

MKM Engineers, Inc.

FINAL FORT WINGATE DEPOT ACTIVITY TIME CRITICAL REMOVAL ACTION ADDENDUM

TO THE

FINAL KICKOUT INVESTIGATION WORK PLAN FORT WINGATE ARMY DEPOT, MCKINLEY COUNTY NEW MEXICO

Submitted to



UNITED STATES ARMY CORP OF ENGINEERS
FORT WORTH DISTRICT
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Submitted by

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Contract No: W912BV-04-D-2016-DY02

June 2008



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JUNE 2008

DoD Contract Number: Delivery/Task Order Number:	W912BV-04-D-2016-DY02 0001
Reviewed and Approved by:	
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This Work Plan Addendum has been prepared at the direction of the United States Army Corps of Engineers (USACE). This document should be used only with the approval of the USACE. This Addendum is based, in part, on information provided in other documents and is subject to the limitations and qualifications presented in the referenced documents.

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ACRONYMS AND ABBREVIATIONS

CE Conditional Exemption
ECM Earth Covered Magazine
ESS Explosive Safety Submission
FWDA Fort Wingate Depot Activity
GPS Global Positioning System

IAW In Accordance With MD Munitions Debris

MEC Munitions and Explosives of Concern

MGFD Munition with the Greatest Fragmentation Distance

MKM MKM Engineers, Inc.
MRA Munitions Response Area
MRS Munitions Response Site
MSD Minimum Separation Distance

NM New Mexico

NMED New Mexico Environmental Department

OB/OD Open Burn/Open Detonation

QA Quality Assurance QC Quality Control

RCRA Resource Conservation and Resources Act

SOW Scope of Work

SUXOS Senior UXO Supervisor
TCRA Time Critical Removal Action

UXO Unexploded Ordnance

UXOTIII Unexploded Ordnance Technician III

WP Work Plan



1.0 INTRODUCTION

MKM Engineers, Inc. (MKM) has prepared this Work Plan (WP) Addendum to be used in conjunction with the execution of the field work to delineate the extent of the open burn/open detonation (OB/OD) Unit Kickout Area Delineation at Fort Wingate Depot Activity (FWDA) in order to incorporate the Munition Response Site (MRS) that is the Arroyo exiting Parcel 3 near Gate 209 of the OB/OD Unit Kickout Area Delineation at the FWDA, McKinley County, New Mexico (NM). The arroyo exits Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extends north for three miles. This addendum to the final Kickout Investigation WP (June 2008) has been developed to provide a description of the necessary tasks that will be conducted at a location that is part of the FWDA OB/OD Unit Kickout Area Delineation Munitions Response Area (MRA). Per the statement of work (SOW), located in Appendix A, the WP will be conducted on the three miles of the Arroyo exiting Parcel 3 near Gate 209. The work necessary under this SOW is required in compliance with the Resource Conservation and Recovery Act (RCRA) Permit No. NM 6213820974, issued by the New Mexico Environmental Department (NMED), for the FWDA facility, and the Programmatic Agreement among the United States Army, the Navajo Nation, the Pueblo of Zuni, the New Mexico State Historic Preservation Officer, and the Advisory Council for Historic Preservation for Environmental Restoration Activities to be undertaken at FWDA and Associated Project Lands. This addendum adds the three mile Arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation.

1.1 Purpose and Scope

The purpose of this addendum is to provide a Munitions and Explosives of Concern (MEC) emergency interim measure to: (1) perform an emergency interim measure of the MEC and munitions debris (MD) from the bottom and sidewalls of the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles, and (2) perform an instrument assisted intrusive investigation in order to remove all detected anomalies in the three mile portion of the arroyo as part of the emergency measure. The floor of the arroyo will be cleared to detection limit of the instrument (Schonstedt and Whites all-metal detector) and the sidewalls will be surface cleared from the floor level to the high water line. All activities, protocols, and procedures not explicitly discussed in this addendum will be conducted in the manner described in the "Kickout Investigation Work Plan, Fort Wingate Army Depot Activity, McKinley County, NM, June 2008".



1.2 Work Plan and Addendum Organization

The final Kickout Investigation WP Section 1.2 is unchanged with the exception of the additional Addendum organization:

The Addendum contains three (3) appendices:

Appendix A: Statement of Work

Appendix B: Site Maps

Appendix C: Project Schedule

1.3 Project Location

The final Kickout Investigation WP Section 1.3 is unchanged with the exception of the following: This addendum is adding the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles at the FWDA as indicated by the Maps located within Appendix B.



2.0 TECHNICAL MANAGEMENT PLAN

The final Kickout Investigation WP Section 2.0 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

2.1 Project Objectives

The final Kickout Investigation WP Section 2.1 is unchanged with the exception of the following: The objective of the MEC emergency interim measure is to perform a Magnetometer, Flag, and Dig (Mag, Flag, and Dig) removal operation (Schonstedt and Whites all-metal detector) that will be conducted on the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles added to the project site as shown in the Map in Appendix B of this Addendum.

2.6 Project Schedule

The final Kickout Investigation WP Section 2.6 is unchanged with the exception of the following: MKM has developed a proposed schedule for the completion of the tasks for performance of the emergency interim measure of the MEC and MD from the bottom and sidewalls of the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation. The project schedule for the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles is shown in Appendix C of this addendum.



3.0 FIELD INVESTIGATION PLAN

The final Kickout Investigation WP Section 3.0 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

3.1 Overall Approach

The final Kickout Investigation WP Section 3.1 is unchanged with the exception of the following: This addendum adds the Mag, Flag, and Dig clearance of the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending north for three miles. The Mag, Flag, and Dig clearance team will perform a surface clearance of the arroyo bottom and the sidewalls up to the high water line by forming a line abreast and traversing the 3 mile length of the clearance area, while maintaining a spacing of approximately 5 feet between sweep personnel. The arroyo sidewalls will be cleared for near surface anomalies, and any large or deep anomalies detected in the sidewalls of the arroyo will be marked with pin flags and addressed separately at the end of the Mag, Flag and Dig clearance. The objective of the surface sweep is to locate exposed and near exposed MEC and MD that may pose a hazard or obstruction to subsequent site operations and use.

Suspected MEC located on the surface or near surface during the surface sweep will be marked with two crossed pin flags by sweep personnel. The MEC will be further inspected by the Senior Unexploded Ordnance (UXO) Supervisor (SUXOS), and if identified as MEC/MD, a digital photo will be taken and a position established by using the established Grid Sheets and Global Positioning System (GPS) point collection will be utilized to mark the UXO position. Grid Sheets: Measurements will be collected in feet and begin from the southwest corner of the grid along both the X and Y axis to establish MEC locations. All gathered information will be recorded on a MEC Discovery Form, and the item will be disposed of per the approved final Kickout Investigation WP (June 2008) if unacceptable to move; however, items determined acceptable to move will be stored in the Earth Covered Magazines (ECM) meeting all of the requirements for Conditional Exemption (CE) storage in accordance with (IAW) the Time Critical Removal Action (TCRA) Explosive Safety Submission (ESS) for the Emergency Interim Measure of Arroyo Exiting the OB/OD FWDA, McKinley County, NM (June 2008), with final disposition performed IAW the final Kickout Investigation WP (June 2008).

The floor of the arroyo will be subsurface cleared using a Mag, Flag and Dig method with hand held detectors (Schonstedt and Whites all-metal detector) to affect subsurface clearance of the additional three miles of the arroyo simultaneously with the aforementioned surface clearance procedures.



To ensure positional control of the Mag, Flag and Dig operation the site will be divided into flexible 100 foot by 100 foot grids (grid shape is "U" shaped from one side wall, across the bottom, and back up the opposite sidewall due to being inside an arroyo; however, each grid will be a linear 100 foot), and each corner marked with a wood stake. The stake will be labeled using the alpha numeric system. The grids will be further divided using movable ¼ inch by approximately 100 foot lengths of line to divide the flexible 100 foot by 100 foot grid into 5 foot search lanes.

The UXO clearance team, using hand held detectors (Schonstedt and Whites all-metal detector), will systematically and thoroughly process their assigned search lane, and will mark each anomaly location with a pin flag. After the grid has been processed, two person excavation teams will investigate anomalies using the same methods discussed in the approved final Kickout Investigation WP (June 2008).

MEC items located during the subsurface clearance will be marked with crossed pin flags, positively identified by the UXO Technician III (UXOTIII) and the SUXOS, a digital photo taken and a position established by taking measurements from at least two of the grid corner stakes recording the intersect point at the MEC location. All gathered information will be recorded on a MEC Discovery Form, and if acceptable to move will be stored IAW the TCRA ESS for the Emergency Interim Measure of Arroyo Exiting the OB/OD FWDA, McKinley County, NM (June 2008), or if unacceptable to move will be disposed of IAW the final Kickout Investigation WP (June 2008).

Each grid will be determined to be cleared after all anomaly locations marked during the anomaly location activity have been investigated and cleared, and a minimum of 10% of the grid area has been re-investigated and all suspected anomalies have been cleared. If a MEC item is located during the Quality Control (QC) inspection, the grid will be re-investigated and all anomalies cleared and the QC process repeated. Response to QC failures will be dealt with per the approved final Kickout Investigation WP (June 2008).

3.1.3 Specific Areas to be Investigated

The final Kickout Investigation WP Section 3.1.3 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

3.4.2 Digital Geophysical Mapping (Quality Control)

The final Kickout Investigation WP Section 3.4.2 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA



OB/OD Unit Kickout Area Delineation and extending to the north for three miles. The Quality Control (QC) will cover 10% of the covered three mile arroyo using hand held equipment. The instrument used during QC inspections will be the same type instrument used during the operational investigation/removal phase. All QC and Quality Assurance (QA) will be conducted IAW Section 4.0 of the final Kickout Investigation WP.

3.18 Geophysical Investigation Goals

The final Kickout Investigation WP Section 3.18 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

3.19.2 Time-Critical Removal Actions

The final Kickout Investigation WP Section 3.19.2 is unchanged with the exception of the following: This addendum adds the MEC emergency interim measure per the TCRA ESS for the Emergency Interim Measure of Arroyo Exiting the OB/OD FWDA, McKinley County, NM (June 2008).

3.22 Intrusive Investigation Methodology

The final Kickout Investigation WP Section 3.22 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

3.22.1 Accountability and Records Management for MEC

The final Kickout Investigation WP Section 3.22.1 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

3.22.1.1 MEC Accountability/Daily Reporting

The final Kickout Investigation WP Section 3.22.1.1 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

3.22.1.2 DD Form 1348-1A Completion

The final Kickout Investigation WP Section 3.22.1.2 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

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3.22.3 MEC Sampling Locations

The final Kickout Investigation WP Section 3.22.3 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles shown in Appendix B of this addendum.

3.22.4.2 Investigation

The final Kickout Investigation WP Section 3.22.4.2 is unchanged with the exception of the following: MKM will perform an investigation using hand-held metal detection equipment to perform an instrument assisted intrusive investigation in order to remove all detected anomalies in the 3-mile portion of the arroyo as part of the emergency interim measure. The floor of the arroyo will be cleared to detection limit of the instrument (Schonstedt and Whites all-metal detectors) and the sidewalls will be surface cleared from the floor level to the high water line. Additionally, hand-held metal detection and thorough visual inspection will be used to conduct 10% of the 3-mile arroyo for QC checks.

3.22.5 Munitions with the Greatest Fragmentation Distance (MGFD)

The final Kickout Investigation WP Section 3.22.5 is unchanged with the exception of the following: The MGFD for the operation at the FWDA arroyo is defined in Section 5 of the TCRA ESS for the Emergency Interim Measure of Arroyo Exiting the OB/OD FWDA, McKinley County, NM (June 2008).

3.22.6 Minimum Separation Distances (MSD)

The final Kickout Investigation WP Section 3.22.6 is unchanged with the exception of the following: The MSD for unintentional detonations, team separation and intentional detonation for the operations at the FWDA arroyo are defined in Section 5 of the TCRA ESS for the Emergency Interim Measure of Arroyo Exiting the OB/OD FWDA, McKinley County, NM (June 2008).

3.22.8 MEC Storage

The final Kickout Investigation WP Section 3.22.8 is unchanged with the exception of the following: The MEC storage for the operations at the FWDA arroyo are defined in Section 7 of the TCRA ESS for the Emergency Interim Measure of Arroyo Exiting the OB/OD FWDA, McKinley County, NM (June 2008).



3.22.9 MEC Disposal

The final Kickout Investigation WP Section 3.22.9 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.

3.23.1 Material Potentially Presenting and Explosive Hazard

The final Kickout Investigation WP Section 3.23.1 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles.



4.0 QUALITY CONTROL PLAN

The final Kickout Investigation WP Section 4.0 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles to Sections 4.0; 4.1; 4.3; 4.4; 4.4.7; 4.5.12; 4.5.14; 4.8; 4.10.2; and 4.13 of the Kickout Investigation WP (June 2008).

4.16 Project Deliverables

The final Kickout Investigation WP Section 4.16 is unchanged with the exception of the addition of the following lines to Table 4-1.

Table 4-1 Project deliverables and due dates

Deliverables	Days After Notice to Proceed (NTP)
Draft Work Plan Addendum	TBD
Draft Final Work Plan Addendum	TBD
Final Work Plan Addendum	14 days after receipt of comments



5.0 EXPLOSIVES MANAGEMENT PLAN

The final Kickout Investigation WP Section 5.0 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles to any applicative portions of the Explosive Management Plan.



6.0 EXPLOSIVE SITING PLAN

The final Kickout Investigation WP Section 6.0 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles to any applicative portions of the Explosive Siting Plan located in Appendix K of the final Kickout Investigation WP (June 2008).



7.0 ENVIRONMENTAL PROTECTION PLAN

The final Kickout Investigation WP Section 7.0 is unchanged with the exception of the following: This addendum adds the arroyo exiting Parcel 3 near Gate 209 of the FWDA OB/OD Unit Kickout Area Delineation and extending to the north for three miles to any applicative portions of the Environmental Protection Plan.



8.0 PROPERTY MANAGEMENT PLAN

No changes, see final Kickout Investigation WP (June 2008).



9.0 INTERIM HOLDING FACILITY SITING PLAN

No changes, see final Kickout Investigation WP (June 2008).



10.0 PHYSICAL SECURITY PLAN

No changes, see final Kickout Investigation WP (June 2008).



11.0 REFERENCES

The final Kickout Investigation WP Section 11.0 is unchanged with the exception of the following: Addition of reference TCRA ESS for the Emergency Interim Measure of Arroyo Exiting the OB/OD FWDA, Mckinley County, NM.



APPENDIX A:

Statement of Work

STATEMENT OF WORK MUNITIONS AND EXPLOSIVE OF CONCERN (MEC) OPEN BURN/OPEN DETENATION (OB/OD) UNIT KICKOUT AREA DELINEATION AMENDMENT 01

EMERGENCY INTERIM MEASURE OF ARROYO EXITING THE OB/OD FORT WINGATE DEPOT ACTIVITY, NEW MEXICO April 2008

1.0 OBJECTIVE: The objective of this amendment is to perform an emergency interim measure of the MEC and MEC debris from the bottom and sidewalls of the arroyo exiting Parcel 3 near the 209 Gate. The Kickout Delineation work plan and procedures shall be used to the greatest extent possible. The arroyo to be surveyed and cleared extends north three miles.

2.0.7 RCRA Permit

VII.G.4 Emergency Interim Measures

The Permittee may determine, during implementation of site investigation activities, that emergency interim measures are necessary to address an immediate threat of harm to human health or the environment. The Permittee shall notify the NMED within one business day of discovery of the facts giving rise to the threat, and shall propose emergency interim measures to address the threat. If the NMED approves the emergency interim measures in writing, the Permittee may implement the proposed emergency interim measures without submitting an interim measures work plan. If circumstances arise resulting in an immediate threat to human health or the environment such that initiation of emergency interim measures are necessary prior to obtaining written approval from the NMED, the Permittee shall notify the NMED within one business day of taking the emergency interim measure. The notification shall contain a description of the emergency situation, the types and quantities of contaminants involved, the emergency interim measures taken, and contact information for the emergency coordinator who handled the situation. The notification shall also include a written statement justifying the need to take the emergency action without prior written approval from the NMED. This requirement shall not be construed to conflict with 20.4.1.500 NMAC (incorporating 40 CFR 264.1(g)(8)) or 20.4.1.900 NMAC (incorporating 40 CFR 270.61).

3.0 SPECIFIC "AMENDED" REQUIREMENTS:

3.3 (TASK 3) GEOPHYSICAL PROVE-OUT (GPO) This task is Firm Fixed Price. The contractor shall work with CESWF to expand the GPO. The contractor should plan a week for the field effort.

3.4 (TASK 4) WORKPLAN This task is Firm Fixed Price. The contractor shall prepare a work plan addendum using DID MR-001 and state hazardous waste guidance as guidelines to cover activities not covered in the Work Plan associated to the original task order.

A site visit will be authorized for work plan addendum and ESS development. The site visit shall be preformed while onsite performing other tasks in order to limit costs.

- 3.4.1 Time Critical Removal Action (TCRA) Explosive Safety Submission (ESS) The contractor shall submit a Draft and Final TCRA ESS and coordinate with CESWF for approval. The TCRA ESS shall be provided to the government as a stand alone document for the approval process then incorporated into the final work plan addendum where appropriate.
- **3.9** (TASK 9) INTRUSIVE INVESTIGATION This task is Firm Fixed Priced. The contractor shall remove 100% of all detected anomalies in the 3 mile portion of the arroyo as part of the emergency interim measure.
- **3.10** (TASK 10) FINAL REPORT This task is Firm Fixed Price. The contractor shall include reporting of the Arroyo Clearance in the final report for the original task order.

4.8 Submittals and Due Dates

SUBMITTAL

Draft ESS Final ESS

Draft Work Plan Final Work Plan

END of SOW Addendment.

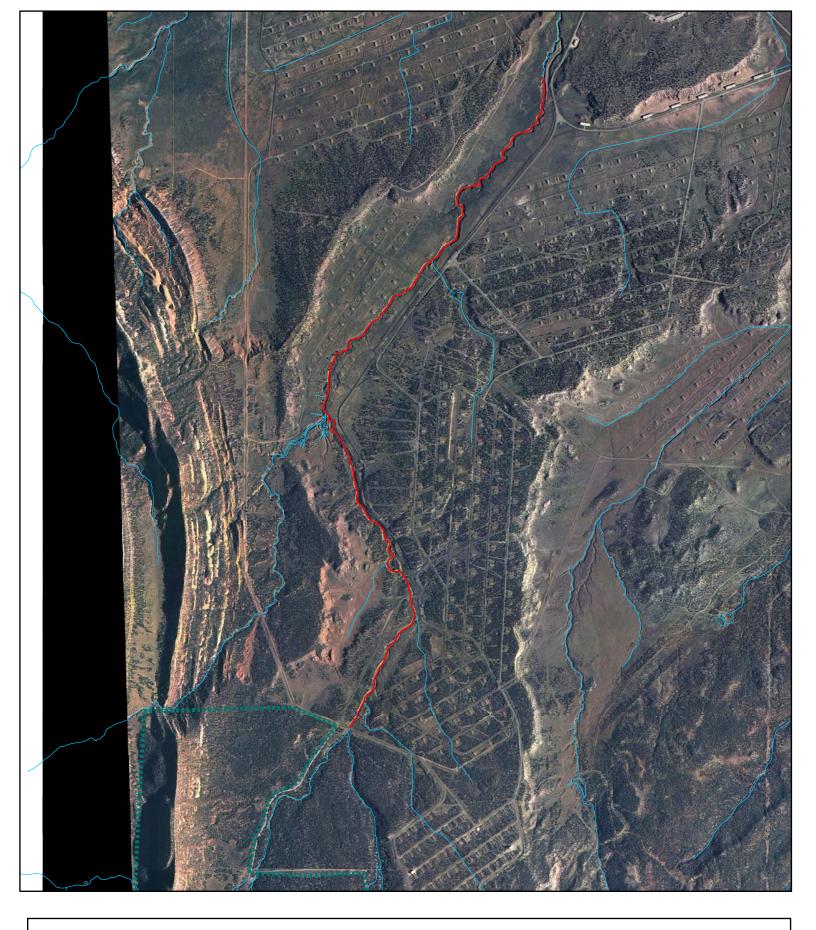
DUE DATES

14 days after award 7 days after receipt of draft comments TBA 14 days after receipt of comments



APPENDIX B:

Site Map





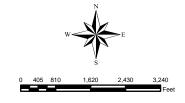




FIGURE 1
PROPOSED CAMU LOCATION MAP
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NM

Drawn On: 4/8/2008 Drawn By: QX Approved By: SK



APPENDIX C:

Project Schedule

