication Wire
	Grounding rod for a generator
	5.56 mm blank shell casing from 1965

Following the completion of the field investigation, TLI contacted CEMEX and JOBE Materials LP as they have quarry operations within the Former Maneuver Area MRS. Mr. Guillermo Garcia, Production Manager, CEMEX and Mr. Ralph Richards, Vice President/General Console, JOBE Materials LP were contacted by phone. Both stated that no munitions had been reported as being found at the quarries.

5.1.2 Analytical Results

Surface soil composite samples and IS were collected at various locations within the twelve surveyed areas. Photographs 5-9 and 5-10 provide examples of the composite sampling and incremental sampling, respectively. Photographs of all sample locations are provided in Appendix C of this report. A total of 18 primary samples and two QC samples were collected for analysis.

The samples included:

- 3 surface soil composite samples (FTBLS-SS001 through FTBLS-SS003).

- 15 IS (FTBLS-IS001 through FTBLS-IS011 and FTBLS-IS013 through FTBLS-IS016). Within the 15 IS, two sets of duplicate/triplicate samples were collected; one set from Area 5 (FTBLS-IS009 through FTBLS-IS011) and the other from Area 6 (FTBLS-IS005 through FTBLS-IS007). The duplicate/triplicate samples were collected at a rate of 10% to assess the precision of the sampling method.

- Two QC (duplicate) samples (FTBL-SS004 and FTBLS-IS012).

A minimum of one sample was collected from each visual survey area. If a specific MD item and its impact area were observed during the visual survey, a composite (spoke and hub) soil sample was collected at the location within the impact area. If no evidence of MEC, MD, or military activity was observed, IS were collected. If small arms debris was scattered over a large area, IS were collected. IS with 40 increments were collected from 0.5 acre sampling units identified in Areas 2, 5, 7, 8, 10, 11, and 14. One acre sampling units with 50 increments were collected from Investigative Areas 6 and 9. A 0.75 acre sampling unit with 40 increments was collected from Investigative Area 15 within an area encompassing a previous MEC find and detonation performed in December 2009 by the El Paso Police Bomb Squad.

All samples were collected from within 6 inches of the surface; no intrusive sampling was conducted. The rationale used for selecting each sample location is provided in Table 5-2.

Photograph 5-9: Composite soil sample FTBLS-SS002 (October 7, 2010)

Photograph 5-10: Field team collecting soil and waypoint for a sample increment (October 6, 2010)

Table 5-2: Former Maneuver Area Locations and Rationale for Soil and Incremental Samples

Sample Name	Sample Location Decimal Degrees		Random or Biased	Rationale
	Latitude	Longitude		
FTBLS-SS001	31.90	-106.09	Biased	Down gradient from large collection of MD in Area 11.
FTBLS-SS002	31.95	-106.07	Biased	In proximity to 4.2-inch mortar shell impact area in Area 4.
FTBLS-SS003	31.95	-106.08	Biased	In proximity to fragmentation from 4.2-inch mortar shells in Area 4.
FTBLS-SS004	31.95	-106.08	Biased	QC sample for FTBLS-SS003.
FTBLS-IS001	31.85	-106.09	Random	No evidence of MEC, MD, or military activity was observed; therefore, a sampling unit location was randomly chosen within Area 9.
FTBLS-IS002	31.85	-106.09	Biased	Sampling unit centered on firing position within Area 10.
FTBLS-IS003	31.87	-106.08	Biased	Small arms debris was scattered over a large area in Area 11.
FTBLS-IS004	31.90	-106.09	Random	No evidence of MEC, MD, or military activity was observed; therefore, a sampling unit location was randomly chosen within Area 7.
FTBLS-IS005	31.89	-106.04	Biased	In proximity to an area historically used for anti-aircraft gun emplacement in Hueco Tanks State Park and Historic Site (Area 6).
FTBLS-IS006	31.92	-106.05	Biased	Duplicate of FTBLS-IS005.

Table 5-2: Former Maneuver Area Locations and Rationale for Soil and Incremental Samples (concluded)

Sample Name	Sample Location Decimal Degrees		Random or Biased	Rationale
FTBLS-IS007	31.92	-106.05	Biased	Triplicate of FTBLS-IS005.
FTBLS-IS008	31.92	-106.05	Biased	Sampling unit in Area 15 encompassing a previous MEC find and detonation.
FTBLS-IS009	31.87	-106.03	Random	No evidence of MEC, MD, or military activity was observed; therefore, a sampling unit location was randomly chosen within Area 5.
FTBLS-IS010	31.93	-106.04	Random	Duplicate of FTBLS-IS009.
FTBLS-IS011	31.93	-106.04	Random	Triplicate of FTBLS-IS009.
FTBLS-IS012	31.93	-106.04	Random	QC sample for FTBLS-IS001.
FTBLS-IS013	31.98	-106.06	Random	No evidence of MEC, MD, or military activity was observed; therefore, a sampling unit location was randomly chosen within Area 2.
FTBLS-IS014	31.88	-106.14	Random	Sampling unit location randomly chosen in proximity to residences in Area 13.
FTBLS-IS015	31.90	-106.01	Random	No evidence of MEC, MD, or military activity was observed; therefore, a sampling unit location was randomly chosen within Area 8.
FTBLS-IS016	31.83	-106.25	Random	No evidence of MEC, MD, or military activity was observed; therefore, a sampling unit location was randomly chosen within Area 14.

Analytical results for metals indicate that all soil sample concentrations are below the applicable screening criteria and no explosives were detected in any of the samples. All copper and lead results were flagged "Q" by the laboratory to indicate that one or more quality control criteria failed. The laboratory indicated that copper and lead were detected in the Interference Check Sample (ICS) at concentrations greater than the limit of detection. These analytes are believed to be present in the ICS solution and no interference is noted. The results are acceptable and no data validation qualifiers were added. No data were rejected, resulting in 100% usability for both the metals and the explosives results. Analytical results are summarized in Table 5-4.

A triplicate and a duplicate sample were collected from Investigative Areas 5 and 6 in addition to the original sample to evaluate the precision of the sampling. Essentially, Area 5 and Area 6 were sampled three times each utilizing different increment locations. The results of these three samples were used to calculate precision as relative standard deviation (RSD) using the formula: RSD = (100*standard deviation)/(average). The results of the RSD calculation are summarized in Table 5-3 below. If the total %RSD (total error) between three to five field replicates from the same sampling unit is less than 30%, then the sampling design and execution are likely to be adequate and the distribution of replicate results can be assumed to be approximately normal.

Table 5-3: RSD Results

Area 5		Area 6	
Analyte	**RSD**	**Analyte**	**RSD**
Barium	10.41%	Barium	1.14%
Copper	0.66%	Copper	4.56%
Lead	7.41%	Lead	0.00%
Magnesium	31.73%	Magnesium	3.36%
Potassium	24.05%	Potassium	2.34%
Zinc	1.71%	Zinc	3.33%

All RSDs, with the exception of magnesium for Area 5, are well below the requisite 30% indicating that the sampling method was adequate and the results are normal. The Area 5 magnesium result is only slightly above the 30% threshold and does not impact the fact that the results for all these samples are all well below the screening criteria.

Matrix spike/matrix spike duplicates (MS/MSD) analyses were performed by the laboratory. All MS/MSD results were within the QC limits with the exception of antimony. As a result of low recoveries, the non-detected results for antimony were qualified as estimated (UJ).

The laboratory flagged the post spike recovery for barium for sample FTBLS-IS014 as not meeting the QC limits. However, the parent sample concentration was greater than four times the spike value and no qualification was required.

The non-detected results for 2-amino-4,6-dinitrotoluene were qualified in six samples as estimated due to exceeded calibration criteria.

Two field duplicate samples were collected with these incremental samples to assess for both analytical and sampling precision. All field duplicates were acceptable.

Additional information regarding the data validation process is provided in Section 5.2 of this report.

5.2 CHEMICAL DATA QUALITY ASSESSMENT

The MC data were reviewed and validated by senior chemists at TLI. Data validation was conducted in accordance with the following documents: *Test Methods for Evaluating Solid Wastes* (2007); *USEPA Contracts Laboratory Program National Functional Guidelines for Evaluating Inorganic Data Review* (October 2004); and *Department of Defense Quality Systems Manual for Environmental Laboratories, Version 3* (DoD QSM) (2009). The validation was performed for 100% of the samples.

Level IV data validation was conducted for 10% of the samples collected for the Former Maneuver Area MR site. The remaining analytical data underwent Level III data validation.

The data review included an evaluation of the following QC parameters:

- Data Completeness
- Holding Times and Preservation
- Calibrations
- Blank Analysis Results
- Surrogate Recoveries
- MS and MSD Results
- Triplicate Sample Analysis
- Duplicate Sample Analysis
- Field Duplicates
- Laboratory Control Samples
- Compound Identification (full validation only)
- Compound Quantitation and Reporting Limits (full validation only)
- Analytical Reporting Limits and Method Detection Limits
- Interference Check Sample Results
- Serial Dilution Results

All analytical data for the surface soil composite samples and IS was validated and deemed complete. Based on the data validation that was conducted and the information provided by the laboratory, the data was determined to be acceptable with minor qualifications noted in the tables and validation reports. All QC parameters were within the project acceptance limits. All of the results were considered usable for the intended purpose and the project DQOs have been met.

The complete data validation report is included in Appendix B.

Table 5-4: Former Maneuver Area Site Inspection Analytical Results Summary

	Sample ID	FTBLS-SS001			FTBLS-SS002			FTBLS-SS003			FTBLS-SS004			FTBLS-IS001			FTBLS-IS002			FTBLS-IS003			FTBLS-IS004		
	Sample Depth	Surface			Surface			Surface			Surface			Surface			Surface			Surface			Surface		
Analyte	**3 X TCEQ State Median Background Levels (mg/kg) [1]**	**USEPA RSLs for Residential Soils (mg/kg) [2]**	**Result (mg/kg)**	**LQ**	**VQ**	**Result (mg/kg)**	**LQ**	**VQ**	**Result (mg/kg)**	**LQ**	**VQ**	**Result (mg/kg)**	**LQ**	**VQ**	**Result (mg/kg)**	**LQ**	**VQ**	**Result (mg/kg)**	**LQ**	**VQ**	**Result (mg/kg)**	**LQ**	**VQ**	**Result (mg/kg)**	**LQ**	**VQ**
Total Metals, mg/kg (SW6010C)																									
Antimony	90,000	31	*0.54*	U	UJ	*0.59*	U	UJ	0.51	UJ	UJ	*0.56*	U	UJ	*0.55*	U		*0.55*	U		*0.59*	U		*0.58*	U	
Barium	900	15,000	49			77			76			68			40		J	58		J	91		J	65		J
Copper	45	3,100	9.9	Q		8.6	Q		6.4	Q		5.5	Q		5.2	Q		8.4	Q		7.8	Q		9.5	Q	
Lead	45	400	11	Q		9.3	Q		6.7	Q		6	Q		7.1	Q		11	Q		9.3	Q		8.6	Q	
Magnesium	NA	NA	2,200			3,000			2,900			2,600			1,600		J	5,000		J	2,900		J	2,800		J
Potassium	NA	NA	1,500			1,800			2,000			1,700			1,600		J	2,400		J	2,000		J	2,100		J
Zinc	90	23,000	23		J	30		J	29		J	27		J	19		J	30		J	39		J	27		J
Explosives, mg/kg (SW8330B)																									
1,3,5-Trinitrobenzene	NA	2,200	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
1,3-Dinitrobenzene	NA	6.1	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
2,4,6-Trinitrotoluene	NA	19	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
2,4-Dinitrotoluene	NA	1.6	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
2,6-Dinitrotoluene	NA	61	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
2-Amino-4,6-dinitrotoluene	NA	150	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
2-Nitrotoluene	NA	2.9	*0.077*	U		*0.078*	U		*0.078*	U		*0.077*	U		*0.078*	U		*0.078*	U		*0.075*	U		*0.075*	U	
3-Nitrotoluene	NA	1,200	*0.077*	U		*0.078*	U		*0.078*	U		*0.077*	U		*0.078*	U		*0.078*	U		*0.075*	U		*0.075*	U	
4-Amino-2,6-dinitrotoluene	NA	150	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
4-Nitrotoluene	NA	30	*0.096*	U		*0.097*	U		*0.097*	U		*0.096*	U		*0.098*	U		*0.098*	U		*0.093*	U		*0.094*	U	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	NA	5.5	*0.077*	U		*0.078*	U		*0.078*	U		*0.077*	U		*0.078*	U		*0.078*	U		*0.075*	U		*0.075*	U	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NA	240	*0.077*	U		*0.078*	U		*0.078*	U		*0.077*	U		*0.078*	U		*0.078*	U		*0.075*	U		*0.075*	U	
Nitrobenzene	NA	4.4	*0.077*	U		*0.078*	U		*0.078*	U		*0.077*	U		*0.078*	U		*0.078*	U		*0.075*	U		*0.075*	U	
Nitroglycerin	NA	6.1	*0.39*	U		*0.39*	U		*0.39*	U		*0.39*	U		*0.39*	U		*0.39*	U		*0.37*	U		*0.38*	U	
Octahydro-tetranitro-1,3,5,7-tetrazocine (HMX)	NA	3,800	*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.039*	U		*0.037*	U		*0.038*	U	
Pentaerythritol tetranitrate (PETN)	NA	NA	*0.39*	U		*0.39*	U		*0.39*	U		*0.39*	U		*0.39*	U		*0.39*	U		*0.37*	U		*0.38*	U	

Acronyms
FTBLS = Ft. Bliss
IS = Incremental Sample
mg/kg = milligrams per kilogram
RSL = Residental Screening Level
SS = Surface Sample
SW = Solid Waste
TCEQ = Texas Commission on Environmental Quality
USEPA = U.S. Environmental Protection Agency

LQ = Lab Qualifier and VQ = Validation Qualifer
J = Estimated Value--The analyte is positively identified but the reported concentration is an estimate due to QC failure or data quality limitations
M = Manaul integrated compound
Q = One or more quality conrol criteria failed
U = The analyte was not detected above the reporting limit
UJ = Estimated value--The analyte is non-detected above the method detection limited (MDL) but the result is an estimate due to QC failure of data quality limitions

Notes
(1) 3X TCEQ State Background Levels (March 2007) have been used.
(2) U.S. EPA Regional Screening Levels (April 2009) have been used
(3) Test Method SW (EPA 1997)

Table 5-4: Former Maneuver Area Site Inspection Analytical Results Summary

Analyte	3 X TCEQ State Median Background Levels (mg/kg) [1]	USEPA RSLs for Residential Soils (mg/kg) [2]	Sample ID	FTBLS-IS005			FTBLS-IS006			FTBLS-IS007			FTBLS-IS008			FTBLS-IS009			FTBLS-IS010			FTBLS-IS011			FTBLS-IS012			FTBLS-IS013			FTBLS-IS014		
			Sample Depth	Surface			Surface			Surface			Surface			Surface			Surface			Surface			Surface			Surface			Surface		
				Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ
Total Metals, mg/kg (SW6010C)																																
Antimony	90,000	31		*0.55*	U		*0.58*	U		*0.57*	U		*0.58*	U		*0.58*	U		*0.55*	U		*0.58*	U		*0.59*	U		*0.56*	U		0.42	J	
Barium	900	15,000		84		J	70		J	71		J	83		J	88		J	87		J	89		J	43		J	71		J	78	J	J
Copper	45	3,100		8.7	Q		8.8	Q		8.8	Q		9.6	Q		13	Q		12	Q		13	Q		5.2	Q		8	Q		9.9	Q	
Lead	45	400		7.5	Q		8.7	Q		8.1	Q		8.8	Q		13	Q		13	Q		13	Q		7.1	Q		7.9	Q		9.7	Q	
Magnesium	NA	NA		5,100		J	3,100		J	3,000		J	3,400		J	3,500		J	3,300		J	3,500		J	1,500		J	3,200		J	3,100		J
Potassium	NA	NA		2,800		J	1,800		J	2,000		J	2,300		J	2,500		J	2,400		J	2,500		J	1,600		J	1,800		J	2,100		J
Zinc	90	23,000		34		J	33		J	34		J	28		J	34		J	34		J	36		J	19		J	32		J	27		J
Explosives, mg/kg (SW8330B)																																
1,3,5-Trinitrobenzene	NA	2,200		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U		*0.04*	U		*0.039*	U		*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	
1,3-Dinitrobenzene	NA	6.1		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U		*0.04*	U		*0.039*	U		*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	
2,4,6-Trinitrotoluene	NA	19		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U		*0.04*	U		*0.039*	U		*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	
2,4-Dinitrotoluene	NA	1.6		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U		*0.04*	U		*0.039*	U		*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	
2,6-Dinitrotoluene	NA	61		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U		0.04	UM		*0.039*	U		*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	
2-Amino-4,6-dinitrotoluene	NA	150		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U	UJ	0.04	UM	UJ	*0.039*	U	UJ	*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	UJ
2-Nitrotoluene	NA	2.9		*0.08*	U		*0.074*	U		*0.077*	U		*0.078*	U		*0.08*	U		*0.079*	U		*0.078*	U		*0.077*	U		*0.075*	U		*0.076*	U	
3-Nitrotoluene	NA	1,200		*0.08*	U		*0.074*	U		*0.077*	U		*0.078*	U		*0.08*	U		*0.079*	U		*0.078*	U		*0.077*	U		*0.075*	U		*0.076*	U	
4-Amino-2,6-dinitrotoluene	NA	150		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U		*0.04*	U		*0.039*	U		*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	
4-Nitrotoluene	NA	30		*0.1*	U		*0.092*	U		*0.096*	U		*0.098*	U		*0.1*	U		*0.098*	U		*0.098*	U		*0.096*	U		*0.094*	U		*0.095*	U	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	NA	5.5		*0.08*	U		*0.074*	U		*0.077*	U		*0.078*	U		*0.08*	U		*0.079*	U		*0.078*	U		*0.077*	U		*0.075*	U		*0.076*	U	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NA	240		*0.08*	U		*0.074*	U		*0.077*	U		*0.078*	U		*0.08*	U		*0.079*	U		*0.078*	U		0.077	UM		*0.075*	U		*0.076*	U	
Nitrobenzene	NA	4.4		*0.08*	U		*0.074*	U		*0.077*	U		*0.078*	U		*0.08*	U		*0.079*	U		*0.078*	U		0.077	U		*0.075*	U		*0.076*	U	
Nitroglycerin	NA	6.1		*0.4*	U		*0.37*	U		*0.38*	U		*0.39*	U		*0.4*	U		*0.39*	U		*0.39*	U		*0.38*	U		*0.38*	U		*0.38*	U	
Octahydro-tetranitro-1,3,5,7-tetrazocine (HMX)	NA	3,800		*0.04*	U		*0.037*	U		*0.038*	U		*0.039*	U		*0.04*	U		*0.039*	U		*0.039*	U		*0.038*	U		*0.038*	U		*0.038*	U	
Pentaerythritol tetranitrate (PETN)	NA	NA		*0.4*	U		*0.37*	U		*0.38*	U		*0.39*	U		*0.4*	U		*0.39*	U		*0.39*	U		*0.38*	U		*0.38*	U		0.38	U	

Acronyms
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J = Estimated Value--The analyte is positively identified but the reported concentration is an estimate due to QC failure or data quality limitations
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U = The analyte was not detected above the reporting limit
UJ = Estimated value--The analyte is non-detected above the method detection limited (MDL) but the result is an estimate due to QC failure of data quality limitions
Notes
(1) 3X TCEQ State Background Levels (March 2007) have been used.
(2) U.S. EPA Regional Screening Levels (April 2009) have been used
(3) Test Method SW (EPA 1997)

Table 5-4: Former Maneuver Area Site Inspection Analytical Results Summary

Analyte	3 X TCEQ State Median Background Levels (mg/kg) [1]	USEPA RSLs for Residential Soils (mg/kg) [2]	Sample ID	FTBLS-IS015			FTBLS-IS016		
			Sample Depth	Surface			Surface		
				Result (mg/kg)	LQ	VQ	Result (mg/kg)	LQ	VQ
Total Metals, mg/kg (SW6010C)									
Antimony	90,000	31		*0.58*	U		*0.58*	U	
Barium	900	15,000		94		J	27		J
Copper	45	3,100		8.1	Q		4.1	Q	
Lead	45	400		8	Q		5.9	Q	
Magnesium	NA	NA		3,800		J	1,100		J
Potassium	NA	NA		1,900		J	1,200		J
Zinc	90	23,000		27		J	15		J
Explosives, mg/kg (SW8330B)									
1,3,5-Trinitrobenzene	NA	2,200		*0.038*	U		*0.04*	U	
1,3-Dinitrobenzene	NA	6.1		*0.038*	U		*0.04*	U	
2,4,6-Trinitrotoluene	NA	19		*0.038*	U		*0.04*	U	
2,4-Dinitrotoluene	NA	1.6		*0.038*	U		*0.04*	U	
2,6-Dinitrotoluene	NA	61		*0.038*	U		*0.04*	U	
2-Amino-4,6-dinitrotoluene	NA	150		*0.038*	U	UJ	*0.04*	U	UJ
2-Nitrotoluene	NA	2.9		*0.076*	U		*0.079*	U	
3-Nitrotoluene	NA	1,200		*0.076*	U		*0.079*	U	
4-Amino-2,6-dinitrotoluene	NA	150		*0.038*	U		*0.04*	U	
4-Nitrotoluene	NA	30		*0.094*	U		*0.099*	U	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	NA	5.5		*0.076*	U		*0.079*	U	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NA	240		*0.076*	U		*0.079*	U	
Nitrobenzene	NA	4.4		*0.076*	U		*0.079*	U	
Nitroglycerin	NA	6.1		*0.38*	U		*0.4*	U	
Octahydro-tetranitro-1,3,5,7-tetrazocine (HMX)	NA	3,800		*0.038*	U		*0.04*	U	
Pentaerythritol tetranitrate (PETN)	NA	NA		*0.38*	U		*0.4*	U	

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USEPA = U.S. Environmental Protection Agency

LQ = Lab Qualifier and VQ = Validation Qualifer
J = Estimated Value--The analyte is positively identified but the reported concentration is an estimate due to QC failure or data quality limitations
M = Manaul integrated compound
Q = One or more quality conrol criteria failed
U = The analyte was not detected above the reporting limit
UJ = Estimated value--The analyte is non-detected above the method detection limited (MDL) but the result is an estimate due to QC failure of data quality limitions

Notes
(1) 3X TCEQ State Background Levels (March 2007) have been used.
(2) U.S. EPA Regional Screening Levels (April 2009) have been used
(3) Test Method SW (EPA 1997)

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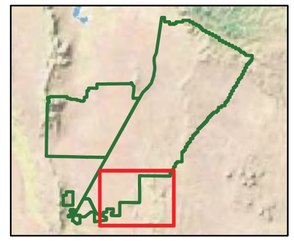
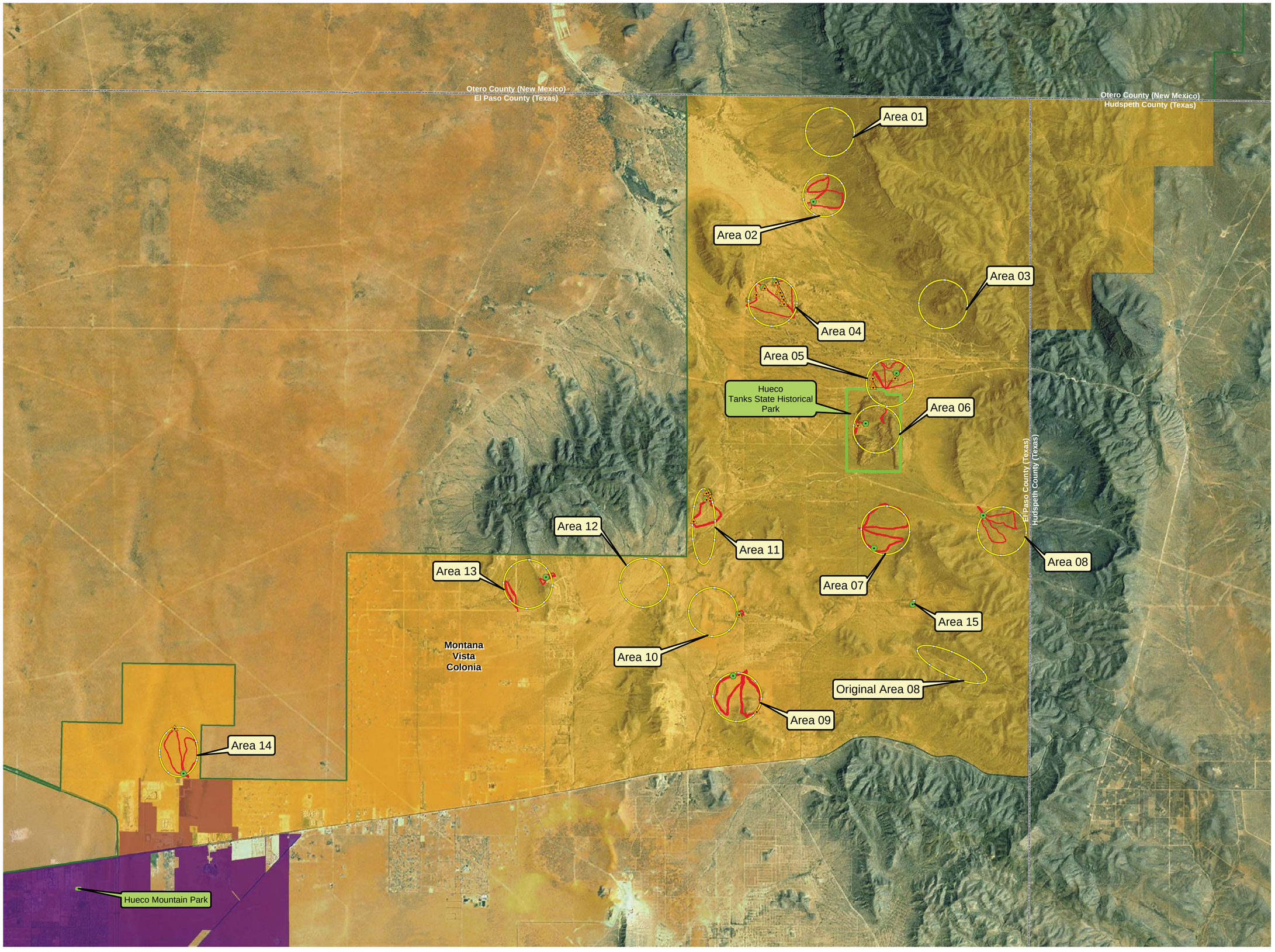
Figure 5-1

Former Maneuver Area MR Site
Visual Survey Transects, Sample Locations, and Finds





N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Areas
- Visual Survey Transects
- MD/MEC Finds
- Sample Locations

2 1 0 2
Kilometers

1 0.5 0 1
Miles

Aerial:
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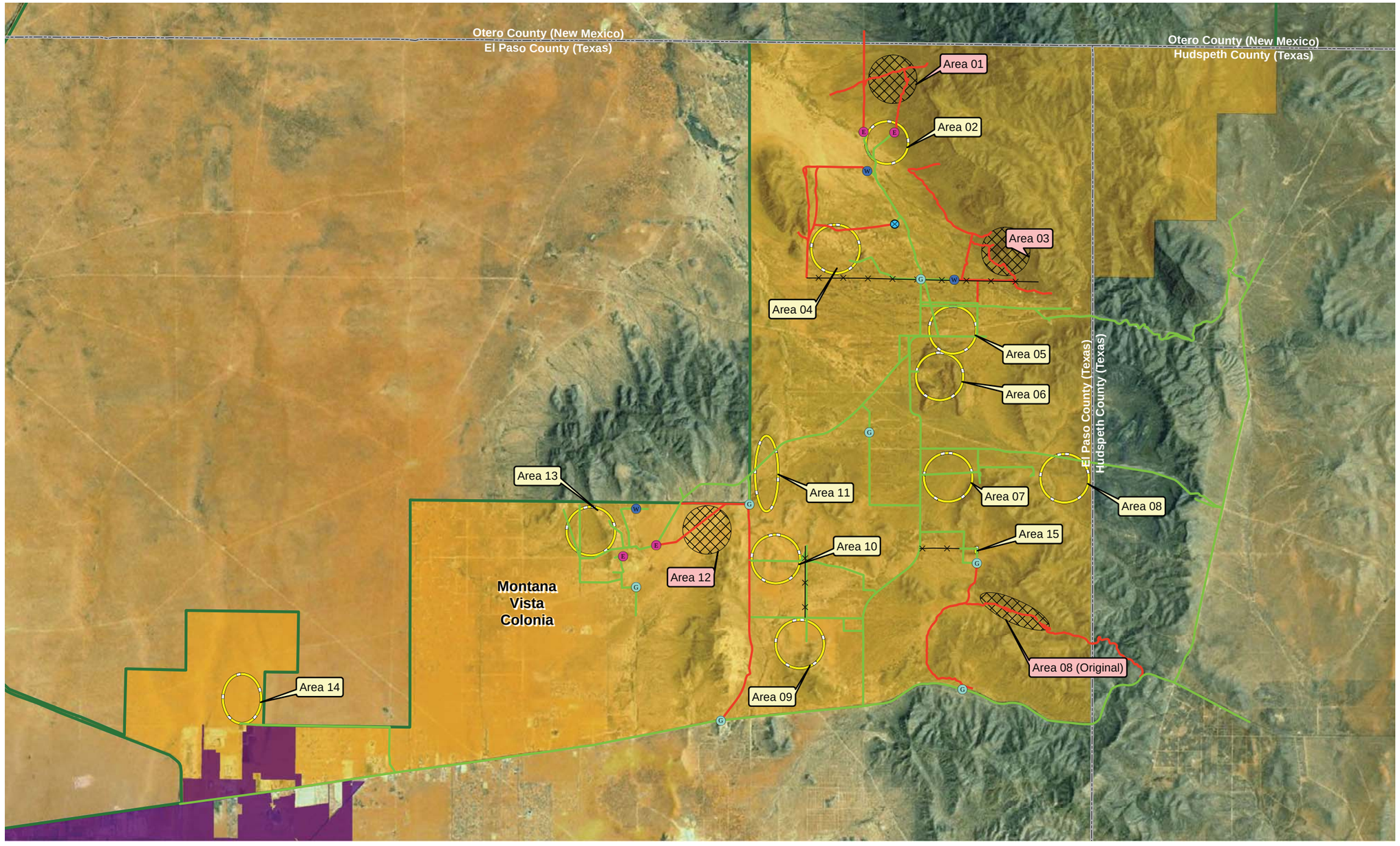
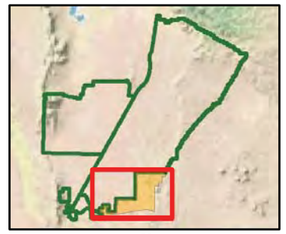
Figure 5-2

Former Maneuver Area MR Site - Accessibility to Investigative Areas





N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Gate
- Impassable Arroyo
- Trail Ends
- Washout
- Fence

Routes to Survey Areas

- Accessible
- Inaccessible

Investigative Areas

- Surveyed
- Not Surveyed

2 1 0 2
Kilometers

1 0.5 0 1
Miles

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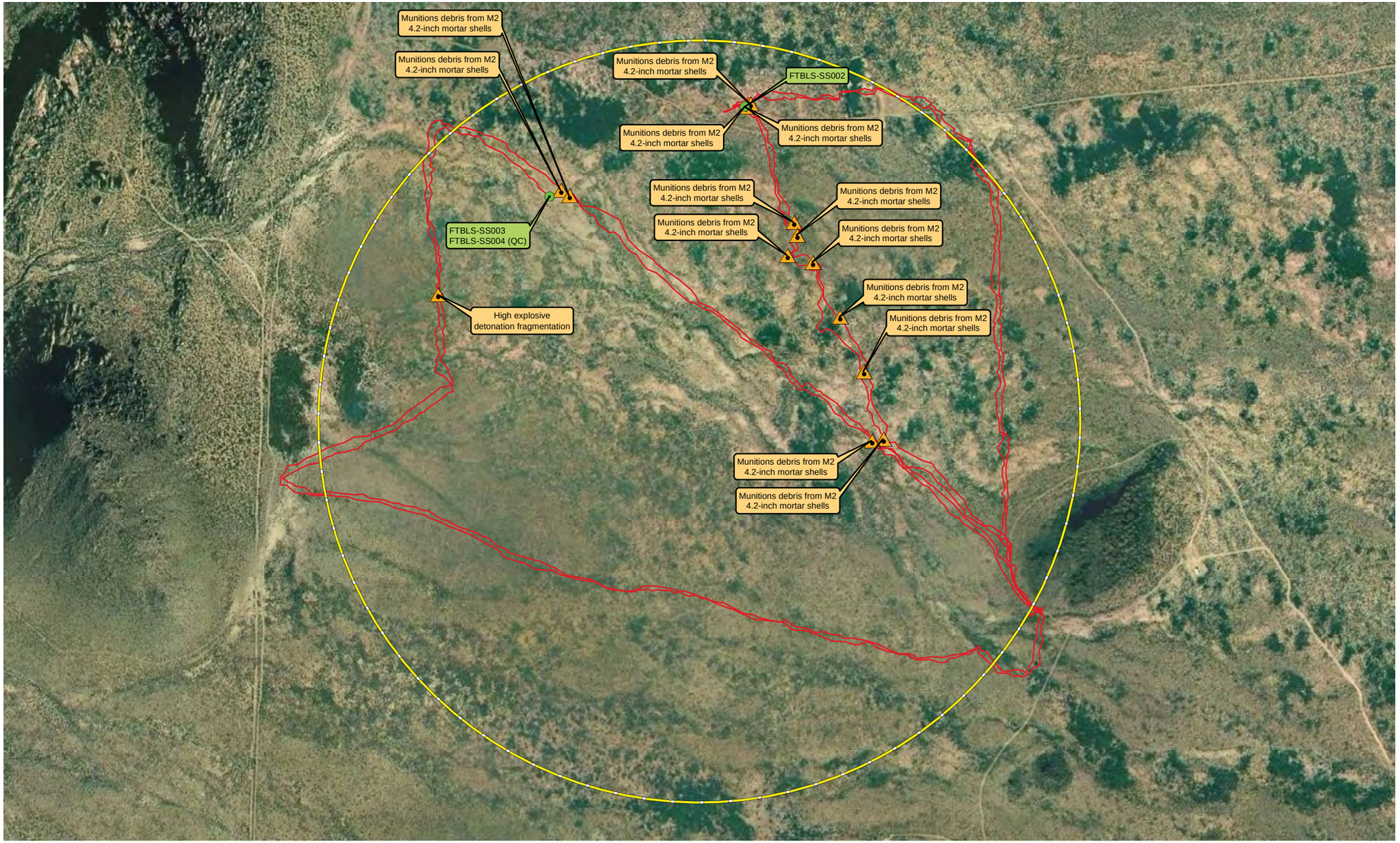
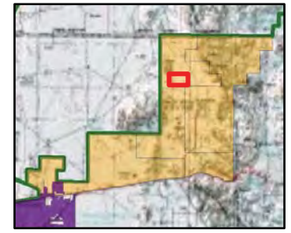


Figure 5-3

Former Maneuver Area MR Site - Investigative Area 04 Visual Survey Transects, Sample Locations, and Finds



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 04 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 8.7 Line Miles
- MD/MEC Finds
- Sample Locations

100 50 0 100
Meters

500 250 0 500
Feet

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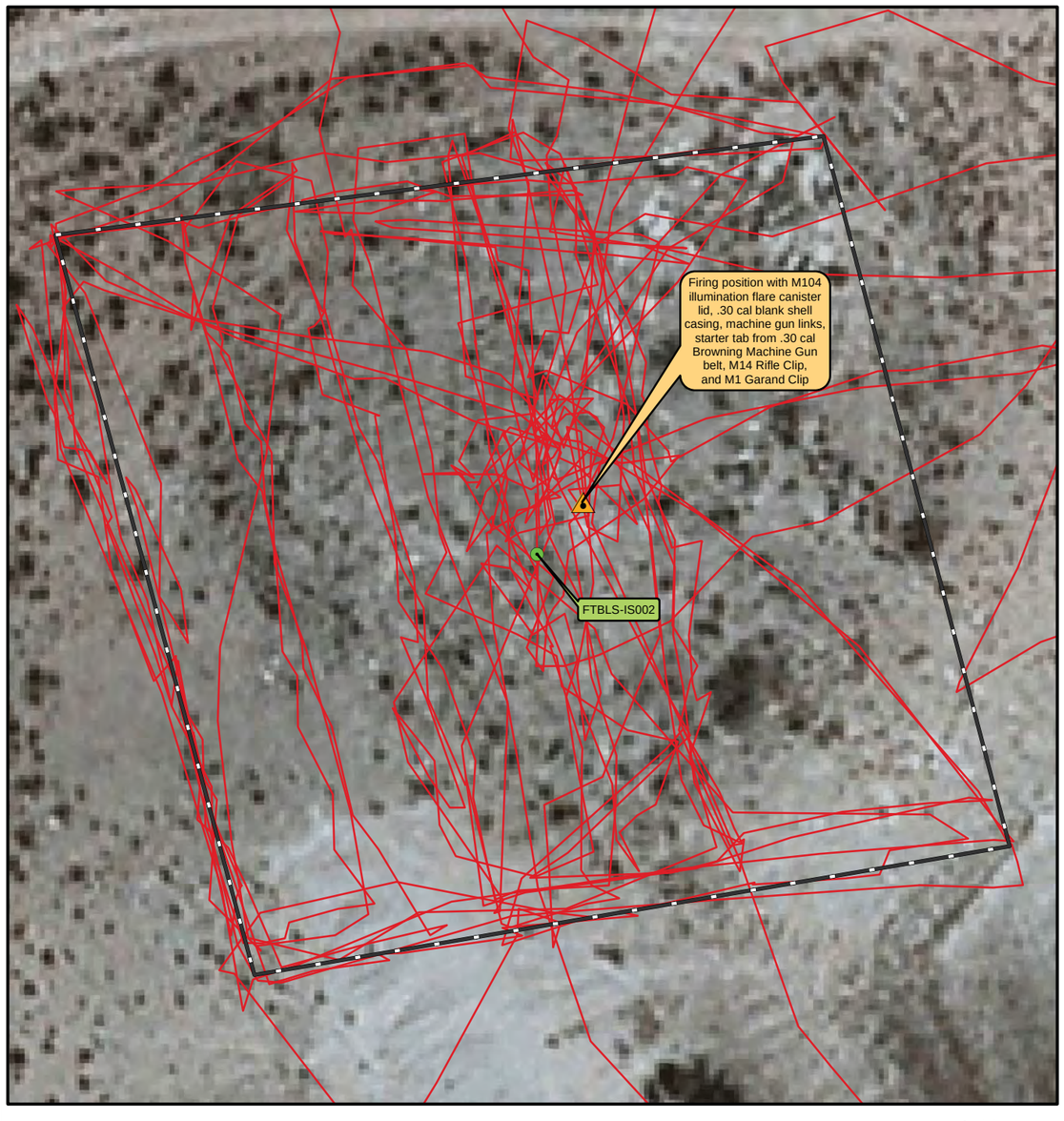

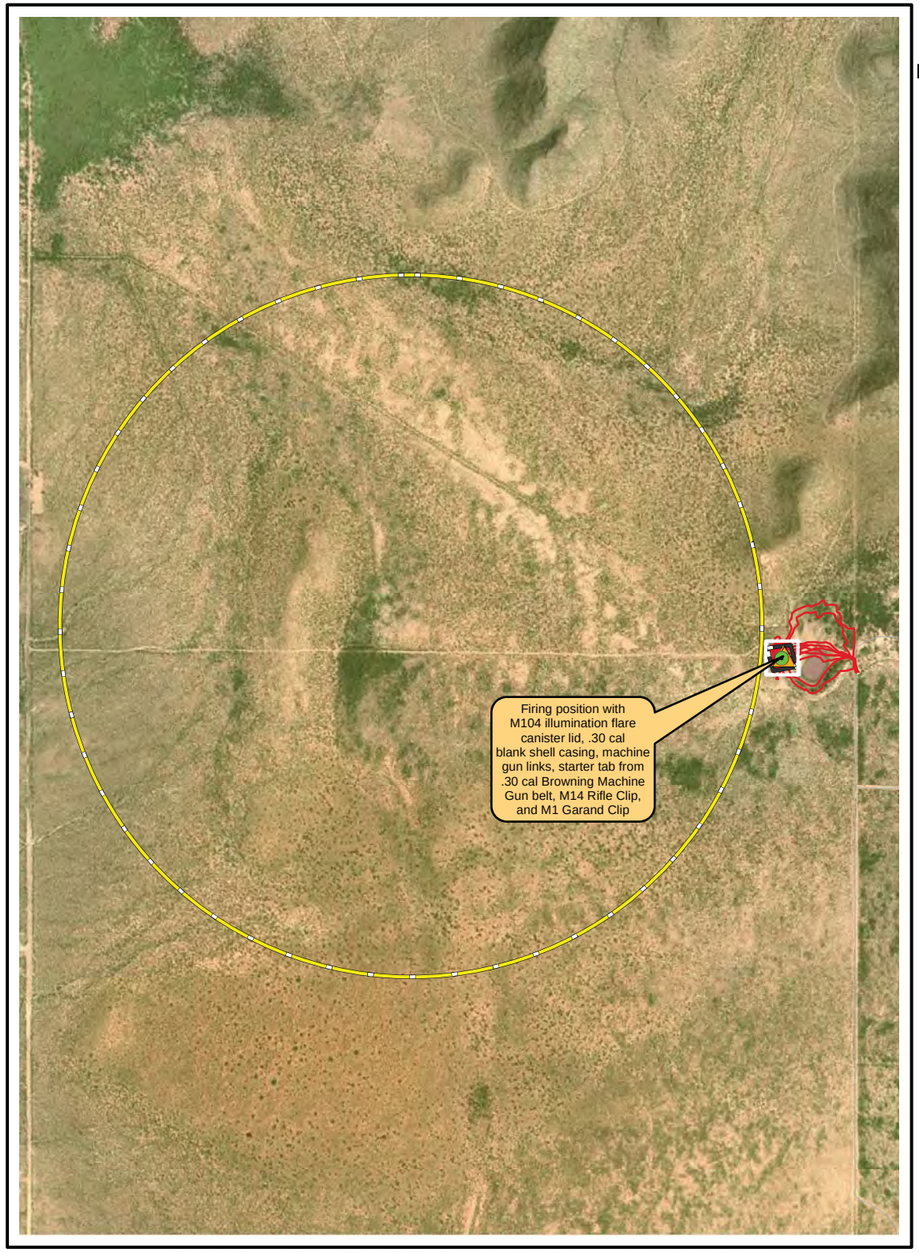

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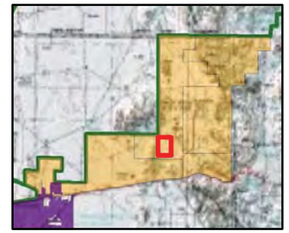
Figure 5-4

Former Maneuver Area
MR Site - Investigative Area 10
Visual Survey Transects,
Sample Locations, and Finds



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 10 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 3.13 Line Miles
- MD/MEC Finds
- Sample Locations
- Incremental Sampling Unit 0.51 Acres

100 50 0 100
Meters

500 250 0 500
Feet

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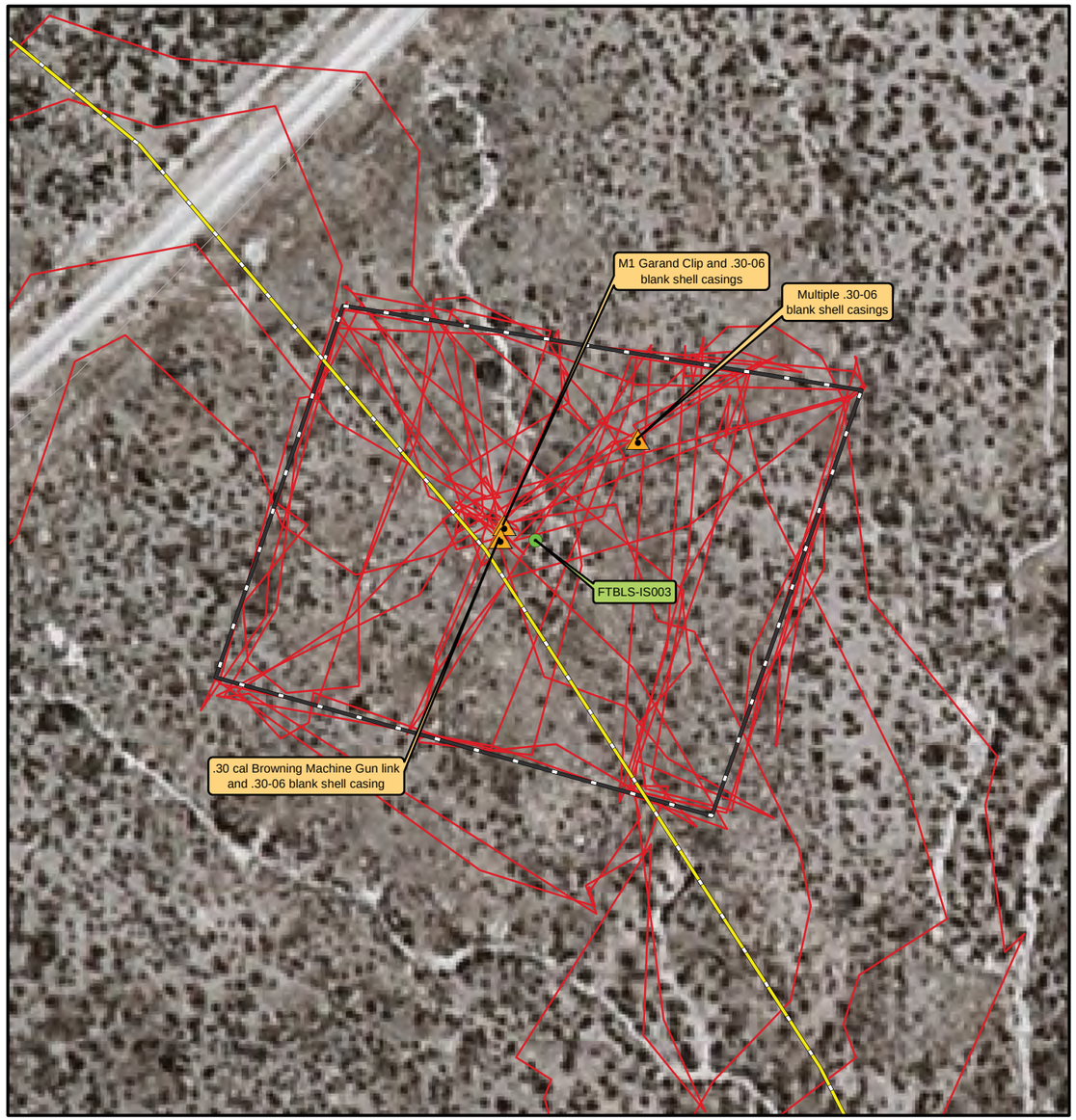

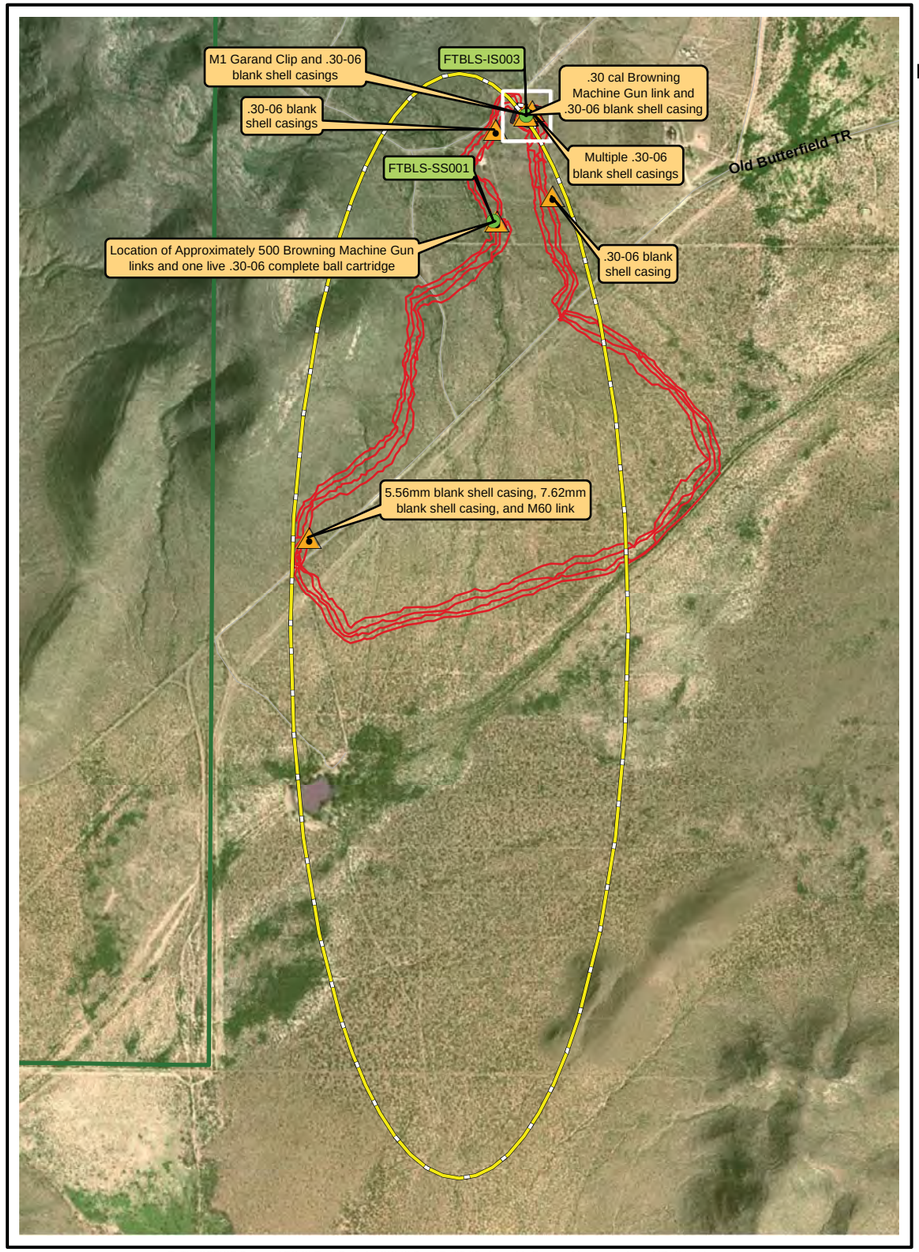

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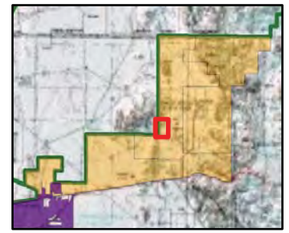
Figure 5-5

Former Maneuver Area MR Site - Investigative Area 11 Visual Survey Transects, Sample Locations, and Finds



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 11 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 9.47 Line Miles
- MD/MEC Finds
- Sample Locations
- Incremental Sampling Unit 0.41 Acres

100 50 0 100
Meters

500 250 0 500
Feet

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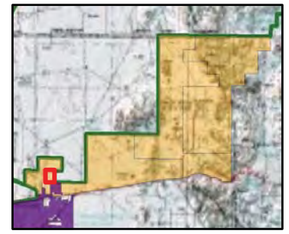
Figure 5-6

Former Maneuver Area
MR Site - Investigative Area 14
Visual Survey Transects,
Sample Locations, and Finds



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 14 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 9.21 Line Miles
- MD/MEC Finds
- Sample Locations
- Incremental Sampling Unit 0.51 Acres

100 50 0 100
Meters

500 250 0 500
Feet

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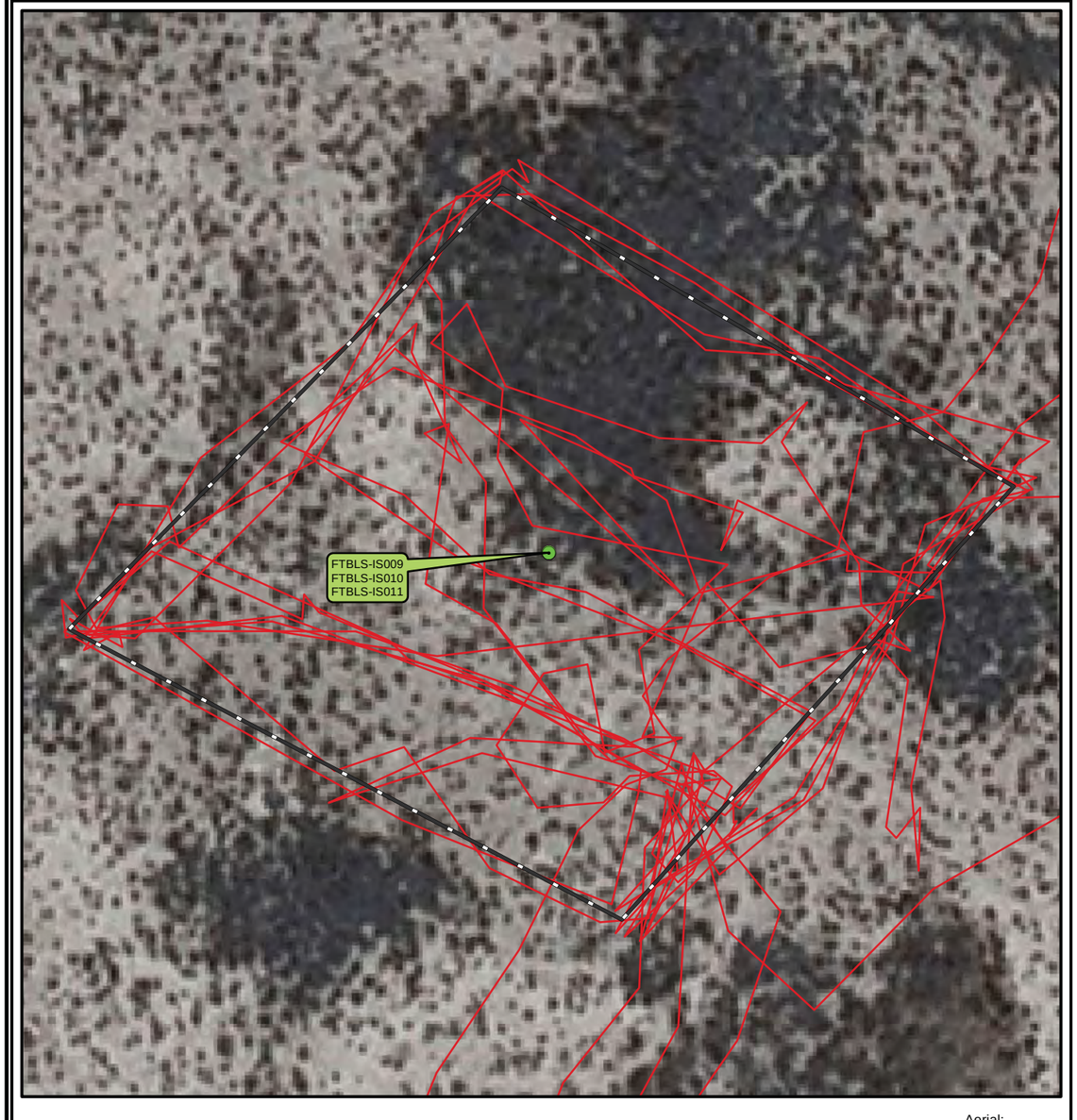

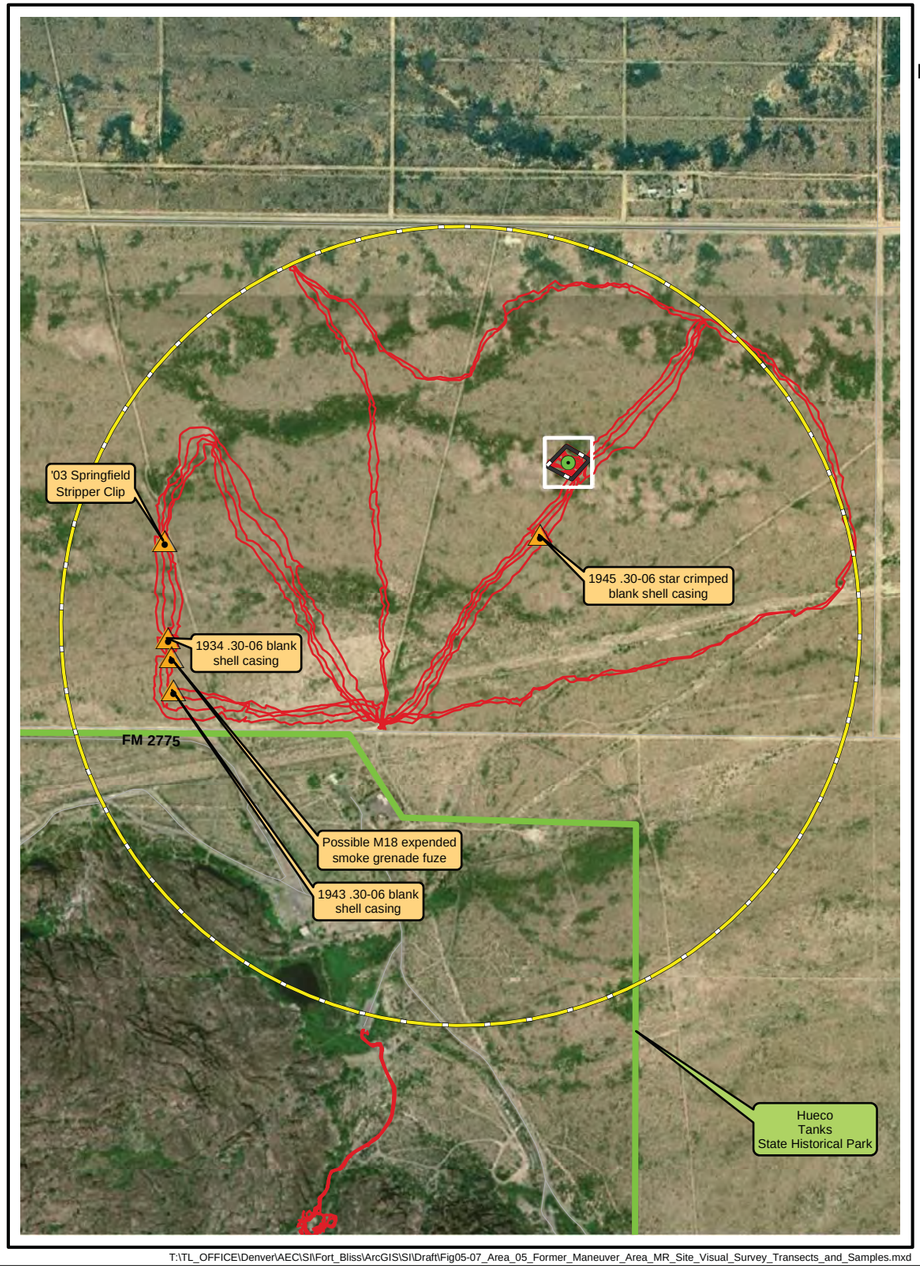

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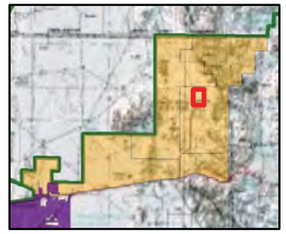
Figure 5-7

Former Maneuver Area
MR Site - Investigative Area 05
Visual Survey Transects,
Sample Locations, and Finds



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 05 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 11.67 Line Miles
- MD/MEC Finds
- Sample Locations
- Incremental Sampling Unit 0.51 Acres

100 50 0 100
Meters

500 250 0 500
Feet

Aerial:
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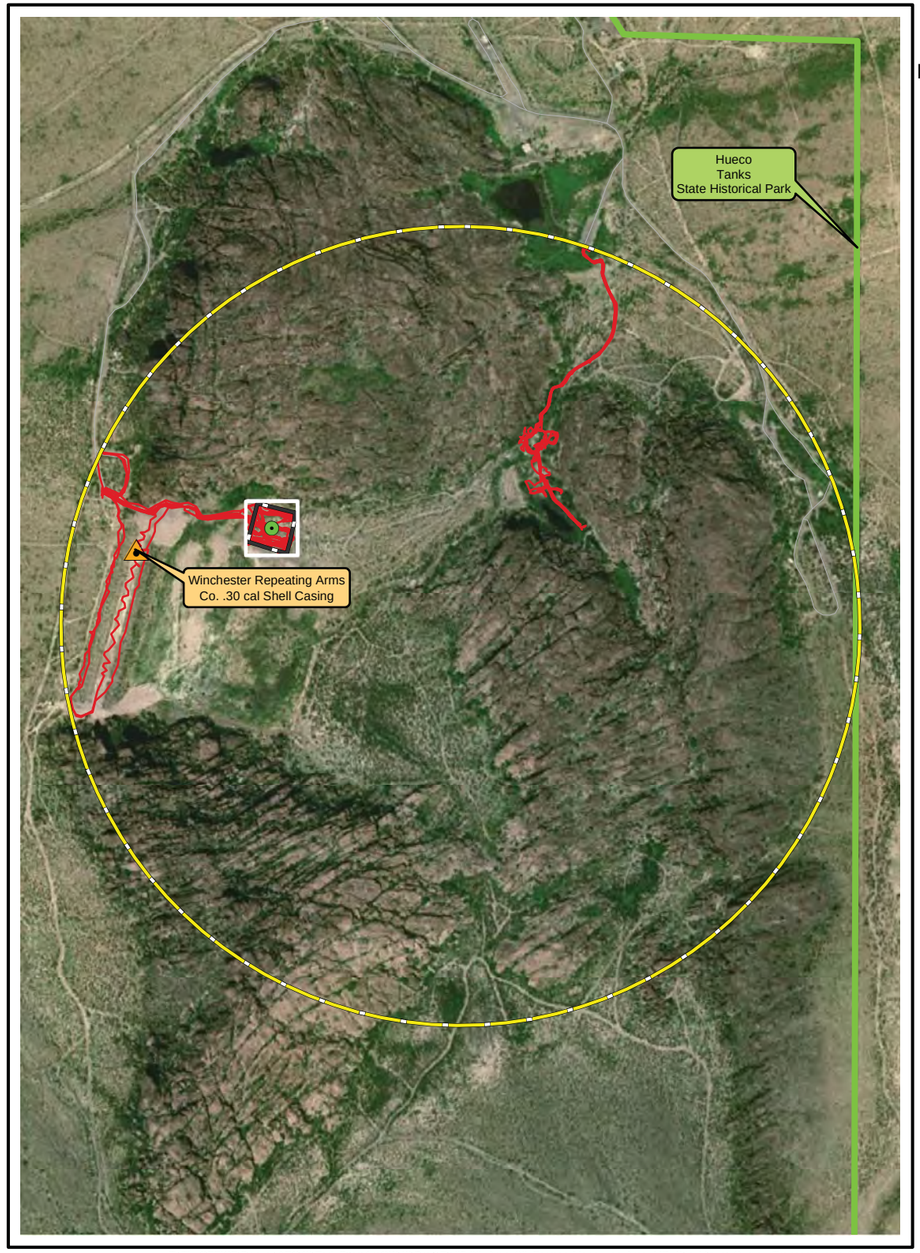

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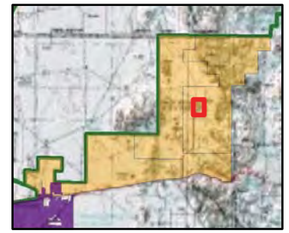
Figure 5-8

Former Maneuver Area
MR Site - Investigative Area 06
Visual Survey Transects,
Sample Locations, and Finds



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 06 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 10.26 Line Miles
- MD/MEC Finds
- Sample Locations
- Incremental Sampling Unit 1.14 Acres

100 50 0 100
Meters

500 250 0 500
Feet

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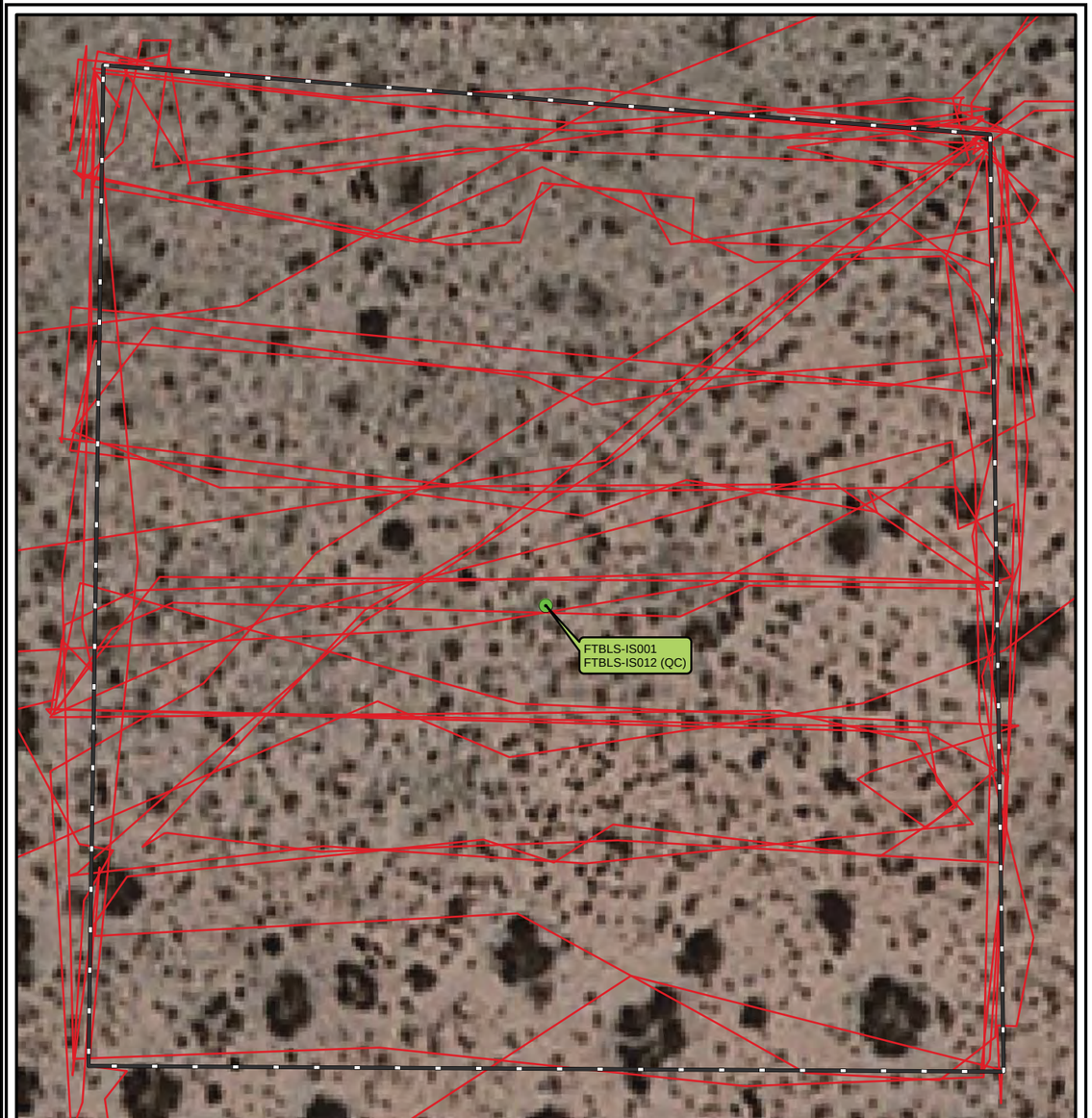

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Source: USGS
Date: 2009

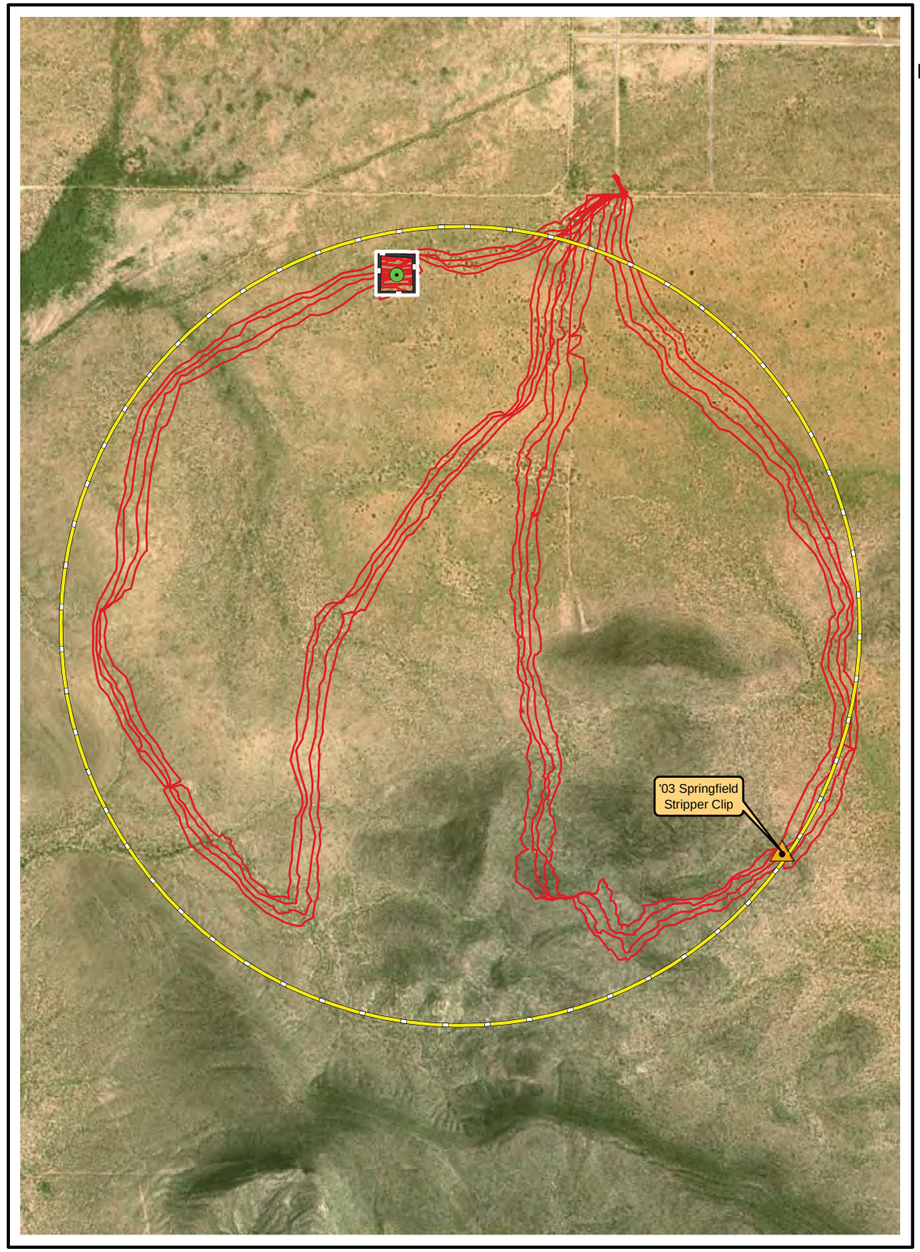

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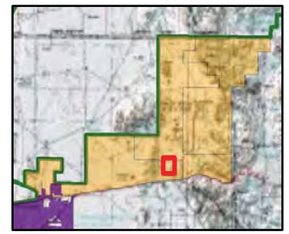
Figure 5-9

**Former Maneuver Area
MR Site - Investigative Area 09
Visual Survey Transects,
Sample Locations, and Finds**



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 09
- Hueco Tanks State Historical Park
- Visual Survey Transects 19.19 Line Miles
- MD/MEC Finds
- Sample Locations
- Incremental Sampling Unit 0.98 Acres

100 50 0 100
Meters

500 250 0 500
Feet

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Aerial:
Source: USGS
Date: 2009

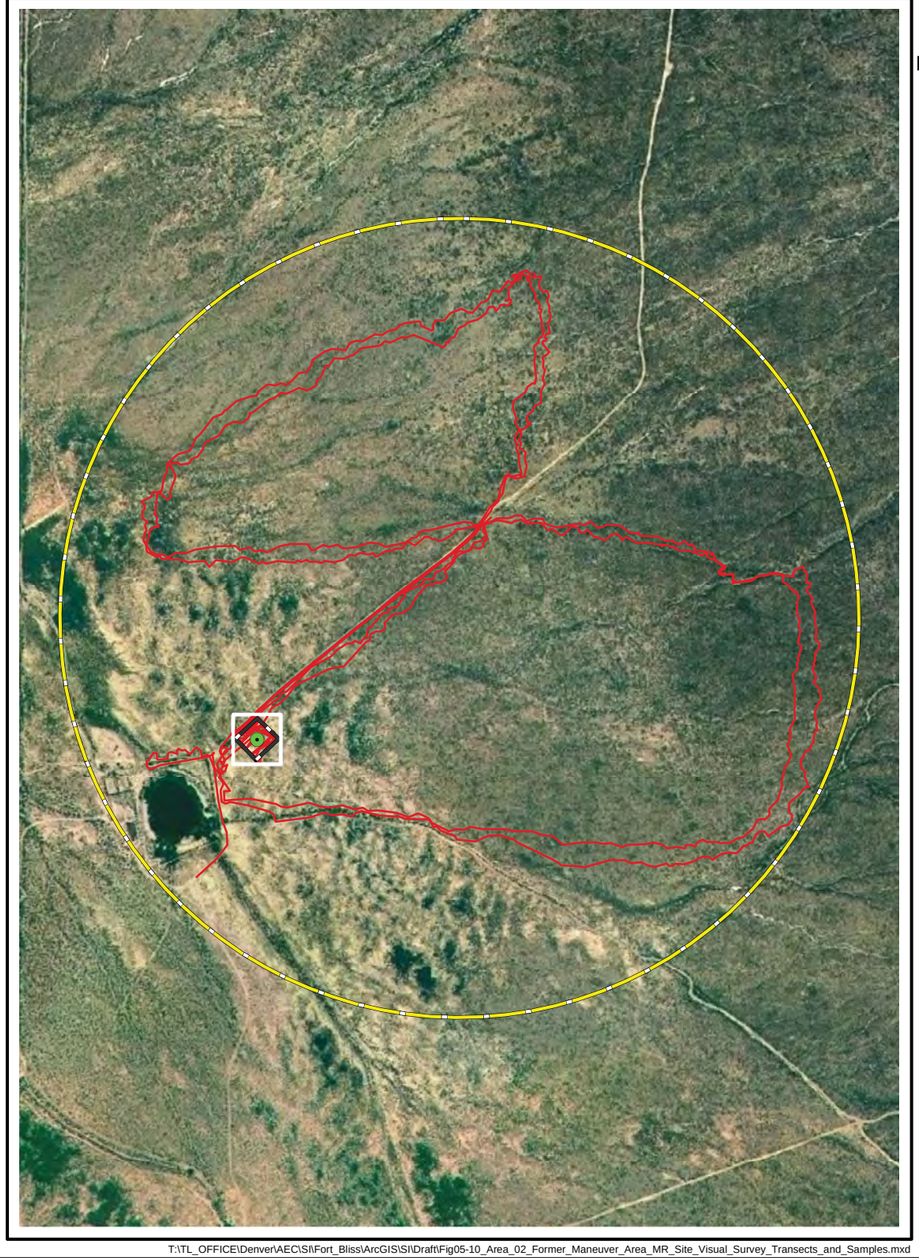

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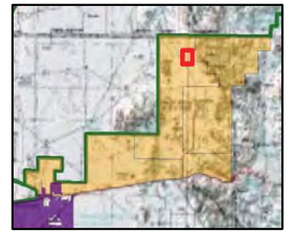
Figure 5-10

Former Maneuver Area
MR Site - Investigative Area 02
Visual Survey Transects and Sample Locations



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 02 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 8.66 Line Miles
- Sample Locations
- Incremental Sampling Unit 0.51 Acres

100 50 0 100
Meters

500 250 0 500
Feet

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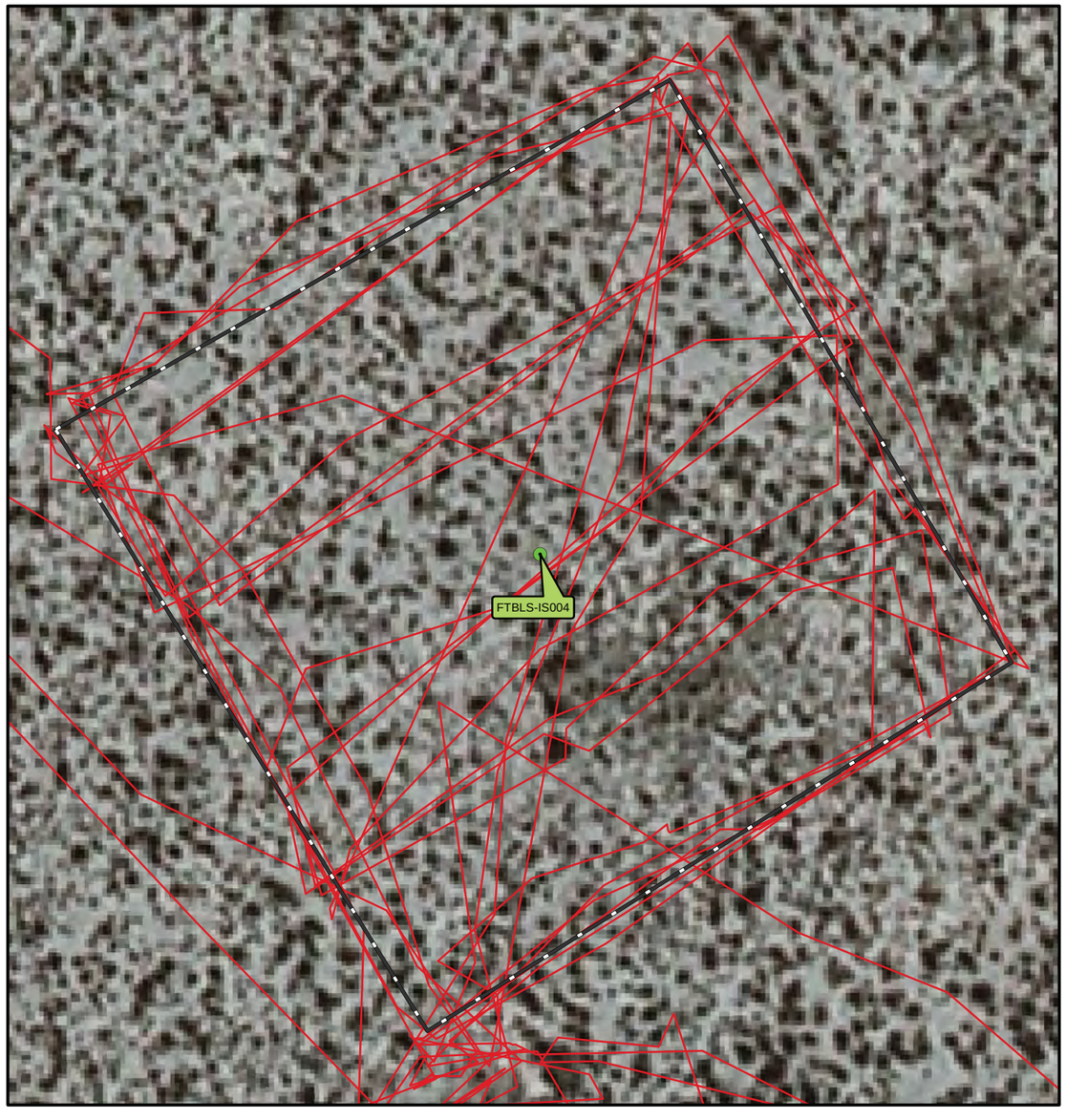


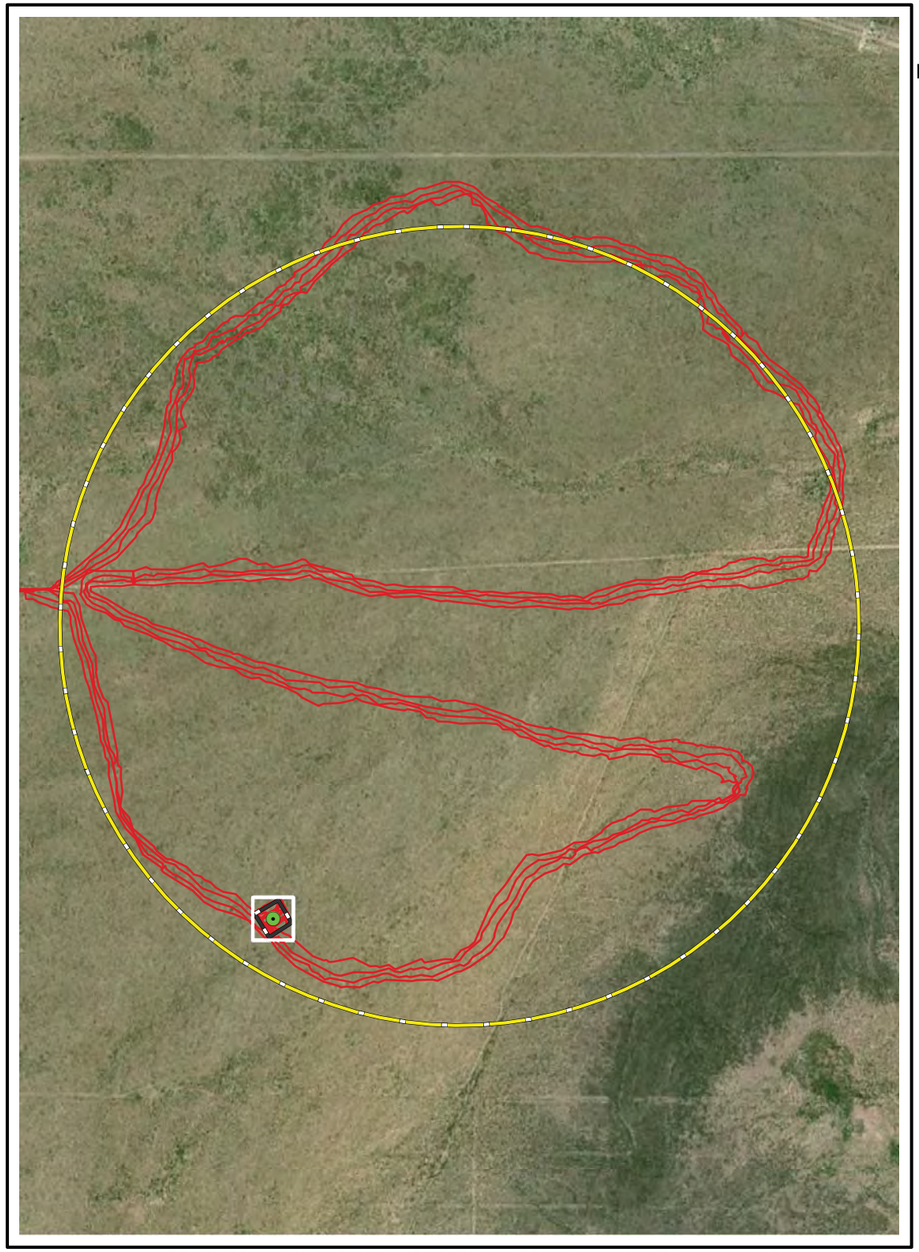
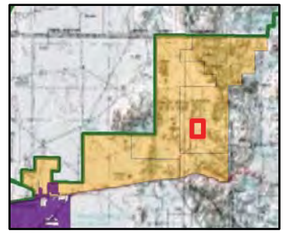


Figure 5-11

Former Maneuver Area
MR Site - Investigative Area 07
Visual Survey Transects and Sample Locations



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 07 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 17.84 Line Miles
- Sample Locations
- Incremental Sampling Unit 0.53 Acres

100 50 0 100
Meters

500 250 0 500
Feet

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Date: March 2011

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Fort Bliss, TX

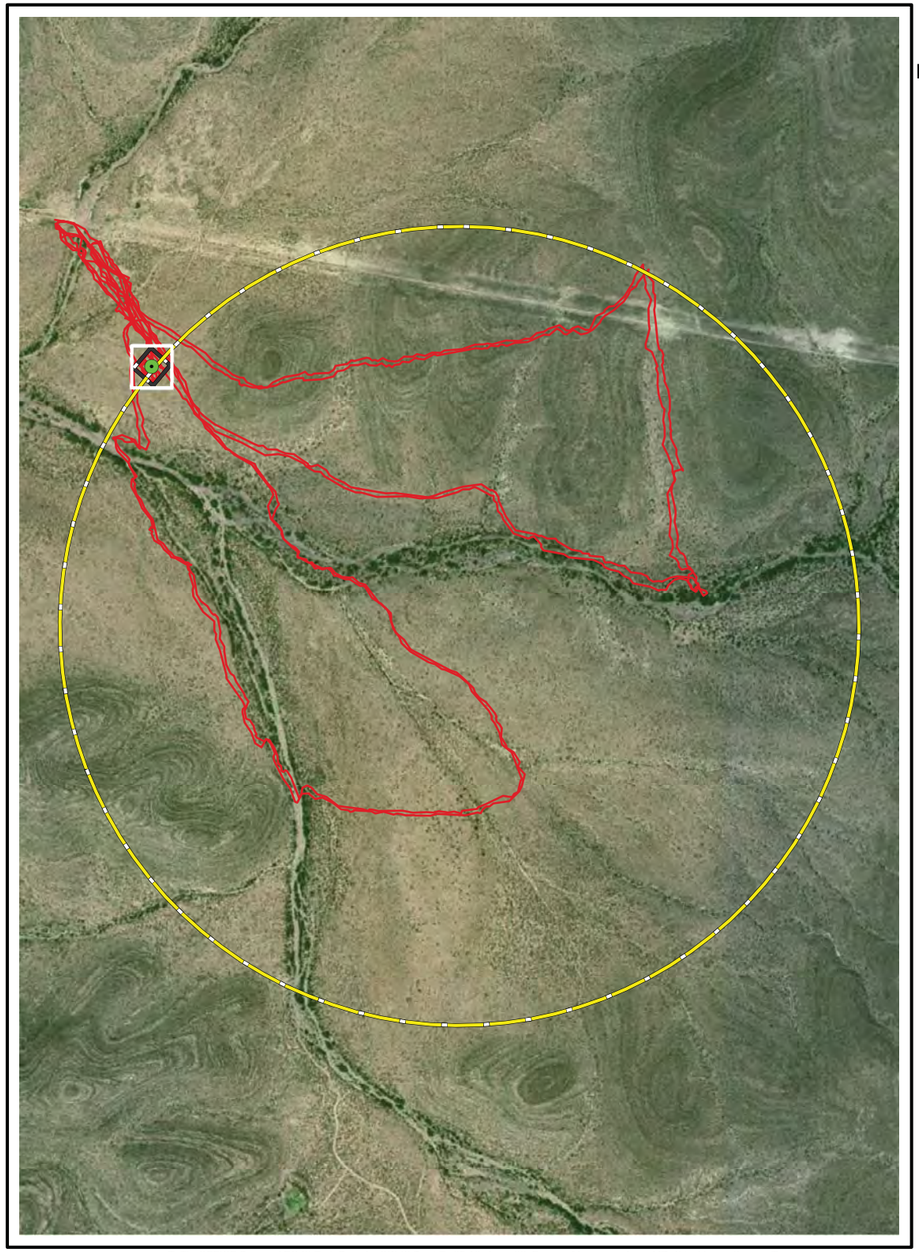

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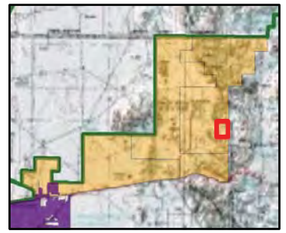
Figure 5-12

Former Maneuver Area
MR Site - Investigative Area 08
Visual Survey Transects and Sample Locations



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 08 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 9.74 Line Miles
- Sample Locations
- Incremental Sampling Unit 0.51 Acres

100 50 0 100
Meters

500 250 0 500
Feet

Aerial:
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Date: March 2011

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Fort Bliss, TX

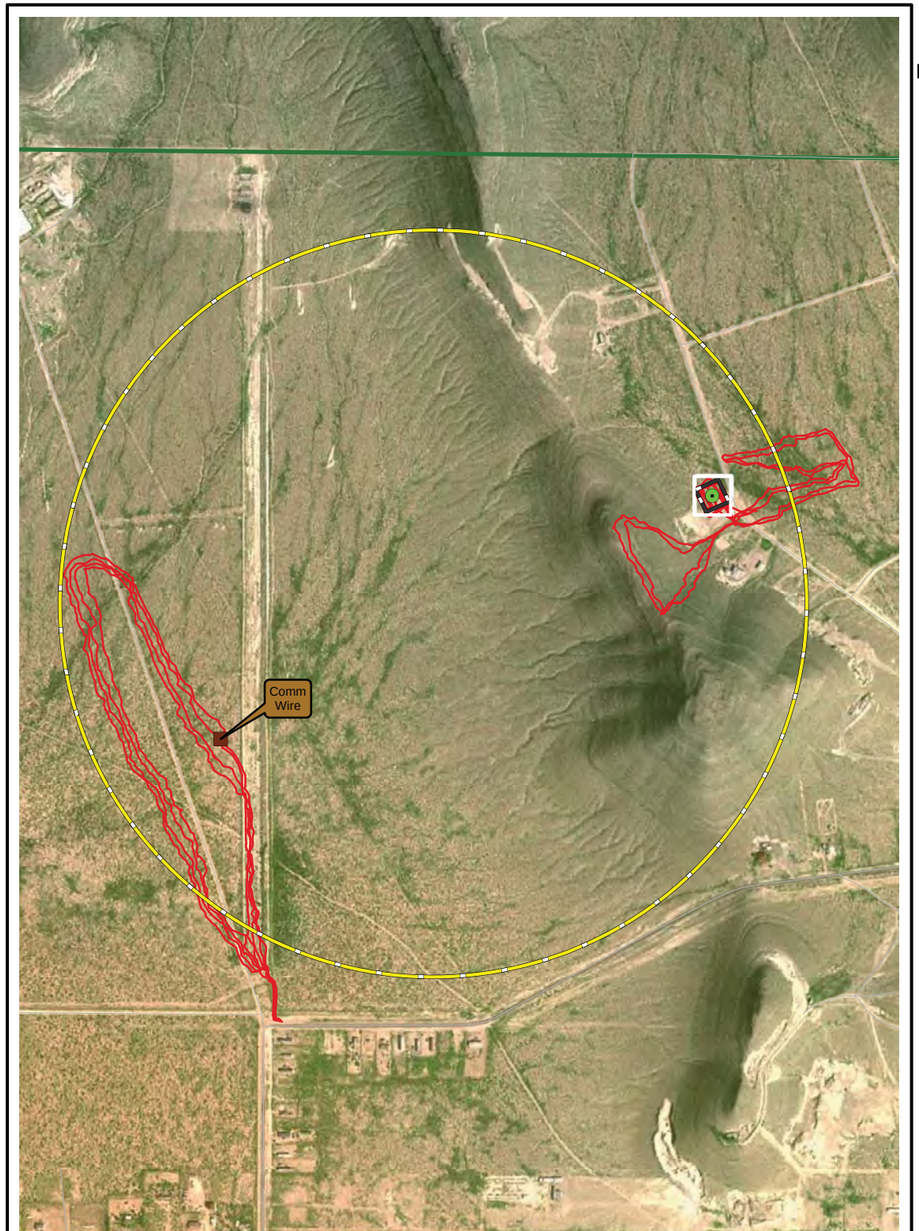
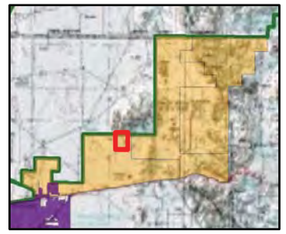


Figure 5-13

Former Maneuver Area
MR Site - Investigative Area 13
Visual Survey Transects and Sample Locations



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 13 366.34 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 8.82 Line Miles
- Sample Locations
- Site Features
- Incremental Sampling Unit 0.51 Acres

100 50 0 100
Meters

500 250 0 500
Feet

Aerial:
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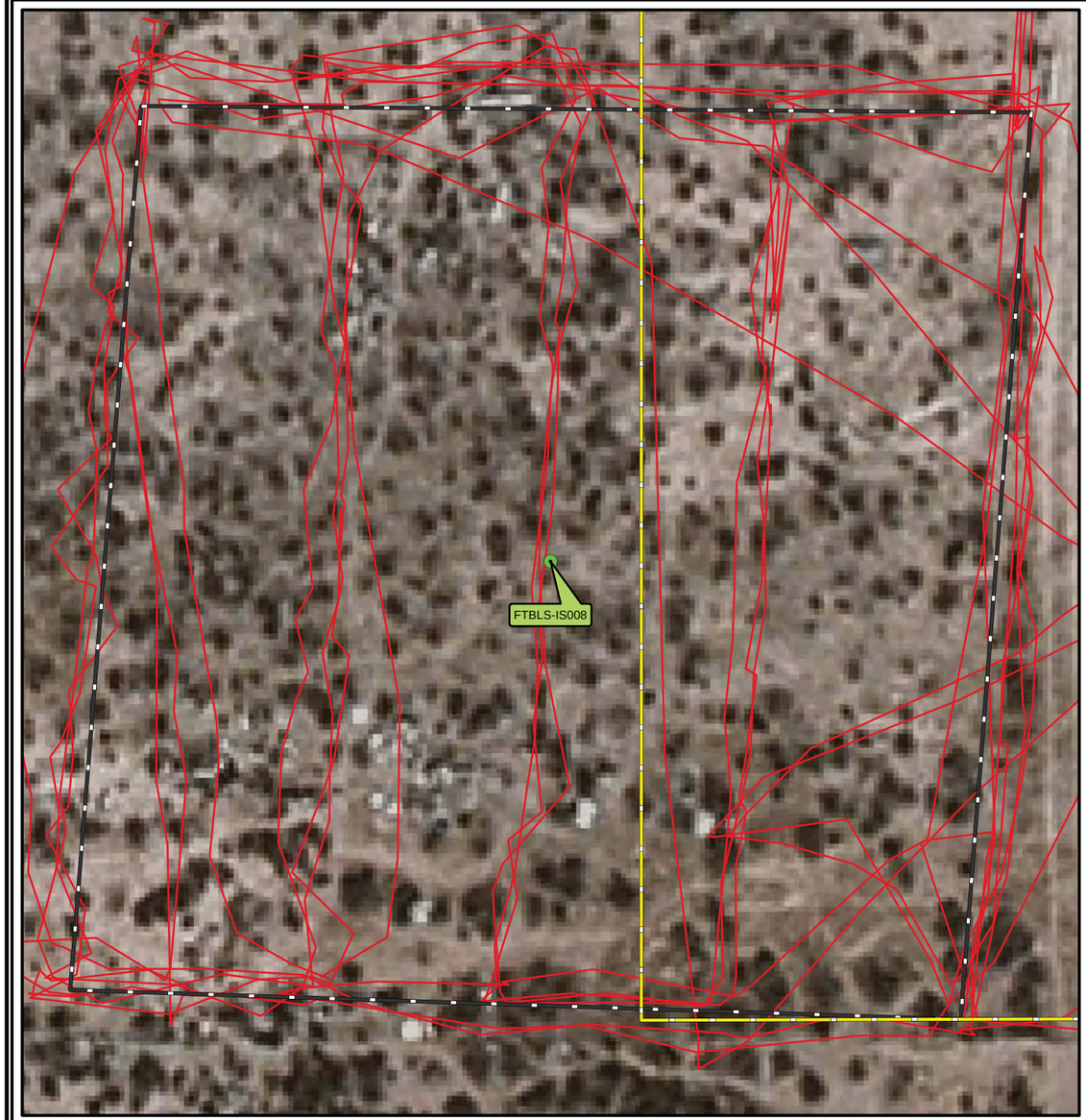

Aerial:
Source: USGS
Date: 2009

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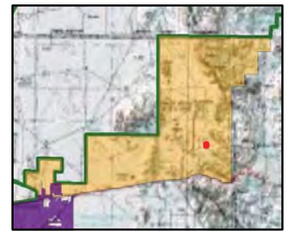
Figure 5-14

Former Maneuver Area
MR Site - Investigative Area 15
Visual Survey Transects and Sample Locations



N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area MR Site
- Investigative Area 15 1.49 Acres
- Hueco Tanks State Historical Park
- Visual Survey Transects 1.68 Line Miles
- Sample Locations
- Incremental Sampling Unit 0.72 Acres

20 10 0 20
Meters

100 50 0 100
Feet

Aerial:
Source: USGS
Date: 2009

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Section 6

6.0 CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) is a description of a site and its environment that is based on existing knowledge. The CSM describes sources of environmental contaminants or MEC hazards at a site, actual or potential pathways, current or proposed use of property, and potential receptors to contaminants or hazards. It will provide a planning tool to integrate site information from a variety of sources, evaluate the information with respect to project objectives and data needs, and respond through an iterative process for further data collection or action. The CSM development should be viewed as a process that reflects the progress of activities at a site from initial assessment through site closeout. Depending on the complexity of the investigation, typical information includes:

- Facility Profile describing all man-made features at or near the site;
- Physical Profile describing factors that may affect release, fate, and transport;
- Land Use and Exposure Profile providing information used to identify and evaluate the applicable exposure scenarios and receptor locations;
- Ecological Profile describing the physical relationship between developed and undeveloped portions of the site, use of the undeveloped portions, and ecological use;
- Release Profile relating the extent of contaminants or hazards in the environment.

One CSM (Table 6-1) was developed for the Former Maneuver Area MR site, which describes the general characteristics of the installation and the specific characteristics of the MR site.

Figures 6-1 and 6-2 present the exposure pathways for receptors to contact MEC at the Former Maneuver Area MR site. Figure 6-3 presents the exposure pathways for receptors to contact MC at the MR site. These figures are provided at the end of Section 6.0 of this report.

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
Facility Profile	**Area and Layout:** • The MR site is located in El Paso County and Hudspeth County, Texas • Fort Bliss and El Paso, Texas, are to the west of the site • The MR site is a transferred range comprised of 72,520.82 acres
	Structures: • Numerous residences, buildings, and road networks are present at the site • Commercial development including a tank farm and gravel quarries is located along Highway 62 (Photograph 6-1) • Buildings and structures associated with Hueco Tanks State Park and Historic Site (Hueco Tanks) are present, including a park office, historic ranch house, residences (two), maintenance facilities, and parking and camping facilities  **Photograph 6-1: Tank Farm Along Highway 62**
	Boundaries: • The MR site is located in the northeast portion of El Paso County, and a very small portion of northwest Hudspeth County, Texas • Bordered to the north by the McGregor Range and to the west by Fort Bliss and the city of El Paso • The Hueco Mountains are located on the eastern portion of the MR site • U.S. Highway 62 (Carlsbad Highway) runs along the southern portion of the MR site
	Utilities: • Electric, water, and sewer in residential areas and Hueco Tanks

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	Security: • None
Physical Profile	**Climate:** • Temperatures can be extreme, ranging from -8ºF to 114ºF, with a daily average of 64ºF, and maximum and minimum daily averages of 76ºF and 51ºF • Average annual precipitation of 8 inches in the valleys and 20 inches in the mountains, occurring mainly during summer months • Days are typically warm, nights are cool, the area is frost-free for an average of 220 days per year
	Geology: • Located in the Basin and Range physiographic province, characterized by isolated, nearly parallel mountain ranges separated by broad flat basins • The Hueco Mountains are comprised of marine limestones from Pennsylvanian and Permian age underlain by Precambrian granites • The valley floor, known as the Hueco Bolson, is comprised of colluvial and alluvial sediment of Quaternary age • Caliche, lake deposits rich in salt and gypsum, and sand and gravel are the dominant sediment types in the basin area  **Photograph 6-2: Transition of Mountain Range to Flat Basin**

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

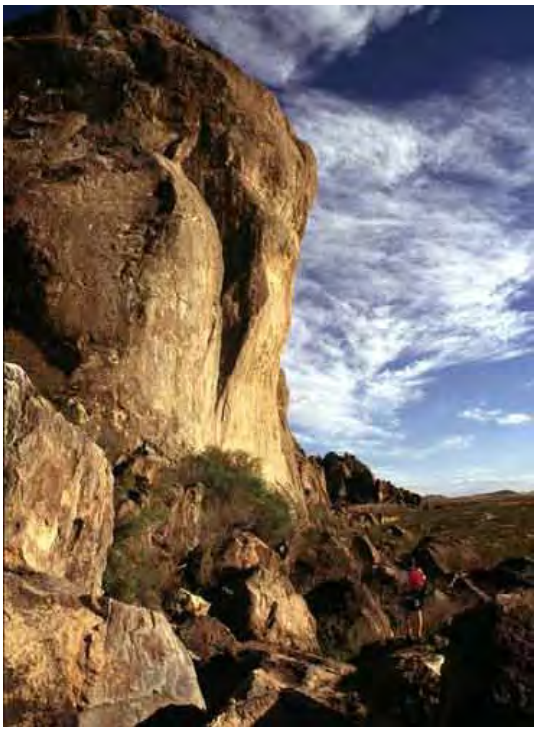
Profile Type	Site Characterization
	Topography: • Ground surface elevations across the site range from approximately 3,900 feet to approximately 6,000 feet above sea level • Hueco Mountains are located on the eastern portion of the site • Hueco Tanks located within MR site, west of Hueco Mountains (Photograph 6-3)  **Photograph 6-3: Topography at Hueco Tanks**
	Soil: • No information was available specific to the MR site; however, based on assessments conducted for nearby areas with similar soils, the following information is provided: o Includes the soil associations/complexes: Pintura-Dona Ana, Wink, Simona, Limestone rock land-Lozier, and Lozier o Generally consist of sandy, silty, gravely loams; and fine sands and silts o Developed from the weathering of gypsum, sandstone, limestone, igneous, and metamorphic rocks o Soils in valleys and basins are shallow to deep, nearly level to very steep, well-drained to excessively drained soils o Soil erosion varies from low to severe across the site

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	Hydrogeology: • Groundwater is obtained from fluvial and lacustrine environments, with fluvial aquifers being the primary source • The Hueco Bolson aquifer is located in this area, and consists of fluvial and lacustrine deposits up to 9,000 feet thick • Groundwater is recharged by precipitation percolating through alluvial deposits near mountain bases
	Hydrology: • No major source of surface water is present • Numerous intermittent streams drain from the Hueco Mountains on the eastern portion of the site into lower lying areas to the west • Numerous additional intermittent streams drain rock outcrops and high elevation areas in various directions around the site • Intermittent streams do not appear to drain to any main stream or river, but rather seep through the permeable soils into groundwater or are lost to evaporation • Rock formations and small depressions, or playas, contain water throughout the site over varying periods of time (Photograph 6-4)  **Photograph 6-4: Watering Hole in Depressed Area**

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	Vegetation: • Habitat in this area is mainly Chihuahuan Desert dominated by honey mesquite coppice dunes and sand scrub in low lying areas, containing plants such as soaptree yucca, four-wing saltbush, broom snakeweed, grasses, various annuals (Photograph 6-5) • Some small areas in these dunes are dominated by grasses and yucca, while other areas contain creosote bush and cactus • Lechugilla, creosote bush, and mariola are the main plants found in steep, rocky habitats in the Hueco Mountains • Sideoats and black gramma grasslands compose vegetation found on gentler slopes  **Photograph 6-5: Vegetation in Hueco Mountains**
	Wetlands: • Wetlands may be present in the form of arroyo-riparian drainages, although these habitats are not common • Small seasonal wetlands are located throughout the rock hills at Hueco Tanks
Land Use and Exposure Profile	**Beneficial Resources:** • Hueco Tanks (camping, hiking, rock climbing, and ecological, cultural and historic resources) • Potable groundwater supplies • Biological resources including rare wildlife and ecosystems

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	Current Land Use: • Residential housing • Light industry and commercial • Cattle grazing • Recreation, education, and wildlife preserve (Hueco Tanks) • Majority of the site is undeveloped
	Current Human Receptors: • Recreational (adult/child) • Residents (adult/child) • Industrial and commercial users • Military and installation personnel • Construction workers • Road and utility maintenance personnel • Ranchers (adult/child)
	Potential Future Land Use: • No anticipated change in land use
	Potential Future Human Receptors: • No anticipated change in human receptors

	Zoning/Land Use Restrictions:
	• According to the El Paso City website the following zoning areas exist in the western portion of the MR site:
	  o C-2 and C-3 – Community Commercial
	  o C-4 – Regional Commercial
	  o R-F – Ranch & Farm
	  o P-R-1 – Planned Residential
	• According to the El Paso County website the eastern portion of El Paso County encompasses rural/residential and rural/agricultural lands

	Demographics: • According to a 2009 census estimate, El Paso County had a population of 751,296 (http://quickfacts.census.gov) • According to a 2006 census estimate, the city of El Paso, Texas has a population of 609,415 (http://quickfacts.census.gov)

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
Ecological Profile	**Habitat Type:** • Mesquite coppice dunes • Mountain habitats • Intermittent streams • Playas and natural water-collecting rock formations • Large variety of unique habitats in the Hueco Tanks area
	Degree of Disturbance: • Possible disturbance from military activity • Disturbance from development of Hueco Tanks State Park and Historic Site facilities • Extensive disturbance in select areas due to construction of roadways, commercial and residential structures, and gravel operations
	Ecological Receptors: • Federal and/or state listed species of concern, threatened, and/or endangered species known to occur and/or to potentially occur within the MR site include: o 9 plants: Sneed pincushion and Sand prickly pear cacti, Alamo beardtongue, Organ Mountain evening primrose, Organ Mountain figwort, Standley whitlowgrass, Night blooming cereus, Hueco Mountains rock daisy, Nodding cliff daisy o 3 reptiles: Texas horned and Mountain short-horned lizards, Texas lyre snake o 16 birds: Interior least and Black terns, Northern aplomado falcon, Southwestern willow flycatcher, Bald eagle, Piping and Mountain plovers, White-faced ibis, Peregrine falcon, Northern goshawk, Ferruginous and Zone-tailed hawks, Mexican spotted and Western burrowing owls, Loggerhead shrike, Baird's sparrow, Costa's hummingbird, Varied bunting, Bell's and Grey vireos o 15 mammals: Small-footed myotis; Long-eared myotis (Photograph 6-6); Eastern small-footed bat; Occult little brown bat (Photograph 6-6); Fringed, Cave, Long-legged, and Yuma myotis; Townsend's pale big-eared bat; Spotted and Big free-tailed bats; Greater western mastiff bat; Gray-footed and Organ Mountain Colorado chipmunks; Black-tailed prairie dog o 2 insects: Anthony blister beetle, Los Olmos tiger beetle

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	 **Photograph 6-6: Long-eared myotis, *Myotis septentrionalis* (left), and Occult little brown bat, *Myotis lucifugus occultuson* (right)** • Hueco Tanks contains a large diversity of species, which include rare plant species • Hueco Tanks and similar rock basin areas host unusual seasonal hatchings of freshwater shrimp; attracting gray fox, bobcat, prairie falcon, golden eagle, lizard, and other predator species (http://www.tpwd.state.tx.us)
	Cultural, Archaeological, and Historical Resources: • Resources present at Hueco Tanks include: o Historic adobe ranch house o Stone ruins o 29 prehistoric archaeological localities include: o Tools and debris from tool making activities o Ceramic sherds and jewelry o Remains of campsites o Small village site o Prehistoric water control system and historic dams o 273 rock panels with approximately 3,000 pictographs (Photograph 6-7)

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	 **Photograph 6-7: Pictograph Rock Panel at Hueco Tanks** • No information was located for potential cultural, archeological, or historical resources for the remainder of the MR site; however, based on input from the installation and Native American Tribal groups, there is a potential for cultural resources to be located throughout the site. o Investigations for a site to the west revealed numerous archeological sites, including pueblos, field houses, pit house villages, isolated pit structures, thermal features, reservoirs, caches, and lithic and ceramic scatters
Munitions Release Profile	**Munitions Types:** • Small arms live rounds: o Springfield (.30-06), M1 (.30 caliber), M2 (.50 caliber), M16 (5.56 mm), M14 (7.62 mm) • Small arms blanks • Pyrotechnics (including smoke grenades and other undetermined types) • Artillery o M2 4.2-inch mortar shells
	Release Mechanisms: • Intentional munitions firing • Simulation of war time activities during maneuver and/or training exercises • Discarded or malfunctioned rounds

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	Maximum Probable Penetration Depth: • The area was utilized as a maneuver and training area; therefore, penetration of the ground surface is not anticipated because firing lines and target areas have not been identified within the majority of the MR site • Although not identified during SI field activities, if firing lines and target areas are present within the MR site, penetration of small arms rounds is anticipated to be limited to the near surface • Pyrotechnics may be present on the surface, but would not be expected to penetrate below the ground surface • Based on the soil type and munitions type, penetration of the mortar shells identified in Investigative Area 4 is not anticipated to exceed 18-24 inches
	MEC Density: • No MEC was observed within the visual survey areas; therefore, MEC density is anticipated to be low throughout the site • Although not anticipated based on SI field activities, if small arms firing lines and target areas are present, MEC density is expected to be low and would only be anticipated at the firing line
	Munitions Debris: • MD was randomly scattered throughout the visual survey areas located in proximity to the installation boundary; therefore, it is anticipated to be scattered throughout all areas along the installation boundary. Other than the 4.2-inch mortar fragments identified in Investigative Area 4, the majority of the MD was related to small arms.

Table 6-1: Conceptual Site Model

Former Maneuver Area MR Site, Fort Bliss

Profile Type	Site Characterization
	Associated Munitions Constituents: • Based on analytical results from samples collected during the SI field activities, no metals identified as MC are present at levels above the screening criteria • Based on analytical results for samples collected during the SI field activities, no explosives were detected in the samples • Detailed information regarding MC associated with munitions used at Former Maneuver Area MR Site is included in the HRR • Potential MC from the M2 4.2-inch mortar shells identified during the SI field activities include iron, manganese, sulfur, phosphorus, copper, lead, zinc, aluminum, magnesium, titanium, chromium, white phosphorus, sulfur-trioxide chlorosulfonic acid solution (FS), 2,4,6-trinitrophenylmethylnitramine (tetryl), NC, NG, diethylphthalate, potassium nitrate, ethyl centralite, barium nitrate, lead styphnate, antimony sulfide, tetrazene
	Transport Mechanisms/Migration Routes: • Precipitation and runoff from heavy summer monsoon storms may cause flash-flooding, accelerating transport and migration of contaminants of concern (COCs) into groundwater • Although it is not anticipated that the majority of the munitions used at the site would penetrate the ground surface during release, there is a potential for MEC and MD to be buried as a result of wind and water erosion • Development associated with commercial and residential properties as well as the Hueco Tanks State Park and Historic Site facilities may have caused soil to be transported offsite or COCS to be disturbed in soil
	Pathway Analysis: • No MEC was observed; however, based on the MD that was observed during visual surveys in portions of the site the pathway for MEC is considered potentially complete (Figure 6-1) • No MEC and no MD were observed during visual surveys throughout a majority of the site; therefore, the pathway for MEC is considered incomplete (Figure 6-2) • No MC was identified at levels over the screening criteria for surface soil samples collected during the SI field activities; therefore, the pathways for human receptors to contact MC is considered incomplete (Figure 6-3)

Figure 6-1: Potentially Complete Exposure Pathways for Receptors to MEC within Portion of the Former Maneuver Area MR Site

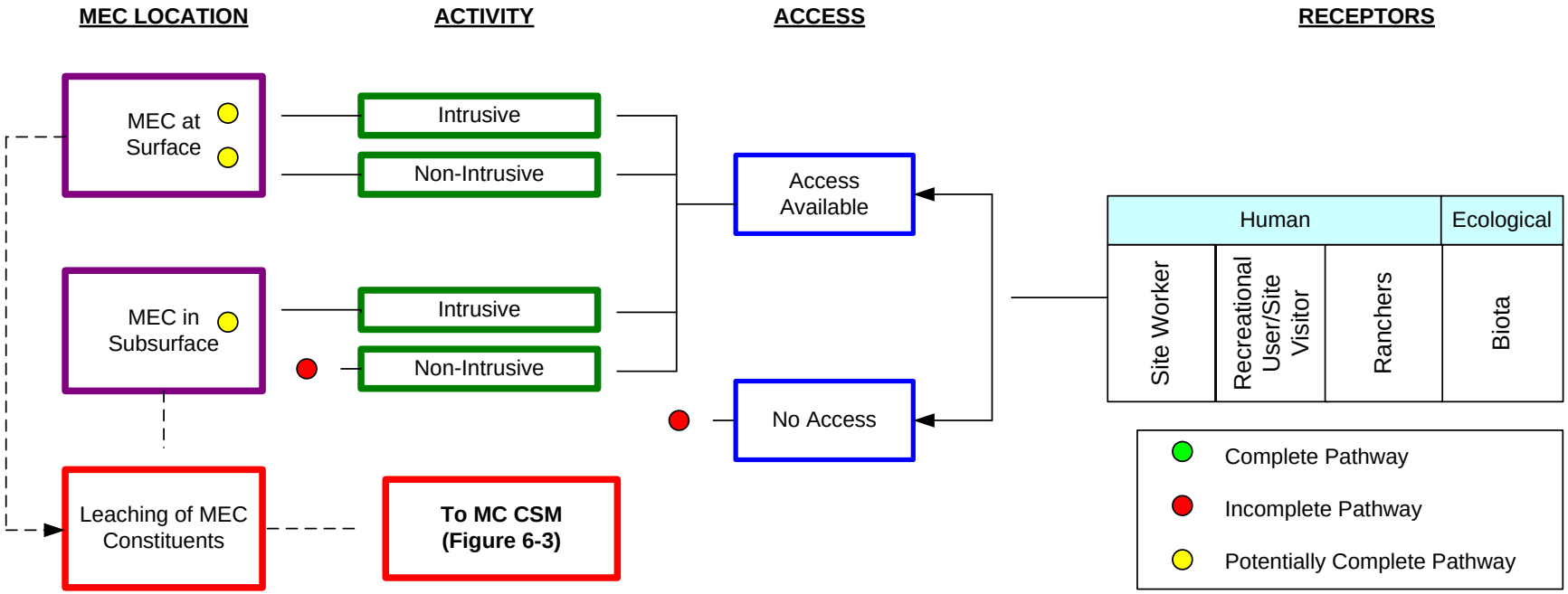


Figure 6-2: Incomplete Exposure Pathways for Receptors to MEC within Portion of the Former Maneuver Area MR Site

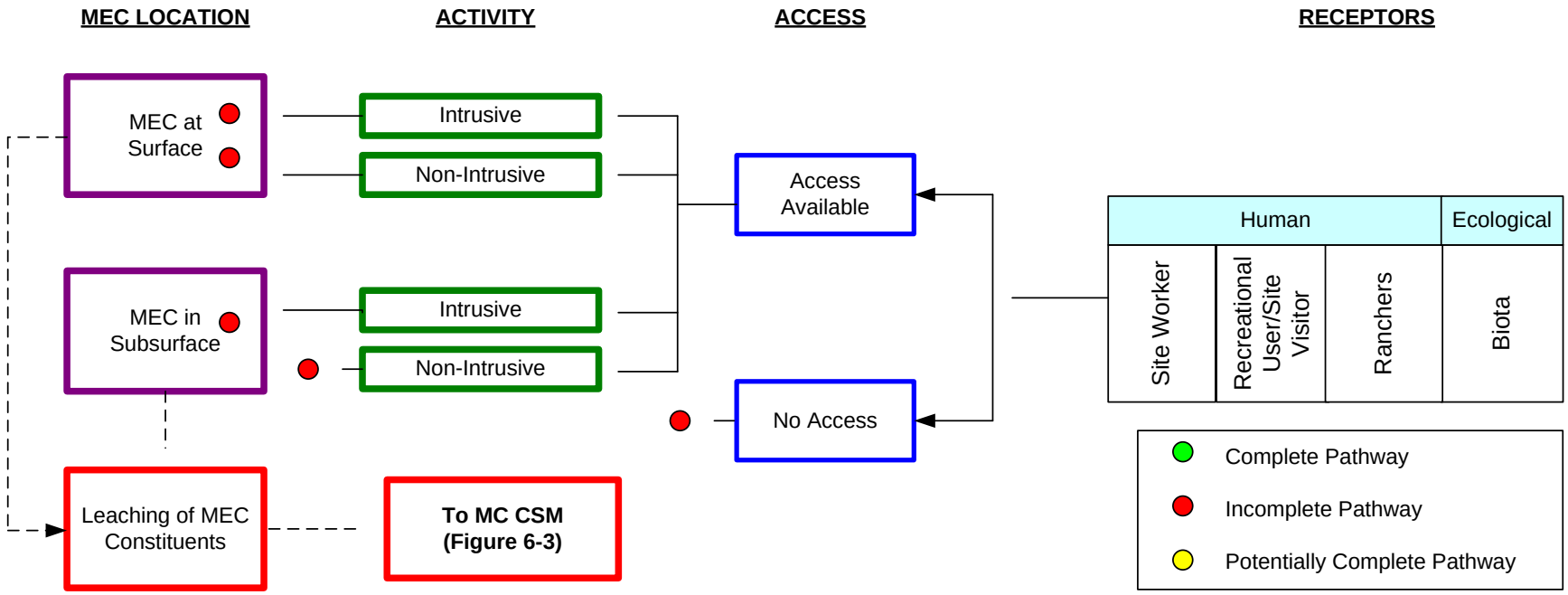
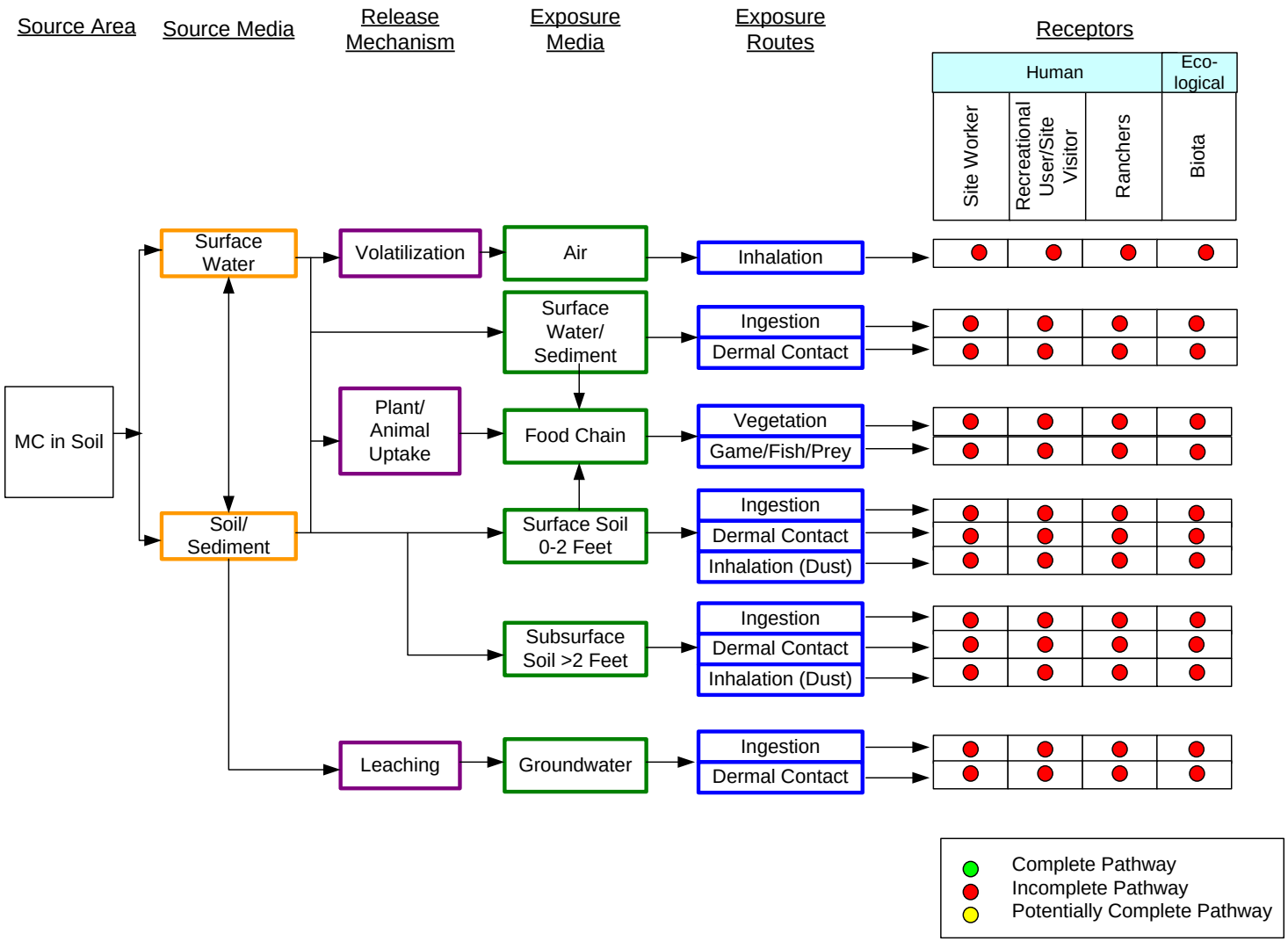


Figure 6-3: Incomplete Exposure Pathways for Receptors to MC at the Former Maneuver Area MR Site



Section 7

7.0 SUMMARY AND CONCLUSIONS

SI field activities were conducted for the Former Maneuver Area MR site associated with Fort Bliss, El Paso, TX from October 4 through October 8, 2010. Activities included visual surveys and surface soil composite and IS. The following conclusions resulted from the SI field activities at the Former Maneuver Area MR site.

All DQOs for this project as outlined in the *Final Site Inspection Work Plan, Fort Bliss, El Paso, Texas*, dated May 2010, were met.

7.1 FORMER MANEUVER AREA (FTBLS-002-R-01)

Based on the historical research conducted during the SI, items that may have been used at the Former Maneuver Area MR site include weapons such as the M1 (.30 caliber), M2 (.50 caliber), M16 (5.56 mm), M14 (7.62 mm), small arms blanks, and pyrotechnics of various unidentified types. According to historical documents, the Former Maneuver Area MR site was to be available for anti-aircraft artillery maneuvers and portions of the MRS were to be utilized as tactical maneuver areas for high-level bombing and strafing missions.

SI field activities conducted at the Former Maneuver Area included a visual survey of the site and the collection of four surface soil composite samples and 16 IS, including two QC samples. It was determined prior to the start of field activities that visual surveys would be conducted within 16 Investigative Areas within the site. Approximately 132.5 line miles of visual surveys were conducted at twelve of the sixteen areas (Areas 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, and 15). The field team was unable to access the remaining four areas (1, 3, 8a, and 12) due to road conditions or locked gates. The results of these activities are summarized below:

- No MEC was identified during the visual survey

- MD identified at the site in Areas 4, 5, 6, 9, 10, 11, and 14 included:
    - Fragments resulting from HE detonations
    - Fragments and fuzes from 4.2-inch mortar shells (Area 4 only)
    - .30-06 blank shell casings
    - 5.56 mm blank shell casings
    - 7.62 mm blank shell casings
    - .30 caliber blank shell casings
    - A fuze from an expended smoke grenade
    - ’03 Springfield Stripper Clips
    - M104 illuminating flare canister lid
    - Machine gun links (.30-06, M60, .30 caliber)
    - Belt starter tabs
    - M14 Rifle Clip
    - M1 Garand Clips

- A live small arms round (.30-06 complete ball cartridge) was identified in Area 11
- Evidence of military activity including a military tent stake, chemical lights, communication wire, and a grounding rod for a generator was identified in Area 14 of the site
- No subsurface anomalies were identified
- Analytical results for metals indicated that all concentrations were below the applicable screening criteria
- No explosive compounds were detected in any of the samples

7.1.1 FUDS MMRP Eligibility

Based on the available historical records, it appears that the majority of the property associated with the Former Maneuver Area MR site was relinquished from use by the Army by 1980. The only exception is a tract of land (Block 79, Township 2, Sections 15, 16, and 21) that was under lease from the State of Texas from 1978 through 1987. Therefore, because the majority of the site was not under control or being used by the Army as of the October 1986, this area is eligible for the FUDS MMRP. However, the tract of land that was leased from the State until the end of 1987 is not eligible for the FUDS MMRP.

Section 8

8.0 RECOMMENDATIONS

The following are the recommendations for the Former Maneuver Area MR site associated with Fort Bliss, El Paso, TX. This information is summarized in Table 8-1 and depicted in Figure 8-1 at the end of this section.

8.1 FORMER MANEUVER AREA (FTBLS-002-R-01)

- **It is recommended that the Former Maneuver Area MR site become a Munitions Response Area (FTBLS-002-R) with two MRSs.**
    - This recommendation is based on the HRR, previous investigations completed at the Former Maneuver Area MR site, and the results of the SI field activities completed within the Former Maneuver Area MR site.
    - The first MRS, Former Maneuver Area A (FTBLS-002-R-01), is an approximately 24,459-acre site encompassing the area adjacent to the installation boundary.
    - The second MRS, Former Maneuver Area B (FTBLS-002-R-02), is an approximately 48,062-acre site that encompasses the remainder of the Former Maneuver Area MRA.

- Based on the identification of a mortar impact area, a firing position, and a fighting position, **the Former Maneuver Area A MR site is recommended for additional investigation for MEC.** Former Maneuver Area A also includes some areas that were unable to be surveyed and have a higher potential of being impacted by military training activities.

- Analytical results for metals indicate that all soil sample concentrations are below the applicable screening criteria and no explosives were detected in the samples collected in the area comprising the Former Maneuver Area A MR site. **Therefore, the Former Maneuver Area A MR site is recommended for NFA for MC.** However, should MEC be identified during the further investigation of the MRS, additional sampling may be warranted.

- Based on a review of the historical information, all property associated with the Former Maneuver Area A MR site was relinquished from use by the Army by 1980 and has been determined to be eligible for FUDS. **Therefore, it is recommended that further investigation of the Former Maneuver Area A MR site be conducted under the FUDS MMRP.**

- No evidence of MEC was identified during the visual survey conducted within the area comprising the Former Maneuver Area B MR site and only small arms debris was observed within this area. **Therefore, the Former Maneuver Area B MR site is recommended for NFA for MEC.**

- Analytical results for metals indicate that all soil sample concentrations are below the applicable screening criteria and no explosives were detected in the samples collected in the area comprising the Former Maneuver Area B MR site. **Therefore, the Former Maneuver Area B MR site is recommended for NFA for MC.**

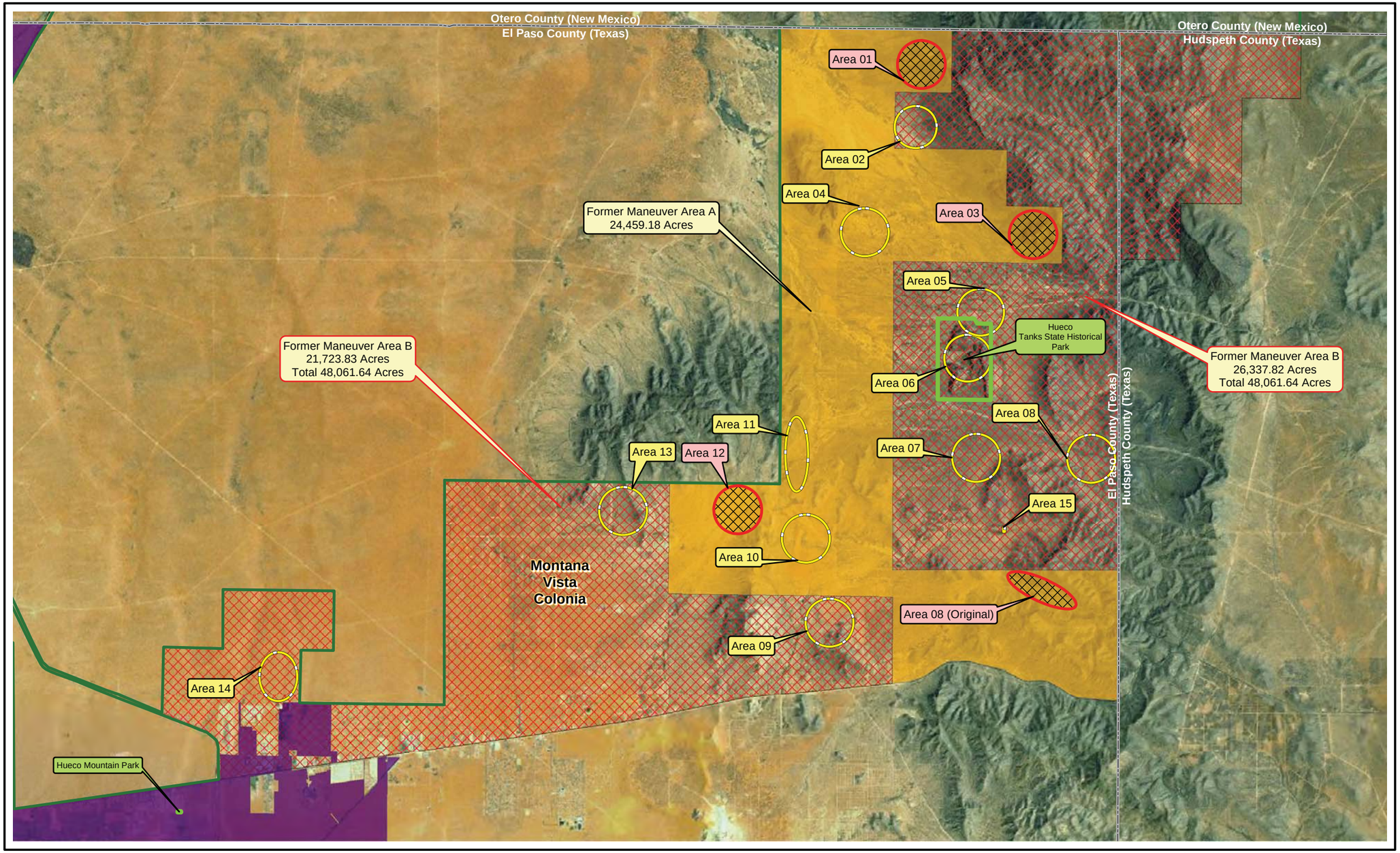
Table 8-1: Former Maneuver Area Site Inspection Recommendations

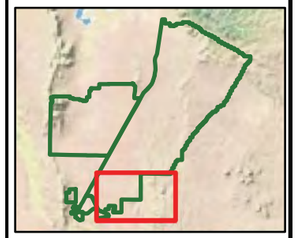
MR Area/Site	Range Inventory Acreage	HRR Acreage	SI Acreage	Recommendation	Basis for Recommendation (MEC)	Basis for Recommendation (MC)
Former Maneuver Area Munitions Response Area (MRA) (FTBLS-002-R)	73,538.6	72, 520.82 Based on the review of the available land acquisition documents and more accurate GIS data, the acreage associated with the MR site was revised.				
Former Maneuver Area A MR site (FTBLS-002-R-01)			24,459.18	Former Maneuver Area A **is recommended for additional investigation for MEC and recommended for NFA for MC.** Based on the historical information that indicates the property associated with the Former Maneuver Area A MR site was relinquished by the Army by 1980, it **is recommended that the site be further investigated under the FUDS MMRP.**	MD was identified during the visual survey at the MR site. Evidence of military activities, including a mortar impact area, firing position, and fighting position, was identified.	Analytical results for metals indicate that all sample concentrations are below applicable screening criteria and no explosive compounds were detected.
Former Maneuver Area B MR site (FTLBS-002-R-02)			48,061.64	Former Maneuver Area B **is recommended for NFA for MEC and MC**.	No MEC was identified during the visual survey. Only small arms MD was observed at the site.	Analytical results for metals indicate that all sample concentrations are below applicable screening criteria and no explosive compounds were detected.

Site Inspection
Fort Bliss, TX

Figure 8-1

Former Maneuver Area MR Site Recommendations





N
W E
S

- Current Installation Boundary
- City of El Paso
- Former Maneuver Area A MR Site
- Former Maneuver Area B MR Site (NFA)

Investigative Areas

- Surveyed
- Not Surveyed

2 1 0 2
Kilometers

1 0.5 0 1
Miles

Aerial:
Source: Copyright:© 2009 ESRI, i-cubed, GeoEye
Date: 2008

Edition: Final Report

Date: March 2011

T:\TL_OFFICE\Denver\AEC\SI\Fort_Bliss\ArcGIS\HRR\FINAL\Fig06-01_Results_of_the_HRR.mxd

Section 9

9.0 REFERENCES

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Appendix A

APPENDIX A

ANALYTICAL DATA

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Note: An electronic copy of the analytical data is provided on the CD in Appendix J.

Appendix B

APPENDIX B

DATA VALIDATION REPORTS

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Data Validation Report
TestAmerica Number: 280-8261-1
Explosives by Method 8330B

REVISED DATA VALIDATION REPORT

Report Date: December 28, 2010
Project/Site: Fort Bliss Inspection
Laboratory No: 280-8261-1
Analyses: Explosives (Nitroaromatics and Nitramines), Method 8330B
[Note: Includes the results for PETN and Nitroglycerin]

This memo presents the organic data validation report for the data obtained during the field activities for the above referenced work assignment. The purpose of this review is to provide a technical validation of the explosive results by SW-846 Method 8330B for Laboratory No. 280-8261-1 from TestAmerica, Denver, CO. This report consists of the validation of twenty (20) soil and sediment samples collected between October 4, 2010 and October 8, 2010. The field sample numbers and corresponding laboratory numbers are presented below:

Field Sample Number	Laboratory Sample Number
FTBLS-SS001	280-8261-6
FTBLS-SS002	280-8261-14
FTBLS-SS003	280-8261-1
FTBLS-SS004	280-8261-2
FTBLS-IS001	280-8261-15
FTBLS-IS002	280-8261-16
FTBLS-IS003	280-8261-17
FTBLS-IS004	280-8261-18
FTBLS-IS005	280-8261-19
FTBLS-IS006	280-8261-20
FTBLS-IS007	280-8261-7
FTBLS-IS008	280-8261-8
FTBLS-IS009	280-8261-9
FTBLS-IS010	280-8261-10
FTBLS-IS011	280-8261-11
FTBLS-IS012	280-8261-12
FTBLS-IS013	280-8261-13
FTBLS-IS014	280-8261-3
FTBLS-IS015	280-8261-4
FTBLS-IS016	280-8261-5

Validation of the explosives analytical data was based on a combination of project-specific Work Plan/QAPP criteria, DoD QSM (DoD 2009), method-specific criteria following USEPA Test Methods for Evaluating Solid Wastes, SW-846, 4th Edition (Fourth update 2007); USEPA Contract Laboratory Program National Functional Guidelines for Evaluating Organics Analyses, October 1999, modified for the method; and subcontract laboratory SOPs.

Validated By: Bill Fear Reviewed By: Lisa Tyson

Full validation (including evaluation of the raw data, analyte quantitation, and data reduction) was performed on samples FTBLS-SS004 and FTBLS-IS010. Cursory validation (QA/QC summary information only) was performed on all remaining samples. The data were evaluated based on the following QA/QC parameters:

Data Completeness
Holding Times and Preservation
Calibrations
Blanks
Surrogate Recoveries
Matrix Spike/Matrix Spike Duplicates
Triplicate Sample Analysis
Field duplicates
Laboratory Control Samples
Compound Identification (full validation only)
Compound Quantitation and Reporting Limits (full validation only)
Overall Assessment

Data Completeness

All data necessary to complete data validation on this data package was provided. The data package was resubmitted by the laboratory on December 16, 2010 to include the results for PETN and Nitroglycerin which were not provided in the initial data package submitted on October 29, 2010. This data validation report was revised to incorporate the PETN and Nitroglycerin data.

Holding Times and Preservation

Analytical holding times were assessed to determine whether the holding time requirements were met by the laboratory. The soil samples were extracted within 14 days of sample collection and the extracts were analyzed within 40 days of extraction. The samples were received at the laboratory in good condition and within the recommended temperature range of 4 ± 2 °C or just below 2 °C, but not frozen.

Calibrations

The instruments were calibrated at the required frequency. No calculation errors or transcription errors were found.

Initial Calibration

The percent relative standard deviations (%RSDs) for all target compounds in the initial calibration were less than or equal to 20% or the correlation coefficients were greater than 0.990.

C*ontinuing Calibration*

The percent differences (%Ds) or percent drifts for the target compounds in the continuing calibrations were less than or equal to the method limit of 20% with the exception noted below.

The %D for 2-amino-4,6-dinitrotoluene at 26.4% exceeded 20% in the October 23, 2010 (0026) continuing calibration standard. As a result of the elevated %D, the following non-detected results were qualified as estimated (UJ):

- 2-Amino-4,6-dinitrotoluene in samples FTBLS-IS014, FTBLS-IS015, FTBLS-IS016, FTBLS-IS008, FTBLS-IS009, and FTBLS-IS010

Blanks

The method blanks were extracted and analyzed at the required frequency. No contamination was found in the associated method blanks. Summary forms and raw data were evaluated.

Surrogate Recoveries

The surrogate compound 1,2-dinitobenzene was added to the samples and QC samples. Surrogate recoveries evaluate the effects of the individual sample matrices on analytical efficiency. All surrogate percent recoveries were within the laboratory QC limits (83-122%). Surrogate recoveries were verified from the raw data for the full validation sample.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicates (MS/MSD) analyses were performed on samples FTBLS-SS001, FTBLS-IS001, and FTBLS-IS005. All MS/MSD results were acceptable as the recoveries were within the laboratory QC limits and the relative percent differences (RPDs) were less than 30%. No calculation errors or transcription errors were found.

Triplicate Sample Analysis

A triplicate sample analysis was performed on samples FTBLS-SS004, FTBLS-IS010, and FTBLS-IS012 to evaluate for method precision. Precision was demonstrated as all samples analyses reported non-detected results.

Field Duplicates

Two field duplicate pairs (samples FTBLS-SS003 / FTBLS-SS004 and samples FTBLS-IS001 / FTBLS-IS012) were collected with these samples to assess for both analytical and sampling precision. All field duplicate results were acceptable because all explosive results were not detected in these samples.

Laboratory Control Samples

The percent recoveries for the laboratory control sample analyses were within laboratory QC limits with the exception noted below. No calculation errors or transcription errors were found.

The recovery for PETN in the LCS SRM (Certified Reference Material analysis) at 292% exceeded the QC limits of 60-115%. However, no action was required for the elevated recovery as PETN was not detected in the associated samples. All recoveries from the associated LCS were within QC limits

Compound Identification (Full Validation Only)

Compound identification was evaluated for samples FTBLS-SS004 and FTBLS-IS010. No problems were found. All explosive results were non-detects.

Compound Quantitation and Reporting Limits (Full Validation Only)

Compound quantitation and reporting limits were evaluated for samples FTBLS-SS004 and FTBLS-IS010. The sample results were verified from the raw data for these two samples. The reporting limits were correctly calculated and reported.

Overall Assessment

Based on the previous assessment of the analytical results, the data are usable as qualified. The non-detected results for 2-amino-4,6-dinitrotoluene in six samples were qualified as estimated due to exceeded calibration criteria, resulting in a 98% date completeness. No data were rejected, resulting in a 100% usability.

The data were considered representative as all samples were received properly preserved, in good condition, and were analyzed within the specified holding times. The data is considered comparable as the samples were analyzed according to SW-846 Method 8330B requirements and standard analytical protocols. Accuracy was evaluated based on the calibration, surrogate recoveries, matrix spikes, and LCS data. Precision was evaluated by the MS/MSD RPDs, triplicate anlaysis %RSDs, and field duplicate analyses.

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality.

U - The analyte was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

J - The positive or detected result is an estimated quantity. The associated numerical value is the appropriate concentration of the analyte in the sample.

J + - The result is an estimated quantity, but the result may be biased high.

J - - The result is an estimated quantity, but the result may be biased low.

U J - The analyte was analyzed for, but was not detected above the level of the associated value. (The associated value is either the sample quantitation limit or the sample detection limit.) The reported value is approximate and maybe inaccurate or imprecise.

N - The analysis indicates that there is presumptive evidence to make a tentatively identification of an analyte.

N J - The analysis indicates that there is presumptive evidence to make a tentatively identification of an analyte and the associated numerical value represents an approximate concentration.

R - The data is unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meeting Quality Control criteria. The analyte may or may not be present in the sample.

NR - Result was not used from a particular sample analysis. This typically occurs when more than one result for an element is reported due to dilutions and reanalyses.

Data Validation Report
TestAmerica Number: 280-8621-1
Metals by Method 6010C

DATA VALIDATION REPORT

Report Date: November 5, 2010
Project/Site: Fort Bliss Inspection
Laboratory No: 280-8261-1
Analyses: Metals by Method 6010C
(barium, copper, magnesium, lead, antimony, potassium, and zinc)

This memo presents the metals data validation report for the data obtained during the field activities for the above referenced work assignment. The purpose of this review is to provide a technical validation of the metals results by SW-846 Methods 6010C for Laboratory No. 280-8261-1 from TestAmerica, Denver, CO. This report consists of the validation of twenty (20) soil and sediment samples collected between October 4, 2010 and October 8, 2010. The field sample numbers and corresponding laboratory numbers are presented below:

Field Sample Number	Laboratory Sample Number
FTBLS-SS001	280-8261-6
FTBLS-SS002	280-8261-14
FTBLS-SS003	280-8261-1
FTBLS-SS004	280-8261-2
FTBLS-IS001	280-8261-15
FTBLS-IS002	280-8261-16
FTBLS-IS003	280-8261-17
FTBLS-IS004	280-8261-18
FTBLS-IS005	280-8261-19
FTBLS-IS006	280-8261-20
FTBLS-IS007	280-8261-7
FTBLS-IS008	280-8261-8
FTBLS-IS009	280-8261-9
FTBLS-IS010	280-8261-10
FTBLS-IS011	280-8261-11
FTBLS-IS012	280-8261-12
FTBLS-IS013	280-8261-13
FTBLS-IS014	280-8261-3
FTBLS-IS015	280-8261-4
FTBLS-IS016	280-8261-5

Validated By: Bill Fear Reviewed By: Lisa Tyson

Data validation was conducted in accordance with the documents "Test Methods for Evaluating Solid Wastes, SW-846, 3rd Edition," (Third update 1996), and the USEPA CLP National Functional Guidelines for Inorganic Data Review, October 2004, modified for the method.

Full validation (including evaluation of the raw data, analyte quantitation, and data reduction) was performed on the samples FTBLS-SS004 and FTBLS-IS010. Cursory validation (QA/QC summary information only) was performed on all remaining samples. The data were evaluated based on the following QA/QC parameters:

Data Package Completeness
Holding Times and Preservation
Calibrations
Blanks
Interference Check Samples
Matrix Spike/Matrix Spike Duplicates
Duplicate Sample Analysis
Field duplicates
Laboratory Control Samples
Serial Dilution for ICP Analysis
Analyte Quantitation and Reporting Limits (full validation only)
Overall Assessment

Data Package Completeness

All data necessary to complete the data validation was provided.

Holding Times and Preservation

Analytical holding times were assessed to determine whether the holding time requirements were met by the laboratory. The samples were analyzed within 180 days of collection for these metals. The samples were received at the laboratory in good condition and within the recommended temperature range of 4 ± 2 °C or just below 2 °C, but not frozen.

Calibrations

The instruments were calibrated at the required frequency. Continuing calibrations (both a mid-level and a low-level CCV) were analyzed every ten samples to verify the instrument calibration throughout the analytical sequence. Summary forms and raw data were evaluated. The reporting limit check standard (CRI) recoveries were within QC limits.

Initial Calibration Verification

The percent recoveries were within the QC limits of 90-110% for the mid-level standard and within 70-130% for the low-level standard.

Continuing Calibration Verification

The percent recoveries were within the QC limits of 90-110% for the mid-level standards and within 70-130% for the low-level standards.

Blanks

The method blanks and calibration blanks were analyzed at the required frequency. Barium, antimony, and magnesium were detected in the laboratory blanks; however, no qualification was required because these analytes were either not detected in the associated samples or the associated sample concentrations were greater than the limit of quantitation or five times the blank value.

Interference Check Samples

All interference check sample percent recoveries were within 80-120%. No calculation errors were found.

Copper and lead were flagged "Q" by the laboratory to indicate an ICSA check sample problem. The laboratory indicated that copper and lead were detected in the ICSA at concentrations greater than the limit of detection. These analytes are believed to be present in the ICSA solution and no interference is noted. Results are acceptable and no data validation qualifiers were added.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicates (MS/MSD) analyses were performed on sample FTBLS-SS003. A post digestion spike analysis was also performed on sample FTBLS-SS003 and on samples FTBLS-IS014 and FTBLS-IS007. According to the laboratory, a pre-digestion MS/MSD was not prepared and analyzed on the Multi-Incremental Sampling (MIS) collection samples because a MS/MSD sample was not specified on the chain-of-custody. All MS/MSD results were within the QC limits of 75-125% or the unspiked sample amount was greater than four times the spike value with the exception noted below.

The MS/MSD recoveries for antimony (55%/57%) were less than 75%, but greater than 30% and the post digestion spike for antimony at 98% was greater than 75% for sample FTBLS-SS003. As a result of the low recoveries, the following non-detected results were qualified as estimated (UJ):

- Antinomy in samples FTBLS-SS001, FTBLS-SS002, FTBLS-SS003, and FTBLS-SS004

The post digestion spike recoveries for samples FTBLS-IS014 and FTBLS-IS007 were within the QC limits of 75-125% or the unspiked sample amount was greater than four times the spike value. The laboratory flagged the post spike recovery for barium for sample FTBLS-IS014 as not meeting QC limits. However, the parent sample concentration was greater than four times the spike value and no qualification was required.

Duplicate Sample Analysis

Matrix spike duplicate and laboratory control sample duplicate analyses rather than a sample duplicate were analyzed. The MS/MSD and LCS/LCSD relative percent differences (RPDs) were less than 20%.

Field Duplicates

Two field duplicate pairs (samples FTBLS-SS003 / FTBLS-SS004 and samples FTBLS-IS001 / FTBLS-IS012) were collected with these samples to assess for both analytical and sampling precision. All field duplicate results were acceptable.

The following is a summary of the field duplicate results:

Analyte	Sample Results (mg/Kg) FTBLS-SS003	Field Duplicate Results (mg/Kg) FTBLS-SS004	RPD
Barium	76	68	11%
Copper	6.4	5.5	15%
Lead	6.7	6.0	11%
Magnesium	2900	2600	11%
Potassium	2000	1700	16%
Zinc	29	27	7%
Analyte	**Sample Results (mg/Kg) FTBLS-SS001**	**Field Duplicate Results (mg/Kg) FTBLS-SS012**	**RPD**
Barium	40	43	7%
Copper	5.2	5.2	0%
Lead	7.1	7.1	0%
Magnesium	1600	1500	6%
Potassium	1600	1600	0%
Zinc	19	19	0%

Laboratory Control Samples

The laboratory analyzed a laboratory control sample for the metals. A laboratory control sample duplicate was also prepared and analyzed with the MIS samples in order to evaluate for method precision. All recoveries were within the laboratory QC limits of 80-120%. No calculation errors or transcription errors were found.

Serial Dilution Analysis

The laboratory performed the serial dilution analysis on samples FTBLS-SS003, FTBLS-IS014, and FTBLS-IS007 for the ICP metals. The serial dilution percent differences (%Ds) were less than 10% or the original sample results were less than 50 times the method detection limit (MDLs) with the exception noted below. No calculation errors or transcription errors were found.

The serial dilution %D for zinc at 11% exceeded 10% and the original sample result was greater than 50 times the MDL for sample FTBLS-SS003. As a result of the elevated %D, the following associated results were qualified as estimated (J):

- Zinc in samples FTBLS-SS001, FTBLS-SS002, FTBLS-SS003, and FTBLS-SS004

The serial dilution %Ds for barium, magnesium, potassium, and zinc exceeded 10% and the original sample results were greater than 50 times the MDLs for samples FTBLS-IS014 and FTBLS-IS007. As a result of the elevated %Ds, the following associated results were qualified as estimated (J):

- Barium, magnesium, potassium, and zinc in samples FTBLS-IS001, FTBLS-IS002, FTBLS-IS003, FTBLS-IS004, FTBLS-IS005, FTBLS-IS006, FTBLS-IS007, FTBLS-IS008, FTBLS-IS009, FTBLS-IS010, FTBLS-IS011, FTBLS-IS012, FTBLS-IS013, FTBLS-IS014, FTBLS-IS015, and FTBLS-IS016

Analyte Quantitation and Reporting Limits (Full Validation Only)

Analyte quantitation and reporting limits were evaluated for FTBLS-SS004 and FTBLS-IS010. The sample concentrations were verified from the raw data for these samples. The results and reporting limits were correctly calculated and reported and adjusted for sample size and percent moisture. [Note: The MIS samples were air dried prior to preparation and analysis and did not require dry weight corrections.] All results were within the linear ranges and no dilutions or reanalyses were required.

Overall Assessment

Based on the previous assessment of the analytical results, the data were acceptable as qualified. Four non-detected results for antimony were qualified as estimated due to low MS/MSD recoveries and 68 results were qualified as estimated due to exceeded serial dilution %Ds which results in an analytical completeness of 49%. No data were rejected resulting in 100% usability for the metals results.

The data were considered representative as all samples were received in good condition and were analyzed within the specified holding times. The data is considered comparable as the samples were analyzed according to SW-846 Method 6010C requirements and standard analytical protocols. Accuracy was evaluated based on the calibration, matrix spikes, post digestion spikes, and LCS data. Precision was demonstrated by the MS/MSD and LCS/LCSD RPDs, field duplicates, and serial dilutions analyses.

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality.

U - The analyte was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

J - The positive or detected result is an estimated quantity. The associated numerical value is the appropriate concentration of the analyte in the sample.

J + - The result is an estimated quantity, but the result may be biased high.

J - - The result is an estimated quantity, but the result may be biased low.

U J - The analyte was analyzed for, but was not detected above the level of the associated value. (The associated value is either the sample quantitation limit or the sample detection limit.) The reported value is approximate and maybe inaccurate or imprecise.

N - The analysis indicates that there is presumptive evidence to make a tentatively identification of an analyte.

N J - The analysis indicates that there is presumptive evidence to make a tentatively identification of an analyte and the associated numerical value represents an approximate concentration.

R - The data is unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meeting Quality Control criteria. The analyte may or may not be present in the sample.

NR - Result was not used from a particular sample analysis. This typically occurs when more than one result for an element is reported due to dilutions and reanalyses.

Appendix C

APPENDIX C

PHOTOGRAPHIC LOG

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Photograph No. 1	Date: 10/4/2010	Time: 11:38
Site: Former Maneuver Area – Area 9		
Description: Facing east – vegetation along hillside		

Photograph No. 2	Date: 10/4/2010	Time: 11:38
Site: Former Maneuver Area – Area 9		
Description: Facing northwest – general site conditions and vegetation		

Photograph No. 3	Date: 10/4/2010	Time: 11:42
Site: Former Maneuver Area – Area 9		
Description: Facing southeast – members of field team performing visual survey on eastern edge of Area 9. Note vegetation.		

Photograph No. 4	Date: 10/4/2010	Time: 11:49
Site: Former Maneuver Area – Area 9		
Description: Desert Tortoise		

Photograph No. 5	Date: 10/4/2010	Time: 12:01
Site: Former Maneuver Area – Area 9		
Description: '03 Springfield Stripper Clip		

Photograph No. 6	Date: 10/4/2010	Time: 12:01
Site: Former Maneuver Area – Area 9		
Description: '03 Springfield Stripper Clip		

Photograph No. 7	Date: 10/4/2010	Time: 12:36
Site: Former Maneuver Area – Area 9		
Description: Facing west – field team member performing visual survey transect. Note steep, rocky terrain.		

Photograph No. 8	Date: 10/4/2010	Time: 12:36
Site: Former Maneuver Area – Area 9		
Description: Facing east – steep, rocky hillside from middle of hill		

Photograph No. 9	Date: 10/4/2010	Time: 12:39
Site: Former Maneuver Area – Area 9		
Description: Facing south – field team traversing hill		

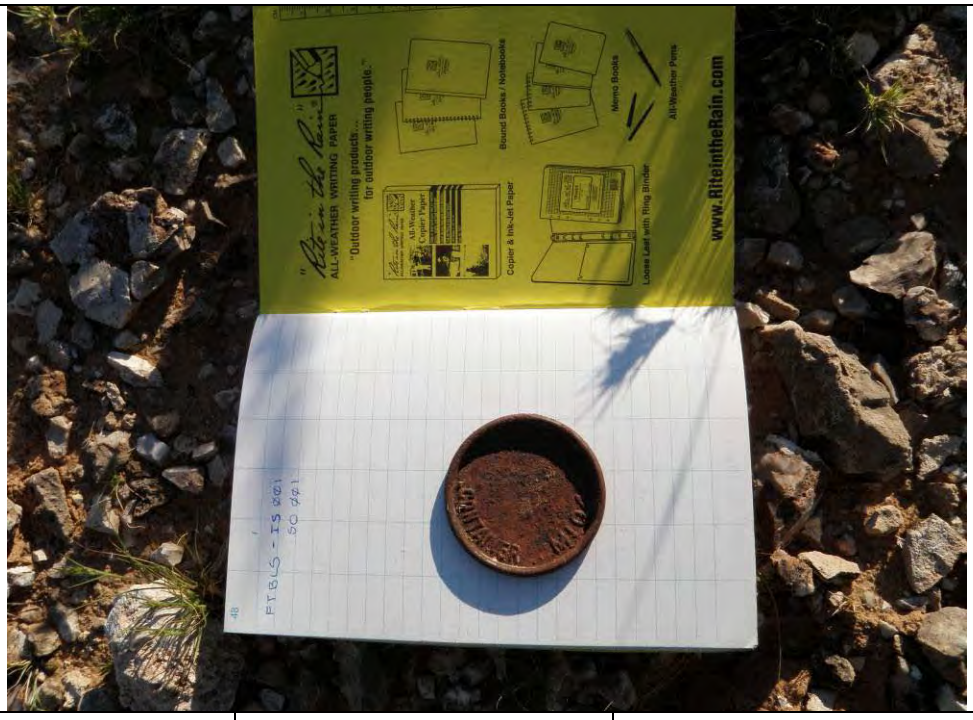
Photograph No. 10	Date: 10/4/2010	Time: 14:27
Site: Former Maneuver Area – Area 9		
Description: Cattle in Area 9		

Photograph No. 11	Date: 10/4/2010	Time: 14:28
Site: Former Maneuver Area – Area 9		
Description: Facing west – southern portion of Area 9		

Photograph No. 12	Date: 10/4/2010	Time: 16:06
Site: Former Maneuver Area – Area 9		
Description: Facing north – incremental sampling unit for sample FTBLS-IS001 from the SW corner		

Photograph No. 13	Date: 10/4/2010	Time: 16:09
Site: Former Maneuver Area – Area 9		
Description: Facing north – incremental sampling unit from middle of west end		

Photograph No. 14	Date: 10/4/2010	Time: 17:02
Site: Former Maneuver Area – Area 10		
Description: Watering hole in eastern portion of Area 10		



Photograph No. 15	Date: 10/4/2010	Time: 17:25
Site: Former Maneuver Area – Area 10		
Description: M104 illuminating flare canister lid		

Photograph No. 16	Date: 10/4/2010	Time: 17:25
Site: Former Maneuver Area – Area 10		
Description: M104 illuminating flare canister lid		

Photograph No. 17	Date: 10/4/2010	Time: 17:25
Site: Former Maneuver Area – Area 10		
Description: M104 illuminating flare canister lid		

Photograph No. 18	Date: 10/4/2010	Time: 17:26
Site: Former Maneuver Area – Area 10		
Description: .30-caliber blank shell casing		

Photograph No. 19	Date: 10/4/2010	Time: 17:26
Site: Former Maneuver Area – Area 10		
Description: .30-caliber blank shell casing		

Photograph No. 20	Date: 10/4/2010	Time: 17:45
Site: Former Maneuver Area – Area 10		
Description: Facing west – view of Area 10 from location where munitions debris was identified		

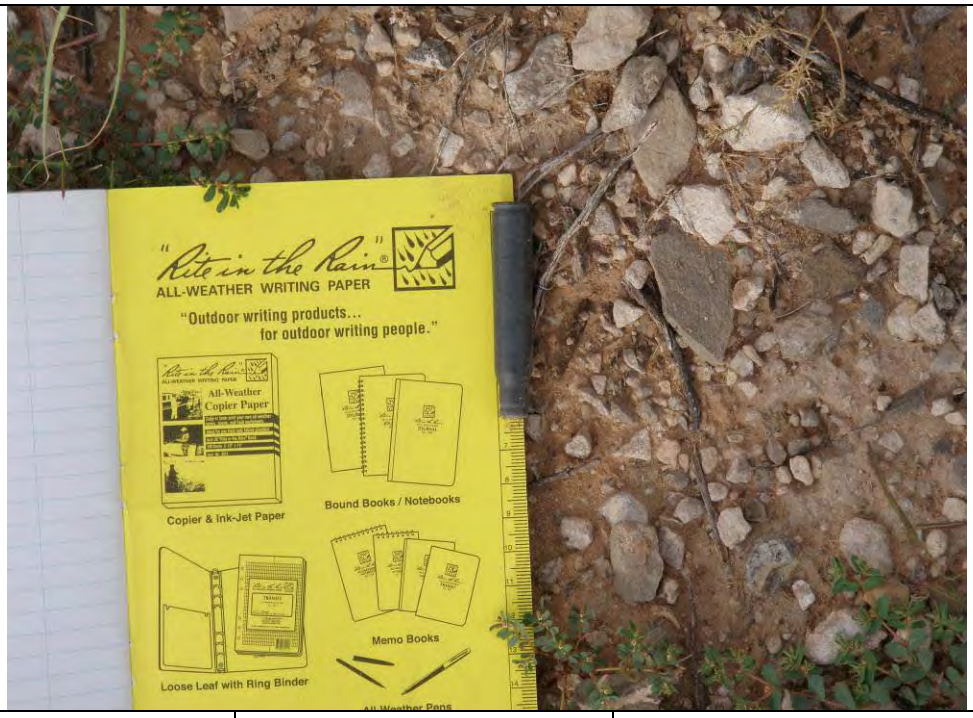
Photograph No. 21	Date: 10/4/2010	Time: 17:52
Site: Former Maneuver Area – Area 10		
Description: M1 Garand Clip		

Photograph No. 22	Date: 10/4/2010	Time: 18:16
Site: Former Maneuver Area – Area 10		
Description: Facing west – flags marking southern boundary of incremental sampling unit for sample FTBLS-IS002		

Photograph No. 23	Date: 10/4/2010	Time: 18:17
Site: Former Maneuver Area – Area 10		
Description: Facing north – incremental sampling unit for sample FTBLS-IS002		

Photograph No. 24	Date: 10/5/2010	Time: 08:33
Site: Former Maneuver Area – Area 11		
Description: Facing southwest – general site conditions		

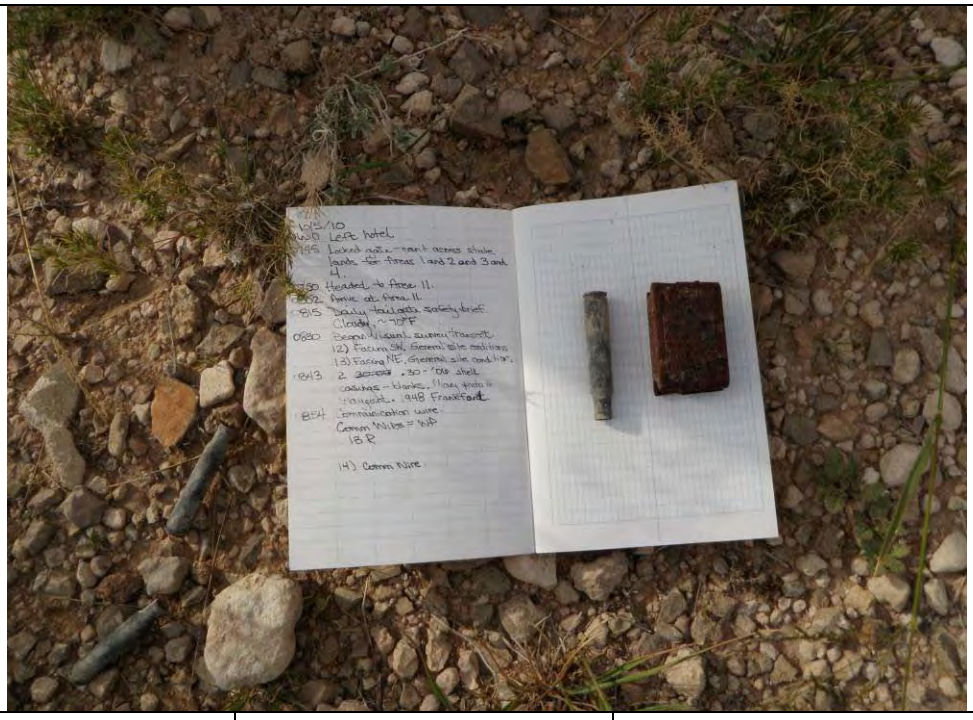
Photograph No. 25	Date: 10/5/2010	Time: 08:33
Site: Former Maneuver Area – Area 11		
Description: Facing northeast – general site conditions		



Photograph No. 26	Date: 10/5/2010	Time: 08:44
Site: Former Maneuver Area – Area 11		
Description: FA 48 .30-06 blank shell casing		

Photograph No. 27	Date: 10/5/2010	Time: 08:44
Site: Former Maneuver Area – Area 11		
Description: 1948 FA .30-06 blank shell casing		

Photograph No. 28	Date: 10/5/2010	Time: 08:54
Site: Former Maneuver Area – Area 11		
Description: Communication wire identified in Area 11		



Photograph No. 29	Date: 10/5/2010	Time: 09:02
Site: Former Maneuver Area – Area 11		
Description: M1 Garand clip and .30-06 shell casings		

Photograph No. 30	Date: 10/5/2010	Time: 09:02
Site: Former Maneuver Area – Area 11		
Description: .30-caliber Browning machine gun link		

Photograph No. 31	Date: 10/5/2010	Time: 09:03
Site: Former Maneuver Area – Area 11		
Description: .30-caliber Browning machine gun link		

Photograph No. 32	Date: 10/5/2010	Time: 09:03
Site: Former Maneuver Area – Area 11		
Description: M1 Garand clip and .30-06 shell casings		

Photograph No. 33	Date: 10/5/2010	Time: 09:45
Site: Former Maneuver Area – Area 11		
Description: Facing south – incremental sampling unit for sample FTBLS-IS003 from center of unit		

Photograph No. 34	Date: 10/5/2010	Time: 09:47
Site: Former Maneuver Area – Area 11		
Description: Facing west – southern boundary of incremental sampling unit for sample FTBLS-IS003		

Photograph No. 35	Date: 10/5/2010	Time: 10:13
Site: Former Maneuver Area – Area 11		
Description: Browning machine gun link pile (~500 links) and 3 belt starter tabs		

Photograph No. 36	Date: 10/5/2010	Time: 10:15
Site: Former Maneuver Area – Area 11		
Description: 1943 .30-06 complete ball cartridge		

Photograph No. 37	Date: 10/5/2010	Time: 10:16
Site: Former Maneuver Area – Area 11		
Description: 1943 .30-06 complete ball cartridge		

Photograph No. 38	Date: 10/5/2010	Time: 10:30
Site: Former Maneuver Area – Area 11		
Description: Facing northeast – standing within area identified as firing point. Looking toward hillside that could have been used as target area. Hillside is approximately 200 yards from firing area.		

Photograph No. 39	Date: 10/5/2010	Time: 10:30
Site: Former Maneuver Area – Area 11		
Description: Facing northeast – standing within area identified as firing point, looking toward hillside that could have used as target area. Hillside is approximately 300 yards from firing point.		

Photograph No. 40	Date: 10/5/2010	Time: 10:30
Site: Former Maneuver Area – Area 11		
Description: Facing east – sampling at firing point with possible target hillside in background		

Photograph No. 41	Date: 10/5/2010	Time: 11:08
Site: Former Maneuver Area – Area 11		
Description: M60 link, 5.56mm blank, and 7.62mm blank		

Photograph No. 42	Date: 10/5/2010	Time: 11:29
Site: Former Maneuver Area – Area 11		
Description: Facing southwest – streambed in central portion of site		

Photograph No. 43	Date: 10/5/2010	Time: 11:33
Site: Former Maneuver Area – Area 11		
Description: Vegetation in central portion of Area 11		

Photograph No. 44	Date: 10/5/2010	Time: 12:02
Site: Former Maneuver Area – Area 11		
Description: Locked gate off Stagecoach Road		

Photograph No. 45	Date: 10/5/2010	Time: 13:35
Site: Former Maneuver Area – Area 7		
Description: Facing northeast – field team performing visual surveys in Area 7		

Photograph No. 46	Date: 10/5/2010	Time: 13:45
Site: Former Maneuver Area – Area 7		
Description: Horned Lizard		

Photograph No. 47	Date: 10/5/2010	Time: 13:47
Site: Former Maneuver Area – Area 7		
Description: Facing northeast – general site conditions with Hueco Tanks State Park in background		

Photograph No. 48	Date: 10/5/2010	Time: 15:54
Site: Former Maneuver Area – Area 7		
Description: Facing west – laying out incremental sampling grid for sample FTBLS-IS004		

Photograph No. 49	Date: 10/5/2010	Time: 15:54
Site: Former Maneuver Area – Area 7		
Description: Field documentation		

Photograph No. 50	Date: 10/5/2010	Time: 16:18
Site: Former Maneuver Area – Area 7		
Description: Facing northwest – western boundary of incremental sampling unit for sample FTBLS-IS004		

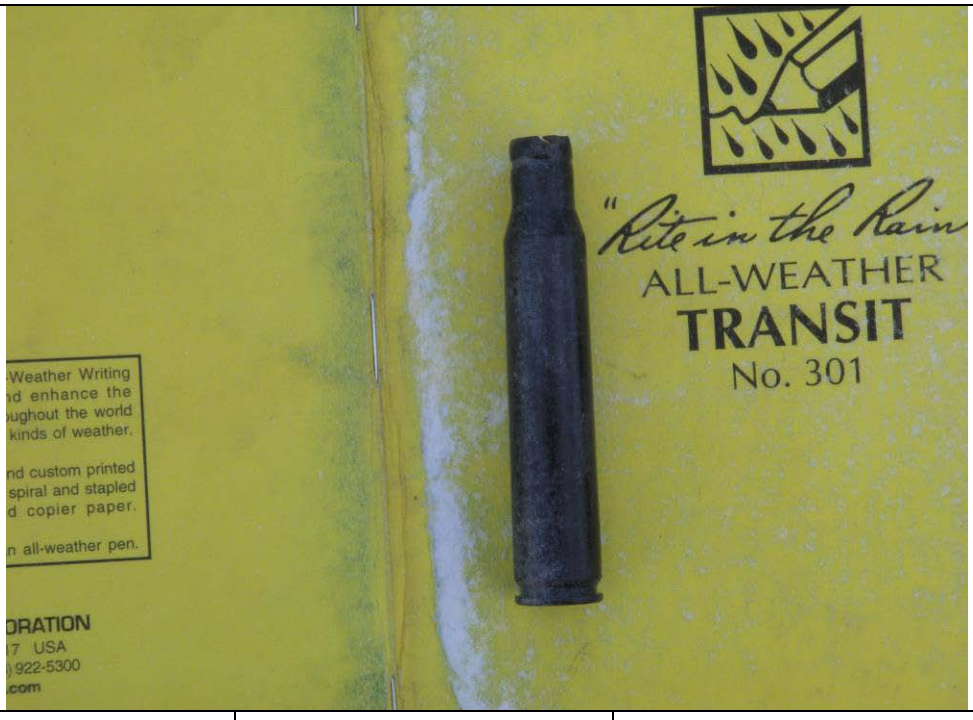
Photograph No. 51	Date: 10/5/2010	Time: 16:18
Site: Former Maneuver Area – Area 7		
Description: Facing northwest – incremental sampling unit for sample FTBLS-IS004		

Photograph No. 52	Date: 10/5/2010	Time: 17:25
Site: Former Maneuver Area – Area 5		
Description: Facing northeast – general site conditions		

Photograph No. 53	Date: 10/5/2010	Time: 17:28
Site: Former Maneuver Area – Area 5		
Description: Facing north – fence line along western boundary of Area 5		

Photograph No. 54	Date: 10/5/2010	Time: 17:28
Site: Former Maneuver Area – Area 5		
Description: SL 43 .30-06 shell casing		

Photograph No. 55	Date: 10/5/2010	Time: 17:31
Site: Former Maneuver Area – Area 5		
Description: Fuze from an expended smoke grenade		



Photograph No. 56	Date: 10/5/2010	Time: 17:37
Site: Former Maneuver Area – Area 5		
Description: FA 34 .30-06 shell casing		

Photograph No. 57	Date: 10/5/2010	Time: 17:47
Site: Former Maneuver Area – Area 5		
Description: '03 Springfield Stripper Clips		

Photograph No. 58	Date: 10/6/2010	Time: 09:50
Site: Former Maneuver Area – Area 6		
Description: Facing west – sampling team performing incremental sample FTBLS-IS005		

Photograph No. 59	Date: 10/6/2010	Time: 09:52
Site: Former Maneuver Area – Area 6		
Description: Facing west – sampling team performing incremental sample FTBLS-IS005 (duplicate and triplicate)		

Photograph No. 60	Date: 10/6/2010	Time: 09:56
Site: Former Maneuver Area – Area 6		
Description: Facing west – sampling team collecting soil and waypoint for sample increment		

Photograph No. 61	Date: 10/6/2010	Time: 10:45
Site: Former Maneuver Area – Area 6		
Description: Facing northwest – field team collecting waypoint data on sample increment location		

Photograph No. 62	Date: 10/6/2010	Time: 10:45
Site: Former Maneuver Area – Area 6		
Description: Facing north – incremental sampling area for samples FTBLS-IS005 (duplicate and triplicate)		

Photograph No. 63	Date: 10/6/2010	Time: 10:45
Site: Former Maneuver Area – Area 6		
Description: Facing northwest – incremental sampling area for samples FTBLS-IS005 (duplicate and triplicate)		

Photograph No. 64	Date: 10/6/2010	Time: 11:12
Site: Former Maneuver Area – Area 6		
Description: Facing north – Hueco Dam from the south		

Photograph No. 65	Date: 10/6/2010	Time: 11:12
Site: Former Maneuver Area – Area 6		
Description: Facing southwest – field team on Hueco Dam		

Photograph No. 66	Date: 10/6/2010	Time: 11:35
Site: Former Maneuver Area – Area 6		
Description: W.R.A. Co. .30-caliber shell casing (late 1800s)		

Photograph No. 67	Date: 10/6/2010	Time: 11:47
Site: Former Maneuver Area – Area 6		
Description: W.R.A. Co. .30-caliber shell casing (late 1800s)		

Photograph No. 68	Date: 10/6/2010	Time: 12:25
Site: Former Maneuver Area – Area 6		
Description: Facing south – central area of Hueco Tanks State Park		

Photograph No. 69	Date: 10/6/2010	Time: 12:35
Site: Former Maneuver Area – Area 6		
Description: Facing southwest – drainage in Hueco Tanks State Park		

Photograph No. 70	Date: 10/6/2010	Time: 12:35
Site: Former Maneuver Area – Area 6		
Description: Facing northeast – drainage in Hueco Tanks State Park		

Photograph No. 71	Date: 10/6/2010	Time: 12:36
Site: Former Maneuver Area – Area 6		
Description: Field team performing visual survey in central area of Hueco Tanks State Park		

Photograph No. 72	Date: 10/6/2010	Time: 12:37
Site: Former Maneuver Area – Area 6		
Description: Facing east – general site conditions		

Photograph No. 73	Date: 10/6/2010	Time: 13:54
Site: Former Maneuver Area – Area 15		
Description: Facing west – general site conditions		

Photograph No. 74	Date: 10/6/2010	Time: 14:25
Site: Former Maneuver Area – Area 15		
Description: Field team collecting incremental sample		

Photograph No. 75	Date: 10/6/2010	Time: 14:28
Site: Former Maneuver Area – Area 15		
Description: Facing south – eastern boundary of IS unit for sample FTBLS-IS008		

Photograph No. 76	Date: 10/6/2010	Time: 14:28
Site: Former Maneuver Area – Area 15		
Description: Facing southwest – incremental sampling unit for sample FTBLS-IS008		

Photograph No. 77	Date: 10/6/2010	Time: 15:41
Site: Former Maneuver Area – Area 5		
Description: Facing northwest – general site conditions in eastern portion of Area 5		

Photograph No. 78	Date: 10/6/2010	Time: 16:01
Site: Former Maneuver Area – Area 5		
Description: Facing southeast – field team performing visual survey transects		

Photograph No. 79	Date: 10/6/2010	Time: 16:52
Site: Former Maneuver Area – Area 5		
Description: Facing northeast – eastern boundary of incremental sampling unit for sample FTBLS-IS009 (duplicate and triplicate)		

Photograph No. 80	Date: 10/6/2010	Time: 17:03
Site: Former Maneuver Area – Area 5		
Description: FA 45 .30-06 star crimped blank shell casing		

Photograph No. 81	Date: 10/7/2010	Time:08:29
Site: Former Maneuver Area – Area 2		
Description: Facing northeast – vegetation and site conditions for Area 2		

Photograph No. 82	Date: 10/7/2010	Time: 08:34
Site: Former Maneuver Area – Area 2		
Description: Facing west – vegetation in Area 2 - very dense cacti and yucca		

Photograph No. 83	Date: 10/7/2010	Time: 09:07
Site: Former Maneuver Area – Area 2		
Description: Facing northwest – water Tank in western portion of Area 2		

Photograph No. 84	Date: 10/7/2010	Time: 09:11
Site: Former Maneuver Area – Area 2		
Description: Tarantula		

Photograph No. 85	Date: 10/7/2010	Time: 09:38
Site: Former Maneuver Area – Area 2		
Description: UXO techs laying out incremental sampling grid for sample FTBLS-IS013		

Photograph No. 86	Date: 10/7/2010	Time: 10:03
Site: Former Maneuver Area – Area 2		
Description: Facing north – eastern boundary of incremental sampling unit for sample FTBLS-IS013		

Photograph No. 87	Date: 10/7/2010	Time: 10:03
Site: Former Maneuver Area – Area 2		
Description: Facing northwest – incremental sampling unit for Area 2		

Photograph No. 88	Date: 10/7/2010	Time: 11:30
Site: Former Maneuver Area – Area 4		
Description: Facing south – rock outcroppings at southern boundary of Area 4		

Photograph No. 89	Date: 10/7/2010	Time: 11:30
Site: Former Maneuver Area – Area 4		
Description: Facing south – rock outcroppings at southern boundary of Area 4		

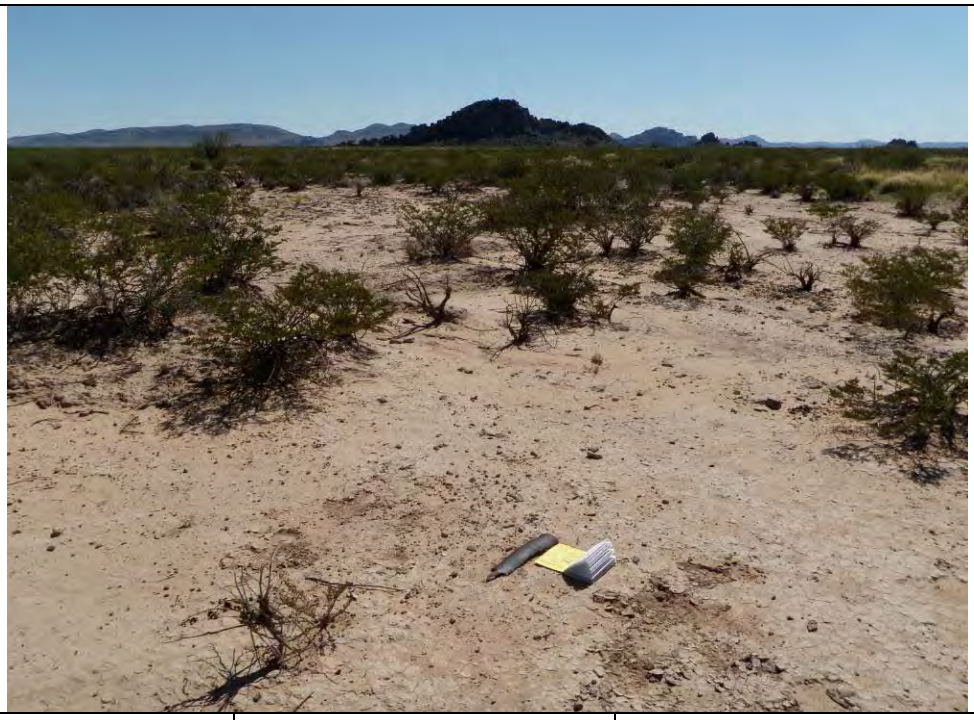
Photograph No. 90	Date: 10/7/2010	Time: 11:54
Site: Former Maneuver Area – Area 4		
Description: Facing west – tall, dense vegetation within Area 4		

Photograph No. 91	Date: 10/7/2010	Time: 12:00
Site: Former Maneuver Area – Area 4		
Description: Facing west – field team member at western boundary of Area 4		

Photograph No. 92	Date: 10/7/2010	Time: 12:19
Site: Former Maneuver Area – Area 4		
Description: High Explosives detonation fragment		

Photograph No. 93	Date: 10/7/2010	Time: 12:20
Site: Former Maneuver Area – Area 4		
Description: High Explosives detonation fragment		

Photograph No. 94	Date: 10/7/2010	Time: 12:20
Site: Former Maneuver Area – Area 4		
Description: Fragment from 4.2-inch mortar shell		



Photograph No. 95	Date: 10/7/2010	Time: 12:20
Site: Former Maneuver Area – Area 4		
Description: Facing southeast – location of fragment from 4.2-inch mortar shell within Area 4		

Photograph No. 96	Date: 10/7/2010	Time: 12:27
Site: Former Maneuver Area – Area 4		
Description: Obturator/rotating band from 4.2-inch mortar shell		

Photograph No. 97	Date: 10/7/2010	Time: 12:30
Site: Former Maneuver Area – Area 4		
Description: Rotating band and fragments from 4.2-inch mortar shell(s)		

Photograph No. 98	Date: 10/7/2010	Time: 12:30
Site: Former Maneuver Area – Area 4		
Description: Several fragments from multiple 4.2-inch mortar shells		

Photograph No. 99	Date: 10/7/2010	Time: 12:30
Site: Former Maneuver Area – Area 4		
Description: Facing east – view across site		

Photograph No. 100	Date: 10/7/2010	Time: 12:30
Site: Former Maneuver Area – Area 4		
Description: Facing east – view across site		

Photograph No. 101	Date: 10/7/2010	Time: 12:40
Site: Former Maneuver Area – Area 4		
Description: Composite soil sample FTBLS-SS002		

Photograph No. 102	Date: 10/7/2010	Time: 12:41
Site: Former Maneuver Area – Area 4		
Description: Facing southeast – soil sample FTBLS-SS002 location in relation to site		

Photograph No. 103	Date: 10/7/2010	Time: 12:43
Site: Former Maneuver Area – Area 4		
Description: Large fragment from 4.2-inch M2 mortar shell without rotating band		

Photograph No. 104	Date: 10/7/2010	Time: 12:51
Site: Former Maneuver Area – Area 4		
Description: Facing east – area of 4.2-inch mortar fragments		

Photograph No. 105	Date: 10/7/2010	Time: 12:51
Site: Former Maneuver Area – Area 4		
Description: Fragment from 4.2-inch M2 mortar shell		

Photograph No. 106	Date: 10/7/2010	Time: 12:51
Site: Former Maneuver Area – Area 4		
Description: Fragment from 4.2-inch M2 mortar shell		

Photograph No. 107	Date: 10/7/2010	Time: 12:52
Site: Former Maneuver Area – Area 4		
Description: Fuze from 4.2-inch mortar shell		

Photograph No. 108	Date: 10/7/2010	Time: 12:52
Site: Former Maneuver Area – Area 4		
Description: Fuze from 4.2-inch mortar shell		

Photograph No. 109	Date: 10/7/2010	Time: 12:52
Site: Former Maneuver Area – Area 4		
Description: Fuze from 4.2-inch mortar shell		

Photograph No. 110	Date: 10/7/2010	Time: 12:58
Site: Former Maneuver Area – Area 4		
Description: Composite soil sample FTBLS-SS003		

Photograph No. 111	Date: 10/7/2010	Time: 13:03
Site: Former Maneuver Area – Area 4		
Description: Fuze from 4.2-inch mortar shell		

Photograph No. 112	Date: 10/7/2010	Time: 13:16
Site: Former Maneuver Area 4		
Description: Undefined munitions fragment		

Photograph No. 113	Date: 10/7/2010	Time: 13:44
Site: Former Maneuver Area – Area 4		
Description: Facing east – rock outcropping at eastern edge of Area 4		

Photograph No. 114	Date: 10/7/2010	Time: 16:05
Site: Former Maneuver Area – Area 13		
Description: Facing north – abandoned building at north end of Area 13		

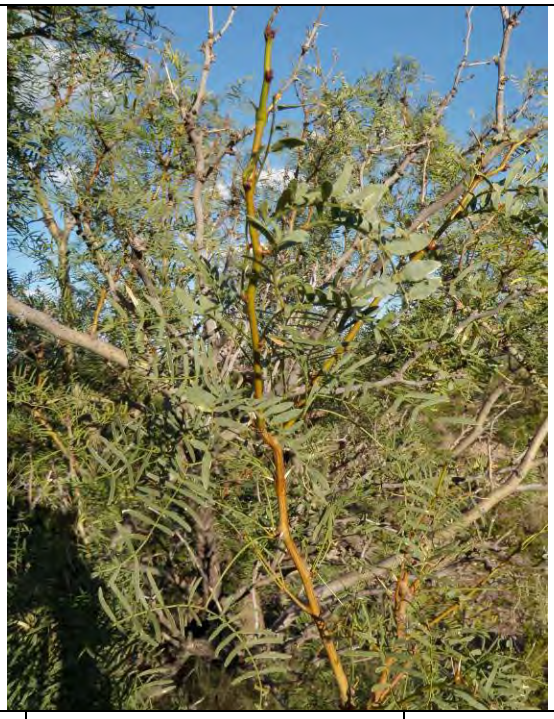
Photograph No. 115	Date: 10/7/2010	Time: 16:29
Site: Former Maneuver Area – Area 13		
Description: Facing north – general site conditions		

Photograph No. 116	Date: 10/7/2010	Time: 17:04
Site: Former Maneuver Area – Area 13		
Description: Facing east – view of Area 13 from top of mountain		

Photograph No. 117	Date: 10/7/2010	Time: 17:04
Site: Former Maneuver Area – Area 13		
Description: Facing east – view of Area 13 from top of mountain		

Photograph No. 118	Date: 10/7/2010	Time: 17:12
Site: Former Maneuver Area – Area 13		
Description: Facing north – northern portion of Area 13		

Photograph No. 119	Date: 10/7/2010	Time: 17:31
Site: Former Maneuver Area – Area 13		
Description: Facing east – general site conditions		



Photograph No. 120	Date: 10/7/2010	Time: 17:34
Site: Former Maneuver Area – Area 13		
Description: Mesquite branches		

Photograph No. 121	Date: 10/7/2010	Time: 17:54
Site: Former Maneuver Area – Area 13		
Description: Facing south – western boundary of incremental sampling unit for sample FTBLS-IS014 in proximity to residences		

Photograph No. 122	Date: 10/7/2010	Time: 17:55
Site: Former Maneuver Area – Area 13		
Description: Facing south – leave no trace; field team ensured that each area was left as it was found		

Photograph No. 123	Date: 10/8/2010	Time: 10:02
Site: Former Maneuver Area – Area 8		
Description: Facing southwest – view from top of hill across southern portion of Area 8		

Photograph No. 124	Date: 10/8/2010	Time: 10:21
Site: Former Maneuver Area – Area 8		
Description: Facing north – water tank within Area 8		

Photograph No. 125	Date: 10/8/2010	Time: 10:26
Site: Former Maneuver Area – Area 8		
Description: Facing southeast – vegetation in Area 8		

Photograph No. 126	Date: 10/8/2010	Time: 10:39
Site: Former Maneuver Area – Area 8		
Description: Facing southwest – dense vegetation in streambed		

Photograph No. 127	Date: 10/8/2010	Time: 10:42
Site: Former Maneuver Area – Area 8		
Description: Facing west – streambed within Area 8		

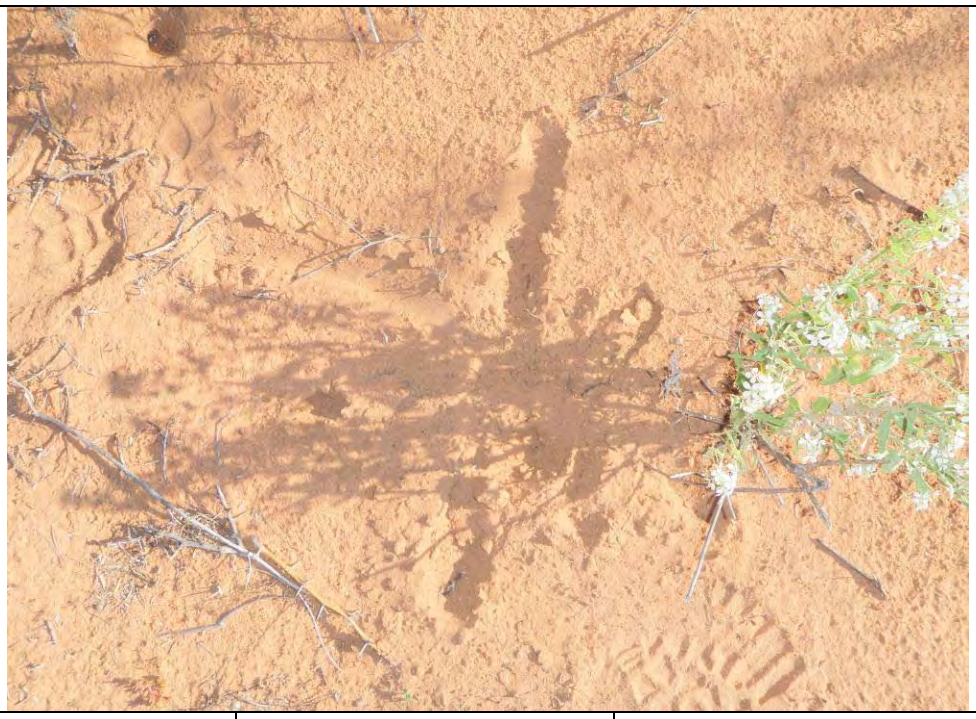
Photograph No. 128	Date: 10/8/2010	Time: 11:38
Site: Former Maneuver Area – Area 8		
Description: Facing south – western boundary of incremental sampling unit for sample FTBLS-IS015		

Photograph No. 129	Date: 10/8/2010	Time: 14:25
Site: Former Maneuver Area – Area 14		
Description: Facing northwest – sign at access point to Area 14		

Photograph No. 130	Date: 10/8/2010	Time: 15:22
Site: Former Maneuver Area – Area 14		
Description: Facing northwest – general site conditions for Area 14		

Photograph No. 131	Date: 10/8/2010	Time: 15:28
Site: Former Maneuver Area – Area 14		
Description: Military tent stake; consistent with bivouac site		

Photograph No. 132	Date: 10/8/2010	Time: 15:31
Site: Former Maneuver Area – Area 14		
Description: 5.56mm blank shell casing		



Photograph No. 133	Date: 10/8/2010	Time: 16:28
Site: Former Maneuver Area – Area 14		
Description: Sampling location for one increment in the incremental sample FTBLS-IS016		

Photograph No. 134	Date: 10/8/2010	Time: 16:29
Site: Former Maneuver Area – Area 14		
Description: Facing north – eastern boundary of the incremental sampling unit for sample FTBLS-IS016		

Appendix D

APPENDIX D

FIELD NOTES

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

DAILY FIELD REPORT

Project: Fort Bliss MMRP SI	**Date:** 4 October 2010
Time of Arrival at Site: 1040	Time of Safety Brief: 1110
Team Leader: Mary Franquemont	UXOSO: Scott Pontius

Weather/Site Conditions:

Weather: Warm and sunny; slight southerly breeze; clear skies; low humidity

Site Conditions: Low lying areas are relatively flat with wide-spaced cacti, shrubs, and grasses; Southern portion of Area 9 was encompassed by several low hills, which were covered with dense cacti. Ephemeral streams cross throughout all areas.

Site Activities Conducted:

0900 – In-brief at Fort Bliss with Ron Baca; departed Fort Bliss at 0930
0940 – Picked up field supplies at FedEx
1040 – Arrived at Area 9; conducted site in-brief and safety brief
1120 – Began visual survey of Area 9
1520 – 1610 – Collected Incremental Sample (IS) from 1 acre area of site (49 increments); location was selected because it represented general site conditions. No evidence of significant military activity was observed
1625 – Completed approx 4.2 line miles of visual survey in Area 9
1700 – Began visual survey in Area 10
1710 – Encountered an area that appeared to have been a firing point for .30 cal blanks firing. (See Below)
1730 – 1815 – Collected IS from 0.5 acre area encompassing firing point (30 increments)
1830 – Completed approximately 0.5 line miles of visual survey in Area 10

Items Identified at Site:

Area 9 – Observed one M14 Rifle Clip on rocky face within southern area of site
Area 10 – Observed approx 20 .30 cal blank cartridges dated from 1943 through 1953; one starter tab from .30 cal Browning Machine gun belt; approx. 50 links from .30 cal; one M1 Garand clip; canister lid labeled "M104 Canister"; area was also littered with civilian shotgun casings and a few clay target pieces

Visitors to Site:

Name	Organization
N/A	

Issues Encountered and Resolutions:

Collection of IS samples required approximately 45 – 50 minutes to layout sampling unit location and collect the increments. The team developed a system for laying out the sampling unit, which will speed up the process.

Driving to the site takes approximately 40 minutes. The field team will leave earlier in the morning to get to the site in time to allow for more visual surveys to be completed.

Actions to be Taken:

Predesigned IS grids will be established for various sampling units to speed up the process of IS collection.
Earlier departure time.
Team plans to conduct visual survey in Areas 1, 2, and 3 on 5 Oct.

Time of Departure from Site: 1830

DAILY FIELD REPORT

Project: Fort Bliss MMRP SI	**Date:** 5 October 2010
Time of Arrival at Site: 0715	Time of Safety Brief: 0820
Team Leader: Mary Franquemont	UXOSO: Scott Pontius

Weather/Site Conditions:

Weather: Warm and sunny; slight southerly breeze; clear skies; low humidity; brief light rain shower in afternoon
Site Conditions: Low lying areas are relatively flat with wide-spaced cacti, shrubs, and grasses

Site Activities Conducted:

0715 – Attempted to access road to Areas 1-4; at 0750, encountered a locked gate with signage noting land was controlled by General Land Office.
0815 – Arrived at Area 11; conducted safety brief and began survey. Access within Area 11 was limited do to limited ROEs. Identified several areas throughout site that appeared to be firing locations for small arms - blanks and live rounds (See below)..
0910 – Collected IS sample from 0.5 acre area encompassing one of the identified firing areas.
1017 – Collected composite sample in proximity to a large pile (several 100) .30 cal links and several 30-06 blank cartridge casings, and one 30-06 ball cartridge (complete).
1145 – Completed 2.3 miles of visual survey transects in Area 11.
1150 – 1320 – Attempted to access southern area of Area 11; locked gates were located on all access roads. Stopped at Don Meier's house to coordinate access to his property for Wed. Drove to Area 7 to begin survey. Lunch break.
1320 – Began Survey in Area 7.
1550 – Collected IS of general site area; no evidence of military activity or munitions was observed within the site.
1640 – Completed 4.33 miles of visual survey in Area 7.
1715 – Began survey in Area 5.
1815 – Completed 1 mile of visual survey in Area 5.

Items Identified at Site:

Area 11 – Observed several areas throughout site that appeared to be as firing areas. Items identified included: one 30-06 ball cartridge (complete round), .30 cal Browning machine gun links, 30-06 blank cartridge casings dated 1948 – 1954, 5.56 blank cartridge casings dated 1972, 7.62 NATO blank cartridge casing dated 1974, and M60 machine gun belt link
Area 7 – No munitions items were observed
Area 5 – Expended smoke grenade top; 30-06 blank cartridge casing dated 1934; and two M14 stripper clips

Visitors to Site:

Name	Organization
Don Meier	Private land owner (assisted with access through gate at Area 7)

Issues Encountered and Resolutions:

Time for collecting IS samples decreased to 30-40 minutes; however, the process is still slow.

The field team was unable to access Areas 1-4, Area 10 (western portion); Area 11 (southern portion); and Area 12 due to locked gates. I contacted Burton Minton of the State GLO and made arrangements for a key to be provided to us. We will have the key by 10 am on Wed. Mr. Meier is assisting with access to Areas 10, 11, and 12

Actions to be Taken:

The field team will conduct surveys in Areas 5, 6, and 8 tomorrow. In addition, an IS sample will be collected in Area 15.

Time of Departure from Site: 1830

DAILY FIELD REPORT

Project: Fort Bliss MMRP SI	**Date:** 6 October 2010
Time of Arrival at Site: 0810	Time of Safety Brief: 0840
Team Leader: Mary Franquemont	UXOSO: Scott Pontius

Weather/Site Conditions:

Weather: Warm and sunny; clear skies; low humidity; steady southerly winds in afternoon
Site Conditions: Low lying areas are relatively flat with wide-spaced cacti, shrubs, and grasses; few wetland/riparian areas in Areas 5 and 6

Site Activities Conducted:

0850 – Began survey in Area 6
0900 – 1050 – Collected IS sample with triplicate. Waypoints were collected for all increments at the request of Wanda.
1250 – Completed 4 miles of visual survey within Area 6
1310 – 1435 – Collected IS sample in Area 15
1500 – Began survey in Area 5
1605 – 1650 Collected IS sample in Area 5
1725 – Completed 2.7 miles of visual survey with Area 5
1730 – Checked gate at GLO land to ensure key worked in lock – it did
1740 – Returned to Hueco Tanks Historic Site to check out munitions items that had been found within the park and are on display in the Interpretative Center.

Items Identified at Site:

Area 6 – Rimmed cartridge casing, labeled W.R.A Co 30 U.S.G, assumed to be from pre-1903
Area 5 – 30-06 blank star-crimped cartridge casing
Area 15 – N/A

Visitors to Site:

Name	Organization
Wanda O.	Park Ranger, Hueco Tanks Historic Site
Don Meier	Private land owner

Issues Encountered and Resolutions:

None

Actions to be Taken:

The field team will conduct surveys in Areas 1-4 tomorrow.

Time of Departure from Site: 1810

DAILY FIELD REPORT

Project: Fort Bliss MMRP SI	**Date:** 7 October 2010
Time of Arrival at Site: 0750	Time of Safety Brief: 0800
Team Leader: Mary Franquemont	UXOSO: Scott Pontius

Weather/Site Conditions:

Weather: Hot and sunny – temperature reached the low 90s; clear skies; low humidity; steady southerly winds in afternoon
Site Conditions: Low lying areas are relatively flat with wide-spaced cacti, shrubs, and grasses; Area 2 had dense almost impassable cacti/yucca/mesquite along the site's eastern boundary

Site Activities Conducted:

0630 – 0750 – Traveled from hotel to Area 2
0810 – 0930 – Completed approximately 1.75 miles per person of visual survey within Area 2
0935 – 1005 – Collected IS sample within Area 2; 0.5 acres with 30 increments
1005 – 1030 – Attempted to find found a route to Area 1 without any success
1030 – 1120 – Worked our way to Area 4
1130 – 1330 – Competed approximately 2 miles per person; identified 4.2-inch mortar impact area (see below); collected 2 composite samples and one QC sample
1415 – Began to move to Area 3; however, a tire developed a slow leak so we decided to head into town for safety and to address the problem
1530 – Ron Baca called. We discussed the need for an outbriefing tomorrow and decided that we would not meet in order for the field team to complete more work.
1535 – 1630 – Completed approximately 1.3 miles per person in western portion of Area 13. We only have limited ROE access to this area.
1650 – 1730 – Completed approximately .7 miles per person in eastern portion of Area 13. We only have ROEs for 3 parcels in this area.
1730 – 1755 – Collected IS sample in proximity to residence located within the area; 0.5 acres with 30 increments
1800 – Departed the site and returned to El Paso to address tire problem

Items Identified at Site:

Area 2 – N/A
Area 4 – Identified fragments and fuzes from approximately 10 4.2-inch mortars
Area 13 – N/A

Visitors to Site:

Name	Organization

Issues Encountered and Resolutions:

None

Actions to be Taken:

The field team will conduct surveys in Areas 3, 8, 12, and 14 tomorrow.

Time of Departure from Site: 1800

DAILY FIELD REPORT

Project: Fort Bliss MMRP SI	**Date:** 8 October 2010
Time of Arrival at Site: 0720	Time of Safety Brief: 0940
Team Leader: Mary Franquemont	UXOSO: Scott Pontius

Weather/Site Conditions:

Weather: Hot and sunny – temperature reached the mid 90s; clear skies; low humidity; steady southerly winds in afternoon
Site Conditions: Low lying areas are relatively flat with wide-spaced cacti, shrubs, and grasses;

Site Activities Conducted:

0630 – 0720 – Traveled from hotel toward Area 3; road to area became washed out and impassable approximately .5 miles from GLO gate.
0800 – Called Ysleta del Sur Pueblo to request access through gate to Area 8
0910 – Got through gate to Area 8
0935 – 1110 – Completed 2 miles per person survey in Area 8
1110 – 1140 – Collected IS sample: 0.5 acres, 30 increments
1140 – 1200 – Attempted to find access to original area 8 along southeast boundary of site. Were not able to access any roads into area.
1200 – 1310 – Attempted to find access to Area 12; eventually located trail along installation boundary that would lead into area; however, after about 0.25 miles road was washed out and became impassable.
1310 – Lunch Break
1430 – Arrived at Area 14. The area is actually within the installation fence. However, the dirt road accesses through a break in the fence. At the fence, a sign was located that read "Danger – Live Fire Training Area." Contacted Ron Baca regarding accessing the area. He told us to call Shane Offutt, Range Control Liaison. Shane said that the area we wanted to access was known as Maneuver Area 2D and has not been used for live fire. He said someone put the sign up there to discourage neighbors from entering the area when training activities (maneuvers) were taking place. He also said that some of the land in the area is owned by the state and some of it was owned by Fort Bliss. He felt that if we stayed within the area identified in the County records as being owned by the state we would most likely be on state property; however, he indicated the maps aren't always accurate and it may not be clear what land was state land and what was Fort Bliss land.
1445 – Processed toward Area 14
1450 – 1600 – Completed 2 miles per person of visual survey in Area 14. Identified area with tent stakes and generator grounding rod.
1600 – 1635 – Collected IS sample; 0.5 acres, 30 increments
1645 – Departed field
1700 – 1900 – Packed sample coolers and other gear. Dropped 4 coolers for shipment to TestAmerica (Saturday delivery) and 3 gear boxes for shipment to TLI at FedEx.

Items Identified at Site:

Area 82 – N/A
Area 14 – 5.56 blank dated 1965

Visitors to Site:

Name	Organization
N/A	

Issues Encountered and Resolutions:

See above regarding access issues.
Actions to be Taken:
Additional information regarding 4.2 mortars observed in Area 4: • Research on the nomenclature on the fragments indicates the mortars contained white phosphorus (WP). These rounds would have been used during training as the WP would create a smoke plume upon impact that would assist with training. • Shearing of the metal to make the fragments indicates that most of the frag was created by impact/detonation of fired rounds. However, some of the shearing indicates the frag was created by another explosive source indicating the a demilitarization/disposal detonation may have occurred in the area.
Time of Departure from Site: 1635

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"Rite in the Rain"®

ALL-WEATHER

TRANSIT

No. 301

MARY FRANQUEMONT
FORT BLISS

4 Oct

0700 - FedEx office - No luck
Called FedEx - Can pick up boxes after 0900

0830 - Visitor Passes

0900 - Ron's Office - in-brief

0925 - Completed in brief

* Note: on 4 Oct Camera time was incorrect (HI Time) - 4 hrs. early

1040 Arrived Area 9
Field Set up

1110 Safety brief
- UXO issues

1120 Began Survey

1140 Photo 1
E - Vegetain along hillside near WP 185

03 Springfield

1158 Photo 2 - ~~M14 Rifle~~ Clip stripper
Photo 3 closeup
RP WP ~~M14 Rifle~~ Clip
03 Springfield stripper

1242 Photo 4 South
Field Team Traversing hill
R & S

Photo 5 SW
Field team traversing hill
Mick

1320 Lunch Break

1408 Back to survey
Photo 6 - Cattle in Area 9.

1520 Began IS ØØ1
49 increments
1 acre coverage
Fine silty clay dry

1610 Completed IS

1625 Completed Area 9
Saved Track
Area 9 GPS5

F :o 7 - Watering Hole in Eastern Area 10

1700 Began Survey ~~Area 10~~

1710 Found 30.06 Firing Pt.
1943, 1951 1952, 1953 observed dates

Starter Tab for 30 cal. Browning Machine gun belt

Blank casings ~ 15 cartridge casings obs.
Clips ~ 50 links observed

Scott researched - Canister is from an illuminating flare could be WWII - Present
~~M100~~ M104 Canister lid ~ 1.5" in diameter

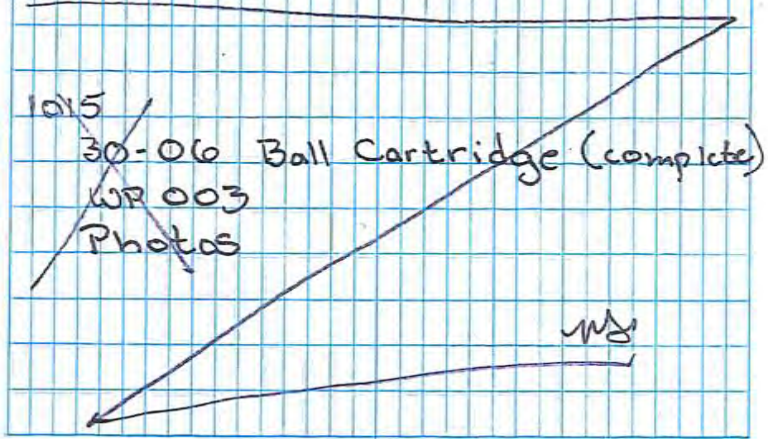
1730 Photos 8-10 3 of M104 lid
Photos 11-12 2 of 30 cal blank
03 Springfield cartridge
~~M14~~ V rifle clip

1740 FTBLS-IS00Z
Area 10
0.5 acres

Area has a lot of shotgun shells casings; clay target

Area is on a small rise
~20 ft above floor
Garand
1755 M1 ~~Granad~~ clip
Photo 13
1750 Began collecting increments
1815 Completed IS
FTBLS-IS00Z
30 increments
0.5 acres
Fine silty clay - very rocky
Photo 14- Cow in Area 10
1830 Back at car
Saved Track Area10A GPS5

1015
30-06 Ball Cartridge (complete)
WR 003
Photos



5 Oct 10

0630 Depart Hotel

0750 Route North to Areas 1-4 blocked by locked gate

0815 Arrived Area 11

0820 Safety brief

0835 Began Survey

0845 WP 001
2 .30-'06 blank casings
Marked 1948 FA (Frankford Ar.)

Photos 15 & 16

0900 WP 002
.30 cal machine link
Assumed to be Browning

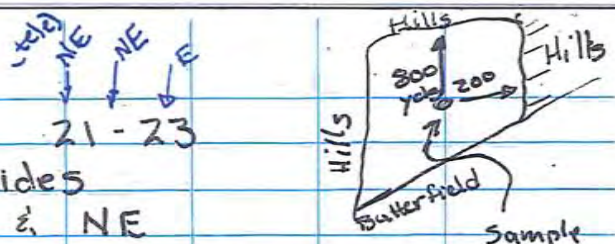
Photo 17 & 18

~~LC~~ Lake City 1954
30-06 blank cartridge casing

0910
FTBLS - IS003
Area 11
30 increments
0.5 acres
Centered on M1 Garand Clip
0945 Completed IS
Observed area w/i ~~IS~~ Sampling Unit w/ ~ 12 .30 cal machine links all w/i ~ 3ft. area

1015
30-06 Ball Cartridge (complete)
Photos 19 & 20
1943
Located in proximity to huge pile of 30 cal. ~~ll~~ links and a few blank casings

1017 Collected composite sample slightly downgradient from huge pile of links
FTBLS-SS001



Photos 21 - 23
hillsides
E & NE
possible target areas
No ROE to target areas

1100
5.56 blank TW 1972 1974
7.62 NATO 1974
RP Waypoint & photos
M60 Machine gun belt link
(fires 7.62 NATO)

1145 Completed transect
Area 11A GPS5 - transect name
2.3 miles

Photo 24 - SW
Streambed in central site area

1200 Photo 25
Locked gate off Stagecoach
Can't access area 11 south

1220
915/855 - 3255 - Don Meier's Phone
Stopped @ Mr. Meier's Ranch
Left business card w/ wife;
he'll call us

1230 - Drove to Montana & DR
to try to access area 10 &
11 (south) - gate locked gate

Drive to Area 7

1250 - Lunch

Called Zeke Garcia - left message
asking if he had key to gate
on London Rd.

Called Burton Minton.
He'll try to determine if
key exists - It'll be in
Austin or Alpine.
Suggested he could FedEx to
us
He'll call back

1320 Began Survey Area 7

Photo 26 Survey Team in Area 7 NE

1500 Mr. Meier stopped by to warn us about a bull in the area "Billy Bob Thorton" He likes to be petted & may approach us

1550 ~~FTL~~ FTBLS-IS00Ø4
0.5 acres
30 increments
Area reflects general site conditions
No evidence of any military activity - very little trash
Mr. Meier said he's leased area from state for 20 yrs

1615 Completed Sample

1640 Completed Survey

1715 Began Survey Area 5

~~N~~ 1728 Photo 27
N Fence line along W of Area 5

1731 Photo 28
Smoke grenade top - expended

1740 Photo 29
30-06 Frankford Arsenal (FA) 1934

1750 Photo 30
03 Springfield stripper clip
~~M14 stripper clips~~ mg
2

1815 Completed 1 mile transect
AREA 5A GPS 5

mg

6 Oct

0725 Departed Hotel
0810 Arrived Hueco Tanks
Met w/ Wanda
0850 Began survey Area 6
0900 Began IS grid layout
1.0 acres
50 increments

1050 Completed IS w/Trip.
FTBLS-IS0005
IS0006
IS0007

1135 Cartridge Casing
W.R.A Co J marking
30U.S.G
WP 004 Winchester Repeating
Photo Arms Co.
Pre-~~to~~ 1903
Rimmed cartridge
Black-powered cartridge

Item was given to Wanda
along w/ GPS waypoint data

1045
Photos 31 NW Laying IS Grid
32 N IS area
33 NW IS area
1112 Photo 34 N Dam from South
35 SW Survey team on Hueco Dam
36 - WP004 item
37-~~40~~41 - she photos of label
1140 Completed survey
Area 6A GPS5 - transect

1210 Began 2nd survey
1225 IS central area of Hueco
Photo ~~42~~ 42
Photo 43 SW - drainage
44 NE - drainage
1236 45 Survey in central
Area of Hueco

1250 Completed survey
Area 6B GPS5 - transect

1300 Arrived @ gate to Meiers

$16.96 - cost of H_2O & ice
No receipt

1110 - Arrived site
Lunch break

1350 Began laying grid

FTBLS-IS0008 1425
0.75 acres Photo 46 - Collecting IS
40 increments

Photo 47 - Bad photo

1405 Began increment
1435 Completed increment

1500 Arrived ~~Began~~ survey Area 5

1510 Began survey
1601 Photo 50-51 SE Field Team in Area 5
1605 Begin IS Triplicate
FTBLS-IS0009, IS0010, IS0011
0.5 Acre
30 increments

No evidence of mil. or munitions
Random sample of general site conditions

1650 Completed IS

1705 Photo 52
30-06 Blank ~~Cart.~~ Casing
↳ Star Crimped

1945 FA

1725 Completed transect Area 5
Area 5B GP55 - Transect

Sample Processing 2000 -
IS Field Duplicate
FTBLS-IS0012
duplicate of FTBLS-IS0001
date of duplicate: 4 Oct
time: 1530

Photo 48 S - Eastern ~~N - Western~~
boundary of IS sampling unit

Photo 49
SW - Across Sampling Unit

7 Oct 10
0630 Departed hotel
0750 Arrived Area 2
0810 Began Survey
0834 Photo 53 W
Veg. in Area 2
Very dense cacti/yucca
0930 Completed Transect of Area2
1.72 line miles (Mick & Me)
0935 Began grid for IS
0.5 acres 30 increments
FTBLS-IS013

Photo 54 NW
Tank in western portion of Area 2
Water impoundment is entirely fenced.
0945 - Began collecting IS
1005 - Completed IS
1030 - Spent 25 min. trying to find access to Area 1
No tracks are passable with this vehicle.
Abandon area 1 survey

1120 After several attempts
Arrived Area 4
1130 Began Survey

Photos 55-56
S - Rock outcroppings at southern boundary of Area 4

1200 Photo 57 - W
Mick @ western boundary Area 4; fence & outcropping

1220 WP 005 HE detonation frag.
Frag. from ~~HE shell~~
~~Rusty old piece of artillery~~ frag.
No other evidence (shell holes or other frag.)
Photos 58 & 59

Photos 60 & 61
View east across site from WP 133

WP ~~ØØ5~~ ØØ6
Large frag
No rotating band
~~to~~ 12" x 4"
Photo 62

1245 WP ØØ7
Large frag Area
5 large pieces
1 fuze expended
6 small pieces

M2 Mortars 4.2"
~~1251 Photo 63 N visual survey in Area 4~~
Samples
FTBLS-SSØØ3-M
SSØØ3-E
FTBLS-SSØØ4-M
SSØØ4-E
Photo 63 - E - Frag distribution area
Photos 64 - 65 - frag
66 - 68
Photo 69 - Sample FTBLS-SSØØ3

1316
Photo 70 Small frag

1344 Photo 71 - E Rock out cropping at eastern edge of Area 4

1330 Completed Area 4 Transect
AREA 4 GPS5
Processed samples
Lunch Break

1415 - Began trek to Area 3
Low tire pressure
Went back to El Paso to get ~~it fixed~~ air.

1530 Spoke w/ Ron Baca
Won't do debrief tomorrow
He's out at 3:30 and we ~~are~~ need to keep working

1535 Arrived ~~Area~~ 13.
Western piece

1613 WP009 Com Wire
Steel core consistent w/ military

Photo 72 N
Abandoned bldg at N end of area

1630 Completed Area 13A

1650 Began Survey Gamboa Property

1730 Completed Survey
Photos 73 - 74 Pictures to East from top of mtn. in Gamboa prop.
Photo 75 N. toward N. area 13

Landowner said area was previously used for bird hunting & shotgun casings ~~are~~ may be present

1730 Began grid
FTBLS-014
0.5 acres
30 increments
Observed skeet target pieces in IS sampling unit

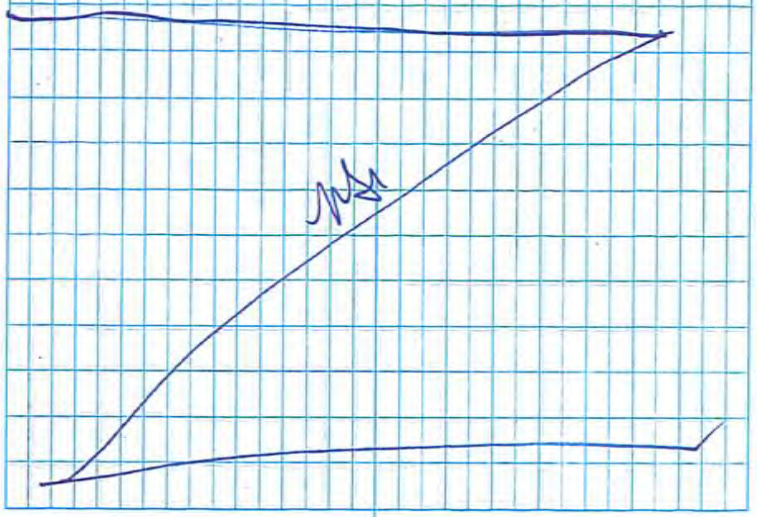
1755 Completed IS
Sampled in vicinity to residences

1800 Departed site

Right front tire has a slow leak
Took car to CostCo
Got problem Fixed

~~$223.00~~

2030 - Arrive back @ hotel



8 Oct 10

0630 Departed hotel

0720 Arrived gate entrance to Area 3
Tried dirt road into ~~Area~~ 3
After about ¼ mile road ~~beg~~ became impassable.
This is the only route into Area 3 ∴ we can't complete Area

0745 Locked GLO gate

0800 Called Arvesto Cruis (sp?) Isleta del Sur
He can get access to gate for ~~Area~~ 8

0815 Arvesto called back
Someone will be at gate in ~30 min.

0800 - 0835 - Waited in Hueco Tanks parking lot

0835 - 0910 - Waited by gate
Got thru gate

0935 - Arrived Area 8

0945 - Began survey

1005 - Photo 76 SW
View from top of hill across S. portion of Area

1021 Photo 77 N - Water Tank
1039 Photo 78 SW - Dense veg. in stream
1042 Photo 79 W - Streambed

1110 Completed Survey

1118 Began laying out grid
FTBLS - IS Ø15
0.5 Acre
30 increments

1140 Completed Increment

1310 After many attempts to find access to area 12
We were not successful.
Gave up on acessing 12

~~1430~~
Lunch Break

1430 Arrived Area 14

Photo 80 NW - Sign at access point to Area 14

~~1537~~

1450 - Arrived Area 14

1533 - WP Ø1Ø Saw ~~Sand~~ comm. wire
5.56 Blank
LC 65
Possibly M14 or M16

Photo 81

1600 Completed visual survey
Began IS
FTBLS - ISØ16
0.5 acres
30 increment

1635 Done!!
2.4 miles
Area 14 GPS5

1700 Back to Hotel
Sample packing

1900 Departed FedEx
Shipped 4 coolers - TA SDR
3 boxes - TLI 2-day

Notes:

- Based on research on nomenclature seen on 4.2 mortar frag., determined it is probable that the mortars contain White Phosphorus. WP would have made a smoke when they impacted which would assist w/ training.

- The shearing of the mortar frag. indicates that most mortars exploded on impact.

Other frag indicates the item was destroyed by a detonation (not exploded) This indicates a disposal/ demo clearance may have occurred.

"Rite in the Rain®"
ALL-WEATHER WRITING PAPER

Name Rebecca Fisher

Address

Phone

Project Fort Bliss SI
Former Maneuver Area. MR Site.

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CONTENTS

PAGE	REFERENCE	DATE

10/4/10

09:05a In-Brief w/ Ron Bacon
09:25a Left JPW
Went to FedEx to pick up equip
10:40a Arrive at Area 9
11:00a UXO Safety Brief
11:15a Begin Visual Survey
11:39a Camera 2
(1) Facing NW. Site conditions/ vegetation.
11:42a (2) Facing SE. Members of field team standing on hill on E edge of site. Site vegetation
11:40a (3) Desert Tortise in cow patty
11:58a M14 Rifle Clip - waypoint
13R 0398010
3523819
Many photo (Camera 6)
12:36p (4) Facing W. Site conditions.
(5) Facing E. Steep, rocky hill in Area 9. From middle of hill.
1320p Stopped for lunch.
1400 Began second half of visual survey for Area 9.
1428 (6) Facing W. Southern portion of Area 9.

10/4/10

1515 Stopped to take IS sample.
~~1605 (7) Facing N. IS sampling units.~~
1605 (7) Facing N. IS sampling units. Top SW corner.
(3) Same from middle of W end.
1612 Completed IS sample. FTBLS-IS001
Took 49 increments in a 1 acre sampling unit, with corners at WP 001, 002, 003, and 004 on GPS 7. Soil was fine, silty clay w/ low moisture content.
001 13R 0397380 3524841
002 13R 0397381 3524778
003 13R 0397319 3524778
004 13R 0397320 3524845
1625 Completed visual survey of Area 9.
1640 Left Area 9 Headed to Area 10.
1645 Arrive at Area 10.
1700 Began visual survey of Area 10.
1710 Discovered target area.
30+ 00 blank shell casings from '43, '52, '53 and links. '51, '44

M1 Garand clip

10/4/10 M14 Rifle clip.

.30cal Starter tab from Browning machine gun belt.

~12 shell casings

~50 links

M104 cap of shipping container Could be rifle grenade or illumination.

On top of hill w/ crest ~20ft above surrounding area.

1730 Began laying grid for 1/2 acre incremental sample w/ 30 increments.

1755 Began sampling.

IS# FTBLS-IS0002.

Unit corners at WP 0014, 0015, 0016, and 0017. on GPS 7

0014. 13R 0397524
3526573

0015 13R 0397478
3526567

0016 13R 0397490
3526523

0017 13R 0397535
3526531

There is also plenty of shotgun shells (civilian) and other cultural debris.

10/4/10

1744 (9) Facing W. Views of site from target area.
All finds located w/in the IS boundary.

1816 (10) Facing W. Flags marking southern boundary of sampling unit.

(11) Facing N. Sampling unit.
Completed sampling.
Soil was fine, silty clay w/ low moisture content. Very rocky - Varying size.

1825 Headed back to truck - losing light.

1834 Completed area 10 for today.

1920 Arrive at hotel.
Conditions were mid to upper 80s, sunny, dry with an intermittent light breeze.

Note: Mary and I left the hotel at 0700 to go to FedEx to find our field equipment. Finally found out where the packages were and that we could pick up after 0900. Picked up ~0940.

10/5/10

0620 Left hotel

0745 Locked gate - can't access state lands for Areas 1 and 2 and 3 and 4.

0750 Headed to Area II.

0802 Arrive at Area II.

0815 Daily tailgate safety brief. Cloudy, ~70°F

0830 Began visual survey transect.
(12) Facing SW. General site conditions
(13) Facing NE. General site conditions

0843 2 ~~30-06~~ .30-'06 shell casings - blanks. Many photo & 'No point.. 1948 Frankford.

0854 Communication wire.
Comm Wire = WP
13R 0396653
3529953
(14) Comm Wire.

0903 II Garand Clip
.30-06 shell casings (5)
WP = GARAND CLIP
~~13~~ 13R 0396646
~~11~~ 3530015

10/5/10

(15) Garand clip and casing on log book.
(16) Garand clip and casings.
Mary found link and casing so taking 1S - 1/2 acre w/ 30' increments.

0910 Began laying out grid for 1S sampling unit.
Corners at WP #19, #20, #21, #22 on GPS 7.
019 13R 0396632
3530034
020 13R 0396621
3530002
021 13R 0396664
3529990
022 13R 0396677
3530027

RP

Soil low moisture content. Was rocky and fine, silty clay.
(17) 1S sampling unit for Area II. Facing S. From center of unit.
(18) 1S sampling unit - southern boundary. Facing W.

0945 Completed 1S.

10/5/10

While taking increments, found a pile of at least 12 links.

1000 Pile of 1954 .30-06 casings and links. At least 12 of each.
WP 30-06 CASINGS
13R 0396587
3529986

1013 Large pile of .30-06 links ~500. Browning machine gun.
(19) Browning machine gun link pile. + belt starter tabs.
Also found full live cartridge - .30-06 Ball.

1017 WP LINK PILE
13R 0396589
3529809
FTBLS-SS-0001 → this WP was also for discrete sampling location.

1025 Mary took spoke and bud sample in proximity to links.

1103 72 5.56 blanks
74 7.62 blanks
1110 link
WP 5.56/7.62

10/5/10

13R 0396225
3529797

1107 (20) Shell casings + link

1150 (21) Vegetation in central portion of Area 11.

1143 Completed first portion of Area 11.

1150 Headed to the second portion of Area 11.

1200 Locked gate - can't access.

1215 Stopped by the house of Don Meier to inquire about the locked gate on his property. Wasn't home. Left a msg to call us.

1233 Tried to access another tree road to Areas 11 and 10 - locked gate.

1244 Arrive at Area 7.

1323 Beginning visual survey transect.

1345 (22) Horned toad. Lizard

1347 (23) Facing NE. Area 7 general site conditions. Hueco tanks in background.

1500 Don Meier stopped by Area 7.

10/5/10

1546 Stopped for incremental sample

1550 Performing 1/2 acre, 30 increment sampling w/ corners marked by WP 023, 024, 025, and 026 on GPS 7.

023 3R 0401329
3528385

024 13R ~~0401329~~ 0401368
~~3528385~~ 3528410

025 13R 0401345
3528448

026 13R 0401305
3528425

1600 Began sampling. FTBLS - 15004

1555 (24) Laying out 45 grid. Facing W.

(25) Field documentation.
Soil was low moisture, fine, silty clay and was rocky.

(26) Western boundary of 15 unit for Area 7. Facing NW

(27) Sampling area. Facing NW.

1620 Completed 15

1645 Completed Area 7

1655 Headed to Area 5

1705 Arrived at Area 5.

10/5/10

1715 Began visual survey transect for Area 5.

1725 (28) General site conditions. Facing NE.

1727 .30-06 blank shell casing. SL 43
WP A5 CASE
13R 0401302
3532980

(29) .30-06 shell casing

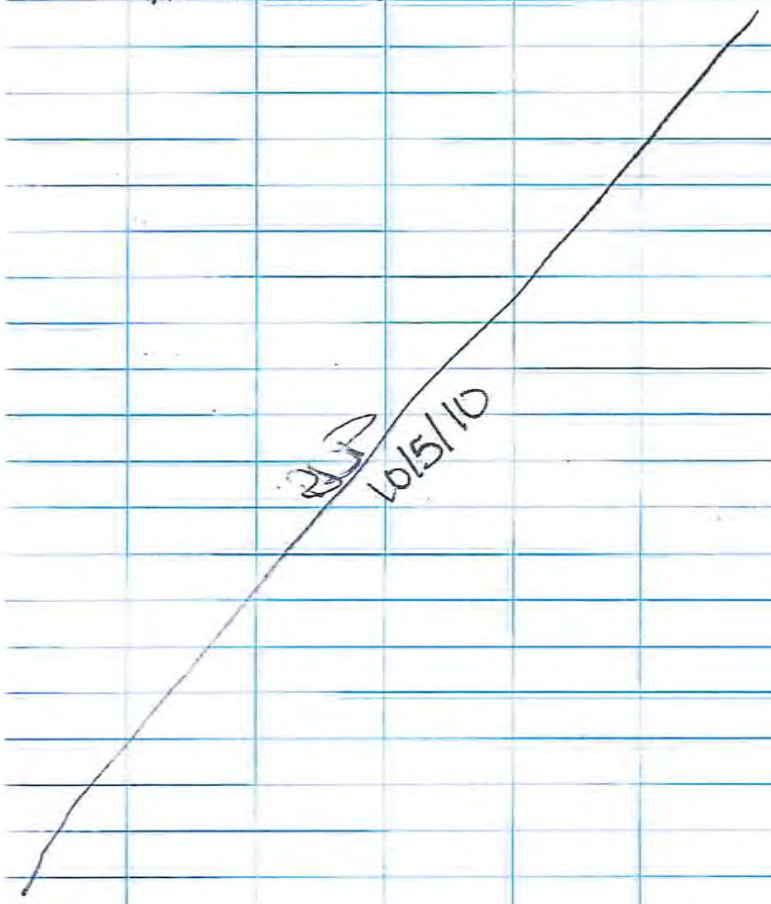
1731 Top of grenade consistent w/ smoke grenade. Expended fuze. Many photo. Possible M18 dates to 70s. Maneuver Area?
WP SMOKE FUZE
13R 0401299
3533035

1738 FA 34 .30-06 blank shell casing. Many photo
WP 34 30-06
13R 0401293
3533067

1745 M14 stripper clip. Many photo.
WP A5 M14 CLIP
13R 0401287
3533230

10/5/10

1810 Completed visual survey transects. Headed out because getting dark. Will come back later. Arrive hotel.



10/6/10

0725 Left hotel to meet park ranger at Hueco Tanks State Park.

0810 Arrive at Hueco Tanks HQ. Spoke w/ Wanda about survey and sampling.

0824 Wanda guiding us to sampling site.

0830 Arrive at site.

0840 Tailgate safety brief

0855 Arrive at sampling location. Began laying out 1 acre grid for 50 increment. NS. Corners at WP 028, 029, 030, 031

0925 Began sampling. FTBLS-150065

028 13R 0401075
3531976

029 13R 0401136
3531961

030 13R 0401122
3531896

031 13R 0401060, 3531914

0950 (B1) Sampling team performing IS. Facing W.

0952 (31) Same.

0956 (32) Facing W. Sampling team collecting soil and WP for increment.

10/6/10

Also performed duplicate - FTBLS-0006 and triplicate - FTBLS-15007 15. Soil was fine silty clay, extremely low moisture. Some was very rocky.

1045 Completed sampling.

1045 Wasn't feeling well so went to car.

1100 Mary, Mick, and Wanda surveyed the face of the dams.

1210 Began visual survey transect between rocks of Hueco Tanks.

1237 (33) Facing E. General site conditions.

1250 Completed visual survey transect.

Note: The clips previously identified as M14 Rifle clip were determined to be '03 Springfield Rifle Clips.

1300 Met Don Meier to perform 3/4 acre 15. 40 increments to be taken. FTBLS-15008

1315 Stopped for lunch.

1345 Began laying out grid. Area 15.

1355 (34) Facing W. Area 15 site conditions.

1405 Began sampling

10/6/10

1430 Completed Area 15 15 marked by corners as WP 001, 002, 003, 004 on GPS 12.

001 13R 0402453
3526884

002 13R 0402458
3526856

003 13R 0402403
3526856

004 13R 0402400
3526803

Soil was fine, silty clay - low moisture.

1453 Arrive at Area 5 to complete visual survey transect.

1513 Begin transect. Mary and Mick taking middle "petal". Scott and I taking Eastern petal".

1542 (35) Facing NW. Area 5 - eastern petal.

1605 Stopped to collect 30 increment sample over 1/2 acre.

1610 Began laying out grid. This will be a triplicate.

10/16/10

Samples FTBLS - ØØ9
FTBLS - 1SØ1Ø
FTBLS - 1SØ11

1620 Began sampling.

1650 Completed sampling w/ corners at WP ØØ5, ØØ6, ØØ7, and ØØ8 on GPSle.

ØØ5 13R ØHØ1973
3533334

ØØ6 13R 0402002
3533367

ØØ7 13R 0401964
3533389

ØØ8 13R 0401931
3533356

1653 (B6) Facing NE. Eastern boundary of the sampling unit.
Soil was fine, silty clay w/ low moisture. Semi-rocky. Easily compactible.

1705 WP A5 FA 45. Another in proximity - .30-'06 blank, star crimped, shell casing. 1945. Many photo.
13R ØHØ1918
3533340

10/16/10

1720 Completed Area 5 visual survey transect.
Heading up to make sure the key works for the Texas land gate. The key was dropped off at the State Park. HQ.

1734 Success!

1745 Arrive. at Hueco Tanks State Park to help identify their collection of munitions.

1801 Headed back to hotel.
→ Signal flare from 40s/70s
→ .45-70 Government. Cartridge from ~~late~~ mid to late 19th Century. 1850s-1880.
These items were identified in the case at Hueco Tanks. All were found within park and are items not yet found by ~~sampling~~ field team.

Weather conditions - in the upper 80s today. Sunny w/ light breeze.

JDP

toilet 10

10/7/10

0800 Arrive at Area 2.
0805 Daily Tail gate safety brief
0815 Began visual survey transect
0830 (37) Facing NE. Vegetation and site conditions for Area 2.
0911 (38) Tarantula.
0925 Completed visual survey transect. Going to take 1/2 acre IS.
0930 Arrive at IS unit. Taking 30 increments. Note. Mary and Mick went to the S for Area 2 transect. Scott and I went to the N.
0930 Began laying out grid for IS unit. FTBLS-0013.
0938 (39) UXO techs laying out sampling
0945 Began sampling
1005 Completed sampling w/ corners at WP 001, 002, 003, and 004 on GPS 7

001 13R 0399586 3538201
002 13R 0399620 3538232
003 13R 0399652 3538201
004 13R 0399617 3538169

10/7/10

1010 Area 2 completed.
1005 (40) Facing N. Eastern boundary of IS unit for FTBLS-0013.
1005 (41) Facing NW. IS unit for Area 2.
1030 Spent 25 minutes trying to gain access to Area 1. Attempted several routes. All were impassable. Cannot go to Area 1. Going to Area 4.
1118 Spent 45 minutes trying to find a possible road into Area 4. Finally arrive at Area 4.
1128 (42) Began visual survey transect for Area 4.
1154 Facing W. Dense vegetation w/in Area 4.
1225 Identified X Shell M2A... Fuze M2-XX-Lot P-236-1 4.2 inch mortar shells. Took waypoints of 3 separate pieces and location of SS 002.
1231 Took composite sample in proximity to base w/ rotating band. obturator?

10/7/10

(SS photo facing SE.)

~~Appears there's enough pieces to make 7 shells.~~ Look like they were put into a pile and disposed of by EOD. ~~Scattered over 25-30 meter diameter.~~

C.H.M. Shell M2

P255-22-HYDRIL-R

The above is nomenclature on shell

What was initially found, WP FRAG was on eastern edge of scattered debris that is enough to make at least 12 shells over 50m diameter. Could be impact area or DB/OD. Maybe impact area that was swept and B/P duds.

Below is a list of waypoints associated with the mortar MD

1216 FRAG 13R0398561, 3535949

1238 FRAG2 13R0398553, 3535944

1239 FRAG3 13R0398553, 3535943

1315 FRAG4 13R0398640, 3535736

1316 ØØ1 13R0398646, 3535712

1317 ØØ2 13R0398628, 3535676

10/7/10

1319 ØØ3 13R0398674, 3535663

1321 ØØ4 13R0398723, 3535565

1324 ØØ5 13R0398766, 3535466

1326 ØØ6 13R0398801, 3535345

FRAG was the first item of MD found. FRAG2 and FRAG3 were the locations of the rotating bands in proximity to the sampling location. FRAG 4 and ØØ1-ØØ6 were waypoints for random pieces (not all) along the way back to the car.

1238 WP SS002 is the location for the composite soil sample taken in proximity to the MD. FRAG-SS002. 13R0398553, 3535944

1220 (3) Fragment from 4.2 in mortar shell.

(4) Facing SE. Frag in relation to site.

1227 (5) Obturator/rotating band from 4.2 inch mortar shell.

1230 (6) Rotating band/fragmentation from 4.2 inch mortar shell.

10/7/10

1230 (47) Several fragments from multiple 4.2 inch mortar shells.

1240 (48) Composite soil sample FTBLS-SS002 location.

1241 (49) Facing SE. Soil sample location in relation to site.

1303 (50) Fuze from the 4.2 inch mortar shell.

1340 Completed visual survey trasect for Area 4.

1345 Stopped for lunch

1425 Headed to Area 3

1435 Warning for low tire pressure. May have flat tire. Going to go inflate tire and monitor it while working at a site closer to town - 13 or 14.

1530 Arrive Area 13.

1540 Began visual survey transect for the first section of Area 13.

1625 Completed visual survey transect for Area 13.

1629 (51) Facing N. Area 13 general site conditions.

10/7/10

1630 Going to other section of Area 13 to perform 1/2 acre, 30 increment sample.

1640 Arrive at second portion of Area 13.

1650 Began visual survey transect.

1730 Completed visual survey transect. Mary and Mick took the hill. Scott and I took the thickets.

1731 (52) Facing E. General site conditions.

(53) Mesquite branch. Full of unclean human flesh loving pokey things.

1730 Began laying out grid for 15.

1735 Began sampling. FTBLS-15014.

1753 Completed sampling

1754 (54) Facing S. Western boundary of 15 adjacent to residences.

1755 (55) Facing S. Leave no trace - evidence of picking up flags.

1800 Completed Area 13.

1810 Tire leaking - going to have it fixed.

Tire - Costco - 915.774-5203

6101 Gateway West Blvd #304
El Paso, TX 79925

10/8/10

0630 Left hotel
0730 Gave up trying to get to Area 3. The road is impassable.
0758 Arrive at Hueco Tanks to call Tribe for access to Area 8.
0815 Tribe is sending someone out to open gate. Should be there in about 30 mins.

Note: The corners for the IS unit in Area 13 near the residences are saved as waypoints 005, 006, 007, and 008 on GPS 7.

1727 005 13R 0392072, 3527627
1728 006 13R 0392092, 3527586
1730 007 13R 0392050, 3527567
1733 008 13R 0392031, 3527608

The soil was rocky, low moisture and had a fine silty clay texture.

0910 The person arrived to open the gate.
0940 Daily tailgate safety brief.
0950 Began visual survey transect.
1026 (56) Facing SE. Vegetation in Area 8.
1110 Completed visual survey transect

10/8/10

1118 Began laying grid for IS unit for Area 8. FTBLS-015.
1115 Began sampling
1140 Completed sampling.
1140 (57) Facing S. Western boundary of IS unit in Area 8.
1153 Completed Area 8. w/ corners at WP 009, 010, 011, 012.

009 13R 0404419, 3529372
010 13R 0404389, 3529337
011 13R 0404423, 3529307
012 13R 0404452, 3529342

1315 Can't find a way into Area 12. Tried several routes for more than an hour. They were either blocked or impassable.
1315 Stopped for lunch
1338 Headed to Area 14
1428 Arrive at Area 14. There is a sign posted that says "Danger Keep Out. Live Fire Range." Mary is calling Ron Baca.

Note: It is in the upper 80s/low 90s today. Sunny w/ a light breeze.

10/8/10

1450 Got the okay to go in. Arrived at Area 14.

1521 (58) Tent stake - potentially military - consistent w/ bivouac area.

1522 (59) Facing NW. General site conditions for Area 14.

1528 (59) Military tent stake. Consistent w/ bivouac site.

Chem light nearby as well as a grounding rod for a generator.

1600 Complete visual survey transect. Began laying out grid for IS unit. FTBLS-Ø14.

1610 Began sampling

1630 Completed IS sample with unit corners at WP 013, 014, 015 and 016 on GPS 7.

013	13R 381830, 3522022
014	13R 381785, 3522032
015	13R 381801, 3522075
016	13R 381845, 3522065

1630 (60) One increment in the IS sample FTBLS-ISØ16 from Area 14.

10/8/10

1630 (61) Eastern boundary of the IS unit. Facing N.

1645 Headed back to hotel to pack up samples and equipment to take to FedEx

1900 Finished at FedEx

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CONTENTS

PAGE	REFERENCE	DATE

MON 4 OCT 2010

0900 MTG WITH RON BACA, BASE IRP TO BRIEF HIM ON THE SI
1040 AREA 9 ARRIVE, SET UP GEAR.
1105 SAFETY BRIEF
1115 BEGIN SURVEY
1320 LUNCH
1400 RESUME SURVEY
1640 DEPART AREA 9 MOVE TO AREA 10.
1700 BEGIN SURVEY
1835 FINISH FIELD OPS FOR THE DAY.
1920 ARRIVE AT HOTEL. SECURE.

SCOTT R. PONTIUS
NAVFAC

TUE 5 OCT 2010

0630 DEPART HOTEL
0800 ARRIVE AT AREA 11.
0815 SAFETY BRIEF.
0830 BEGIN SURVEY
1145 SURVEY COMPLETE, MOVING TO NEW AREA.
1245 ARRIVE AT AREA 7.
1320 BEGIN SURVEY
1645 SURVEY COMPLETE, MOVING TO NEW AREA.
1705 ARRIVE AT AREA 5.
1715 BEGIN SURVEY
1810 SURVEY COMPLETE
1930 ARRIVE AT HOTEL, SECURE.

SCOTT R. PONTIUS
NAVFAC

WED 6 OCT 2010

0725 DEPART HOTEL
0810 ON SITE
0840 SAFETY BRIEF
0855 BEGIN SURVEY IN HUECO TANKS STATE PARK AREA. PARK RANGER WANDA ESCORTING.
1045 REBECCA PISHA IS NOT FEELING WELL, WE PUT HER IN THE VEHICLE FOR A BREAK. I AM MONITORING HER CONDITION.
1115 REBECCA FEELING MUCH IMPROVED.
1250 SURVEY COMPLETE
1300 ARRIVE AT AREA 15
1315 LUNCH
1345 BEGIN SURVEY/SAMPLING
1430 SURVEY COMPLETE
1450 ARRIVE AT AREA 5
1720 SURVEY COMPLETE
1800 DEPART SITE
1835 ARRIVE AT HOTEL, SECURE.

[signature]
SCOTT R. PONTIUS
UXOSO

[initials]

THU 7 OCT 2010

0630 DEPART HOTEL
0800 ARRIVE AT AREA 2
0805 SAFETY BRIEF
1010 SURVEY COMPLETE, MOVING TO NEW AREA
1130 AT AREA 4, BEGIN SURVEY
1225 LOCATE PIECES OF 4.2" MORTAR, BEGIN SEARCH OF THE AREA
1340 WE FOUND MD FROM MULTIPLE 4.2" MORTARS SCATTERED OVER A WIDE AREA. FUZES IDENTIFIED AS FUZE M2, MORTARS ARE MARKED "CH.M. SHELL M2" POSSIBLE WP (WHITE PHOSPHORUS). MOST FRAGMENTS ARE FRACTURED IN A WAY CONSISTENT W/ FUNCTION AS DESIGNED. A FEW FRAGMENTS ARE CRUSHED INWARD IN A WAY CONSISTENT W/ BIP. AREA IS A PROBABLE IMPACT AREA.
1530 ARRIVE AT AREA 13
1800 SURVEY COMPLETE. VEHICLE HAS DEVELOPED A SLOW AIR LEAK IN RIGHT FRONT TIRE. LEAVING THE FIELD AT THIS TIME TO HAVE TIRE REPAIRED.
1900 ARRIVE AT HOTEL, SECURE

(NOTE: REBECCA HAS MULTIPLE GPS POINTS LOGGED MARKING 4.2" MORTAR LOCATIONS)

[signature]
SCOTT R PONTIUS
UXOSO

FRI 8 OCT 2010

0630 LOAD OUT VEHICLE + DEPART HOTEL.
0910 ARRIVE AT AREA 8
0940 SAFETY BRIEF
0950 BEGIN SURVEY
1155 SURVEY COMPLETE, MOVING TO NEW AREA
1430 ARRIVE AT AREA 14
1450 BEGIN SURVEY
1635 FINISH SURVEY, DEPART FOR HOTEL
1700 ARRIVE AT HOTEL, WORKING ON EQUIPMENT PACK UP
1800 SECURE

SCOTT R. PONTIUS
LNC050

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CONTENTS

10/4/2010 AREA 9.

9.00 MEETING WITH RON BARKER.

10.40 ARRIVED AREA -9

11.05 EQUIPEMENT SET UP

11.10 SAFETY BRIEF

11.20 STARTED SWEEP

13.20 FINISHED SWEEP STARTED LUNCH

13.50 FINISHED LUNCH

15.20 SAMPLING STARTED.

16.20 SAMPLING FINISHED

16.25 SWEEP FINISH

16.45 MOVED TO AREA 10

17.00 STARTED SWEEP

17.30 LAY OUT SAMPLE AREA

17.55 SAMPLEING

18.15 INCREMENT SAMPLEING COMPLETE

18.35 FINISH DAY

10/5/2010

7.10	LOOKING FOR ACCESS TO GRIDS 1/2/3/4.
7:45	MOVED TO GRID 11
0880	TAIL GATE SAFETY BRIEF
0910	STARTED SAMPLEING
09.35	FINISHED SAMPLEING
	WEATHER COOL/LIGHT BREEZE 3/10 CLOUD
11.50	FINISHED NORTHERN PART GRID 11.
12.45. ARRIVED	AREA 7
12.50	LUNCH
13.20	START AREA 7
15.00	LAY OUT SAMPLEING GRID
16.00	STARTED SAMPLEING
16.20	FINISHED SAMPLEING
16.45	FINISHED SWEEP. AREA 7
16.55	MOVE TO 5.
17.05	ARRIVE 5. START GRID.
18.15	FINISH PART GRID 5.
18.30	FINISH DAY

6/10/2016

0725 START DAY
0815 SAFETY BRIEF
0825 START SAMPLEING
0015 FINISHED
1140 FINISHED FIRST PART OF ~~SAMPLING~~ SURVEY
1240 FINISHED SECOND PART OF SURVEY
1245 MOVING TO NEXT GRID 15
1315 LUNCH
1345 START LAYING OUT SAMPLEING AREA GRID 15
1430 FINISHED SAMPLEING
1440 MOVE TO AREA 5
1725 FINISHED AREAS
1735 CHECKING ACCESS TO STATE LANDS
1800 FINISH DAY.

07/10/2010

06.30	START DAY
08.00	SAFETY BRIEF
08.05	STARTED SWEEP AREA 2
10.05	FINISHED SWEEP AND SAMPLEING AREA 2 SUN VERY HOT, NO CLOUD COVER. BAD VEGITATION COVERAGE
10.10	MOVING TO AREA 3
10.25	UNABLE TO FIND ROUTE. MOVING TO AREA 4
11.20	FOUND AREA 4.
11.25	STARTED AREA 4
13.00	FINISHED AREA 4
13.45	LUNCH
14.15	MOVING TO AREA 14 VIA GARAGE TO TOP OFF TYRE PRESSURE
15.30	ARRIVED AREA 14A START SWEEP
16.30	FINISHED SWEEP MOVING TO 14B

16.40	FOUND AREA 14B
17.50	FINISHED AREA 14B.
18.00	FINISHED DAY

10/8/2010

06.30 START DAY

07.00 TRYING TO FIND ACCESS AREA 3

07.30 NO ACCESS TO AREA 3

07.40 MOVING TO AREA 8.

08.10 WAITING FOR ACCESS

9.15 ACCESS!!!

9.40 ARRIVED AT AREA 8

11.58 FINISHED AREA 8 ~~FOUND~~ NOTHING FOUND.

MOVING TO AREA 12 NO ACCESS

13.15 LUNCH

13.38 LUNCH OVER

MOVING TO 14.

14.28 ARRIVEING AREA 14

16.35 FINISHED 14

1 XLC 65 5.56 BLANK FOUND

16.40 EQUIPEMENT DISPOSED

17.30 ~~FINISH~~ FINISH DAY

WRA CO

30 USA

Appendix E

APPENDIX E

MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOLS

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOL

The Munitions Response Site Prioritization Protocol (MRSPP) reflects the statement in 10 U.S.C. § 2710(b)(2) that the priority assigned should be based on the overall conditions at each location, taking into consideration various factors relating to safety and environmental hazard potential. As required under 10 U.S.C. § 2710(b)(1), the priority assigned to each munitions response site will be included with the inventory information made publicly available. The requirement for an inventory of munitions response sites known or suspected of containing unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC) is found at 10 U.S.C. § 2710(a). The assigned priority will be updated annually to reflect new information that becomes available. In compliance with Code of Federal Regulations (CFR) §179.5, the MRSPP scores are considered interim pending stakeholder input.

Description

The Munitions Response Site Prioritization Protocol evaluates the following potential explosive safety and environmental hazards:

- Explosive hazards posed by unexploded ordnance (UXO) and discarded military munitions (DMM)
- Hazards associated with the effects of chemical warfare materiel (CWM)
- The chronic health and environmental hazards posed by munitions constituents (MC) or other chemical constituents.

DoD recognizes the different hazards inherent to each class of materials. To address these differences, the Protocol has three hazard evaluation modules, each of which is specific to one type of hazard, specifically:

- Explosive hazards are evaluated using the Explosives Hazard Evaluation (EHE) module
- CWM-related hazards are evaluated using the Chemical Warfare Materiel Hazard Evaluation (CHE) module
- Health and environmental hazards posed by MC are evaluated using the Health Hazard Evaluation (HHE) module.

DoD recognized that sufficient data to apply all three of the hazard evaluation modules may not be immediately available for some munitions response sites. In such cases where data are available for only one or two of the modules, the priority will be assigned based on the modules for which sufficient data are available. This initial priority may change when additional data are collected and all three modules are evaluated. Modules for which there are insufficient data will be assigned a status of “evaluation pending”.

Upon completion of all necessary munitions responses at a munitions response site, the status “prioritization no longer required” will be assigned. The sequencing of munitions response sites for environmental restoration activities will be based primarily on the priority assigned using this Protocol, but may also reflect other relevant information, such as stakeholder concerns, economic issues, and program management considerations.

Evaluation

An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

The priority assigned to each site based on the three hazard evaluation modules are summarized in Table E-1 of this Appendix. A complete list of tables for Munitions Response Prioritization Protocols is provided in Table E-2 of this Appendix. The complete prioritization protocol evaluation forms are provided in this appendix as well as electronically on a CD located in the back of this binder. In compliance with Code of Federal Regulations (CFR) §179.5, the MRSPP scores are considered interim pending stakeholder input.

Table E-1: Prioritization Protocol Priorities for Each MR Site

MR Site	Explosive Hazard Evaluation (EHE)		Chemical Hazard Evaluation (CHE)		Human Health Evaluation (HHE)		MRS Priority or Alternative Rating
	EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority	
Former Maneuver Area A FTBLS-002-R-01	C	4	No Known or Suspected CWM Hazards		No Known or Suspected HHE Hazards		4
Former Maneuver Area B FTBLS-002-R-02	No Known or Suspected EHE Hazard		No Known or Suspected CWM Hazards		No Known or Suspected HHE Hazards		No Known or Suspected Hazard

Table E-2: List of Tables for Munitions Response Prioritization Protocols

Explosives Hazard Evaluation (EHE) Module	
Table 1	Munitions Type Data Element Table
Table 2	Source of Hazard Data Element Table
Table 3	Location of Munitions Data Element Table
Table 4	Ease of Access Data Element Table
Table 5	Status of Property Data Element Table
Table 6	Population Density Data Element Table
Table 7	Population Near Hazard Data Element Table
Table 8	Types of Activities/Structures Data Element Table
Table 9	Ecological and/or Cultural Resources Data Element Table
Table 10	Determining the EHE Module Rating
Chemical Warfare Materiel Hazard Evaluation (CHE) Module	
Table 11	CWM Configuration Data Element Table
Table 12	Sources of CWM Data Element Table
Table 13	Location of CWM Data Element Table
Table 14	Ease of Access Data Element Table
Table 15	Status of Property Data Element Table
Table 16	Population Density Data Element Table
Table 17	Population Near Hazard Data Element Table
Table 18	Types of Activities/Structures Data Element Table
Table 19	Ecological and/or Cultural Resources Data Element Table
Table 20	Determining the CHE Module Rating
Health Hazard Evaluation (HHE) Module	
Table 21	Groundwater Data Element Table
Table 22	Surface Water – Human Endpoint Data Element Table
Table 23	Sediment – Human Endpoint Data Element Table
Table 24	Surface Water – Ecological Endpoint Data Element Table
Table 25	Sediment – Ecological Endpoint Data Element Table
Table 26	Surface Soil Data Element Table
Table 27	Supplemental Contaminant Hazard Factor Table
Table 28	Determining the HHE Module Rating
Summary Tables	
Table 29	MRS Priority
Table A	MRS Background Information

Note: If the scores for the EHE and CHE modules reflect that there was no known or suspected hazard, Tables 2 through 9 and Tables 12 through 19 are not included in the MRSPP.

Additionally, Table 27 is only included when the list of analytes exceeding the screening criteria is too long to include on Tables 21 through 26.

FORMER MANEUVER AREA A

MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOL

Installation Name:	**Fort Bliss El Paso, Texas**	**EHE Score:**	**C**
Site Name:	**Former Maneuver Area A (FTBLS-002-R-01)**	**CHE Score:**	**No Known or Suspected CWM Hazard**
Completed By:	**TLI Solutions, Inc.**	**HHE Evaluation:**	**No Known or Suspected MC Hazard**
Date Completed:	**March 2011**	**Overall Priority:**	**4**

Background

The Munitions Response Site Prioritization Protocol reflects the statement in 10 U.S.C. § 2710(b)(2) that the priority assigned should be based on the overall conditions at each location, taking into consideration various factors relating to safety and environmental hazard potential. As required under 10 U.S.C. § 2710(b)(1), the priority assigned to each munitions response site will be included with the inventory information made publicly available. The requirement for an inventory of munitions response sites known or suspected of containing unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC) is found at 10 U.S.C. § 2710(a). The assigned priority will be updated annually to reflect new information that becomes available.

Description

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Upon completion of all necessary munitions responses at a munitions response site, the status “prioritization no longer required” will be assigned. The sequencing of munitions response sites for environmental restoration activities will be based primarily on the priority assigned using this Protocol, but may also reflect other relevant information, such as stakeholder concerns, economic issues, and program management considerations.

Instructions

Enter the appropriate score for each “Classification” in the “Site Score” column. Enter the highest Site Score in the last row of each table. Follow the matrix presented in Table 10 to determine the EHE rating. Repeat this process to determine the CHE rating (Table 20) and HHE rating (Table 24).

EHE Site Scores are calculated in Tables 1 through 9. The EHE rating is calculated in Table 10. CHE Site Scores are calculated in Tables 11 through 19. The CHE rating is calculated in Table 20. HHE Site Scores are calculated in Tables 21 through 27. The HHE rating is calculated in Table 28. The Site Priority based on the three hazard evaluations (EHE, CHE, and HHE) is calculated in Table 29. The value determined in Table 29 is used to determine the priority of the site.

Table A
MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the **MRS Summary**, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.

Munitions Response Site Name: Former Maneuver Area (FTBLS-002-R-01)

Component: U.S. Army

Installation/Property Name: Fort Bliss

Location (City, County, State): El Paso, El Paso County, Texas

Site Name/Project Name (Project No.): Former Maneuver Area Munitions Response (MR) Site/Military Munitions Response Program (MMRP) Site Inspection

Date Information Entered/Updated: March 2011 (prepared by TLI Solutions, Inc.)

Point of Contact (Name/Phone): Ron Baca/915-568-7979

Project Phase (check only one): Site Inspection

❑ PA	☑ SI	❑ RI	❑ FS	❑ RD
❑ RA-C	❑ RIP	❑ RA-O	❑ RC	❑ LTM

Media Evaluated (check all that apply):

❑ Groundwater	❑ Sediment (human receptor)
☑ Surface soil	❑ Surface Water (ecological receptor)
❑ Sediment (ecological receptor)	❑ Surface Water (human eceptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type:

Fort Bliss is located in El Paso County in western Texas. The Former Maneuver Area MR Area (MRA) is a transferred site comprised of portions of two adjacent former maneuver areas that encompasses 72,520.82 acres. The MRA is located along the southern and eastern boundaries of Fort Bliss in El Paso and Hudspeth Counties. Data collected for the Historical Records Review indicates that this MRA was used for various training purposes from approximately 1939 into the 1970s. Based on the results of the Site Inspection, the MRA has been split into two MR sites. The Former Maneuver Area A MR site encompasses 24,459.18 acres and is located adjacent to the southeastern boundary of Fort Bliss. During site inspection (SI) field activities, evidence of military activity, including fragments and fuzes from 4.2-inch mortars, was identified. In addition, evidence of small arms was observed (SI Report, Section 5.1.1).

Description of Pathways for Human and Ecological Receptors: Potential exposure pathways include surface soils. Rainfall in the area is limited; therefore, transport of contaminants into the groundwater is unlikely. However, there is a potential for MEC and MD to be buried as a result of wind and water erosion. No MEC was observed during the field activities and no MC was identified in the soil samples at levels that exceeded the screening criteria. Therefore, the pathways for receptors to encounter MEC or MC are considered incomplete (SI Report, Section 6.0, Table 6-1).

Description of Receptors (Human and Ecological): Human receptors include recreational users of the area, residents, industrial and commercial users, military and installation personnel, construction workers, road and utility maintenance personnel and ranchers. Ecological receptors include plant, reptile, bird, mammal, insect, and cattle receptors (SI Report, Section 6.0, Table 6-1).

MRSPP Score: 4

Table 1
EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with **all** the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	◆ UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). ◆ Hand grenades containing energetic filler. ◆ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	30
High explosive (used or damaged)	◆ UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." ◆ DMM containing a high-explosive filler that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	**25**
Pyrotechnic (used or damaged)	◆ UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). ◆ DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	20
High explosive (unused)	◆ DMM containing a high-explosive filler that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	15
Propellant	◆ UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ▪ Damaged by burning or detonation ▪ Deteriorated to the point of instability.	15
Bulk secondary high explosives, pyrotechnics, or propellant	◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10
Pyrotechnic (not used or damaged)	◆ DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	10
Practice	◆ UXO that are practice munitions that are not associated with a sensitive fuze. ◆ DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	5
Riot control	◆ UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	◆ Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.)	**2**
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	**25**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided.

Munitions reported to have been used at the site include blanks or small arms associated with the use of M1(.30 caliber), M2(.50 caliber), M16(5.56mm), M14(7.62mm) rifles and pyrotechnics of various types (SI Report, Section 3.1.1). No MEC or MC was identified during the SI visual survey, although MD including fragments and fuzes from 4.2-inch mortars was identified (SI Report, Section 5.1.1).

Table 2
EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with **all** the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms *former range, practice munitions, small arms range, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	◆ The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones.	**10**
Former munitions treatment (i.e., OB/OD) unit	◆ The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	◆ The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	◆ The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	5
Former burial pit or other disposal area	◆ The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	◆ The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	◆ The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	**4**
Former missile or air defense artillery emplacements	◆ The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	◆ The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	◆ The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	**10**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Source of Hazard*** classifications in the space provided.

Munitions reported to have been used at the site include blanks or small arms associated with the use of M1(.30 caliber), M2(.50 caliber), M16(5.56mm), M14(7.62mm) rifles and pyrotechnics of various types (SI Report, Section 3.1.1). No MEC or MC were identified during the SI visual survey, although MD including fragments and fuzes from 4.2-inch mortars was identified. In addition, evidence was observed of firing areas where small arms were used. The majority of the small arms appeared to be blanks; however, one live .30-06 caliber ball cartridge was observed (SI Report, Section 5.1.1).

Table 3

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with **all** the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	◆ Physical evidence indicates that there are UXO or DMM on the surface of the MRS. ◆ Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS.	25
Confirmed subsurface, active	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.	20
Confirmed subsurface, stable	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.	15
Suspected (physical evidence)	◆ There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	**10**
Suspected (historical evidence)	◆ There is historical evidence indicating that UXO or DMM may be present at the MRS.	**5**
Subsurface, physical constraint	◆ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	◆ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	**10**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of Munitions*** classifications in the space provided.

Munitions reported to have been used at the site include blanks or small arms associated with the use of M1(.30 caliber), M2(.50 caliber), M16(5.56mm), M14(7.62mm) rifles and pyrotechnics of various types (SI Report, Section 3.1.1). No MEC or MC were identified during the SI visual survey, although MD including fragments and fuzes from 4.2-inch mortars was identified. In addition, evidence was observed of firing areas where small arms were used. The majority of the small arms appeared to be blanks; however, one live .30-06 caliber ball cartridge was observed (SI Report, Section 5.1.1).

Table 4
EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	◆ There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	**10**
Barrier to MRS access is incomplete	◆ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	◆ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	◆ There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	**10**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided.

The Former Maneuver Area A MR site is located outside of the Fort Bliss installation on land that is owned by private, commercial, and State of Texas entities. Several fences with locked gates cross the site, the site is accessible to the public.

Table 5

EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	◆ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. ◆ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.	**5**
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided.

The Former Maneuver Area A MR site is a transferred site. The entire site is located on land owned by private, commercial, and State of Texas entities.

Table 6

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	◆ There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100–500 persons per square mile	◆ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	**3**
< 100 persons per square mile	◆ There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**3**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided.

Although the U.S. Census data for 2006 indicates a population density for El Paso of 670.9 persons per square mile within a two mile radius of the perimeter of the MRS, the population within the MRS boundary is generally sparse. The score takes into account the sparseness of the population within the MRS and the MRS' proximity to Fort Bliss and El Paso, TX.

Table 7

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	◆ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	**5**
16 to 25 inhabited structures	◆ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	◆ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	◆ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	◆ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	◆ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided.

Although the majority of the site is undeveloped, several residences and the Hueco Tanks State Historic Site are located within the site and inhabited structures including residences and buildings associated with commercial activities are located within two miles of the site.

Table 8

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the scores that correspond with **all** the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	**5**
Parks and recreational areas	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	**4**
Agricultural, forestry	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	**3**
Industrial or warehousing	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	◆ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided.

According to the El Paso City website, there are Community and Regional Commercial, Ranch & Farm and Planned Residential zoning areas in the western portion of the MR site. The website also states that the eastern portion of El Paso County encompasses rural/residential and rural/agricultural lands. Although the majority of the site is undeveloped, the land is used for recreational purposes such as hunting. The Former Maneuver Area A MR site is also used for residential housing, cattle grazing, and gravel mining operations.

Table 9

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	◆ There are both ecological and cultural resources present on the MRS.	**5**
Ecological resources present	◆ There are ecological resources present on the MRS.	3
Cultural resources present	◆ There are cultural resources present on the MRS.	3
No ecological or cultural resources present	◆ There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided.

There are numerous federal and/or state listed species of concern, threatened, and/or endangered species known to occur and/or to potentially occur within the MR site. These include 9 plant, 3 reptile, 16 bird, 15 mammal and 2 insect species. The MR site is located in proximity to the Hueco Tanks State Historic Site. Resources at the park include a historic adobe ranch house and stone ruins, 29 prehistoric archeological localities and 273 rock panels with approximately 3000 pictographs.

Table 10
Determining the EHE Module Rating

DIRECTIONS:

1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.
4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	25	35
Source of Hazard	Table 2	10	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	10	25
Ease of Access	Table 4	10	
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	3	18
Population Near Hazard	Table 7	5	
Types of Activities/Structures	Table 8	5	
Ecological and/or Cultural Resources	Table 9	5	
EHE MODULE TOTAL			**78**

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	**C**
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard
EHE MODULE RATING	**C**

Table 11

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with **all** the CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	The CWM known or suspected of being present at the MRS are: ◆ CWM that are UXO (i.e., CWM/UXO) ◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	◆ The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: ◆ Nonexplosively configured CWM/DMM either damaged or undamaged ◆ Bulk CWM (e.g., ton container).	15
CAIS K941 and CAIS K942	◆ The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	◆ CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***CWM Configuration*** classifications in the space provided.

No historical or visual evidence indicates that CWM is or was present at this MRS.

Tables 12 through 19 are intentionally omitted according to Active Army Guidance

Table 20
Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.
4. Circle the appropriate range for the **CHE Module Total** below.
5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		
Accessibility Factor Data Elements			
Location of CWM	Table 13		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19		
CHE MODULE TOTAL			**0**

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	**No Known or Suspected CWM Hazard**

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional groundwater contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ☑

Table 22

HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Human Endpoint) MC Hazard ☑

Table 23

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Sediment (Human Endpoint) MC Hazard ☑

Table 24

HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum the Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard ☑

Table 25

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
CHF Scale	**CHF Value**	**Sum the Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ☑

Table 26

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface soil contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
Antimony	0.51	31	0.016
Barium	91	16,000	0.006
Copper	9.9	3,100	0.003
Lead	11	400	0.028
Magnesium	5,000	3,300	1.515
Potassium	2,400	N/A	N/A
Zinc	39	23,000	0.002
CHF Scale	**CHF Value**	**Sum the Ratios**	1.570
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	**L**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	**L**
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

All results for metals in the samples collected from the site were below the screening criteria and no explosives were detected in the samples. Therefore, there is no potential for MC to migrate in the environment.

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	**L**
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

All results for metals in the samples collected from the site were below the screening criteria and no explosives were detected in the samples. Therefore, there is no potential for receptors to encounter MC.

No Known or Suspected Surface Soil MC Hazard ☑

Table 28

Determining the HHE Module Rating

DIRECTIONS:

1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)					
Surface Water/Human Endpoint (Table 22)					
Sediment/Human Endpoint (Table 23)					
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)					
Surface Soil (Table 26)	L	L	L	LLL	G

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING	G

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	C
HML	D
MMM	D
HLL	E
MML	E
MLL	F
LLL	G

Alternative Module Ratings	
	Evaluation Pending
	No Longer Required
	No Known or Suspected MC Hazard

No analytes exceeded the site screening values as agreed upon by all stakeholders during the Site Inspection process; therefore, the MRS is recommended for No Further Action for MC (SI Report, Section 8.0).

Table 29
MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the **MRS Priority or Alternative MRS Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	**4**	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		**No Known or Suspected CWM Hazard**		**No Known or Suspected MC Hazard**	
MRS PRIORITY or ALTERNATIVE MRS RATING				**4**	

FORMER MANEUVER AREA B

MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOL

Installation Name:	**Fort Bliss El Paso, Texas**	**EHE Score:**	**No Known or Suspected EHE Hazard**
Site Name:	**Former Maneuver Area B (FTBLS-002-R-02)**	**CHE Score:**	**No Known or Suspected CWM Hazard**
Completed By:	**TLI Solutions, Inc.**	**HHE Evaluation:**	**No Known or Suspected HHE Hazard**
Date Completed:	**March 2011**	**Overall Priority:**	**No Known or Suspected Hazard**

Background

The Munitions Response Site Prioritization Protocol reflects the statement in 10 U.S.C. § 2710(b)(2) that the priority assigned should be based on the overall conditions at each location, taking into consideration various factors relating to safety and environmental hazard potential. As required under 10 U.S.C. § 2710(b)(1), the priority assigned to each munitions response site will be included with the inventory information made publicly available. The requirement for an inventory of munitions response sites known or suspected of containing unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC) is found at 10 U.S.C. § 2710(a). The assigned priority will be updated annually to reflect new information that becomes available.

Description

The Munitions Response Site Prioritization Protocol evaluates the following potential explosive safety and environmental hazards:

- Explosive hazards posed by unexploded ordnance (UXO) and discarded military munitions (DMM)
- Hazards associated with the effects of chemical warfare materiel (CWM)
- The chronic health and environmental hazards posed by munitions constituents (MC) or other chemical constituents.

DoD recognizes the different hazards inherent to each class of materials. To address these differences, the Protocol has three hazard evaluation modules, each of which is specific to one type of hazard, specifically:

- Explosive hazards are evaluated using the Explosives Hazard Evaluation (EHE) module
- CWM-related hazards are evaluated using the Chemical Warfare Materiel Hazard Evaluation (CHE) module
- Health and environmental hazards posed by MC are evaluated using the Health Hazard Evaluation (HHE) module.

DoD recognized that sufficient data to apply all three of the hazard evaluation modules may not be immediately available for some munitions response sites. In such cases where data are available for only one or two of the modules, the priority will be assigned based on the modules for which sufficient data are available. This initial priority may change when additional data are collected and all three modules are evaluated. Modules for which there are insufficient data will be assigned a status of “evaluation pending”.

Upon completion of all necessary munitions responses at a munitions response site, the status “prioritization no longer required” will be assigned. The sequencing of munitions response sites for environmental restoration activities will be based primarily on the priority assigned using this Protocol, but may also reflect other relevant information, such as stakeholder concerns, economic issues, and program management considerations.

Instructions

Enter the appropriate score for each “Classification” in the “Site Score” column. Enter the highest Site Score in the last row of each table. Follow the matrix presented in Table 10 to determine the EHE rating. Repeat this process to determine the CHE rating (Table 20) and HHE rating (Table 24).

EHE Site Scores are calculated in Tables 1 through 9. The EHE rating is calculated in Table 10. CHE Site Scores are calculated in Tables 11 through 19. The CHE rating is calculated in Table 20. HHE Site Scores are calculated in Tables 21 through 27. The HHE rating is calculated in Table 28. The Site Priority based on the three hazard evaluations (EHE, CHE, and HHE) is calculated in Table 29. The value determined in Table 29 is used to determine the priority of the site.

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the **MRS Summary**, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.

Munitions Response Site Name: Former Maneuver Area B (FTBLS-002-R-02)

Component: U.S. Army

Installation/Property Name: Fort Bliss

Location (City, County, State): El Paso, El Paso and Hudspeth Counties, Texas

Site Name/Project Name (Project No.): Former Maneuver Area B Munitions Response (MR) Site/Military Munitions Response Program (MMRP) Site Inspection

Date Information Entered/Updated: March 2011 (prepared by TLI Solutions, Inc.)

Point of Contact (Name/Phone): Ron Baca/915-568-7979

Project Phase (check only one): Site Inspection

❑ PA	☑ SI	❑ RI	❑ FS	❑ RD
❑ RA-C	❑ RIP	❑ RA-O	❑ RC	❑ LTM

Media Evaluated (check all that apply):

❑ Groundwater	❑ Sediment (human receptor)
☑ Surface soil	❑ Surface Water (ecological receptor)
❑ Sediment (ecological receptor)	❑ Surface Water (human eceptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type:

Fort Bliss is located in El Paso County in western Texas. The Former Maneuver Area MR Area (MRA) is a transferred site comprised of portions of two adjacent former maneuver areas that encompasses 72,520.82 acres. The MRA is located along the southern and eastern boundaries of Fort Bliss in El Paso and Hudspeth Counties. Data collected for the Historical Records Review indicates that this MRA was used for various training purposes from approximately 1939 into the 1970s. Based on the results of the Site Inspection, the MRA has been split into two MR sites. The Former Maneuver Area B MRS encompasses 48,061.64 acres and encompasses areas within El Paso and Hudspeth Counties. During site inspection (SI) field activities, evidence of military activity, including evidence of small arms and an expended smoke grenade were observed (SI Report, Section 5.1.1).

Description of Pathways for Human and Ecological Receptors: Potential exposure pathways include surface soils. Rainfall in the area is limited; therefore, transport of contaminants into the groundwater is unlikely. However, there is a potential for MEC and MD to be buried as a result of wind and water erosion. No MEC was observed during the field activities and no MC was identified in the soil samples at levels that exceeded the screening criteria. Therefore, the pathways for receptors to encounter MEC or MC are considered incomplete (SI Report, Section 6.0, Table 6-1).

Description of Receptors (Human and Ecological): Human receptors include recreational users of the area, residents, industrial and commercial users, military and installation personnel, construction workers, road and utility maintenance personnel and ranchers. Ecological receptors include plant, reptile, bird, mammal, insect, and cattle receptors. (SI Report (Section 6.0, Table 6-1).

MRSPP Score: No Known or Suspected Hazard

Table 1
EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with **all** the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	◆ UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). ◆ Hand grenades containing energetic filler. ◆ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	30
High explosive (used or damaged)	◆ UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." ◆ DMM containing a high-explosive filler that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	25
Pyrotechnic (used or damaged)	◆ UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). ◆ DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	20
High explosive (unused)	◆ DMM containing a high-explosive filler that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	15
Propellant	◆ UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ▪ Damaged by burning or detonation ▪ Deteriorated to the point of instability.	15
Bulk secondary high explosives, pyrotechnics, or propellant	◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10
Pyrotechnic (not used or damaged)	◆ DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	10
Practice	◆ UXO that are practice munitions that are not associated with a sensitive fuze. ◆ DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	5
Riot control	◆ UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	◆ Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.)	2
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	**0**
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided.

Munitions reported to have been used at the site include blanks or small arms associated with the use of M1(.30 caliber), M2(.50 caliber), M16(5.56mm), M14(7.62mm) rifles and pyrotechnics of various types (SI Report, Section 3.1.1). Because no MEC was identified during SI field activities and only debris associated with small arms and one expended smoke grenade was observed, this site is recommended for No Further Action (NFA) at this time (SI Report, Section 8.0).

Tables 2 through 9 are intentionally omitted according to Active Army Guidance

Table 10
Determining the EHE Module Rating

DIRECTIONS:

1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.
4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	0	0
Source of Hazard	Table 2		
Accessibility Factor Data Elements			
Location of Munitions	Table 3		
Ease of Access	Table 4		
Status of Property	Table 5		
Receptor Factor Data Elements			
Population Density	Table 6		
Population Near Hazard	Table 7		
Types of Activities/Structures	Table 8		
Ecological and/or Cultural Resources	Table 9		
EHE MODULE TOTAL			**0**

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard
EHE MODULE RATING	**No Known or Suspected Explosive Hazard**

Table 11

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with **all** the CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	The CWM known or suspected of being present at the MRS are: ◆ CWM that are UXO (i.e., CWM/UXO) ◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	◆ The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: ◆ Nonexplosively configured CWM/DMM either damaged or undamaged ◆ Bulk CWM (e.g., ton container).	15
CAIS K941 and CAIS K942	◆ The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	◆ CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	**0**

DIRECTIONS: Document any MRS-specific data used in selecting the ***CWM Configuration*** classifications in the space provided.

No historical or visual evidence indicates that CWM is or was present at this MRS.

Tables 12 through 19 are intentionally omitted according to Active Army Guidance

Table 20
Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.
4. Circle the appropriate range for the **CHE Module Total** below.
5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		
Accessibility Factor Data Elements			
Location of CWM	Table 13		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19		
CHE MODULE TOTAL			**0**

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	**No Known or Suspected CWM Hazard**

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional groundwater contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ☑

Table 22

HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Human Endpoint) MC Hazard ☑

Table 23

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Sediment (Human Endpoint) MC Hazard ☑

Table 24

HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum the Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard ☑

Table 25

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
CHF Scale	**CHF Value**	**Sum the Ratios**	
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ☑

Table 26

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface soil contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
Antimony	0.42	31	0.014
Barium	94	16,000	0.059
Copper	13	3,100	0.004
Lead	13	400	0.033
Magnesium	5,100	3,300	1.545
Potassium	2,500	N/A	N/A
Zinc	34	23,000	0.002
CHF Scale	**CHF Value**	**Sum the Ratios**	1.657
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	**L**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	**L**
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

All results for metals in the samples collected from the site were below the screening criteria and no explosives were detected in the samples. Therefore, there is no potential for MC to migrate in the environment.

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	**L**
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**L**

All results for metals in the samples collected from the site were below the screening criteria and no explosives were detected in the samples. Therefore, there is no potential for receptors to encounter MC.

No Known or Suspected Surface Soil MC Hazard ☑

Table 28

Determining the HHE Module Rating

DIRECTIONS:

1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)					
Surface Water/Human Endpoint (Table 22)					
Sediment/Human Endpoint (Table 23)					
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)					
Surface Soil (Table 26)	L	L	L	LLL	G

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING	G

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	C
HML	D
MMM	D
HLL	E
MML	E
MLL	F
LLL	G

Alternative Module Ratings	
	Evaluation Pending
	No Longer Required
	No Known or Suspected MC Hazard

No analytes exceeded the site screening values as agreed upon by all stakeholders during the Site Inspection process; therefore the MRS is recommended for No Further Action (SI Report, Section 8.0).

Table 29
MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the **MRS Priority or Alternative MRS Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		**No Known or Suspected CWM Hazard**		**No Known or Suspected MC Hazard**	
MRS PRIORITY or ALTERNATIVE MRS RATING				**No Known or Suspected Hazard**	

Appendix F

APPENDIX F

MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOL NOTIFICATION LETTER AND PUBLIC ANNOUNCEMENT

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Note: As of 31 March 2011, Fort Bliss had not placed the Public MRSPP Announcement in the local newspapers because funding for the advertisements was not available. Once the announcements have been published, copies will be provided as a supplement to this SI Report and if any additional information is obtained as a result of the announcement, the SI Report will be revised as appropriate.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS
1 PERSHING ROAD
FORT BLISS, TEXAS 79916-3803

REPLY TO
ATTENTION OF:

February 11, 2011

Environmental Division

Ms. Joanna Manning, P.G.
Program Manager
Remediation Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. D
Mail Code 221
Austin, TX 78753

Dear Ms. Manning:

As a lead agency and in accordance with the 32 Code of Federal Regulations 179.5 requirements, The U.S. Army, Fort Bliss, is providing this notification that a Military Munitions Response Program (MMRP) Site Inspection (SI) is being executed. The MMRP site, Former Maneuver Area 1 and 2, established during the SI process will be evaluated and scored by applying the Munitions Response Site Prioritization Protocol (MRSPP). The MRSPP evaluation criteria includes assessing types of munitions which may be potentially present, assessing land uses, determining ease of access to sites, and quantifying the number of people with access to Sites.

Sites will be initially scored and presented in the Draft SI Report. If you, or any applicable stakeholder, are interested in participating in the initial scoring process, a meeting can be setup prior to publishing the Draft SI Report. Please let us know within 30-days, if you are interested in participating in the scoring process. However, you may elect to simply review and provide input on the initial scores within the Draft SI Report. MMRP scores will be considered final in the Final SI Report.

Should you have any questions regarding the SI and the application of MRSPP, please do not hesitate to please contact: Mr. Ron Baca, (915) 568-7979 or email at ron.baca@us.army.mil or Mr Joel Reyes (915) 568-6993 or email at joel.reyesjr@us.army.mil.

Vicki G. Hamilton, R.A.
Chief, Environmental Division
Directorate of Public Works

Cc: TCEQ, Region 6 office

Appendix G

APPENDIX G

TECHNICAL PROJECT PLANNING MEETING MINUTES

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Technical Project Planning Meeting
January 26, 2011

Technical Project Planning Meeting
Military Munitions Response Program
Fort Bliss, Texas

26 January 2011

Project: **Military Munitions Response Program Site Inspection (2nd)**
Fort Bliss, Texas

Points of Contact:
United States Army Environmental Command (USAEC) Environmental Restoration Manager: Scott Reed/210-792-3468
United States Army Corps of Engineers – Sacramento District (USACE-SPK) Project Manager: Young Chong/916-557-7212
Fort Bliss, Installation Restoration Program (IRP) Manager: Ron Baca/915-568-7979
Contractor, TLI Solutions, Inc. Project Manager: Gene Barber/303-763-7188

A Technical Project Planning (TPP) meeting was held at 1:00 PM on January 26, 2011 at the Embassy Suites Hotel, El Paso Texas. Representatives from the organizations listed below met to discuss the Site Inspection (SI) activities conducted under the Military Munitions Response Program (MMRP) at the Former Maneuver Area Munitions Response (MR) site. This site is located between Loop 375 and the Hueco Mountains and north of Montana Ave.

MEETING ATTENDEES

Name	Organization / Title	Email	Telephone Number
Scott Reed	USAEC/ Environmental Restoration Manager	scott.h.reed@us.army.mil	210-792-3468
Marianne Bradshaw	Fort Bliss Office of the Staff Judge Advocate/ Environmental Attorney	marianne.bradshaw@us.army.mil	915-568-1909
Ron Baca	Fort Bliss Directorate of Public Works-Environmental (DPW-E)/ Installation Restoration Program (IRP) Manager	ron.baca@us.army.mil	915-568-7979
Young Chong	U.S. Army Corps of Engineers (USACE)/ Project Manager	young.s.chong@usace.army.mil	916-557-7212
Richard Smith	USACE-Tulsa/Project Manager	richard.p.smith@usace.army.mil	918-669-4956
Ken Kebbell	USACE-Tulsa/Chief, Environmental Engineering Branch	kenneth.kebbell@usace.army.mil	918-669-7249

Name	Organization / Title	Email	Telephone Number
Wanda Olszewski	Texas Parks and Wildlife Department (TPWD), Hueco Tanks/Superintendent	wanda.olszewski@tpwd.state.tx.us	915-857-1135
Andrea Silva	Texas Commission on Environmental Quality (TCEQ) – El Paso Office Environmental Investigator	asilva@tceq.state.tx.us	915-834-4952
Elda Rodriguez-Hefner	City of El Paso/Senior Environmental Scientist	ridriguez-hefnere@elpasotexas.gov	915-599-6232
Rene Lopez	Ysleta Del Sur Pueblo/ Traditional Council	salsalopez84@yahoo.com	915-319-0400
Rafael Gomez, Jr.	Ysleta Del Sur Pueblo/ Traditional Council	redpueblo@hotmail.com	915-217-8828
Richard Teschner	Frontera Land Alliance/ Vice President	teschner@utep.edu	915-533-1279
Gene Barber	TLI Solutions, Inc./ Project Manager	gbarber@tlisolutions.com	303-763-7188
Mary Franquemont	TLI Solutions, Inc./ Technical Team Lead	mfranquemont@tlisolutions.com	303-763-7188
Rebecca Pisha	TLI Solutions, Inc./ Environmental Scientist	rpisha@tlisolutions.com	303-763-7188

The meeting began with introductions and an overview of the MRRP program by Mr. Gene Barber, TLI Solutions, Inc. The goals of the meeting were presented and included review of the following topics: the MMRP, the MMRP SI goals and objectives, the Technical Project Planning (TPP) Process, SI activities and results, conclusions and recommendations for munitions and explosives of concern (MEC) and munitions constituents (MC), and the draft Munitions Response Site Prioritization Protocols (MRSPP). The presentation included an outline of how the MMRP process at Fort Bliss has followed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. Mr. Barber also outlined the TPP process, which has been used throughout the SI to include stakeholders in the project decision-making process.

Ms. Mary Franquemont, TLI Solutions, Inc. provided a summary of the historical information that had been included in the Final Historical Records Review (HRR) report developed for the Former Maneuver Area MR site. Ms. Franquemont provided a general overview of the tasks that were completed during the SI field activities, including visual surveys and surface soil sampling. Field activities were executed from the 4th through 8th of October 2010.
Approximately 132.5 line miles of visual surveys were completed throughout the site. Prior to conducting visual surveys on private property, the Army obtained a Right of Entry (ROE) from the landowner that grants permission for the field work to be completed. Ms. Elda Rodriguez-Hefner, City of El Paso, asked for clarification on the location of the investigation areas where

the property owners refused to sign the ROE. Ms. Franquemont noted on the figure in the presentation the areas for which ROEs were not obtained. She also emphasized that the field team did not access areas for which ROEs were not obtained. The purpose of the visual survey is to identify the presence of any military munitions, including unexploded ordnance (UXO), discarded military munitions (DMM), munitions debris (MD), or the evidence of military activities, such as berms, gun emplacements, and maneuver areas. No intrusive work (digging) was conducted during the visual survey. The field team consisted of two qualified UXO technicians and two environmental professionals. The field team used metal detectors to assist in locating metallic objects during the visual survey. In addition, each team member carried a global positioning system (GPS) unit to log their track and document any observations.

Sixteen investigation areas were selected from within the Former Maneuver Area for visual surveys and sampling. These locations were selected based on the available historical information and present likely locations where military training activities may have occurred. Modifications to the investigation areas were made based on the executed ROEs. Visual surveys were conducted in twelve of the sixteen areas, as four of the areas were inaccessible due to road conditions or locked gates.

During the visual surveys, munitions debris including fragmentation from 4.2-inch mortars was observed in Area 4, small arms debris and evidence of military activity was observed in six areas (Areas 5, 6, 9, 10, 11, and 14), and no munitions or evidence of military activity was observed in five areas (Areas 2, 7, 8, 13, and 15). No munitions and explosives of concern were identified during the visual survey.

In addition to visual surveys, 20 soil samples were collected to determine if munitions constituents have contaminated the soils within the Former Maneuver Area MR site. Sixteen incremental samples and four composite samples were collected. The composite samples were collected in Areas 4 and 11. These samples were collected in proximity to significant MD items. The 16 IS were collected within the remaining investigative areas. Ms. Franquemont explained that if MD was identified during the fieldwork, then an IS was taken that encompassed the area of the MD. However, if no MD was present, the IS was taken from a random location that appeared to represent the general characteristics (vegetation and terrain) of the area. Mr. Ron Baca, Fort Bliss, asked about the depth of the samples to which Ms. Franquemont responded that the samples were taken from the surface at a depth of zero to six inches. Ms. Young Chong, USACE, pointed out that the samples were analyzed at a laboratory that is both TCEQ and Department of Defense (DoD) certified. Ms. Franquemont confirmed that the TestAmerica laboratory in Denver, Colorado possesses both certifications. Samples were collected from locations where evidence of munitions or military activities was observed. Samples were also collected randomly from areas that had no evidence of munitions or military activities. No intrusive digging below six inches was conducted during the soil sampling. Samples were analyzed for explosives and metals based on munitions used at the site. Analytical results were compared to the screening criteria that was agreed upon by the stakeholders and presented in the Final SI Work Plan. These included comparing the metal results to 3 times the State background level as defined by TCEQ; and comparing the results for explosives to the U.S. Environmental Protection Agency Regional Screening Levels. The analytical results for metals indicated that all

concentrations are below the applicable screening criteria and no explosives were detected in any of the samples.

During the presentation of the fieldwork and results, the following discussions took place:

- Mr. Richard Smith, USACE-Tulsa District, asked if all of the munitions debris identified in Area 4 was at the surface. Ms. Franquemont confirmed that this was the case. During the field activities, the UXO technicians scanned the area with hand-held metal detectors to determine if subsurface anomalies existed and did not find evidence of subsurface metallic objects.

- Mr. Baca questioned if it is unusual to identify intact fuzes during field investigations. Mr. Barber responded that it is not unusual to find fuzes and that TLI personnel have identified intact fuzes during previous investigations. However, the fuzes identified during the field work for this effort did not contain any explosives and did not present a hazard according to TLI's UXO technicians.

- Mr. Rafael Gomez, Jr. of the Ysleta Del Sur Pueblo asked which areas were tribal lands and if the field team had permission to access these lands. Ms. Franquemont responded that Areas 5 and 8 belonged to Ysleta Del Sur Pueblo and, in addition to having the proper ROEs, a tribal representative opened a locked gate for the field team.

- Mr. Baca pointed out that it would have been better to collect soil samples from evident pockmarks created by artillery impacts. Ms. Franquemont confirmed that it would have been better; however, because the impacts occurred decades ago, the resultant pockmarks have since washed away. Samples were taken in close proximity to the munitions debris remaining in the area. Mr. Baca also pointed out that no one should ever pick up a munitions item. If munitions are found, the El Paso Police Bomb Squad should be contacted.

- Ms. Rodriguez-Hefner asked for clarification on how the seven metals analyzed were chosen. Ms. Franquemont stated that, as agreed upon during the TPP meeting for the Work Plan, the metals were chosen based on an analysis of the munitions expected to be identified during field activities and the metals associated with those munitions.

Ms. Franquemont presented the conclusions and recommendations related to the Former Maneuver Area MR site. It is recommended that the Former Maneuver Area MR site be identified as a Munitions Response Area (MRA) and be divided into two MR sites. The first site, Former Maneuver Area A, encompasses approximately 21, 317 acres including areas adjacent to the installation boundary and areas that were not accessed during the field activities that have a greater potential for historical military use. The Former Maneuver Area A MR site is recommended for additional investigation to determine if any hazard associated with past military use may exist in this area. The second site, Former Maneuver Area B, encompasses approximately 51, 204 acres and is recommended for No Further Action (NFA) at this time. The group discussed the intent of the NFA recommendation and how this recommendation may be viewed by the public. The group concurred that the intent of the NFA recommendation is that

based on the information collected about the site, there is no need for the Army to conduct any additional work in this area. However, if any munitions items are found and reported to the Army in the future, the Army will address the item and further investigate the area. The group also determined that a slide with this definition should be added to the public meeting presentation. In addition to the NFA slide, two slides will be added to the public meeting presentation: one with the Army's UXO safety program of the three R's – Recognize, Retreat, Report regarding munitions finds by the public and the other with information regarding the unexploded ordnance notification process should any munitions items be identified (i.e., contacting local law enforcement). However, it was decided that the slides did not need to be printed for inclusion in the handout.

During the presentation of the recommendations, the following discussions took place:

- Mr. Baca expressed his belief that property owners present at the upcoming public meeting would question why their property was not surveyed. Ms. Franquemont stated that the investigative areas were selected based on the historical use of the site as well as on topography as this would determine those areas most likely used by the military for training.

- It is most likely that individual property owners would also question whether their property values would be affected. It has been determined that property values traditionally have not been affected either way as a result of site inspections.

- Ms. Rodriguez-Hefner stated that if this information is relayed to the public in a way that they can understand, they will trust it. They trust that the Army is trying to do the right thing.

- Ms. Andrea Silva, TCEQ, asked how far in advance the team attempted to obtain ROEs. USACE attempted to get the ROEs 90 days before the fieldwork began. Ms. Silva also questioned whether individuals approached the field team during visual surveys to give permission to access their property. This was not the case at the Former Maneuver Area; however, it has happened in the past at other sites and there are protocols in place to handle this scenario. Written approval from USACE is still required.

ACTION ITEMS

The following action items were identified during the meeting:

Item	Responsible Party	Due Date
Once all comments on the Stakeholder Draft Site Inspection Report are received, they will be incorporated into the report and the Final Site Inspection Report will be distributed.	TLI Solutions	February 28, 2011

As required by the USACE Technical Project Planning process, the following is a list of stakeholders who were invited, but were unable to attend this initial meeting:

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Franklin Mountains Wilderness Coalition

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Technical Project Planning Meeting
October 15, 2009

Technical Project Planning Meeting
Military Munitions Response Program
Fort Bliss, Texas

15 October 2009

Project: **Military Munitions Response Program Site Inspection (2nd) Former Maneuver Areas, Fort Bliss, Texas**

Points of Contact: United States Army Environmental Command (USAEC) Program Manager: Mary Ellen Maly/410-436-1511
USAEC Environmental Restoration Manager: Scott Reed/210-838-2587
United States Army Corps of Engineers – Sacramento District (USACE-SPK) Project Manager: Young Chong/916-557-7212
Fort Bliss, Installation Restoration Program (IRP) Manager: Ron Baca/915-568-7979
Contractor, TLI Solutions, Inc. Project Manager: Gene Barber/303-763-7188

A Technical Project Planning (TPP) meeting was held at 1:00 PM on October 15, 2009 at the Embassy Suites Hotel, El Paso Texas. Representatives from the organizations listed below met to discuss the Site Inspection (SI) activities to be conducted under the Military Munitions Response Program (MMRP) at the Former Maneuver Area Munitions Response (MR) site. This site is located between Loop 375 and the Hueco Mountains and north of Montana Ave.

MEETING ATTENDEES

Name	Organization / Title	Email	Telephone Number
Scott Reed	USAEC/ Environmental Restoration Manager	scott.h.reed@us.army.mil	210-838-2587
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Name	Organization / Title	Email	Telephone Number
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Joe Sierra, Jr.	Ysleta Del Sur Pueblo/Tribal Sheriff	tcjnighthorse@sbcglobal.net	915-859-7913
Judy Ackerman	Franklin Mountains Wilderness Coalition/Secretary	j.p.ackerman@sbcglobal.net	915-755-7371
Richard Teschner	Frontier Land Alliance/Board of Directors Member	teschner@utep.edu	915-533-1279

Name	Organization / Title	Email	Telephone Number
Gene Barber	TLI Solutions, Inc./ Project Manager	gbarber@tlisolutions.com	303-763-7188
Mary Franquemont	TLI Solutions, Inc./ Technical Team Lead	mfranquemont@tlisolutions.com	303-763-7188

The meeting began with introductions and an overview of the MRRP program by Mr. Barber. The presentation included an outline of how the MMRP process at Fort Bliss would follow the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process as had been agreed upon during the previous Stakeholder Meeting held in July 2009. Mr. Barber also outlined the TPP process and the process for identifying stakeholders. Ms. Ackerman expressed concern that the public at-large had not been included in the stakeholder group. Mr. Barber and Ms. Waggoner explained that at the SI level in the process, the stakeholder group generally includes the installation, state and federal regulators, local officials, and property owners. Because there are approximately 3,000 private landowners associated the site, it was determined that they would be invited to participate in the process through public meetings. Dr. Rincon emphasized the need to keep the local city and county governments informed regarding the progress of the project.

Mr. Barber discussed the Munitions Response Site Prioritization Protocols (MRSPPs) that are developed for each site within the MMRP. Ms. Ackerman inquired if all sites within the MMRP had been prioritized. Mr. Barber explained the three components of the MRSPP and explained that the sites are not prioritized until enough data is available to complete the MRSPP (usually following completion of the SI field work).

Ms. Franquemont provided a summary of the historical information that had been included in the Final Historical Records Review (HRR) report developed for the Former Maneuver Area MR site. Ms. Olszewski stated that an employee of the state park had determined the location of the historic gun emplacement that was pictured in the Final HRR. It was located along the southwest corner of North Mountain within Hueco Tanks. Ms. Olszewski indicated that they had a current photograph of the area. TLI Solutions, Inc will follow up with her regarding this location.

Mr. Barber provided a general overview of the tasks that will be completed during the SI field activities, including visual surveys and surface soil sampling. The site-specific Army Draft Work Plan will be produced within the next two to three weeks. The Stakeholder Draft Work Plan will be distributed by the beginning of December 2009. The field work is tentatively scheduled to occur between the end of January and mid-February 2010. Prior to conducting the field work, Rights of Entry will need to be obtained from the private landowners whose property will be accessed for the visual survey and sampling. Ms. Chong indicated that for property owned by the City of El Paso, the County of El Paso, and TPWD Hueco Tanks, the USACE Real Estate Office would send a letter outlining the tasks to be completed, the project schedule, and areas to be accessed. Ms. Olszewski indicated this procedure would be sufficient as long as the appropriate Antiquities and Natural Resources permits had been obtained. Mr. Waggoner inquired regarding the number of private parcels that would be accessed during the field work.

Mr. Barber stated that although the exact number is not known at this time, it is anticipated that no more than 50 ROEs will be required. Mr. Barber explained that if a property owner refuses to consent to the ROE, the property would not be included in the survey. Ms. Manning indicated that the State has a process to override the ROE refusal; however, the process takes several months.

Ms. Franquemont provided an overview of the 11 areas within the MR site that are proposed for visual surveys. A transect of approximately 5 miles with be completed within each area. The current scope of work calls for 50 line miles of visual surveys. Mr. Barber noted that each transect will be completed by a team of three; therefore, a five line mile transect will actually encompass approximately 15 line miles. The group discussed the proposal and provided input into alternative locations. Ms. Olszewski indicated that during visual surveys within Hueco Tanks, an escort would be required in certain areas. Mr. Gonzales indicted that the area to the north of Hueco Tanks that is proposed for survey is owned by Ysleta Del Sur Pueblo. He did not anticipate any problems with this area being surveyed. Ms. Silva, Ms. Manning, and Ms. Olszewksi provided input into other others that should be included in the visual survey. In order to address the additional areas within the available scope, the layout of the transect areas may need to be modified. The following areas were noted as possible locations for visual surveys:

1. Area to the west of Hueco Tanks – several new homes have been constructed in this area and it is anticipated that additional growth may occur. Therefore, it would be beneficial to identify any concerns with this area.
2. Southern portion of site adjacent to Highway 62 – currently, this area is not covered by any visual surveys.
3. East of installation boundary in proximity to Old Butterfield Trail – based on location of Little Tokyo and Yokohoma training areas, this area to the east of the installation boundary may have been impacted.
4. Mountainous areas along the southern and eastern boundary of the site.

Mr. Sackett and Ms. Mollard inquired if the Section 106 process under the National Historic Preservation Act (NHPA) had been initiated. Mr. Barber and Ms. Chong explained that to date, the Section 106 process had not been required during the SI phase of the MMRP, because no intrusive work has been conducted. The Section 106 process allows federal agencies to manage decisions about archaeological resources. Mr. Sackett and Ms. Mollard indicted that they felt a Section 106 review would be required; however, they indicated they would initiate the process and provide USACE, USAEC, and TLI with the necessary information.

The group discussed the munitions constituents (MC) sampling that will occur within the site. Currently, it is proposed that 20 samples, including two Quality Control (QC) samples, will be conducted during the field activities. Ms. Manning inquired if incremental sampling (IS) will be conducted. Mr. Barber and Ms. Franquemont explained that sampling will be biased based on the identification of MEC, MD, or evidence of military activities. Three sampling protocols will be used including spoke and hub for locations adjacent to munitions items and discrete for random sample locations. Ms. Manning concurred that spoke and hub sampling protocol would be appropriate for biased sample locations. Random samples would only be collected if no MEC, MD, or evidence of military activities were identified. If random samples were required,

the field team would attempt to collect them from drainage areas in which MC may accumulate. Ms. Manning indicated that she felt IS should be used at the site and she would plan to make this comment if IS procedures are not indicated in the Work Plan. Ms. Chong and Mr. Reed discussed that programmatically IS has not been used at the SI level within the MMRP. Therefore, it probably would not be implemented for this site, because all the MRSPPs throughout the program should use the same protocol in order to accurately rank the site. In addition, the group generally concurred that more than 20 samples may be required to successfully determine the presence or absence of MC within the site.

Based on the types of munitions used at the site, the samples will be analyzed for Target Compound List (TCL) explosives and an abbreviated list of Target Analyte List (TAL) metals. The metals will include lead, copper, zinc, antimony, potassium, magnesium, and barium. Ms. Franquemont inquired if the State had any regional-specific background data that could be used. The State has developed state-wide background data, but nothing that applies specifically to the El Paso region. Mr. Waggoner and Ms. Manning indicated that a background study should be conducted during the SI. Ms. Manning indicated that for projects conducted at Formerly Used Defense Sites (FUDS) the screening levels used were three times the State background level. Therefore, the State requested that these same levels be used. Ms. Manning stated that the State background data is available through the TCEQ website. Mr. Reed indicated that he would discuss the need for a background study with personnel at USAEC.

The group discussed the proposed public meetings that will be held regarding the SI project. The first public meeting is scheduled to be held on December 2, 2009. Another public meeting will be held following the development of the SI report in order to discuss the findings of the project. The initial public meeting will include presentations regarding the history of the site, the proposed SI field work, and the ROE process. In addition, the public will be asked to provide any input they have regarding historical military activities in the area and any information about munitions that have been observed. The meeting will include approximately one hour of formal presentations and approximately 30 minutes for questions. Translation services will be provided. The group emphasized the need to keep the discussion simple and not to use program-specific jargon during the presentations. The use of pictures and maps/graphics will help inform the public. Postcards will be mailed to property owners regarding the public meeting. In addition, public notices will be placed in the local English and Spanish newspapers. The group also suggested that flyers could be posted in the local Montana Vista grocery store and near the community mailboxes. The group concurred that Mountain View High School would be a good location for the public meeting. Based on input from the group, it was decided that information regarding the meeting will be distributed three weeks prior to the meeting.

Mr. Barber asked the stakeholder how much time is required for review of documents. Ms. Manning requested a minimum of 30 days for review and she indicated that additional time may be required. Mr. Barber stated that 30-day review periods will be used; however, requests for additional time may be made to Ms. Chong.

Dr. Rincon inquired if any local labor will be used during this project. Mr. Barber explained that the field effort will only require a three-person field team; however, if additional work is required in the future, local labor may be used.

ACTION ITEMS

The following action items were identified during the meeting:

Item	Responsible Party	Due Date
Obtain current photograph of area within Hueco Tanks assumed to be location of historic gun emplacement	TLI Solutions	October 28 2009
Obtain information from TWPD regarding required Antiquities and Natural Resources permits prior to conducting field work	TLI Solutions	December 2009
Develop NHPA Section 106 documents (initial information will be provided in the Army Draft Work Plan)	Fort Bliss DPW-E Archaeologist	December 2009
Request soil constituent background data from the State of Texas	TLI Solutions	October 23, 2009
Contact Mountain View High School regarding public meeting location	TLI Solutions	October 20, 2009

As required by the USACE Technical Project Planning process, the following is a list of stakeholders who were invited, but were unable to attend this initial meeting:

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Appendix H

APPENDIX H

PUBLIC MEETING SUMMARY NOTES

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Public Meeting
January 27, 2011

Public Meeting
Military Munitions Response Program
Fort Bliss, Texas

27 January 2011

Project:	**Military Munitions Response Program Site Inspection** **Former Maneuver Area, Fort Bliss, Texas**
Points of Contact:	United States Army Environmental Command Environmental Restoration Manager: Scott Reed/210-792-3468 United States Army Corps of Engineers – Sacramento District Project Manager: Young Chong/916-557-7212 Fort Bliss, Installation Restoration Program Manager: Ron Baca/915-568-7979 Contractor, TLI Solutions, Inc. Project Manager: Gene Barber/303-763-7188

The Fort Bliss Directorate of Public Work – Environmental Division (DPW-E) hosted a public meeting on January 27, 2011 to present information regarding the Site Inspection (SI) under the Military Munitions Response Program (MMRP) of the Former Maneuver Area Munitions Response site. The meeting was held in the cafeteria of Mountain View High School, 14964 Greg Drive, El Paso, Texas.

Mr. Joel Reyes of Fort Bliss DPW-E began the meeting with introductions and a brief overview of the information to be covered during the meeting. The SI activities associated with the Former Maneuver Area Munitions Response site are being conducted by TLI Solutions, Inc. (TLI) under contract to the United States Army Corps of Engineers – Sacramento District and in support of the United States Army Environmental Command. Mr. Reyes introduced Mr. Gene Barber and Ms. Mary Franquemont of TLI who continued the presentation regarding the Munitions Response site. For reference, a copy of the presentation is attached to these meeting notes.

Mr. Barber began the presentation with an overview of the MMRP including the history of the development of the program in 2001 as part of the Department of Defense's Defense Environmental Restoration Program. The following information was presented by Mr. Barber regarding the development of the MMRP:

The MMRP was created to specifically address human health, safety, and environmental concerns regarding explosives safety and munitions constituent contamination at defense sites. The MMRP only applies to former ranges and training areas where unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) are known or suspected. The MMRP does not apply to operational ranges, operating storage/manufacturing facilities, or permitted treatment and disposal facilities.

The MMRP follows the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The initial step of the CERCLA process is the Preliminary Assessment. The

Former Maneuver Area was addressed during the current Site Inspection (SI), which is the second step in the CERCLA process. The MMRP SI process includes the following steps:

- Stakeholder Identification and Involvement – work with stakeholders to develop project objectives
- Historical Records Review – research and reporting
- Technical Project Planning – develop work plan to outline project activities
- Field Work and Results – conduct visual surveys and soil sampling; report results

The primary goal of the MMRP SI is to collect the appropriate amount of information necessary to determine which of the following actions will be needed at the site:

- Further Investigation
- Immediate response
- No further action at this time

Following the conclusion of the MMRP background discussion, Ms. Franquemont presented the following summary of the historical information regarding the Former Maneuver Area Munitions Response site:

The Former Maneuver Area Munitions Response site encompasses approximately 72,500 acres located in El Paso and Hudspeth counties of Texas. Fort Bliss began acquiring land associated with the site as early as 1942. Most of the land was acquired through co-use leases. This means that Fort Bliss never owned a majority of the land. While Fort Bliss was using the land for training activities, the owners continued to live on the property and use it for ranching operations.

None of the land associated with the site is currently owned by Fort Bliss nor does Fort Bliss have any intentions to acquire the land. Most of the land was relinquished from use by Fort Bliss by 1980. However, one tract of land was under lease from the State of Texas until 1987. Current uses of the land include Hueco Tanks State Park and Historic Site, private residences, light industry, gravel mining operations, and ranching.

Training activities conducted by Fort Bliss within the Former Maneuver Area included anti-aircraft emplacement training with Browning M2 .50 caliber machine guns. Historical information indicates that planes may have flown from some landing strips within the site and that soldiers in gun emplacements constructed from sandbags would practice firing at the planes or targets towed by the planes. In addition, the soldiers completed infiltration courses, bivouacs, and maneuver training. During these operations, it is assumed that small arms and pyrotechnics were used.

Small arms are bullets .50 caliber or smaller. These munitions are similar to those used by civilian hunters. Pyrotechnics are used during training to simulate battlefield conditions by creating noise, flashes of light, and smoke. The explosive hazards associated with small arms and bullets are minimal; however, if these items are observed at any location within the Former Maneuver Area, citizens should follow these steps:

- Recognize – Identify the item as a munitions item without moving or handling the item
- Retreat – Move away from the location of the item
- Report – Contact the El Paso County Sheriff to report the location of the item

Once the El Paso County Sheriff's office has been contacted, they will implement their procedure for identifying and removing the item. This procedure will probably require the Sheriff to contact the Explosive Ordnance Disposal unit at Fort Bliss, which will come to the location of the item and manage its removal by either transporting the item away or blowing it up in place.

Following the summary of the history of the Former Maneuver Area, Ms. Franquemont presented information regarding the activities that were completed during the SI field activities.

Approximately 132.5 line miles of visual surveys were completed throughout the site. Prior to conducting visual surveys on private property, the Army obtained a Right of Entry from each landowner that grants permission for the field work to be completed. The purpose of the visual survey is to identify the presence of any military munitions, including UXO, DMM, or munitions debris, or the evidence of military activities, such as berms, gun emplacements, and maneuver areas. No intrusive work (digging) was conducted during the visual survey. The field team consisted of two qualified UXO technicians and two environmental professionals. The field team used metal detectors to assist in locating metallic objects during the visual survey. In addition, each team member carried a global positioning system (GPS) unit to log their track and document any observations.

In addition to visual surveys, 20 soil samples were collected to determine if munitions constituents have contaminated the soils within the Former Maneuver Area. Samples were collected from locations where evidence of munitions or military activities was observed. Samples were also collected randomly from areas that had no evidence of munitions or military activities. Samples were collected from the surface (0-6 inches). No intrusive digging was conducted during the soil sampling. Samples were analyzed for explosives and metals based on munitions used at the site. The analytical results for metals indicated that all soil sample concentrations are below the applicable screening criteria and no explosives were detected in any of the samples.

Sixteen locations were selected from within the Former Maneuver Area for visual surveys and sampling. These locations were selected based on the available historical information and represent likely locations where military training activities may have occurred. Property owners for several of the original locations did not approve the Right of Entry for their property; therefore, survey locations were moved to allow the field team access to areas where access was granted by the property owners. Visual surveys were conducted in twelve of the sixteen areas, as four of the areas were inaccessible due to road conditions or locked gates. These locations were depicted on a figure displayed during the Public Meeting (a copy of the figure is attached to these notes).

During the visual surveys, munitions debris including fragmentation from 4.2-inch mortars was observed in Area 4, small arms debris and evidence of military activity was observed in six areas (Areas 5, 6, 9, 10, 11, and 14), and no munitions or evidence of military activity was observed in five areas (Areas 2, 7, 8, 13, and 15). No items containing any explosive hazards were identified during the visual survey.

Based on the results of the Site Inspection, it is recommended that the Former Maneuver Area be divided into two Munitions Response Sites. The first site, Former Maneuver Area A, encompasses approximately 21, 317 acres including areas adjacent to the installation boundary and areas that were not accessed during the field activities that have a greater potential for historical military use. Former Maneuver Area A is recommended for additional investigation to determine if any hazard associated with past military use may exist in this area. The second site, Former Maneuver Area B, encompasses approximately 51, 204 acres and is recommended for no further action at this time. No further action means that based on the information collected about the site, there is no need for the Army to conduct any additional work in this area. However, if any munitions items are found and reported to the Army in the future, the Army will address the item and further investigate the area. These recommendations were depicted on a figure displayed during the Public Meeting (a copy of the figure is included with these notes).

During and following the presentation, the following questions were presented by the public:

Q: How long until everything is finished at this site?

A: According to the U.S. Army Environmental Command and U.S. Army Corps of Engineers representatives at the meeting, it will require approximately five years to complete the work at the Former Maneuver Area. It is expected that the remedial investigation will be completed in approximately three years.

Q: Signs have been posted along property bordering the east side of Hueco Tanks Road that indicate guns are being used in the area and no trespassing is allowed. Is this area being used by Fort Bliss and is there any danger to the public?

A: This property is privately-owned and is being used by a private company that provides training for security personnel. It is not associated with Fort Bliss. Also, another private firing range is located within the site to the northeast of Hueco Tanks State Park. This range is not used by Fort Bliss.

Q: How can property owners find out if their property was included in the visual survey?

A: If a property owner did not receive a request for Right of Entry from the U.S. Army Corps of Engineers, then their property was not included in the survey. Property owners can view the site maps to determine if visual surveys were conducted near their property. All site maps have been updated to include the names of major roads to assist owners in locating their property.

Q: How can a property owner determine if any hazards are located on their property?

A: At this time, there is no reason to believe that any hazardous items are located within the Former Maneuver Area Munitions Response site. However, property owners should use caution if they find suspicious items and report them to the El Paso County Sheriff.

Q: Will my property be included in future work?

A: Prior to any future work in the Former Maneuver Area A Munitions Response site, the U.S. Army Corps of Engineers will contact property owners to request Rights of Entry to their property.

Numerous questions were asked regarding how the property owners can identify the location of their property. It was suggested that the property owners contact the El Paso County Assessor's office to request information regarding their property.

Public Meeting
December 2, 2009

Public Meeting
Military Munitions Response Program
Fort Bliss, Texas

2 December 2009

Project: **Military Munitions Response Program Site Inspection**
Former Maneuver Area, Fort Bliss, Texas

Points of Contact: United States Army Environmental Command (USAEC) Program Manager: Mary Ellen Maly/410-436-1511
USAEC Environmental Restoration Manager: Scott Reed/210-838-2587
United States Army Corps of Engineers – Sacramento District (USACE-SPK) Project Manager: Young Chong/916-557-7212
Fort Bliss, Directorate of Public Work – Environmental Division: Ron Baca/915-568-7979
Contractor, TLI Solutions, Inc. Project Manager: Gene Barber/303-763-7188

The Fort Bliss Directorate of Public Work – Environmental Division (DPW-E) hosted a public meeting on December 2, 2009 to present information regarding the Site Inspection (SI) under the Military Munitions Response Program (MMRP) of the Former Maneuver Area Munitions Response (MR) site. The meeting was held in the gymnasium of Mountain View High School, 14964 Greg Drive, El Paso, Texas.

Mr. Ron Baca of Fort Bliss DPW-E began the meeting with introductions and a brief overview of the information to be covered during the meeting. The SI activities associated with the Former Maneuver Area Munitions Response (MR) site are being conducted by TLI Solutions, Inc. (TLI) under contract to the United States Army Corps of Engineers – Sacramento District (USACE-SPK) and in support of the United States Army Environmental Command (USACE). Mr. Baca introduced Mr. Gene Barber and Ms. Mary Franquemont of TLI who continued the presentation regarding the MR site. For reference, a copy of the presentation is attached to the meeting notes.

Mr. Barber began the presentation with an overview of the MMRP including the history of the development of the program in 2001 as part of the Department of Defense (DoD) Defense Environmental Restoration Program (DERP). The following information was presented by Mr. Barber regarding the development of the MMRP:

The MMRP was created to specifically address human health, safety and environmental concerns regarding explosives safety and munitions constituent contamination at defense sites. The MMRP only applies to former ranges and training areas where unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) are known or suspected. The MMRP does not apply to operational ranges, operating storage/manufacturing facilities, or permitted treatment and disposal facilities.

The MMRP follows the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The initial step of the CERCLA process is the Preliminary Assessment (PA). The PA, which is also known as the MMRP Phase 3 Army Range/Site Inventory, for Fort Bliss was completed in November 2002. As a result of the PA, six sites were identified at Fort Bliss that were eligible for the MMRP. The current status of these sites is listed below.

MMRP Site Name	Acreage	Current Status
Dona Ana Range-McNew Surplus	52,410.7	Being addressed by the Formerly Used Defense Sites program
Former Maneuver Area	72,520.82	Being addressed by this Site Inspection
Winfree's Nose	1,898.4	Being addressed by the Formerly Used Defense Sites program
Closed Castner Firing Range	7,007.34	Site Inspection has been completed under the MMRP; recommended for immediate response (fencing and signage) and further characterization
Fort Bliss Dona Ana Range	17	Determined to be part of an operational range and ineligible for the MMRP
Castner Range-XD	1,338.9	Being addressed by the Formerly Used Defense Sites program

As noted in the table above, the Former Maneuver Area is the only site being addressed during the current Site Inspection (SI), which is the second step in the CERCLA process. The MMRP SI process includes the following steps:

- Stakeholder Identification and Involvement – work with stakeholders to develop project objectives
- Historical Records Review – research and reporting
- Technical Project Planning – develop work plan to outline project activities
- Field Work and Results – conduct visual surveys and soil sampling; report results

The primary goal of the MMRP SI is to collect the appropriate amount of information necessary to decide which of the following actions will be needed at the site:

- Further Investigation
- Immediate response
- No further action at this time

The secondary goals of the MMRP SI are to:

- Support program objectives such as determining cost to complete all site activities
- Develop the Munitions Response Site Prioritization Protocol (MRSPP), which sets the prioritization for working at each site in the program

Following the conclusion of the MMRP background discussion, Ms. Franquemont presented the following summary of the historical information regarding the Former Maneuver Area MR site:

The Former Maneuver Area MR site encompasses approximately 72,500 acres located in El Paso and Hudspeth counties of Texas. Fort Bliss began acquiring land associated with the site as early as 1942. Most of the land was acquired through co-use leases. This means that Fort Bliss never owned a majority of the land. While Fort Bliss was using the land for training activities, the owners continued to live on the property and use it for ranging operations.

None of the land associated with the site is currently owned by Fort Bliss nor does Fort Bliss have any intentions to acquire the land. Most of the land was relinquished from use by Fort Bliss by 1980. However, one tract of land was under lease from the State of Texas until 1987. Current uses of the land include Hueco Tanks State Park and Historic Site, private residences, light industry, gravel mining operations, and ranching.

Training activities conducted by Fort Bliss within the Former Maneuver Area included anti-aircraft emplacement training with Browning M2 .50 caliber machine guns. Historical information indicates that planes may have flown from some landing strips within the site and that soldiers in gun emplacements made from sandbags would practice firing at the planes or targets towed by the planes. In addition, the soldiers completed infiltration courses, bivouacs, and maneuver training. During these operations, it is assumed that small arms and pyrotechnics were used.

Small arms are bullets .50 caliber or smaller. These munitions are similar to those used by civilian hunters. Pyrotechnics are used during training to simulate battlefield conditions by creating noise, flashes of light, and smoke. The explosive hazards associated with small arms and bullets are minimal; however, if these items are observed at any locations within the Former Maneuver Area, citizens should follow these steps:

- Recognize – Identify the item as a munitions item
- Retreat – Move away from the location of the item
- Report – Contact the El Paso County Sheriff to report the location of the item

Once the El Paso County Sheriff has been contacted, they will implement their procedure for identifying and removing the item. This procedure will probably require the Sheriff to contact the Explosive Ordnance Disposal (EOD) unit at Fort Bliss, which will come to the location of the item and manage its removal by either transporting the item away or blowing it up in place.

Following the summary of the history of the Former Maneuver Area, Ms. Franquemont presented information regarding the activities that are planned to be completed during the SI field activities:

Approximately 50 line miles of visual surveys will be completed throughout the site. Prior to conducting visual surveys on private property, the Army will need to obtain a Right of Entry from the landowner that grants permission for the field work to be completed. The purpose of the visual survey is to identify the presence of any military munitions, including UXO, DMM, or

munitions debris, or the evidence of military activities, such as berms, gun emplacements, and maneuver areas. No intrusive work (digging) will be conducted during the visual survey. The field team will consist of a qualified UXO technician and two team members. The field team will use metal detectors to assist in locating metallic objects during the visual survey. In addition, each team member will carry a global positioning system (GPS) unit to log their track and document any observations. If the field team identifies any UXO or DMM, they will follow the same procedure as outlined above to recognize, retreat, and report the item.

In addition to visual surveys, up to 20 soil samples will be collected to determine if munitions constituents have contaminated the soils with the Former Maneuver Area. Samples will be collected from locations where evidence of munitions or military activities are observed. Samples will be collected from the surface (0-6 inches). No intrusive digging will be conducted during the soil sampling. Each sample will contain enough soil to fill an eight ounce jar. Samples will be analyzed for explosives and metals.

Fourteen locations have been selected from within the Former Maneuver Area for visual surveys and sampling. These locations were selected based on the available historical information and present likely locations where military training activities may have occurred. These locations were depicted on a figure shown during the Public Meeting (a copy of the figure is included in the presentation provided with these notes).

The data quality objectives of the SI field work is to collected sufficient data to determine if further investigation is warranted, an immediate response is required, or no further action is required at this time.

Mr. Barber presented the following information regarding the Right of Entry (ROE) process:

An ROE is a voluntary legal agreement by which the property owner grants the Army permission to enter their property for a specific purpose. By signing the agreement, the property owner protects their rights, limits the Army's actions, and makes the Army responsible for its actions. The purpose of the Army's actions is to help the property owner by identifying and addressing any potential hazards caused by the Army's previous use of the land.

ROEs will be sent to the property owners whose land has been selected for visual survey and soil sampling. The ROEs will come from the United States Army Corps of Engineers. If a property owner declines to sign an ROE, their property will not be included in the SI field activities.

During and following the presentation, the following questions were presented by the public:

Q: Why has it taken the Army over 20 years to address this problem?

A: The concern regarding the potential for hazards associated with former military training activities was brought to the attention of Congress in the early 2000s. Therefore, Congress required the implementation of the MMRP in 2001. Once funding became available, the Army developed an inventory of all sites with potential hazards. This is how the Former Maneuver Area site was identified. Prior to this program, the Army addressed issues

regarding UXO and DMM on a case-specific basis as concerns were brought to their attention.

Q: Are there any health problems associated with the munitions?

A: None that we are aware of at this time. Very few sites have been identified throughout the country where the levels of munitions constituents are of concern. These sites are primarily small arms ranges where lead contamination has been identified in berms. We do not anticipate any concentration of munitions constituents within the Former Maneuver Area, because locations were used randomly and widely distributed across the site. The main concern within the site would be safety issues related to UXO and DMM.

Q: Does Fort Bliss still conduct training activities?

A: Yes, Fort Bliss is one of the Army's largest training facilities. All training activities occur within the boundary of the installation. No training activities are conducted within the Former Maneuver Area site and the Army has no plans to use the area for any training activities.

Q: Does Fort Bliss plan to take any private property (through eminent domain) or are they going to buy any private property within in the Former Maneuver Area MR site?

A: No, Fort Bliss will not be buying or taking any property within the Former Maneuver Area MR site.

Q: Does Fort Bliss have plans to expand?

A: No, at this time, Fort Bliss does not have any plans to acquire additional land or expand beyond their current installation boundary.

Q: Are any of the munitions constituents toxic?

A: Yes, in high concentrations, the constituents can be toxic. In order to identify areas with the highest concentrations of munitions constituents, sampling will be biased toward areas where UXO, DMM, munitions debris, or evidence of military activities are observed.

Q: Have any cancer cells been linked to munitions constituents?

A: We are not aware of any cases where munitions constituents have been linked to cancer. In addition, we would not anticipate any high concentrations of munitions constituents, because there was not any concentrated use of a single area within the site.

Q: Is the Army looking at insects to determine any potential health issues?

A: No, at this time, we are only trying to determine the presence or absence of contamination. If contamination is identified, a more in-depth study to determine the nature and extent of contamination will be performed. At that time, biological indicators maybe used.

Q: How does this work affect property values?

A: Work completed at other installations throughout the country has indicated that there is minimal impact on property values. There is a possibility that property values may increase, but overall there won't be much impact.

Q: Many locations with the site have already been developed. With this much construction isn't it likely that munitions would have already been found?

A: Yes, it is possible that items could be found during construction. However, it is possible that construction workers didn't identify items as munitions and simply threw them away. Also, there are large areas of the site in which construction hasn't occurred and these areas still need to be investigated.

Q: To what depth may munitions be buried?

A: Based on the use of small arms and pyrotechnics at the site, it is anticipated that most of the munitions will be on the surface. During use, these items do not have enough explosive energy penetrate the surface in the way that larger artillery shells may. However, there is a potential for munitions to be buried as a result of wind and water erosion. Dust storms are common within the area.

Q: When will the field work be conducted?

A: The current schedule is to complete the field work in Spring 2010. In order to meet the schedule, ROEs will be mailed in January.

Appendix I

APPENDIX I

SUMMARY OF RIGHTS OF ENTRY CONTACTS

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Summary of Fort Bliss ROE Contacts

	Approved ROE
	Refused ROE
	Did not respond

[A] **Notes provided by Young Chong, USACE Project Manager, regarding efforts to obtain ROEs are included in column as notations beginning with YSC.**

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zip Code	Signed ROE Date and Notes [A]
Area 11	H79900100601500	6 HUECO MOUNTAIN ESTATES #1 LOT 8 (10.08 ACRES)	GONZALO AGUILAR, P.E.	481 N RESLER DR	EL PASO	TX	79912-2746	3/25/10
Area 11	H79900100601700	6 HUECO MOUNTAIN ESTATES #1 LOT 9 (7.40 ACRES)						
Area 07	X57700012300000	77 TSP 1 SEC 23 T & P ABST 1962 (50.00 ACRES)	HECTOR AGUILAR, JR	806 IVY DR	PFLUGERVILLE	TX	78660-4770	YSC, 14 May – No answer – left the message to call back.
Area 13	X60600000402000	6 PUBLIC SCHOOL SEC 4 ABST 6672 (100.00 ACRES)	ANTO ENTERPRISES INC	31 ROBBINS STATION RD	NORTH HUNTINGDON	PA	15642-2085	
Area 13	V87300000601100	6 VISTA DE LOMAS LOT 11 (9.2 ACRES)	KENNETH BLACKMON	5829 DESERT GOLD DR	EL PASO	TX	79938-0500	
Area 13	V87300000601200	6 VISTA DE LOMAS [E PT OF 12 (400' ON ST - 718.46' ON S - 400' ON W - 715.76' ON N)] (6.59 AC)						
Area 03	N/A (Hudspeth County)	Public School Block 2, Sections 4-8 and 17-19	CERRO ALTO LTD	11990 MONTANA AVE	EL PASO	TX	79936	YSC, 13 and 14 May – No answer
Area 07	X60500000200000	5 PUBLIC SCHOOL SEC 2 ABST 9178 (640 ACRES)	GARY CROSSLAND	500 W PAISANO DR STE C	EL PASO	TX	79901-1013	Refused

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zip Code	Signed ROE Date and Notes [A]
Area 11	X57700011900000	77 TSP 1 SEC 19 T & P ABST 1960 (305.7868 AC) & (20.0002 AC) & (22.489 AC) (TOTAL 348.2760 AC)	DONA ANA FUNDING LLC Alternate Name/Address Cornerstone Holdings, LLC Attn: Laura Frank (Provided to USACE on 4/14)	11001 W. 120th Ave, Suite 310	Broomfield	CO	80021	4/30/10
Area 13	V87300000600425	6 VISTA DE LOMAS PT OF 4 BEG 240' N OF SEC (121.94' ON ST - IRREG ON N- 280.40' ON W - IRREG ON S) (3.89 ACRES)	BRAD S. GAETZKE	6033 DESERT GOLD DR	EL PASO	TX	79938-0504	
Area 13	V87300000601000	6 VISTA DE LOMAS LOT 10 (7.34 ACRES)						
Area 13	V87300000600700	6 VISTA DE LOMAS LOT 7 (5.20 ACRES)	ALFONSO GAMBOA	5939 DESERT GOLD DR	EL PASO	TX	79938-0502	3/22/10
Area 13	V87300000600800	6 VISTA DE LOMAS LOT 8 (5.56 ACRES)						
Area 13	V87300000600400	6 VISTA DE LOMAS S 240' OF E 367.35' OF 4 (88164.00 SQ FT) (2.02 ACRES)	SONIA GUTIERREZ	6411 AJAX AVE	BELL GARDENS	CA	90201-3007	8/25/10
Area 12	X60600000105000	6 PUBLIC SCHOOL SEC 1 ABST 7357 S (160.0 AC)	HANSEN FAMILY LP	PO BOX 13327	EL PASO	TX	79913-3327	3/22/10

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zip Code	Signed ROE Date and Notes [A]
Area 13	V87300000300500	3 VISTA DE LOMAS LOT 5 (5.58 ACRES0	HIDDEN VALLEY JOINT VENTURE	5744 N. Mesa St.	EL PASO	TX	79912-5427	We were not able to find any information for this company. However, the following business has the same address. Also, another property included within the site (but not requested for ROE) lists Michael Wieland at this address as the owner. Wieland Realtors Investors 915-542-1654 YSC, 14 May – Left message for Mr. Mike Wieland to call back. 17 May – Spoke with Mr. Wieland, he will sign new ROE as soon as he receives it.
Area 13	V87300000400500	4 VISTA DE LOMAS LOT 5 (5.79 ACRES0						
Area 13	V87300000400600	4 VISTA DE LOMAS LOT 6 (5.85 ACRES0						
Area 13	V87300000400800	4 VISTA DE LOMAS LOT 8 (5.26 ACRES0						
Area 13	X60600000300000	6 PUBLIC SCHOOL SEC 3 ABST 6673 TR 1 (255.40 ACRES)						
Area 09	X60500001700500	5 PUBLIC SCHOOL SEC 17 ABST 7211 W 1/2 (320 ACRES)	HOT WELLS CATTLE CO	7321 NORTH LOOP DR	EL PASO	TX	79915-2523	3/25/10
Area 09	X60500001800000	5 PUBLIC SCHOOL SEC 18 ABST 7212 (640.00 ACRES)						
Area 10	X60500000700000	5 PUBLIC SCHOOL SEC 7 BLK 77 (640 ACRES)						
Area 12	X60600000100000	6 PUBLIC SCHOOL SEC 1 ABST 7357 (480.00 ACRES)						

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zip Code	Signed ROE Date and Notes [A]
Area 08	X60500001100000	5 PUBLIC SCHOOL SEC 11 ABST 9844 S 1/2 (320.000 ACRES)	HOUDAL ASSOCIATES	1226 EMERALD GREEN LN	HOUSTON	TX	77094-3007	We were not able to locate any information regarding this company (not listed in any phone directory or the Texas Sec. of State records. However, we did find the following name and for this address. It is unclear if this person has any relationship with the company. Randy Radcliffe YSC, 14 May – No answer – left the message to call back
Area 08	X60500001400000	5 PUBLIC SCHOOL SEC 14 ABST 9847 (640.00 ACRES)						
Area 05	HUECO TANKS PARK	N/A	HUECO TANKS STATE PARK Wanda Olszewski, Superintendent	6900 HUECO TANKS ROAD, #1	EL PASO	TX	79938	8/9/10 YSC, 13 May – Talked to Wanda O. at State Parks. Sent an email with simplified ROE. Wanda and State OC will review.
Area 06	HUECO TANKS PARK	N/A						

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zip Code	Signed ROE Date and Notes [A]
Area 06	X57700010900000	77 TSP 1 SEC 9 T & P ABST 1955 W 3/4 (1.9100 ACRES)	HUECO MOUNTAIN ESTATES INC	10530 CRETE DR	EL PASO	TX	79924-1831	YSC, 14 May – Refused. He has not found any MEC related debris and will be fencing the property. Only way to grant ROE is by the lease by government to pay for the use of property.
Area 07	I25500000230074	INDIAN HILLS SEC 23 TR 7 LOT 4 (10 ACRES)						
Area 07	I25500000230075	INDIAN HILLS SEC 23 TR 7 LOT 5 (5.255 ACRES)						
Area 07	I25500000230080	INDIAN HILLS SEC 23 TR 8 (48.5660 ACRES)						
Area 07	X60500000300000	5 PUBLIC SCHOOL SEC 3 ABST 9179 (556.652 ACRES)						
Area 11	H79900100702700	7 HUECO MOUNTAIN ESTATES #1 LOT 14 (8.95 ACRES)						
Area 11	H79900100703900	7 HUECO MOUNTAIN ESTATES #1 LOT 20 (9.72 ACRES)						
Area 11	H79900100704100	7 HUECO MOUNTAIN ESTATES #1 LOT 21 (9.03 ACRES)						
Area 11	X57700011901300	77 TSP 1 SEC 19 T & P ABST 1960 S 112 EXC SEC (271.7240 AC)						
Area 08	X60500001200000	5 PUBLIC SCHOOL SEC 12 ABS 10049 (635.679 ACRES)	JOHN & P K JOHNS CHILDRENS TRUST C/O GORDON AND MOTT	PO BOX 1322	EL PASO	TX	79947-1322	6/15/10 YSC, 14 May – Spoke to Terry Hallmark, Mr. Gordon's secretary. Also sent email with simplified ROE for Mr. Gordon's review.
Area 08	X60500001300000	5 PUBLIC SCHOOL SEC 13 ABST 9846 (640 ACRES)						

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zip Code	Signed ROE Date and Notes [A]
Area 11	H79900100702500	7 HUECO MOUNTAIN ESTATES #1 LOT 13 (9.68 ACRES)	WILLIAM A KLIER	4517B EVANS AVE	AUSTIN	TX	78751-3207	ROE returned as undeliverable. No other address was found. Property is small, so it won't need to be accessed.
Area 13	V87300000600200	6 VISTA DE LOMAS LOT 2 (6.91 ACRES)	CLAUDIA LABRADO	1712 WESTON BRENT LN	EL PASO	TX	79935-3014	
Area 13	V87300000600300	6 VISTA DE LOMAS LOT 3 (6.31 ACRES)						
Area 13	V87300000600450	6 VISTA DEL LOMAS NWC OF 4 (308.18 FT ON N - 81.74 FT ON E - 308.18 FT ON S - 82.14 FT ON W) (23679.96 SQ FT) (0.54 ACRES)	PATRICIA MC CARDLE	10232 MONTWOOD DR	EL PASO	TX	79925-6330	
Area 15	M64500000010017	1 MONTE CARLO BLOCK 17	DONALD MEIER, JR.	6601 OVERLAND STAGE RD	EL PASO	TX	79938	4/19/10
	M64500000020015	2 MONTE CARLO BLOCK 15						
	M64500000020016	2 MONTE CARLO BLOCK 16						
Area 01	X60100000400000	1 PUBLIC SCHOOL SEC 4 (640.00 ACRES)	PEOPLE OF THE STATE OF TEXAS c/o Burton Minton Real Estate Asset Manager General Land Office	1700 N. Congress Ave., Suite 840	AUSTIN	TX	78701-1495	9/7/10 (estimated; approved ROE is not dated)
Area 04	X60100002000000	1 PUBLIC SCHOOL SEC 20 (640.00 ACRES)						
Area 03	X60100002300000	1 PUBLIC SCHOOL SEC 23 (640.00 ACRES)						
Area 02	X60100000900000	1 PUBLIC SCHOOL SEC 9 (640.00 ACRES)						4/16/10
Area 07	X57700012200000	77 TSP 1 SEC 22 T & P SURV (632.79 ACRES)						
Areas 10 & 11	X60500000602020	5 PUBLIC SCHOOL SEC 6 ABST 7734 (640.00 ACRES)						
Area 12	X60600000200000	6 PUBLIC SCHOOL SEC 2						

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zip Code	Signed ROE Date and Notes [A]
		(640.00 ACRES)						
Area 14	X57900022100000	79 TSP 2 SEC 21 T & P ABST 2132 (640.00 ACRES)						
Area 14	X57900022200000	79 TSP 2 SEC 22 T & P ABST 8071 (371.70 AC)						
Area 13	X60600000400000	6 PUBLIC SCHOOL SEC 4 ABST 6672 (540.00 ACRES)	RIVERSIDE VILLAGE SHOPPING CENTER	8761 ALAMEDA AVE	EL PASO	TX	79907-6233	3/25/10
Area 13	V87300000400700	4 VISTA DE LOMAS LOT 7 (6.25 ACRES0	DEBRA A SANDY	PO BOX 37	LATIMER	PA	18234-0037	4/16/10
Area 13	V87300000601300	6 VISTA DE LOMAS 13 & W PT OF 12 (357.88 FT ON N- 400.00 FT ON E-359.23 FT ON S-386.82 FT ON W) (8.2900 AC)	KLAUS SCHWARZ	15401 BUCKWHEAT ST	EL PASO	TX	79938-9006	
Area 13	V87300000600900	6 VISTA DE LOMAS LOT 9 (5.35 ACRES)	WALTER N SLOSAR	5921 DESERT GOLD DR	EL PASO	TX	79938-0502	
Area 05	X57700011000000	77 TSP 1 SEC 10 T & P ABST 2838 (154.8330 AC)	YSELTA DEL SUR PUEBLO COUNCIL ELIAS TORRES, GOVERNOR	PO BOX 17579	EL PASO	TX	79917	
Area 05	X57700010300000	77 TSP 1 SEC 3 T & P ABST 1952 SEC OF SECTION (227.1500 AC)						3/31/10
Area 08	X57700012400000	77 TSP 1 SEC 24 T&R ABST 9180 (633.9440 AC)						YSC, 13 May – Sent reminder email. This section is necessary if we do not receive an ROE from the Johns Childrens Trust (Gordon and Mott).
Area 13	V87300000600500	6 VISTA DE LOMAS LOT 5 (6.26 ACRES)	ROBERT O & VIOLA M WALKER	15349 FAIRWOOD CT	HORIZON CITY	TX	79928-7021	
Area 13	V87300000600600	6 VISTA DE LOMAS LOT 6 (5.77 ACRES)						

Areas of Interest	El Paso County Parcel ID Number (PIDN)	Legal Description	Owner	Street	City	State	Zipcode	Signed ROE Date and Notes
Area 01	X60100000500000	1 PUBLIC SCHOOL SEC 5 ABST 9910 (640.00 ACRES)	JUAN NAVAR FAMILY ENTERPRISES	10828 SOMBRA VERDE DR	EL PASO	TX	79935-3623	Refused. Young will contact lawyer to discuss. YSC, 14 May – Spoke to Mr. Felsen and sent email with simplified ROE for Mr. Felsen's review.
Area 01	X60100000600000	1 PUBLIC SCHOOL SEC 6 ABST 7748 (640.00 ACRES)						
Area 01	X60100000700000	1 PUBLIC SCHOOL SEC 7 ABST 7749 (640.00 ACRES)						
Areas 01 & 02	X60100000800000	1 PUBLIC SCHOOL SEC 8 ABST 7745 (640.00 ACRES)						
Area 04	X60100001900000	1 PUBLIC SCHOOL SEC 19 ABST 3247 (640.00 ACRES)						
Area 15	M64500000010017	1 MONTE CARLO BLOCK 17	DONALD MEIER, JR.	6601 OVERLAND STAGE RD	EL PASO	TX	79938	4/19/10
	M64500000020015	2 MONTE CARLO BLOCK 15						
	M64500000020016	2 MONTE CARLO BLOCK 16						

Appendix J

APPENDIX J

ELECTRONIC FILES

FINAL SITE INSPECTION REPORT
FORT BLISS
EL PASO, TEXAS

Note: Electronic Files are provided on the CD located on the back of the binder.

Response To Comments

DOCUMENT REVIEW RECORD			
DOCUMENT PREPARER: TLI Solutions, Inc. **DOCUMENT TITLE:** *Stakeholder Draft* Site Inspection Report, Fort Bliss, El Paso, Texas			
The following provides TLI's response to comments received from the Texas Commission on Environmental Quality (TCEQ) and Hueco Tanks State Park and Historic Site			
REVIEWED BY: TCEQ **REVIEWER: Joanna Manning**			
Comment Number	**Section, Paragraph, Page**	**Reviewer Comment**	**Preparer Response**
1.	Sections 1, 3, 8, 12	It is noted that designated areas 1, 3, 8, 12 were not investigated due to access issues. The TCEQ is available to help with access issues. Please ensure that all these areas are incorporated into the proposed Maneuver Area A and retained for further investigation.	Concur. The land associated with the Maneuver Area A Munitions Response Site (MRS), which is recommended for further investigation, has been modified to incorporate Investigative Area 3. All other areas that were not accessed during the site inspection (SI) field activities (Areas 1, 8, and 12) were already included in the Maneuver Area A MRS.
2.	General	With the exception of the areas not investigated due to access issues, the TCEQ concurs with dividing the Former Maneuver Area into two response sites. Please revise and resubmit Figure 8-1, Former Maneuver Area Recommendations. Please include the outline of all sixteen investigation areas on the revised map and resubmit the map for TCEQ review prior to submitting the final copy of the Site Inspection Report.	Concur. Figure 8-1 has been revised as requested.

REVIEWED BY: **Hueco Tanks State Park & Historic Site** **REVIEWER:** **Wanda Olszewski**			
Comment Number	**Section, Paragraph, Page**	**Reviewer Comment**	**Preparer Response**
1.	General	The official name of our site (for the several places it is referred to) is Hueco Tanks State Park and Historic Site.	Concur. Text will be modified as requested
2.	Section 3, Paragraph 1 (page 3-9)	If Margaret Howard is the person being referred to in the first sentence of the first full paragraph on pg 3-9, her title is Archeology Survey Team Leader, Texas Parks and Wildlife Department. The next sentence should refer to our agency as Texas Parks and Wildlife Department.	Concur. Text will be modified as requested
3.	Section 5, paragraph 4 (page 5-8)	Page 5-8, paragraph below the photo: should read that the dam was created in the early 1960s.	Concur. Text will be modified as requested
4.	Section 6 Paragraph (page 6-9)	Page 6-9 says that Hueco Tanks contains populations of cattle. If this was meant to refer to area within the boundaries of the park, it is not true (Cattle are grazed only on property outside the park.).	Concur. Text will be modified as requested