DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)

22 August 2025

Colonel Justin D. Secrest, USAF
Commander
377th Air Base Wing
[redacted]

Mr. S. Travis Tucker
U.S. EPA
RCRA Corrective Action Section (6LCR-RC)
[redacted]

Dear Mr. Tucker

Pursuant to the provisions of the Defense Environmental Restoration Program, Kirtland Air Force Base has completed the Five-Year Review for MMRP sites AL120 Proximity Fuze Range, DA130 Arroyo Del Coyote Demolition Area, ML125 Field Firing Range, and PT123 Tijeras Small Arms Range.

Kirtland AFB has prepared this Five-Year Review to include an evaluation of current site conditions and of the effectiveness of the selected final remedies for the four Munitions Response Sites located in Kirtland Air Force Base. The Air Force is submitting this Document for the Environmental Protection Agency's (EPA) review and comment.

If you have any questions or concerns, please contact Mr. Scott Clark at [redacted] or via email at [redacted], or Ms. Suzanne Devergie at [redacted] or via email at [redacted]

Sincerely

SECREST.JUSTIN.D.1078711082 Digitally signed by SECREST.JUSTIN.D.1078711082 Date: 2025.08.22 13:41:56 -06'00'

JUSTIN D.SECREST, Colonel, USAF
Commander

Attachment:
Five-Year Review Report for Military Munitions Response Sites AL120, DA130, ML125, PT123, July 2025

cc:
EPA Region 6 (Lyssy)
NMED-HWB (Nance)
AFCEC-CZOW (Segura, Clark)
AFCEC-CZRX (Gonzales)
AFB Public Admin. Record (Miranda)

Outlook

[Draft] Re: 5 Year Review for MMRP sites - Kirtland AFB

From [redacted]
Draft saved Thu 3/19/2026 9:03 AM

From: [redacted]
Sent: Friday, March 13, 2026 1:23 PM
To: [redacted]
Cc: [redacted]
Subject: [Non-DoD Source] RE: 5 Year Review for MMRP sites - Kirtland AFB

Scott,

Subject 5-Year Review for AL120, DA130, ML125, and PT123 – looks good. The report determines that the necessary remedy at each site is currently protective, with no issues identified that affect current or future protectiveness.

Concurrence with KAFB.

1. Continue to perform annual LUC inspections.
2. The recommendation to upgrade security infrastructure to install a new chain-link fence along the southern boundary of AL120 / replace the existing degraded fencing. This action will strengthen site security and prevent unauthorized access.

This FYR ensures long-term protectiveness of human health and the environment.

S. Travis Tucker
Senior Project Manager, U.S. EPA
RCRA Corrective Action Section (6LCR-RC)
[redacted]

From: [redacted]
Sent: Thursday, January 29, 2026 11:35 AM
To: [redacted]
Cc: [redacted]
Subject: FW: 5 Year Review for MMRP sites - Kirtland AFB

Hi Travis,

I got pinged by our contractors on this, so wanted to reach out and see if you'd had a chance to review? It's pretty straightforward for MMRP, all sites have LUCs and protectiveness determination for all of them was protective. Original email with more info is just below, and no hurry – just wanted to see if you had any comments.

Thanks, and if you have any questions feel free to reach out,
Scott

//SIGNED//

SCOTT C CLARK
Restoration Program Manager
Kirtland ISS, AFCEC/CZO
[redacted]

From: [redacted]
Sent: Tuesday, September 23, 2025 8:45 AM
To:
Cc: [redacted]
Subject: 5 Year Review for MMRP sites - Kirtland AFB

Hi Travis,

Attached is a 5 Year Report for some MMRP sites we have on Kirtland, and we're submitting for your review. This 5YR covers MMRP sites AL120 (Proximity Fuze Range), DA130 (Arroyo Del Coyote Demolition Area), ML125 (Field Firing Range), and PT123 (Tijeras Small Arms Range). Interviews were held December 2024 (Mr. Lyssy from EPA was interviewed) and no issues were raised through the interviews (Site inspections and interviews in section 4.5 of the report). They've all got LUCs in place and limited access, so it's all relatively straightforward. NMED was Cc'd on this submittal for their awareness too, but they received a hard copy.

As always, if you have any questions feel free to reach out and hope all is well out there.
Thanks!
Scott

//SIGNED//

SCOTT C CLARK
Restoration Program Manager
Kirtland ISS, AFCEC/CZO
[redacted]

KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO

FINAL

FIRST FIVE-YEAR REVIEW REPORT FOR MILITARY MUNITIONS RESPONSE SITES AL120 PROXIMITY FUZE RANGE, DA130 ARROYO DEL COYOTE DEMOLITION AREA, ML125 FIELD FIRING RANGE, AND PT123 TIJERAS SMALL ARMS RANGE

July 2025

377 MSG/CEI
2050 Wyoming Boulevard SE
Kirtland AFB, New Mexico 87117-5270

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KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO

FINAL

FIRST FIVE-YEAR REVIEW REPORT

AL120 Proximity Fuze Range,
DA130 Arroyo Del Coyote Demolition Area,
ML125 Field Firing Range, and
PT123 Tijeras Small Arms Range
Munitions Response Sites

Military Munitions Response Program

Prepared for

Department of the Air Force, 772nd ESS/PKB
2261 Hughes Avenue, Suite 155
Joint Base San Antonio Lackland, Texas 78236-9853

USACE Contract W912PP24P0015

Submitted by

FPM AECOM JV2

July 2025

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NOTICE

FPM-AECOM Joint Venture 2 (JV2) prepared this First Five-Year Review Report for the Department of the Air Force (DAF), Air Force Civil Engineer Center (AFCEC), and Kirtland Air Force Base (AFB) to support the execution of the Air Force Military Munitions Response Program (MMRP).

Government agencies and their contractors registered with the Defense Technical Information Center (DTIC) should direct requests for copies of this report to: DTIC, Cameron Station, Alexandria, Virginia 22304-6145.

The public can print the document from the Air Force Administrative Record webpage (https://ar.cce.af.mil/)

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	July 2025	PRELIMINARY DRAFT FIRST FIVE-YEAR REVIEW REPORT AL120 Proximity Fuze Range, DA130 Arroyo Del Coyote Demolition Area ML125 Field Firing Range, and PT123 Tijeras Small Arms Range Munitions Response Sites Kirtland Air Force Base, Albuquerque, New Mexico

4. TITLE AND SUBTITLE	5. FUNDING NUMBERS
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6. AUTHOR FPM AECOM Joint Venture 2	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) FPM AECOM Joint Venture 2 181 Kenwood Avenue Oneida, New York 13421	8. PERFORMING ORGANIZATION REPORT NUMBER Not Applicable
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Melissa Gonzales AFCEC/CZRE 2261 Hughes Avenue, Suite 155 Lackland AFB, Texas 78236-9853	10. SPONSORING/ MONITORING AGENCY REPORT NUMBER 0094AA

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40 CFR 270.11
DOCUMENT CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

SECREST.JUSTIN.D.1078711082 Digitally signed by SECREST.JUSTIN.D.1078711082 Date: 2025.08.22 13:42:17 -06'00'

22August2025

JUSTIN D. SECREST, Colonel, USAF
Commander, 377th Air Base Wing

Date

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PREFACE

The purpose of this First Five-Year Review Report is to evaluate the implementation and performance of selected remedies, which consist of Land Use Controls (LUCs), installed at Kirtland Air Force Base (AFB) Munitions Response Sites (MRSs) AL120 Proximity Fuze Range, DA130 Arroyo Del Coyote Demolition Area, ML125 Field Firing Range, and PT123 Tijeras Small Arms Range to determine if the remedies are and will continue to be protective of human health and the environment. These LUCs apply to all employees and organizations at Kirtland AFB, to all contractors (including utility workers) doing work at Kirtland AFB, and to all Base residents and visitors.

FPM AECOM Joint Venture 2 (JV2) performed this work under the authority of the U.S. Army Corps of Engineers (USACE) Contract Number W912PP24P0015. Ms. Rachel Watts-Gravette is the Project Manager for USACE. Mr. Scott Clark is the Kirtland AFB Remedial Project Manager. Ms. Suzanne Devergie is the Kirtland AFB MMRP Lead. Mr. Daniel Baldyga of FPM-AECOM JV2 is the Project Manager. Mr. Chris Coonfare of FPM-AECOM JV2 reviewed this report for quality control and quality assurance.

Daniel Baldyga

Daniel Baldyga, PMP, CE
FPM-AECOM JV2
Project Manager

Christopher T. Coonfare

Chris Coonfare, PG
FPM-AECOM JV2
Five-Year Review Quality Control Supervisor

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APPENDICES

ACRONYMS AND ABBREVIATIONS

%	percent
ABCWUA	Albuquerque Bernalillo County Water Utility Authority
AFB	Air Force Base
amsl	above mean sea level
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CES	Civil Engineer Squadron
CFR	Code of Federal Regulations
COPC	Contaminants of Potential Concern
CSE	Comprehensive Site Evaluation
DAF	Department of the Air Force
DERP	Defense Environmental Restoration Program
DGM	Digital Geophysical Mapping
DOE	Department of Energy
EC	Engineering Control
EO	Executive Order
EOD	Explosive Ordnance Disposal
ERP	Environmental Restoration Program
FPM-AECOM JV2	FPM-AECOM Joint Venture 2
FYR	Five-Year Review
ft	feet
GIS	Geographic Information System
HGL	HydroGeoLogic
HHRA	Human Health Risk Assessment
IDP	Installation Development Plan
JV2	Joint Venture 2
lb	pound
LUC	Land Use Control
MC	Munition Constituent
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
MEC-HA	MEC Hazard Assessment
mg/kg	milligrams per kilogram
mm	millimeter
MMRP	Military Munitions Response Program
MPPEH	Material Potentially Presenting an Explosive Hazard
MRA	Munitions Response Area
MRS	Munitions Response Site
n.d.	No Date
NCP	National Contingency Plan
NMED	New Mexico Environment Department

ACRONYMS AND ABBREVIATIONS (concluded)

NMER	New Mexico Experimental Range
NMPG	New Mexico Proving Ground
PP	Proposed Plan
RAO	Remedial Action Objective
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
RI	Remedial Investigation
ROD	Record of Decision
RSL	Regional Screening Levels
SVOC	Semi-Volatile Organic Compounds
SARA	Superfund Amendments and Reauthorization Act
SI	Site Investigation
SLERA	Screening Level Ecological Risk Assessment
SSL	Soil Screening Levels
TNT	2,4,6-trinitrotoluene
UU/UE	Unlimited Use/Unrestricted Exposure
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USEPA	United States Environmental Protection Agency
USFS	U.S. Forest Service
UTL	Upper Tolerance Limit
UXO	Unexploded Ordnance
XRF	X-Ray Fluorescence
VT	Variable Time

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EXECUTIVE SUMMARY

FPM-AECOM Joint Venture 2 (JV2) was contracted under United States Corps of Engineers (USACE) Albuquerque District Contract No. W912PP24P0015, to conduct a Five-Year Review (FYR) for the Military Munitions Response Program (MMRP) sites at Kirtland Air Force Base (AFB). Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section (§)121(c) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), the purpose of the FYR is to determine if the final remedies at the sites, which consist of Land Use Controls (LUCs), are and will continue to be protective of human health and the environment. FYRs are required for CERCLA remedies that leave hazardous substances, pollutants, or contaminants on site above levels that allow for Unlimited Use and Unrestricted Exposure (UU/UE).

This is the first FYR for the Kirtland MMRP sites, AL120 Proximity Fuze Range, DA130 Arroyo Del Coyote Demolition Area, ML125 Field Firing Range, and PT123 Tijeras Small Arms Range. The FYR includes an evaluation of current site conditions and of effectiveness of the selected final remedies documented in the signed Final Records of Decision (RODs) for the four Munitions Response Sites (MRSs).

Areas within the four MRSs cannot support UU/UE due to Munitions and Explosives of Concern (MEC) and Material Potentially Presenting an Explosive Hazard (MPPEH) remaining in place after implementation of the selected remedies. Land use restrictions are required as part of the response action and are achieved through the implementation of administrative LUCs and Engineering Controls (EC) (e.g., warning signs) with onsite construction support. The Department of the Air Force (DAF) is committed to monitoring, maintaining, and enforcing all components of the selected remedy to ensure that it remains protective of human health and the environment.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Kirtland Air Force Base		
EPA ID: Not Applicable		
Region: 6	**State:** NM	**City/County:** Albuquerque/Bernalillo
SITE STATUS		
National Priorities List Status: Non-NPL		
Multiple OUs? Yes		**Has the site achieved construction completion?** Yes
REVIEW STATUS		
Lead Agency: Department of the Air Force		
Author Name (Federal or State Project Manager): Scott Clark		
Author Affiliation: Restoration Program Manager		
Review Period: 12/13/2019 – 12/12/2024		
Date of Site Inspection: 12/11/2024 – 12/12/2024		
Type of Review: Statutory		
Review number: 1		

Triggering action dates: 12/13/2019[1]
Due date: July 2026

SUMMARY OF REMEDIAL ACTIONS

A brief summary of the remedies to comply with the corresponding RODs is presented in **Table 1-1**.

PROTECTIVENESS SUMMARY

The remedies are functioning as intended at all MRSs evaluated under this FYR and are expected to continue to be protective of human health and the environment. Long-term protectiveness of the remedial actions will be verified through annual LUC inspections and maintenance. The protectiveness evaluation for each site is long-term protective with respect to human health and no unacceptable risks are occurring.

PROTECTIVENESS STATEMENT

The overall sitewide protectiveness determination for the sites included in this FYR is "long-term protective." The remedy currently protects human health and the environment because access controls, warning signs, and LUCs are in place to prevent exposure to site hazards.

[1] Signature date of ROD for DA130. This was the first ROD signed for the sites in this review.

1.0 INTRODUCTION

This Five-Year Review (FYR) Report was prepared for Kirtland Air Force Base (AFB), in Albuquerque, New Mexico to determine if the remediation measures selected for the Kirtland Military Munitions Program (MMRP) sites are, and will continue, to be protective of human health and the environment. FPM-AECOM Joint Venture 2 (JV2) was contracted by the United States Army Corps of Engineer (USACE) under Contract Number W912PP24P0015 to complete an FYR for the four Munitions Response Sites (MRSs) under the MMRP.

This is the first FYR for the four MRSs remediated under the MMRP at Kirtland AFB. The Records of Decision (RODs), contaminants of concern, Remedial Action Objectives (RAO), and a summary of the remedial actions for the four sites included in this FYR are presented in **Table 1-1**. The MRSs addressed in this report are as follows:

- AL120 Proximity Fuze Range MRS (488.5 acres),
- DA130 Arroyo del Coyote Demolition Area MRS (61.0 acres),
- ML125 Field Firing Range MRS (2,231.3 acres), and
- PT123 Tijeras Small Arms Range MRS (434.2 acres).

The FYR is being conducted pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121(c) and the National Contingency Plan (NCP). CERCLA §121(c) states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with the section [104] or [106]; the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

This requirement is further interpreted in the NCP (40 Code of Federal Regulations [CFR] §300.430(£)(4)(ii)) which states,

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE), the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

Executive Order (EO) 12580 establishes the Department of Defense as the CERCLA lead agency for environmental restoration sites at their facilities. EO 12580 states:

> *The functions vested in the President by Sections 104(a), (b), and (c)(4), ll3(k), ll7(a) and (c), 119, and 121 of the Act (i.e., CERCLA) are delegated to the Secretaries of Defense and Energy, with respect to releases or threatened releases where either the release is on or the sole source of the release is from any facility or vessel under the jurisdiction, custody, or control of their departments.*

This authority has been re-delegated by the Secretary of Defense to the Department of the Air Force (DAF).

This FYR was prepared because hazardous substances, pollutants, or contaminants remain above levels that allow for UU/UE at all sites included in this report. The triggering action for this review is the signature date of the first ROD completed for the four MSRs on December 13, 2019. Land Use Control

(LUC) implementation was completed on August 14, 2018, which included the installation of warning signs along the site boundaries.

This FYR was performed in accordance with the U.S. Environmental Protection Agency (USEPA) Comprehensive FYR Guidance (USEPA, 2001), FYR Recommended Template (USEPA, 2016), and other associated supplemental guidance. The methods, findings, and conclusions of reviews are documented in this report. In addition, the report identifies issues found during the review and documents recommendations to address them.

1.1 Overview of Kirtland Air Force Base

Kirtland AFB, located in Albuquerque, New Mexico, serves as a critical hub for military operations, research, and development. The base is primarily managed by the 377th Air Base Wing (377 ABW), a unit under the Air Force Materiel Command. Its mission includes munitions maintenance and storage, base support for over 100 associate units, and readiness and training activities. Kirtland AFB hosts a variety of organizations, including the Air Force Research Laboratory, the 58th Special Operations Wing, and the New Mexico Air National Guard, among others. These units work on cutting-edge research, operational testing, and special operations support.

In addition to its military functions, Kirtland AFB is home to several Department of Energy (DOE)-leased, owned, or permitted areas, such as Sandia National Laboratories, which plays a key role in developing and testing special weapons and energy systems. While Kirtland AFB oversees a wide range of military and research operations, the DOE manages environmental protection and compliance within its facilities, distinct from the base's overall management.

The history of Kirtland AFB dates back to the late 1920s when the land was first developed for aviation use, initially as a private airport named Albuquerque Airport. It later became Oxnard Field and was expanded in the 1930s to support military training. By 1941, the site had evolved into Albuquerque Army Air Base, serving as a major training site for bomber crews during World War II. In 1942, the base was renamed Kirtland Field, and soon after, it became a key location for developing and storing aircraft and weapons, especially to support the atomic research conducted at Los Alamos.

Following World War II, the base underwent several transformations, including the establishment of the Air Force Special Weapons Center and the arrival of the Sandia Branch of the Los Alamos Scientific Laboratory, which later became Sandia National Laboratories. Kirtland continued to support special weapons and nuclear testing, with significant contributions to the development of missile and bomb technologies. The base also expanded to include additional areas such as Manzano Base for weapons storage, which played an integral role in the Cold War era.

In the 1970s and 1980s, Kirtland AFB further solidified its role as a center for research and development, particularly in space and nuclear technologies. The base became home to several critical units, such as the 1550th Combat Crew Training Wing, and later the 542nd Crew Training Wing. It became a hub for training aircrews and pararescue personnel, specializing in missions for the Air Force Special Operations Command. In the 1990s, the base underwent additional restructuring, with the 377 ABW becoming the primary host unit responsible for base operations and the storage and maintenance of munitions.

Today, Kirtland AFB continues to serve a vital role in the Air Force, with more than 23,000 personnel, including civilian contractors. The base supports a wide range of operations, from research and development to munitions maintenance, ensuring its importance in both national security and military readiness. The ongoing evolution of Kirtland AFB highlights its adaptability and central role in advancing military technologies and operations.

1.2 Conceptual Site Model – MMRP Sites Kirtland Air Force Base

The Kirtland AFB has been used in support of historical training operations as described in the previous section. Explosive hazards associated with Munitions and Explosives of Concern (MEC)/ Material

Potentially Presenting an Explosive Hazard (MPPEH) are the only risks identified for the four MRSs (HGL, 2013). A wide variety of munitions have been used at the sites that could be present as explosive hazards: rockets (2.75-inch, 4.5-inch, and 5-inch), projectiles (20 millimeter [mm], 57mm, 58mm 75mm, 76mm, 90mm, 5-inch, 105mm, 120mm, 127mm, 155mm, 3-inch, 3.7-inch, and 5-inch), and grenades (rifle). The primary exposure pathways for human and ecological receptors are surface MEC handling, treading underfoot, and contact during intrusive activities. The conceptual site model, included in the Comprehensive Site Evaluation (CSE) Phase II, identified potentially complete pathways for human and ecological receptors with surface and subsurface MEC sources at AL120, DA130, and PT123, and complete pathways at ML125.

Based on the field and analytical data collected during the CSE Phase II and the Remedial Investigation (RI) at sites AL120, DA130, and PT123, the release of Munitions Constituents (MC) from the presence of MEC and Munitions Debris (MD) as a result of the previous site activities did not occur at these locations. For site ML125, release of MC contamination was identified, however, contaminants present in soil at ML125 did not pose a threat to human health under current or future site conditions based on the human health risk assessment (HHRA) performed during the RI. Therefore, there are no complete exposure pathways for MC at these four MRSs (HGL, 2013).

1.3 Installation Environmental Setting

1.3.1 Demography

The Population Estimates Program of the U.S. Census Bureau for vintage year 2023 (July 1, 2023) estimated the population of Albuquerque to be approximately 560,274. Albuquerque experienced a 0.8 percent (%) decrease in population since the 2020 census (U.S. Census Bureau, [n.d.]).

Kirtland AFB employs over 23,000 people, including more than 3,000 active duty and 1,100 Guard and Reserve, 3,400 civil service, 300 fund employees and 12,500 contractors (Military OneSource, n.d.).

1.3.2 Topography

Kirtland AFB lies along the eastern margin of the Albuquerque Basin and on part of the central Rio Grande rift. The eastern portion of the installation rises into the Manzanita Mountains, where elevations reach 7,900 feet (ft) above mean sea level (amsl). Land elevations in the western portion of the base near the airport are approximately 5,300 ft amsl. Topography of most of the installation is level to gently sloping, with occasional washes for seasonal drainage. The eastern area of the installation contains sharp crested hills, rocky outcrops, and canyons in and around the Manzanita Mountains (Kirtland AFB, 2005).

1.3.3 Soils

Surface soil across the Albuquerque Basin is comprised mostly of sandy soils and loam soils, which are common near mountain foothills. The primary parent bedrock is granite from the Sandia Mountains, which produce sandy soils (80% to 100% sand) as weathering and erosion occurs. Loam soils (25% to 50% sand) form in flood plains and drainage basins as larger-grained sand particles erode. Soil of Kirtland AFB is comprised of two main types: Latene sandy loam and Wink fine sandy loam. Generally, these two can be described as well-drained soil with moderate permeability, meaning water can infiltrate into the soil reasonably quickly from the surface. Surface water that flows across these soil types generally permeates into the ground, limiting surface water runoff.

1.3.4 Geology

Kirtland AFB is located within the Albuquerque Basin of the Rio Grande Rift. The Albuquerque Basin is a half-graben within the system of basins that comprise the Rio Grande Rift (Connell and Love, 2009). The Rio Grande Rift is a chain of fault-linked basins beginning in the highlands of central Colorado and continuing more than 680 miles south through western Texas into northern Mexico. The Rio Grande Rift

began forming between 35 million and 29 million years ago, in response to extension of the earth's crust. Crust extension produced deep asymmetrical faulted basins (called half-grabens) that filled with more than 3 miles of sediment eroded from the basin-flanking uplands.

The Albuquerque Basin is approximately 25 miles wide by 100 miles long, and extends from Cochiti, New Mexico, to San Acacia, New Mexico, making it one of the largest, deepest basins in the state (Albuquerque Bernalillo County Water Utility Authority, 2016). The eastern edge of the half-graben is defined by the Sandia and Manzanita mountains, and the western edge is roughly defined at the location of the Rio Puerco.

The Albuquerque Basin has been filled with sediments identified as the Santa Fe Group. The thickness of the basin fill deposits varies throughout the basin due to the structural characteristics and faulting along the Rio Grande Rift. Generally, sedimentary deposits of the Santa Fe Group are more than 3,000 ft thick in most of the basin (Kelley, 1977). Seven million years ago, the Ancestral Rio Grande entered the Albuquerque Basin (Connell and Love, 2009; Hawley, 1978), which has been continuously filled by three depositional systems.

1. Alluvial fans: Easterly derived alluvial fan deposits from the Sandia and Manzanita mountains; fan or cone-like aprons of sediment derived from an eastern upslope source.
2. "Axial" Ancestral Rio Grande fluvial system: A braided fluvial system from north to south through-flowing Ancestral Rio Grande, running generally perpendicular to the edge-derived fans along the long axis of the half-graben.
3. Fluvial fans: Westerly derived fluvial fan deposits—a distributive fluvial system similar to an alluvial fan, but larger, with a lower gradient, greater degree of fluvial processes, and larger catchment area.

Kirtland AFB is located on the eastern edge of the Albuquerque Basin, and extends from the Manzano mountains to the west, to within approximately 2 miles of the Rio Grande. All three depositional systems listed above can be found within the installation boundary.

1.3.5 Hydrogeology

Water at Kirtland AFB is supplied by the Middle Rio Grande aquifer. The aquifer is unconfined and dominated by the sediments. The water table at Kirtland AFB is approximately 480 ft below ground surface (bgs) within the basin and becomes shallower near the base of the mountains. Historically, groundwater on the base flowed southwest toward the Rio Grande. Currently, the groundwater flow direction is dominated by the operation of Kirtland AFB and city of Albuquerque production wells.

Subsurface recharge from adjacent basins is the primary source of recharge to the aquifer. There is also surface recharge from the mountain-front and tributary sources to the northeast. Physical aquifer properties, such as hydraulic conductivity, are highly variable across Kirtland AFB. This variability corresponds with the depositional history of the Santa Fe Group.

Groundwater pumped from the Middle Rio Grande aquifer is a source of potable water for Kirtland AFB workers and inhabitants and is currently drawn from production wells on Kirtland AFB property. Water for citizens of the city of Albuquerque is supplied by Albuquerque Bernalillo County Water Utility Authority (ABCWUA). The closest ABCWUA water supply wells are located within 1,750 ft north of the Kirtland AFB northern boundary.

1.3.6 Surface Water Hydrology

The surface water system within the Kirtland AFB area consists primarily of ephemeral streams or arroyos, which lose water through channel losses that contribute to groundwater recharge. These drainages potentially influence the shape of the water-surface profile of the underlying aquifer. There are several known springs, all downstream of the Manzano Mountains, and tributaries to Arroyo del Coyote.

The major surface drainages include the Tijeras Arroyo, Arroyo del Coyote, and an unnamed drainage south of Arroyo del Coyote. Except for two short reaches of channels, these drainages are all ephemeral within Kirtland AFB. Floods and runoff occur mostly during the summer thunderstorm season (July through September). The snow in the Manzano Mountains can produce localized runoff, which rarely reaches the lower portions of the arroyos or the Rio Grande Valley (HGL, 2010).

1.3.7 Climate

The climate of Kirtland AFB and the surrounding vicinity is classified as "arid continental." The mean annual precipitation is 8.4 inches and the mean annual snowfall is 1.25 inches. The average monthly precipitation in the Albuquerque area varies from less than 1 inch during November through March to over 1.25 inches in July and August. Winters are typically dry with monthly snowfalls seldom exceeding 3 inches. Snow generally melts within 24 hours outside the mountain areas. Typically, summer rains in the form of brief, but locally heavy thunderstorms account for almost half of the annual moisture. Potential evapotranspiration (evaporation occurring when no soil-water deficit exists) for the Albuquerque area is 30.9 inches. Actual evapotranspiration has been determined to be about 95% of precipitation in the climatic regime, with the remaining 5% divided equally between runoff and recharge (HGL, 2010).

1.3.8 Vegetation

The vegetation at Kirtland AFB consists of four main plant communities: grassland, piñon-juniper, ponderosa, and riparian/wetland/arroyo. These vegetative communities correspond closely with the U.S. Forest Service (USFS) plant community descriptions. Transitional areas are found between these communities and contain a mixture of representative species from the bordering areas. The piñon-juniper and grassland are the dominant vegetative communities at Kirtland AFB. The riparian/wetland/arroyo plant community is confined to isolated areas inundated by surface water most of the year and is, therefore, not considered a primary vegetative plant community (HGL, 2010).

1.4 Site Specific Background

This section includes site conditions, land use, and operational history for each MRS. Chronology of events for each site is provided in **Tables 1-2A** through **1-2D**.

1.4.1 AL120 Proximity Fuze Range Site Conditions, Land Use, and Operational History

The AL120 Proximity Fuze Range MRS covers 488.5 acres and is located in a remote area on the southeastern boundary of Kirtland AFB (**Figures 1-1** and **1-2**). The site is characterized by thick vegetation, sharp hills, steep slopes, and rocky outcrops, with limited accessibility via unmaintained four-wheel drive roads that are gated and patrolled by security forces. The current land use scenario for this site is constrained land use (HGL, 2013). Per the Kirtland AFB Installation Development Plan, areas designated as constrained land use have been designated as a result of restrictions imposed by airfield or explosive safety criteria, physical constraints, zoning, and compatibility with the development of surrounding communities (Kirtland AFB, 2016). The Kirtland AFB Installation Development Plan also identifies that the land use for the AL120 MRS is expected to remain unchanged in the long term.

Historically, the AL120 MRS was part of a larger 4,440-acre Munitions Response Area (MRA) used for large-caliber munitions testing at the New Mexico Proving Ground (NMPG)/New Mexico Experimental Range (NMER) between January 1942 and June 1952. This area included the testing of various projectiles and proximity fuzes, with the Manzanita Mountains serving as the backstop for many of the firing activities.

Documented military munitions activities within the AL120 MRA included testing of proximity fuzes and firing of 3-inch, 5-inch, 57mm, 58mm, 75mm, 76mm, 78mm, 90mm, 105mm, and 120mm projectiles; projectiles included 4.5-inch and 5-inch rockets.

Investigations performed at the AL120 MRS include CSE Phase I (USA Environmental, Inc., 2007) and Phase II (HGL, 2010) and RI (HGL, 2013). Several MD (5-inch projectile pieces) and one piece of MD (a 5-inch projectile) were identified at the site during the CSE Phase I and II visual surveys, respectively. During the RI field effort, no MEC, MD, or discolored soil was observed on the surface. One MD frag was identified in the subsurface during the RI analog geophysical mapping of the MRS. Because no MEC or substantial MD was identified, RI field data (specifically, Expray and X-Ray Fluorescence [XRF]) were collected from 10 locations in a low-lying area of the MRS. Expray results were non-detect and XRF results were below the background level for lead at all locations. Following soil sampling and evaluation of laboratory analytical data, no Contaminants of Potential Concern (COPCs) were identified at the MRS.

No MEC or MD was identified during the RI; however, the site was unable to be investigated thoroughly because of the steep terrain. As a result, the RI Report recommended LUCs with On-Site Construction Support and Engineering Controls (ECs) (signage) to limit access to authorized personnel (HGL, 2013).

1.4.2 DA130 Arroyo del Coyote Demolition Area Site Conditions, Land Use and Operational History

The DA130 Arroyo del Coyote Demolition Area MRS consists of 61.0 acres and is located in the northwest portion of Kirtland AFB (**Figures 1-1** and 1-**3**). The site is characterized by the Arroyo del Coyote that transects the site, flowing to the northwest. The arroyo contains numerous smaller, braided channels which cut into the floodplain. Along the southwestern bank, numerous small tributary arroyos have carved the escarpment into low sandy hills. The DA130 MRS is an undeveloped open space covered with native grasses and shrubs. Access to the MRS is limited to four-wheel drive access roads. All access roads to the MRS are currently gated and patrolled by installation security forces. Portions of the DA130 MRS are restricted areas controlled by DOE Tech Area-3. The current land use scenario for this site is constrained land use (HGL, 2013. According to the Kirtland AFB Installation Development Plan, the anticipated long-term future land-use scenario for the DA130 MRS will remain the same (Kirtland AFB, 2016).

The DA130 MRS was part of the Arroyo del Coyote Demolition Area MRA, a 386.5-acre open burn/open detonation site located in the northwest portion of Kirtland AFB and was identified at the conclusion of the CSE Phase II. Two Kirtland AFB Environmental Restoration Program (ERP) sites, OT-010 and SS-069, existed within the footprint of the DA130 MRS. Both were remediated in accordance with New Mexico Environmental Department (NMED) regulations and approved for No Further Action in 2005 (NMED, 2005). The DA130 MRS also contains a suspected Explosive Ordnance Disposal (EOD) area referred to as DP-101. A 2001 investigation of DP-101 indicated no buried munitions were identified at the site; however, during restoration operations in 2003, several MD items were recovered. These items included a 3.5-inch rocket warhead, frag, unknown munitions-related items, frag, residue from smoke grenades, grenade spoons, and miscellaneous expended small arms (MWH Americas, 2003).

Investigations performed at the DA130 MRS include CSE Phase I (USA Environmental, Inc., 2007) and Phase II (HGL, 2010) and RI (HGL, 2013). One MD item (a light case metal fragment) was identified during the CSE Phase I visual survey. MD items including an empty 5-inch shell and fragments identified during the CSE Phase II ground truthing at the MRS. No MEC items were discovered during the RI. Based on the results of the RI intrusive investigation, a total of 32 pounds of MD were recovered and disposed of. Nine target anomaly locations were selected for the collection of field and laboratory data based on the recovered anomaly's potential for being a source of contamination. At the nine anomaly locations selected for further investigation, all explosives field screening results were non-detect and all lead XRF results were below background levels. Based on the evaluation of soil analytical data, the HHRA and Screening Level Ecological Risk Assessment (SLERA) determined no COPCs were present in soil at the MRS (HGL, 2013).

The RI Report recommended LUCs with On-Site Construction Support and ECs (signage).

1.4.3 ML125 Field Firing Range Site Conditions, Land Use, and Operational History

The ML125 Field Firing Range MRS is a 2,231-acre multi-use range located in the southern portion of Kirtland AFB (**Figures 1-1** and **1-4**). The terrain varies from rolling, grassy hills to steep, rocky foothills (HGL, 2010). The western portions are gently sloping and relatively flat, although frequently cut by gullies, arroyos, and washes. Elevation and terrain quickly rise towards the eastern portions as this is the base of Mount Washington. Many parts of the steep mountainous areas of the eastern portion exceed 40 degrees of slope and are impassable. The majority of the ML125 MRS is undeveloped open space.

A western portion of the ML125 MRS is currently used by the Starfire Optical Range, a strategic optical system for space object imaging and laser energy projection, which does not involve the use of military munitions. Signs are posted throughout ML125 warning of Unexploded Ordnance (UXO) in the area. The current land use scenario for this site is constrained land use (HGL, 2013). According to the Kirtland AFB Installation Development Plan, the anticipated long-term future land-use scenario for the ML125 MRS will remain the same (Kirtland AFB, 2016).

Historically the Field Firing Range was used as the main impact and target area for the NMPG during World War II development and production testing of the variable time-fuze program from 1942-1952. Documented military munitions activities within the MRS included testing of proximity fuzes and firing of: .50-caliber machine guns; 3-inch, 5-inch, 20mm, 57mm, 58mm, 75mm, 76mm, 78mm, 90mm, 105mm, 120mm, 155mm, 3-inch, 3.7-inch, and 5-inch projectiles; 3.5-inch, 4.5-inch, and 5-inch rockets; and 60mm mortars.

The CSE Phase I at ML125 MRA was conducted in 2006 (USA Environmental, Inc., 2007). The types of munitions identified during the CSE Phase I visual survey represent a wide range of munitions reportedly fired at the NMPG from 1943 through 1952, including 5-inch, 3-inch, 105mm, 90mm, 76mm, 75mm, and 57mm projectiles, and 5-inch rockets. Also, several munitions that indicate limited use of this MRS as the former Field Firing Range and Mortar Impact Area were identified, including the 60mm mortar, 57mm and 75mm projectiles, and 3.5-inch rockets. The acreage of the MRA increased from 1,619 to 1,993 acres at the conclusion of the CSE Phase I.

During the CSE Phase II investigation conducted in 2010, ML125 MRA increased from 1,993 acres to 2,231.3 acres due to a change in boundary (HGL, 2010). The additional acreage had previously been part of the Proximity Fuze Range MRA. The CSE Phase II field activities included site reconnaissance, geophysical survey, visual survey, and ground truthing at the western area of the ML125 MRA. Geophysical survey results indicated two large areas of high anomaly density as illustrated in Figure 5-7.1 of the CSE Phase II Report (HGL, 2010). Approximately 201 acres of visual survey was also completed at the ML125 MRA and confirmed the presence of several MEC and MD items. Approximately 51 miles of ground truthing transects (visual survey aided by metal detectors) were completed and confirmed the presence of high concentrations of MEC and MD items and numerous non-MEC items. Seventy-four surface soil samples were collected as part of the CSE Phase II investigation and analyzed for explosives and metals. Explosive components, 2,4,6-trinitrotoluene (TNT) and hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) were detected in one and two samples, respectively. All analyzed metals were detected at concentrations above background values with the exception of antimony and mercury. Based on the analytical results of the CSE Phase II soil sampling comparison to NMED Residential Soil Screening Levels (SSL) and USEPA Residential Regional Screening Levels (RSLs), a threat to human health from a contaminant release does not exist. The surface water and groundwater pathways were determined incomplete due to the lack of surface water on or near the site and the depth to groundwater (>200 ft bgs).

The RI conducted in 2013 focused on the western portion of the ML125 MRS, as the eastern portion of the site was unable to be investigated because of the hilly terrain (HGL, 2013). However, site history does not suggest that the eastern portion of ML125 contains increased MEC, MD, or potential contamination

relative to the western portion. RI activities at the ML125 MRS included Digital Geophysical Mapping (DGM) transects and grids, MEC and MD removal, XRF sampling, explosives field screening, test pit soil sampling, and surface and subsurface soil sampling. The eastern portion was mostly inaccessible due to the steep and rocky nature of the terrain, and only a few transects were accessible using analog geophysical mapping. Digital Geophysical Mapping identified1,381 target anomalies that were intrusively investigated. Of those anomalies, 16 MEC items were discovered (four- 57mm projectiles, three- 5 inch Zuni rocket, three- 75mm projectile, one- 5 inch rocket fuze, one- 5 inch projectile booster, one- 5 inch projectile, one- 5 inch rocket base fuze, one- 57mm projectile Variable-Time (VT) fuze, one- 5.2 inch rocket). Four test pits were also excavated in ML125, but only construction debris was observed; no MEC or MD items were found (HGL, 2013).

Explosives field screening and XRF screening was conducted at 275 sample locations identified based on intrusive investigation results and location of MEC finds. Analytical results were non-detect at all 275 locations. In addition, while XRF results at several locations were reported as above the background level for lead, results were below the NMED Residential SSLs and USEPA Region 6 Residential RSLs.

As part of the RI field activities, 270 surface and 280 subsurface soil samples were collected from the 275 locations and analyzed for explosives constituents, target analyte list metals/mercury, and Semi-Volatile Organic Compound (SVOCs). No SVOCs or explosives were identified in the surface soils. However, 11 metals (aluminum, antimony, arsenic, cadmium, chromium, cobalt, copper, iron, manganese, thallium, and vanadium) were detected in surface soil at concentrations exceeding the respective RSL. Only vanadium exceeded background Upper Tolerance Limits (UTLs) (IT Corporation, 1996) and was identified as a COPC in surface soils. No SVOCs or explosives were identified as COPCs in the 280 subsurface samples. Nine metals (aluminum, antimony, arsenic, chromium, cobalt, iron, manganese, thallium, and vanadium) were detected at concentrations above the respective risk-based screening level for subsurface soils. Based on the HHRA and SLERA results, the identified COPCs did not pose a threat to human health or the environment. The HHRA considered a wide range of potential future receptors including industrial/commercial workers (indoor workers and outdoor maintenance workers), construction workers, recreational site users, trespassers, site visitors, and residents.

The RI Report recommended the delineation of the MRS into two MRSs (MRS ML125-Western and MRS ML125-Eastern) with the division placed where the mountain range begins. It further suggested that ML125-Eastern should have LUCs that restrict access to the site as it is likely that MEC items would be found. The MEC Hazard Assessment (MEC-HA) current scenario is high (Level 2) for explosives hazards given that an investigation has not been conducted and is the highest risk (Level 1) in the unlikely case of future construction and residential use scenario (HGL, 2013). ML125-Western has a moderate risk (Level 3) under the MEC-HA current scenario and increases to a high risk (Level 2) when taking into account any future construction and residential use scenario. This is in part because ML125 was a former target area and MEC is likely to be found. LUCs were also recommended for ML125-Western with subsurface clearance in the event that construction is planned at the site.

1.4.4 PT123 Tijeras Small Arms Range Site Conditions, Land Use, and Operational History

The PT123 Tijeras Small Arms Range MRS, a 408.3-acre site, is classified as a multiuse range and was used as a small arms combat training range located in the northeastern portion of Kirtland AFB (**Figures 1-1** and **1-5**). According to the Kirtland AFB Installation Development Plan, the current land-use scenario for PT123 is that of constrained land use. Currently, PT123 is undeveloped open space.

The official period of use for PT123 as a small arms combat training range is unknown. Investigations performed at the PT123 MRS include CSE Phase I (USA Environmental, Inc., 2007) and Phase II (HGL, 2010) and RI (HGL, 2013).

The CSE Phase I at PT123 was conducted in 2006 (USA Environmental, Inc., 2007). The types of munitions identified during the CSE Phase I visual survey included one MD item (smoke grenade spoon) and several expended small arms cartridge cases within this site. Based on historical and visual survey data, the potential for human exposure to MEC and MC contaminated media exists within PT123, and PT123 was recommended for CSE Phase II.

During the CSE Phase II investigation, site reconnaissance, geophysical survey, visual survey, and ground truthing were conducted within PT123. During the initial site reconnaissance, it was determined that the majority of the area would be covered utilizing litter/cart, while visual survey would be used to survey steep terrain not accessible by the litter/cart. The geophysical survey covered approximately 322 acres.

Geophysical survey results revealed multiple areas of high anomaly density. Approximately 67 acres of visual survey was completed at PT123 which confirmed the presence of several MD items including slap flare casings, 40mm grenade casings and 7.62mm blanks. Approximately 21 miles of ground truthing transects were completed within this MRA and confirmed that cultural features were the cause of the high anomaly density areas (HGL, 2010). In accordance with Section 6.15.2.4 of the CSE Phase II Work Plan (i.e., MC soil sampling will be completed for areas containing potential sources [MEC] of MC contamination), the PT123 did not meet the established criteria for sample collection. Therefore, no MC samples were collected and exposure pathways for all receptors are incomplete.

RI was performed at PT123 MRS in 2013 and activities at the accessible western portion of the PT123 MRS included DGM transects and grids, MEC and MD removal, XRF sampling, Expray sampling, test pit soil sampling, and surface and subsurface soil sampling. The eastern portion was mostly inaccessible due to terrain. The PT123 MRS contained 71 DGM target anomalies that were reacquired and intrusively investigated. Of those anomalies, one MEC item was discovered (slap flare). Based on the results of the intrusive investigation, a total of 156 pounds of MD was removed, including the MD resulting from the demolition of the MEC item.

Seven sample locations were selected based on their potential as sources of contamination. Due to the increased possibility of being a source of contamination, the location where the MEC item was discovered was included as a sample location.

Expray and XRF screening was conducted for each of the seven sample locations. Surface soil (0 to 0.5-ft bgs) and subsurface soil (0.5 to 5 ft bgs) were screened for explosives using an Expray field test kit. The Expray results were nondetect at all seven locations. XRF results at all seven locations were reported as below the background UTL for lead (Upper Canyons Super Group, 41 milligram per kilogram (mg/kg) for surface soil), with a maximum XRF result of 20 mg/kg at PT123-G6-7. Based on the field data collected at these locations, release of MEC- or MD-related contamination has not occurred at PT123. At the location of the MEC item discovery, PT123-21, Expray results were nondetect and XRF results were less than or equal to 7 mg/kg. At the remaining six anomalies selected for further investigation, Expray results were nondetect and lead XRF results were below background levels.

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2.0 RESPONSE ACTION SUMMARY

Investigations and response actions have been conducted under CERCLA consistent with Defense Environmental Restoration Program (DERP). **Table 1-1** lists the MMRP sites at Kirtland AFB, summarizes the RAOs, and identifies the selected remedy for each MRS.

2.1 Common Response Action Elements

The following sections summarize the LUC components implemented at the sites including the basis for taking action, summary of response actions, status of implementation, and LUC summaries.

2.1.1 Basis for Taking Action

The selected remedies are presented in the RODs for the four MRSs: AL120, DA130, ML125, and PT123 ([FPM, 2020a], [FPM, 2019a], [FPM, 2022a], [FPM, 2022b], respectively). The remedies were chosen in accordance with CERCLA of 1980, as amended by Superfund Amendments and Reauthorization Act (SARA) of 1986, and to the extent practicable, the NCP. The remedies identified in the RODs were based on the MRS investigation results and alternative remediation evaluations conducted at each site; these documents are contained in the Administrative Record for Kirtland AFB (https://ar.cce.af.mil/). The RODs were issued by DAF, as the lead agency. DAF selected the remedies and USEPA Region 6 concurred with the selected remedies. The effectiveness of these remedies was evaluated during this FYR.

MEC may present an imminent and substantial endangerment to public health or welfare. Therefore, the response actions selected in the RODs were necessary to protect human receptors from potential MEC at former Kirtland AFB ranges.

DAF manages the post-remediation activities for MEC/MPPEH at MRSs in accordance with CERCLA as required by DERP and Executive Order 12580.

2.1.2 Response Actions

The RAOs specify the contaminants and media of interest, exposure pathways, and preliminary remediation goals that permit a range of alternatives to be developed. MC was not detected at any sites at concentrations posing a hazard to human health or the environment. Therefore, no chemical-specific preliminary remediation goals were identified or developed for RAOs. Instead, the RAOs focused on addressing the potential physical hazards resulting from the presence of MEC. In evaluating potential RAOs, the following risk management principles were considered:

- Reducing the quantity of MEC lowers risk.
- Reducing the number of receptors lowers risk.
- Reducing the potential for interaction between receptors and MEC lowers risk; and
- Modifying or controlling the behavior of receptors lowers risk.

The RAOs developed for the MRSs to reduce or eliminate potential contact with MEC from current and/or future site receptors are:

- Prevent public (trespassers, site visitors, site users, etc.) from coming into contact with MEC.
- Ensure protection of Installation personnel and contractors (including utility workers) during present and future intrusive activities at the site.
- Ensure any proposed change in land use is evaluated in terms of consistency with protection goals.
- Ensure any MEC discovered within the MRS is appropriately handled and disposed of.

2.1.3 Status of Implementation

The LUCs were implemented in accordance with the Technical Memorandum LUCs Implementation (FPM, 2017). Generally, the fieldwork included: (1) brush clearing where necessary; (2) identifying and marking sign placement locations and access routes using a Differential Global Positioning System; and (3) installing warning signs. UXO construction support was provided for all aspects of fieldwork and is required for future intrusive activities at the MRSs. LUC components implemented at four MRSs are listed below.

2.1.3.1 Signs

Posting of signs represents an element of access control, and although it does not prohibit activities in the areas, it warns potential receptors of the MEC/MPPEH hazards, and therefore, reduces the potential for contact with MEC/MPPEH. Signage is effective only if the postings are well placed and maintained.

A total of 240 warning signs were installed at the four MRSs between January and August 2018. The details regarding the signage placement within each MRS are provided below.

AL120 (Figure 2-1)

- 21 small warning signs spaced every 200 ft along the eastern boundary of the MRS (signposts with a single sign facing outward from the MRS boundary);
- 9 small warning signs placed on the fence line along the portion of the southern boundary of the site; and
- 1 large warning sign placed on the fence line at the south-east boundary of the site.

DA130 (Figure 2-2)

- 32 small warning signs spaced every 200 ft along the perimeter of the MRS (signposts with a single sign facing outward from the MRS boundary) and
- 3 large warning signs placed on unmaintained 4-wheel drive roads at significant entry points to the MRS (signpost with two opposing signs facing traffic from both directions).

ML125 (Figure 2-3)

- 18 small warning signs spaced every 200 ft along the perimeter of the accessible portion of the MRS (signposts with a single sign facing outward from the MRS boundary) and
- 26 small warning signs placed every 200 ft on the fence line at the portion of the MRS's southern boundary (single signs facing outward from the MRS boundary).

PT123 (Figure 2-4)

- 59 small warning signs spaced every 200 ft along the perimeter of the western and southern boundary of the MRS (signposts with a single sign facing outward from the MRS boundary);
- 58 small warning signs placed every 200 ft on the fence line at the MRS's northern and eastern boundary (single signs facing outward from the MRS boundary); and
- 13 large warning signs placed on unmaintained 4-wheel drive roads at significant entry points to the MRS (signpost with two opposing signs facing traffic from both directions).

2.1.3.2 Updates to the Kirtland AFB General Plan, Real Property Records, and Geographic Information System Database

The update of the Kirtland AFB General Plan regarding the implementation of LUCs and potential MEC/MPPEH hazards in the affected areas was made. The exact coordinates of sign locations as well as

all other features from maps in the Geographic Information System (GIS) shapefile format, where appropriate, were provided to the Base GIS land management system (Geobase) to allow for routine considerations in making land use and planning decisions. This data will be updated as needed if LUCs or boundaries change and act as a tracking mechanism for all MRSs under control. The record of sign installation was noted in the Base Real Property records as well.

2.1.3.3 Notifications during Contracting

The 377th Contracting Squadron includes an appropriate clause in contracts which involve or could foreseeably involve contractor (including utility workers) activities including providing the UXO construction support in the areas of concern. The clause informs the contractor that they acknowledge UXO could be in the area of activity, provide information regarding UXO descriptions and safety measures, and provides contact information in the event of a suspected UXO. The 377th Civil Engineer Squadron (CES) office coordinates with the 377th Contracting Squadron to provide current information regarding the location of areas of concern (i.e., MRSs) as well as the information regarding UXO and contact procedures.

2.1.3.4 Education Programs

For all contracted activities that occur within or near the MRSs, the DAF will educate contractors about the potential MEC/MPPEH hazards that may be encountered. The information is provided through the use of maps and data. In addition, the DAF provides notice regarding receiving this information for distribution to Natural Resources, Public Affairs, Base Housing, Housing Privatization, Equipment Rental, Force Support Squadron, Outdoor Recreation, Security Forces and the Fire Department, among others. 377th CES/EOD is the DAF on-base authority for MEC/MPPEH hazards and provides response to any MEC/MPPEH emergencies.

2.1.3.5 Dig Permits

The DAF personnel and contractors (including utility workers) are required to obtain an approved Dig Permit (United States Air Force [USAF] Form 103) prior to performing any subsurface work penetrating greater than three (3) inches bgs. The form is completed by receiving signatory approval from all appropriate Installation offices such as communications, electrical, heating, venting and air conditioning, water and fuel, environmental compliance, environmental restoration, pavement/grounds, fire protection, security police, safety, Base operations, New Mexico One Call, and Civil Engineering Customer Service as well as from Chief of Operations Flight or Chief of Engineering Flight. Maps or diagrams showing the areas where the work is being performed must be attached to the Dig Permit. As part of the process of issuing the permit, the DAF makes the users aware of the potential MEC/MPPEH hazards within the affected area(s).

2.1.3.6 UXO Construction Support Activities

UXO construction support is required for all intrusive activities conducted by the Installation and its contractors (including utility workers) in the affected areas. Each UXO construction support event supports activities such as construction and upkeep of access roads, utility corridors, building construction/ demolition, forest and fire management activities, soil moving activities, and other types of intrusive activities. UXO support is provided within the appropriate contract requirements or via 377th CES/ EOD for high priority Installation performed projects, subject to approval by 377th CES/Commander.

2.1.4 LUC Summary Table

The LUC components presented in the previous sections are summarized in **Table 2-1**. General LUC information is included in the Kirtland AFB Installation Development Plan (IDP) to provide awareness of site constraints during Kirtland AFB planning.

2.1.5 Systems Operation and Maintenance

The DAF monitors and inspects all site areas subject to LUCs at least annually. The annual inspections include the following activities:

- Physical inspections of the UXO warning signs to document current conditions and assess whether land use within the LUC area conforms to the LUCs, or whether LUC deficiencies or inconsistent land uses are identified.
- Communication with installation personnel to document any authorized or known unauthorized intrusive work and/or breaches that occurred inside LUC boundaries during the annual reporting period.
- Communication with installation personnel to identify notifications regarding potential UXO presence made during the dig permit process.
- Communication with the installation community planner to verify whether the Kirtland AFB IDP includes the required language and legal surveys in map form for sites with LUCs.
- Communication with the Geobase analyst to verify whether the installation Geobase includes the required language and legal surveys in map form for sites with LUCs.
- Identification of items (signs and/or signposts) requiring repairs or replacement, including such repairs and/or replacement as needed. Results from the annual inspections (2018 through 2023), including all LUC issues discovered by inspectors, are included in **Table 2-2**.

2.1.6 Remedial Process Optimization

Optimization was not performed given there are no active remedies and protection is provided through LUCs.

2.1.7 Status of Implementation

The LUCs were implemented at all MRSs in accordance with the Technical Memorandum LUCs Implementation (FPM, 2017).

3.0 PROGRESS SINCE THE LAST REVIEW

This is the first FYR completed for these sites. No prior protectiveness statements exist for the AL120, DA130, ML125, and PT123 MRSs located at Kirtland AFB.

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4.0 FIVE-YEAR REVIEW PROCESS

This section provides a summary of FYR methods, processes, and activities conducted at the AL120, DA130, ML125, and PT123 MRSs in the current evaluation.

4.1 Five-Year Review Process

The FYR process for the Kirtland AFB MRSs consists of the following components:

(1) Administrative and Schedule – The lead agency has primary responsibility for conducting the FYR while support agencies provide information and review support during the FYR process from start to finish.

(2) Community Involvement and Notification – Public Notification is issued twice during the FYR; the first when the review begins and the second when the FYR Report is released.

(3) Document Review – Review Reports, RODs including RAOs, and inspection and maintenance reports to determine if the remedial actions are being implemented as specified and if these actions remain protective of human health and the environment for the short and long-term.

(4) Site Inspection and Interviews – Interview relevant persons to obtain an understanding of the decisions which resulted in remedy in place and complete an inspection at each site to identify any potential issues that may affect the protectiveness of the remedy.

(5) Protectiveness Determination – Compile findings from the document and contaminant level review, interviews, and site inspection and identify issues, make recommendations to address the issues, if any, and provide a protectiveness statement.

4.2 Administrative Components

The team members utilized in completing the First FYR at AL120, DA130, ML125, and PT123 are presented below.

- Scott Clark – AFCEC/Kirtland AFB Restoration Program Manager
- Suzanne Devergie – AFCEC/Kirtland AFB MMRP Lead
- Melissa Gonzales – AFCEC Program Manager
- Joshua Mellema – USACE Project Manager
- Jeannine Hunter – USACE Alternate Project Manager
- Dana Price – USACE Biologist
- Gaby Atik – FPM-AECOM JV2 Program Manager
- Dan Baldyga – FPM-AECOM JV2 Project Manager and FPM Lead
- Greg Barnes – FPM-AECOM JV2 Deputy Project Manager and AECOM Lead
- Jeff Humenik – FPM-AECOM JV2 Corporate Sponsor
- Patrick Ostrye – FPM-AECOM JV2 FYR Support
- Taylor Young – FPM-AECOM JV2 FYR Support
- Ivana Raicevic – FPM-AECOM JV2 Technical Lead
- Chris Coonfare – FPM-AECOM JV2 QC Supervisor
- Andres Diaz – FPM-AECOM JV2 Geophysicist

- Melissa Delepiani – FPM -AECOM JV2 Geophysicist
- Kent Tibbits – FPM-AECOM JV2 UXO Manager
- Bill Raasch – FPM-AECOM-JV2 UXO Safety Officer

The FYR kick-off meeting was held remotely on August 14, 2024. Team members attending the meeting via teleconference were Scott Clark. Suzanne Devergie, Melissa Gonzales, Rachel Watts-Gravette, Keith Winemiller, Jeannine Hunter, Dana Price, Gaby Atik, Dan Baldyga, Gaby Atik, Greg Barnes, Jeff Humenik, Patrick Ostrye, Tom Wohlford, and Chris Coonfare. A review schedule was established during the kick-off meeting.

4.3 Community Notifications and Involvement

Involving members of the community and notifying them that an FYR is underway are important parts of the FYR process. Publishing a public notice in a local newspaper was determined to be the best way to share information with the community about FYR activities at Kirtland AFB. In support of this, a public notice of the beginning of the FYR process was published in English and Spanish in the Albuquerque Journal and another public notice will be issued at the end of this FYR process. The initial public notice was published on October 17, 2024 and is provided in **Appendix A**. The notice announced the start of the FYR process and provided an overview of the FYR process. It invited interested members to contribute to the review process and to contact the Kirtland AFB Environmental Restoration Program if they desired to be part of this effort. The notice also shared resources for more information related to investigations of the Kirtland AFB MRSs including a link to the AFCEC Administrative Record (https://ar.cce.af.mil/). There were no public comments related to the public notification and no members of the public requested an interview.

4.4 Document Review

All relevant documents and data were reviewed to obtain information to assess performance of the response action identified in the RODs. The document and data review for each MRS is presented within **Section 1.4** and documents included in the review are listed in **Section 9.0, References**.

The RODs for the 4 MRSs and the results from the LUC inspection and maintenance reports from 2018 through 2023 were evaluated. The remedy in place was reviewed and analyzed to determine if there have been changes in the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of remedy selection that would call into question the protectiveness of the remedy.

4.5 Site Inspections and Interviews

Site inspections were completed between December 10 and December 12, 2024. The inspections were performed by Greg Barnes, Patrick Ostrye, Taylor Young, Kent Tibbitts, and Bill Raasch. Findings of the site inspections are included in **Section 5.0**. A site inspection checklist was created for each MRS and is presented in **Appendix B**. Photographs depicting existing site conditions and conditions of fences and warning signs for each MRS are presented in **Appendix C.**

Recommendations to address the issues identified during the site inspections are provided in **Section 6.0.**

Figures 2-1 through **2-4** show the locations of all 240 installed signs. All signs were in place and in good condition. The inspection confirmed that access by unauthorized personnel or members of the public is unlikely given the security procedures in place at Kirtland AFB and warning signs surrounding the MRSs. The inspection team observed no evidence of activities that violated the LUCs (e.g., evidence of unauthorized excavation).

Interviews were conducted with Kirtland AFB personnel and USFS and USEPA representatives by telephone. None of the interviewees expressed concerns regarding the use, efficacy, or management of selected remedy at the AL120, DA130, ML125, and PT123 MRSs.

Interviews were conducted with the following individuals for this first FYR:

- Mr. David Sanchez – Assistant Manager, Wildland Support Module, USFS.
- Mr. Greg Lyssy – Senior Project Manager, Resource Conservation and Recovery Act Corrective Action Section, USEPA Region 6.
- Mr. Robert Smith – Kirtland AFB Public Affairs, Media and Environment Chief, Kirtland AFB.
- Mr. Scott Clark – Kirtland AFB Restoration Program Manager, AFCEC.
- Ms. Suzanne Devergie – Kirtland AFB MMRP Lead, AFCEC.

The consensus of the interviewees is that the remedies are protective and performing effectively and they are not aware of any public concerns. Some signs have been damaged or obscured by vegetation and/or trees, but LUC inspections performed annually identify these cases and replaced the signs/signposts and/or removed the vegetation. The full comments from the interviewees are summarized in the interview notes provided in **Appendix D.** This input was used in the FYR process as a check on the findings, to ensure that no potential problems with the remedy were overlooked, and to determine if the community is kept sufficiently informed about the status of the cleanup.

4.6 Review Of Exposure Assumptions, Toxicity Data, And Cleanup Levels

Based on the previous investigation, it was concluded for all sites that MC did not pose an unacceptable risk to human health or the environment. To assess whether there have been any changes in exposure assumptions or toxicity data that could alter these conclusions, the analytical results of the historical investigations were compared to current screening values for each site included in this FYR. No issues were identified.

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5.0 TECHNICAL ASSESSMENT

5.1 AL120 MRS

5.1.1 Question A: Is The Remedy Functioning As Intended By The Decision Documents?

Yes, the remedy appears to be functioning as intended. Based on interviews conducted with Kirtland AFB and USEPA personnel, LUCs have been successfully implemented and maintained as described in the ROD (FPM, 2019a).

In addition, access to Kirtland AFB is controlled as a military installation and will continue to prevent access to the area by unauthorized personnel. According to the FYR site inspection conducted in December 2024, signs were placed along the perimeter of the site and along the fence and are in good condition; and a UXO Construction Support is required for all intrusive activities conducted by the Installation and its contractors (including utility workers) in the affected areas. Prior to commencing any soil-disturbing operations, it is imperative to obtain UXO clearance and UXO avoidance training. Notifications concerning the potential presence of UXO within the LUC boundaries are issued, and applicants for work are directed to Weapons Safety for UXO training. There have been no reported violations of LUCs or community concerns about the remedy's effectiveness further suggesting that it is operating as expected. No instances of authorized or unauthorized intrusive activities were reported inside LUC boundaries and no incidents involving MEC encounters were reported. Additionally, there is no available evidence of a planned land use change and no change to the exposure pathways was identified.

Additional observation during the December 2024 site inspection include: the terrain is steep with dense vegetation; the southern Kirtland AFB perimeter fence is in poor condition; currently, there is only a barbed wire fence with four strands of wire. Kirtland AFB plans to install a chain-link fence along the southern boundary of Kirtland AFB. This would also include the southern boundary of AL120.

5.1.2 Question B: Are The Exposure Assumptions, Toxicity Data, Cleanup Levels, And RAOS Still Valid?

Yes, the exposure assumptions, toxicity data, cleanup levels, or RAOs are still valid. Stakeholder interviews reveal no new information or changes in site conditions that would necessitate altering these factors. No new issues related to toxicity or exposure have been raised during inspections or in discussions with individuals involved in the project. The ongoing monitoring and access to records (like the Air Force Administrative Record) provide continuous validation of these elements.

5.1.3 Question C: Is There New Information That Reduces The Protectiveness Of The Remedy?

No, there is no new information that reduces the protectiveness of the remedy. All interviews with individuals involved in the project and site inspections point to stable conditions. There have been no violations or concerns raised regarding the LUCs, and all actions to maintain the site safety and remedy protectiveness (such as signage, UXO escort requirements, dig permits, and notifications during the contracting) are being implemented as planned. Furthermore, no changes in site conditions have been noted that would compromise the remedy’s effectiveness.

5.2 DA130 MRS

5.2.1 Question A: Is The Remedy Functioning As Intended By The Decision Documents?

Yes, the remedy appears to be functioning as intended. Based on interviews conducted with Kirtland AFB and USEPA personnel, LUCs have been successfully implemented and maintained as described in the ROD (FPM, 2019b).

In addition, access to Kirtland AFB is controlled as a military installation and will continue to prevent access to the area by unauthorized personnel. In addition, DA130 is in a secure area with sensors and cameras. Access to the area must be granted by 898 MUNS (Munitions Squadron).

According to the FYR site inspection conducted in December 2024, signs were placed along the perimeter of the site and are in good condition; and a UXO Construction Support is required for all intrusive activities conducted by the Installation and its contractors (including utility workers) in the affected areas. In addition, prior to commencing any soil-disturbing operations, workers need to obtain UXO clearance and UXO avoidance training. Notifications concerning the potential presence of UXO within the LUC boundaries are issued, and applicants for work are directed to Weapons Safety for UXO training. There have been no reported violations of LUCs or community concerns about the remedy's effectiveness further suggesting that it is operating as expected. No instances of authorized or unauthorized intrusive activities were reported inside LUC boundaries and no incidents involving MEC encounters were reported. Additionally, there is no available evidence of a planned land use change and no change to the exposure pathways was identified.

5.2.2 Question B: Are The Exposure Assumptions, Toxicity Data, Cleanup Levels, And RAOs Still Valid?

Yes, the exposure assumptions, toxicity data, cleanup levels, or RAOs are still valid. Stakeholder interviews reveal no new information or changes in site conditions that would necessitate altering these factors. No new issues related to toxicity or exposure have been raised during inspections or in discussions with individuals involved in the project. The ongoing monitoring and access to records (like the Air Force Administrative Record) provide continuous validation of these elements.

5.2.3 Question C: Is There New Information That Reduces The Protectiveness Of The Remedy?

No, there is no new information that reduces the protectiveness of the remedy. All interviews with individuals involved in the project and site inspections point to stable conditions. There have been no violations or concerns raised regarding the LUCs, and all actions to maintain site safety and remedy protectiveness (such as signage placement and UXO escort requirements) are being implemented as planned. Furthermore, no changes in site conditions have been noted that would compromise the remedy’s effectiveness.

5.3 ML125 MRS

5.3.1 Question A: Is The Remedy Functioning As Intended By The Decision Documents?

Yes, the remedy appears to be functioning as intended. Based on interviews conducted with Kirtland AFB and USEPA personnel, LUCs have been successfully implemented and maintained as described in the ROD (FPM, 2020d).

In addition, access to Kirtland AFB is controlled as a military installation and will continue to prevent access to the area by unauthorized personnel. According to the FYR site inspection conducted in December 2024, signs were placed along some portions of the site perimeter and were separated more than 200ft; and a UXO Construction Support is required for all intrusive activities conducted by the Installation and its contractors (including utility workers) in the affected areas. Prior to commencing any soil-disturbing operations, it is imperative to obtain UXO clearance and UXO avoidance training. Notifications concerning the potential presence of UXO within the LUC boundaries are issued, and applicants for work are directed to Weapons Safety for UXO training. There have been no reported violations of LUCs or community concerns about the remedy's effectiveness further suggesting that it is operating as expected. No instances of authorized or unauthorized intrusive activities were reported inside LUC boundaries and no incidents involving MEC encounters were reported. Additionally, there is no available evidence of a planned land use change and no change to the exposure pathways was identified.

Additional observation during the December 2024 site inspection include: Site boundary is not sufficiently marked; ingress/egress roads are not marked; several mission partners and training facilities located within the MRS; identified several spent M83 smoke grenades located within the MRS. Although evidence of operations within the site boundary was noted, these operations were approved by Suzanne Devergie (Kirtland AFB MMRP Lead) as part of the dig permitting system. In addition, during the installation of signs, the crew was notified by security that signs could not be installed in certain ML125 areas of security restrictions; as a result, signs were installed in all planned areas where allowed by security.

5.3.2 Question B: Are The Exposure Assumptions, Toxicity Data, Cleanup Levels, And RAOs Still Valid?

Yes, the exposure assumptions, toxicity data, cleanup levels, or RAOs are still valid. Stakeholder interviews reveal no new information or changes in site conditions that would necessitate altering these factors. No new issues related to toxicity or exposure have been raised during inspections or in discussions with individuals involved in the project. The ongoing monitoring and access to records (like the Air Force Administrative Record) provide continuous validation of these elements.

5.3.3 Question C: Is There New Information That Reduces The Protectiveness Of The Remedy?

No, there is no new information that reduces the protectiveness of the remedy. All interviews with individuals involved in the project and site inspections point to stable conditions. There have been no violations or concerns raised regarding the LUCs, and all actions to maintain site safety and remedy protectiveness (such as signage placement and UXO escort requirements) are being implemented as planned. Furthermore, no changes in site conditions have been noted that would compromise the remedy's effectiveness.

5.4 PT123 MRS

5.4.1 Question A: Is The Remedy Functioning As Intended By The Decision Documents?

Yes, the remedy appears to be functioning as intended. Based on interviews conducted with Kirtland AFB and USEPA personnel, LUCs have been successfully implemented and maintained as described in the ROD (FPM, 2020b).

In addition, access to Kirtland AFB is controlled as a military installation and will continue to prevent access to the area by unauthorized personnel. According to the FYR site inspection conducted in December 2024, signs are located along the perimeter of the site approximately every 200 ft along the site boundaries and ingress and egress signs were placed on site roads; and a UXO Construction Support is required for all intrusive activities conducted by the Installation and its contractors (including utility workers) in the affected areas. Prior to commencing any soil-disturbing operations, it is imperative to obtain UXO clearance and UXO avoidance training. Notifications concerning the potential presence of UXO within the LUC boundaries are issued, and applicants for work are directed to Weapons Safety for UXO training. There have been no reported violations of LUCs or community concerns about the remedy's effectiveness further suggesting that it is operating as expected. No instances of authorized or unauthorized intrusive activities were reported inside LUC boundaries and no incidents involving MEC encounters were reported. Additionally, there is no available evidence of a planned land use change and no change to the exposure pathways was identified.

Additional observations during the December 2024 site inspection include brush removal and road regrading was recently performed along the northern fence line (in 2024).

5.4.2 Question B: Are The Exposure Assumptions, Toxicity Data, Cleanup Levels, And RAOS Still Valid?

Yes, the exposure assumptions, toxicity data, cleanup levels, or RAOs are still valid. Stakeholder interviews reveal no new information or changes in site conditions that would necessitate altering these factors. No new issues related to toxicity or exposure have been raised during inspections or in discussions with individuals involved in the project. The ongoing monitoring and access to records (like the Air Force Administrative Record) provide continuous validation of these elements.

5.4.3 Question C: Is There New Information That Reduces The Protectiveness Of The Remedy?

No, there is no new information that reduces the protectiveness of the remedy. All interviews with individuals involved in the project and site inspections point to stable conditions. There have been no violations or concerns raised regarding the LUCs, and all actions to maintain site safety and remedy protectiveness (such as signage placement and UXO escort requirements) are being implemented as planned. Furthermore, no changes in site conditions have been noted that would compromise the remedy's effectiveness.

6.0 ISSUES/RECOMMENDATIONS

Recommendations as a result of this FYR are as follows:

Issues: None
Sites with Issues Identified in the FYR: None

Site: AL120 Proximity Fuze Range MRS	**Issue Category:** None			
	Issue: None			
	Recommendation: Continue performing annual inspections of the LUCs at the MRS to ensure land use restrictions are followed, and the signage is in place and in good condition. Document any unauthorized activities or breaches within LUC boundaries and conduct FYRs to assess the effectiveness of response actions. Kirtland AFB plans to install a chain-link fence along the southern boundary of AL120 since the current fence is in poor condition.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	No	DAF	USEPA	NA

Site: DA130 Arroyo Del Coyote Demolition Area MRS	**Issue Category:** None			
	Issue: None			
	Recommendation: Continue performing annual inspections of the LUCs at the MRS to ensure land use restrictions are followed, and the signage is in place and in good condition. Document any unauthorized activities or breaches within LUC boundaries and conduct FYRs to assess the effectiveness of response actions.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	No	DAF	USEPA	NA

Site: ML125 Field Firing Range MRS	**Issue Category:** None
	Issue: None
	Recommendation: Continue performing annual inspections of the LUCs at the MRS to ensure land use restrictions are followed, and the signage is in place and in good condition. Document any unauthorized activities or breaches within LUC boundaries and conduct FYRs to assess the effectiveness of response actions.

Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	No	DAF	EPA	NA

Site(s): PT123 Tijeras Small Arms Range MRS	Issue Category: None			
	Issue: None			
	Recommendation: Continue performing annual inspections of the LUCs at the MRS to ensure land use restrictions are followed, and the signage is in place and in good condition. Document any unauthorized activities or breaches within LUC boundaries and conduct FYRs to assess the effectiveness of response actions. Verify the fence line along the northeastern boundary is correctly shown in Figures 1-5 and 2-4.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	No	DAF	EPA	NA

7.0 PROTECTIVENESS STATEMENTS

Overall protectiveness statements are provided below for the sites evaluated in this FYR Report based on the technical assessments presented in **Section 5.0**.

Protectiveness Statement(s)	
Site: AL120 Proximity Fuze Range,	**Protectiveness Determination**: Protective
Protectiveness Statement: The remedy at AL120 is protective of human health and the environment under current and anticipated future land use and based on the continued implementation of LUCs. If those conditions change, the risks posed to human health and the environment may need to be reevaluated.	

Protectiveness Statement(s)	
Sites: DA130 Arroyo Del Coyote Demolition Area,	**Protectiveness Determination**: Protective
Protectiveness Statement: The remedy at DL130 is protective of human health and the environment under current and anticipated future land use and based on the continued implementation of LUCs. If those conditions change, the risks posed to human health and the environment may need to be reevaluated.	

Protectiveness Statement(s)	
Site: ML125 Field Firing Range	**Protectiveness Determination**: Protective
Protectiveness Statement: The remedy at ML125 is protective of human health and the environment under current and anticipated future land use and based on the continued implementation of LUCs. If those conditions change, the risks posed to human health and the environment may need to be reevaluated.	

Protectiveness Statement(s)	
Site: PT123 Tijeras Small Arms Range	**Protectiveness Determination**: Protective
Protectiveness Statement: The remedy at PT123 is protective of human health and the environment. It has been determined that the site is not a source of significant contamination and the LUCs specified in the ROD are currently in place to prevent exposure to potential residual MEC remaining in the subsurface.	

Note - a protectiveness determination of "protective" is typically used when the answers to Questions A, B, and C (see Section 5) provide sufficient data and documentation to conclude that the remedy is functioning as intended and all human and ecological risks are currently under control and are anticipated to be under control in the future.

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8.0 NEXT FIVE-YEAR REVIEW

The next FYR for the Kirtland AFB MMRP sites is required by July 2029.

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9.0 REFERENCES

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TABLES

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TABLE 1-1: KIRTLAND AFB FIVE-YEAR REVIEW SITE REMEDIATION SUMMARY

Air Force Site Name	Site Category	Site Description	Decision Document(s) and Date(s)	Contaminants of Concerns	Remedial Action Objectives	Remedial Action(s)*
AL120	MMRP Site	Proximity Fuze Range	Final ROD (December 2019) Signed on 03/11/2020	Surface and subsurface soil (MEC/MPPEH)	• Prevent public from coming into potential contact with MEC. • Ensure protection of Installation personnel and contractors during present and future intrusive activities at the site. • Ensure any proposed change in land use is evaluated in terms of consistency with protection goals. • Ensure any MEC discovered within the MRS is appropriately handled and disposed of.	• LUCs • Warning signs, summary of hazards updated in the KAFB IDP, notifications during contracting, education programs, dig permit requirements, UXO construction support, and recurring reviews completed by the DAF, which at a minimum, will include annual LUC inspections and FYRs.
DA130	MMRP Site	Arroyo del Coyote Demolition Area	Final ROD (December 2019) Signed on 12/13/2019	Surface and subsurface soil (MEC/MPPEH)	• Prevent public from coming into potential contact with MEC. • Ensure protection of Installation personnel and contractors during present and future intrusive activities at the site. • Ensure any proposed change in land use is evaluated in terms of consistency with protection goals. • Ensure any MEC discovered within the MRS is appropriately handled and disposed of.	• LUCs • Warning signs, summary of hazards updated in the KAFB IDP, notifications during contracting, education programs, dig permit requirements, UXO construction support, and recurring reviews completed by the DAF, which at a minimum, will include annual LUC inspections and FYRs.

Air Force Site Name	Site Category	Site Description	Decision Document(s) and Date(s)	Contaminants of Concerns	Remedial Action Objectives	Remedial Action(s)*
ML125	MMRP Site	Field Firing Range	Final ROD (February 2021) Signed on 05/04/2022	Surface and subsurface soil (MEC/MPPEH)	• Prevent public from coming into potential contact with MEC. • Ensure protection of Installation personnel and contractors during present and future intrusive activities at the site. • Ensure any proposed change in land use is evaluated in terms of consistency with protection goals. • Ensure any MEC discovered within the MRS is appropriately handled and disposed of.	• LUCs • Warning signs, summary of hazards updated in the KAFB IDP, notifications during contracting, education programs, dig permit requirements, UXO construction support, and recurring reviews completed by the DAF, which at a minimum, will include annual LUC inspections and FYRs.
PT123	MMRP Site	Tijeras Small Arms Range	Final ROD (July 2020) Signed on 12/01/2022	Surface and subsurface soil (MEC/MPPEH)	• Prevent public from coming into potential contact with MEC. • Ensure protection of Installation personnel and contractors during present and future intrusive activities at the site. • Ensure any proposed change in land use is evaluated in terms of consistency with protection goals. • Ensure any MEC discovered within the MRS is appropriately handled and disposed of.	• LUCs • Warning signs, summary of hazards updated in the KAFB IDP, notifications during contracting, education programs, dig permit requirements, UXO construction support, and recurring reviews completed by the DAF, which at a minimum, will include annual LUC inspections and FYRs.

TABLE 1-2A: CHRONOLOGY OF SITE EVENTS FOR AL120 MRS

Event	Date
AL120 was part of several firing fans and the main impact area for the NMPG/NMER.	1942-1952
CSE Phase I evaluated 26 MRAs. The DAF began MMRP wide area assessment (WAA) at Kirtland AFB. WAA used airborne technologies (orthophotography and LiDAR) for surface feature identification. Visual surveys in AL120 MRA identified 5-inch projectiles as MD.	2007
CSE Phase II included reconnaissance, geophysical surveys, soil sampling, and CSM evaluation. MRAs were designated as MRSs based on MEC presence or absence. MD was identified at the southeastern portion of AL120 and that portion of the MRA was recommended for munitions response. AL120 MRA was divided into six MRSs, including AL120 (Proximity Fuze Range).	2010
RI: Conducted at AL120, including geophysical mapping, XRF, and Expray sampling. DGM surveys were performed with incomplete coverage due to terrain (i.e., steep slopes) and vegetation. No MEC or MD were found on the surface, but an anomalous location was identified as MD frag. Expray and XRF results showed no evidence of MC contamination in soil. Soil analysis found SVOCs at low levels, and some metals exceeding the background levels but were not identified as COPCs. No contaminants were identified at AL120, so the site was not included in the baseline risk assessment. As a result, no CSM was developed for MC at AL120, and no contaminant fate/transport analysis was required. The RI Report recommended LUCs with On-Site Construction Support and ECs (signage)..	2013
FS evaluated the following remedial alternatives: • Alternative 1-No action, • Alternative 2-LUCs; • Alternative 3-LUCs with fencing; • Alternative 4-Surface clearance with LUCs; and • Alternative 5-Surface and subsurface clearance	2014
The preferred alternative in the Proposed Plan (PP) for AL120 was Alternative 2 (LUCs) (FPM, 2018a). No requests were received from the public to extend the public comment period or hold a public meeting.	2018
The Final ROD was signed on March 11, 2020 (FPM, 2020a).	2020
LUCs implemented at AL120 included (FPM, 2020c): • Warning signs (21 small signs placed along the eastern boundary of the MRS, 9 small signs placed on the portion of the southern fence line,	2018

Event	Date
and 1 large warning placed sign at the south-east boundary of the MRS), • Summary of hazards updated in the IDP, • Updating Base Real Property Records and the GIS Database, • Notification during Contracting, • Education and Awareness Programs, • Dig Permits, • UXO Construction Support, and • Recurring Reviews.	
LUCs site inspections conducted from 2018 through 2023; results summarized in **Table 2-2**.	2018-2023

TABLE 1-2B: CHRONOLOGY OF SITE EVENTS FOR DA130 MRS

Event	Date
DA130 MRS is a 61.0 acre portion of the Arroyo del Coyote Demolition Area MRA, a 386.5-acre OB/OD site located in the northwest portion of Kirtland AFB.	Unknown
CSE Phase I evaluated 26 MRAs. USAF began MMRP WAA at Kirtland AFB. WAA used airborne technologies (orthophotography and LiDAR) for surface feature identification. Visual surveys in DA130 indentified a single MD item (a light case metal fragment).	2007
CSE Phase II included reconnaissance, geophysical surveys, soil sampling, and CSM evaluation. MRAs were designated as MRSs based on MEC presence or absence. An empty 5-inch projectile and several pieces of fragmentation were found in DA130.	2010
RI activities at the DA130 MRS included DGM transects and grids, MD removal, XRF sampling, explosive constituents field screening, and subsurface soil sampling. Information gathered from the RI was evaluated to determine the nature and extent of MEC and MC, assess MEC hazards and MC risk, and prepare the MRSPP for the MRS. DGM survey results from the RI did not identify any MEC items at DA130. The investigation did result in the identification and removal of 32 pounds (lbs) of MD. At the nine anomaly locations selected for further investigation, all explosives field screening results were non-detect and all lead XRF results were below background levels. Following soil sampling and evaluation of laboratory analytical data, no COPCs were identified at the MRS. The RI Report recommended LUCs with On-Site Construction Support and ECs (signage).	2013
FS evaluated the following remedial alternatives: • Alternative 1-No action, • Alternative 2-LUCs; • Alternative 3-LUCs with fencing; • Alternative 4-Surface clearance with LUCs; and • Alternative 5-Surface and subsurface clearance	2014
The preferred alternative in the Proposed Plan (PP) for DA130 was Alternative 2 (LUCs) (FPM, 2018c). No requests were received from the public to extend the public comment period or hold a public meeting.	2018
The Final ROD was signed on December 13, 2019 (FPM, 2019a).	2019
LUCs implemented at DA130 included (FPM, 2020c):	2018

Event	Date
• Warning signs (32 small warning signs placed along the perimeter of the site and 3 large warning signs placed on 4-wheel drive roads), • Summary of hazards updated in the IDP, • Updating Base Real Property Records and the GIS Database, • Notification during Contracting, • Education and Awareness Programs, • Dig Permits, • UXO Construction Support, and • Recurring Reviews.	
LUCs site inspections conducted from 2018 through 2023; results summarized in **Table 2-2**.	2018-2023

TABLE 1-2C: CHRONOLOGY OF SITE EVENTS FOR ML125 MRS

Event	Date
ML125 was used as the main impact and target area for the NMPG during World War II development and production testing of the VT fuze program.	1942-1952
CSE Phase I evaluated 26 MRAs. The DAF began MMRP WAA at Kirtland AFB. WAA used airborne technologies (orthophotography and LiDAR) for surface feature identification. The teams recorded two UXO items (one 5-inch projectile with MK48 Series fuze and one 57mm projectile with partially intact fuze), numerous MPPEH items, and two munitions debris items.	2007
CSE Phase II included reconnaissance, geophysical surveys, soil sampling, and CSM evaluation. MRAs were designated as MRSs based on MEC presence or absence. This event confirmed the presence of several MEC and MD items.	2010
RI activities at the western portion of ML125 included DGM transects and grids, MEC and MD removal, XRF sampling, explosives field screening, test pit soil sampling, and surface and subsurface soil sampling. Subsurface MEC and MD was found at the site. The eastrn portion of the MRS was inacessible due to steep terrain. Based on the results from the explosive field screening, XRF screening, and soil samples analyzed in the laboratory, and based on the HHRA and SLERA performed for the analytes exceeding the screening levels, it was concluded that ideitified COPCs (i.e., MC) did not pose a threat to human health or the environment. The RI Report recommended LUCs with On-Site Construction Support and ECs (signage).	2013
FS evaluated the following remedial alternatives: • Alternative 1-No action, • Alternative 2-LUCs; • Alternative 3-LUCs with fencing; • Alternative 4-Surface clearance with LUCs; and • Alternative 5-Surface and subsurface clearance	2014
The preferred alternative in the Proposed Plan (PP) for ML125 was Alternative 2 (LUCs) (FPM, 2018b). No requests were received from the public to extend the public comment period or hold a public meeting.	2018
The Final ROD was signed on May 4, 2022 (FPM, 2022a).	2020
LUCs implemented at ML125 included (FPM, 2020c):	2018

Event	Date
• Warning signs (18 small signs along the perimeter of the accessible portion of the MRS and 26 small signs on the southern boundary fence line), • Summary of hazards updated in the IDP, • Updating Base Real Property Records and the GIS Database, • Notification during Contracting, • Education and Awareness Programs, • Dig Permits, • UXO Construction Support, and • Recurring Reviews.	
LUCs site inspections conducted from 2018 through 2023; results summarized in **Table 2-2**.	2018-2023

TABLE 1-2D: CHRONOLOGY OF SITE EVENTS FOR PT123 MRS

Event	Date
The official period of use for PT123 as a small arms combat training range is unknown. Several MD items and one surface UXO item were observed. Additional types of MEC expected to be found at the site include medium/large caliber shells practice 75mm projectiles and pyrotechnic residues.	Unknown
CSE Phase I evaluated 26 MRAs. USAF began MMRP WAA at Kirtland AFB. WAA used airborne technologies (orthophotography and LiDAR) for surface feature identification. The teams recorded one MD item (smoke grenade spoon) and several expended small arms cartridge cases.	2007
CSE Phase II included reconnaissance, geophysical surveys, soil sampling, and CSM evaluation. MRAs were designated as MRSs based on MEC presence or absence. This event confirmed the presence of several MD items including slap flare casings, 40mm grenade casings and 7.62mm blanks.	2010
RI activities at the PT123 MRS included DGM transects and grids, MEC and MD removal, XRF sampling, Expray sampling, test pit soil sampling, and surface and subsurface soil sampling. The eastern portion was mostly inaccessible due to terrain. One subsurface MEC item was found and a total of 156 pounds of MD was removed, including the MD resulting from the demolition of the MEC item. Based on Expray field screening and XRF no evidence exists to suggest a release of MEC- or MD-related contamination has occurred at PT123 as a result of the site history. The RI Report recommended LUCs with On-Site Construction Support and ECs (signage).	2013
FS evaluated the following remedial alternatives: • Alternative 1-No action, • Alternative 2-LUCs; • Alternative 3-LUCs with fencing; • Alternative 4-Surface clearance with LUCs; and • Alternative 5-Surface and subsurface clearance	2014
The preferred alternative in the PP for PT123 was Alternative 2 (LUCs) (FPM, 2019c). No requests were received from the public to extend the public comment period or hold a public meeting.	2019
The Final ROD was signed on December 1, 2022 (FPM, 2022b).	2020
LUCs implemented at PT123 included: • Installing signs (59 small signs placed along the perimeter of the western and southern boundary of the MRS, 58 small signs placed on	2018

Event	Date
the fence line at the MRS's northern and eastern boundary, and 13 large warning signs on 4-wheel drive roads), • Summarizing the hazards updated in IDP, • Updating of base real property records and GIS database, • Developing a clause to notify construction contractors, • Developing education and awareness programs, • Modifying dig permits to include MRS information, • Performing UXO construction support, and • Conducting recurring reviews.	
LUCs site inspections conducted from 2018 through 2023; results summarized in **Table 2-2**.	2018-2023

TABLE 2-1: LUC SUMMARY FOR AL120, DA130, ML125, AND PT123 MRSs (KIRTLAND AFB)

LUC Component and Actions	LUC Description	Initial Implementation	Inspection Frequency
Signs	Warning signs have been installed around the perimeter of each MRS with a nominal spacing of 200 ft. Large signs were installed at significant entry points to the MRSs.	2018	Annually
Summary of hazards updated in the Kirtland AFB IDP, base real property records and the GIS database	MEC hazards associated with each MRS are noted in the base real property records, Kirtland AFB IDP, and in the base GeoBase.	2018	Annually
Notifications during contracting	As part of the contracting process, notifications are being made to all contractors with operations (including USAF contractors, utility workers, or others) that may result in disturbance of the soil and potential MEC/MPPEH hazards and associated contractual. Work requirements (e.g., educational requirements, dig permits, and UXO construction support services) in the affected areas.	2018	Ongoing as needed
Education programs	The educational and awareness program has been developed and updated to inform base personnel, residents, contractors (including utility workers), and visitors of the potential hazards due to the presence of MEC/MPPEH in each MRS.	2018	Annually
Dig permits	The dig permit is an official USAF form (AF form 103) that is required for any subsurface work penetrating greater than three inches below the ground surface. The form is completed by receiving signatory approval from all appropriate installation offices.	To coincide with scheduled intrusive activities/construction projects.	As needed
UXO construction support activities	UXO construction support is used to support intrusive activities/construction projects as long as the LUCs are in place at each MRS.	To coincide with scheduled intrusive	As needed

LUC Component and Actions	LUC Description	Initial Implementation	Inspection Frequency
		activities/construction projects.	
Recurring reviews	Annual LUC inspections.	2019	Annually, unless frequency modified following five- year review.
	5-year reviews required by CERCLA section 121(c).	2024	No greater than every 5 years.

TABLE 2-2: SUMMARY OF ANNUAL LUC INSPECTION RESULTS (2018-2023)

Annual Inspection/Report	Inspection Dates	AL120, DA130, ML125, and PT123
2018 (FPM, 2020c)	08/14/2018 - 08/16/2018	All warning signs were in good condition. No damage to the fence at AL120, ML125, and PT123 was observed. No unusual land disturbances or activities were observed that could interfere with the effectiveness of the LUCs. No instances of unauthorized intrusive activities were reported. No incidents involving MEC encounters were reported and no Munitions Response Actions were taken by EOD inside the LUCs boundaries of the MRSs. Based on communication with Kirtland AFB Environmental, two dig permit requests for intrusive activities within the ML125 MRS and one dig permit request for intrusive activities within the DA130 MRS were made during the 2018 annual reporting period. Recommendation: Continue annual site inspections at all sites.
2019 (FPM, 2020b)	0917/2029 – 10/01/2019	AL120: The large double-sided warning sign was damaged and repaired during the 2020 LUC inspections. The sign had a broken post and the entering side of the sign looked to have been shot with a firearm. All other warning signs at all sites were in good condition. No damage to the fence at AL120, ML125, and PT123 was observed. No instances of unauthorized intrusive activities were reported. No incidents involving MEC encounters were reported and no Munitions Response Actions were taken by EOD inside the LUCs boundaries of the MRSs. Based on communication with Kirtland AFB Environmental, five dig permit requests for intrusive activities within the ML125 were made during the 2019 annual reporting period. Recommendation: Continue annual site inspections at all sites.

Annual Inspection/Report	Inspection Dates	AL120, DA130, ML125, and PT123
2020 (FPM, 2021)	11/10/2020 – 11/17/2020	AL120: One small warning sign had minor damage and was repaired. Another small sign was damaged. The sign had a broken post and the entering side of the sign looked to have been shot with a firearm. The sign was replaced. PT123: One small warning sign and one large UXO warning sign were missing. The signs were replaced on November 13, 2020. All other warning signs at all sites were in good condition. No damage to the fence at AL120, ML125, and PT123 was observed. No instances of unauthorized intrusive activities were reported. No incidents involving MEC encounters were reported and no Munitions Response Actions were taken by EOD inside the LUCs boundaries of the MRSs. Based on communication with Kirtland AFB Environmental, 21 dig permit requests for intrusive activities within the AL120 and ML125 were made during the 2020 annual reporting period (3 in AL120 and 18 in ML125). Recommendation: Continue annual site inspections at all sites.
2021 (FPM, 2023)	10/12/2021 – 10/15/2021	PT123: One small UXO warning sign was crooked. The UXO warning sign was straightened on October 12, 2021. All other warning signs at all sites were in good condition. No damage to the fence at AL120, ML125, and PT123 was observed. No instances of unauthorized intrusive activities were reported. No incidents involving MEC encounters were reported and no Munitions Response Actions were taken by EOD inside the LUCs boundaries of the MRSs. Based on communication with Kirtland AFB Environmental, 21 dig permit requests for intrusive activities within the AL120 and ML125 were made during the 2020 annual reporting period (3 in AL120 and 18 in ML125). Recommendation: Continue annual site inspections at all sites.
2022 (FPM, 2024a)	09/12/2022 – 09/15/2022	All warning signs were in good condition. No damage to the fence at AL120, ML125, and PT123 was observed.

Annual Inspection/Report	Inspection Dates	AL120, DA130, ML125, and PT123
		No unusual land disturbances or activities were observed that could interfere with the effectiveness of the LUCs. No instances of unauthorized intrusive activities were reported. No incidents involving MEC encounters were reported and no Munitions Response Actions were taken by EOD inside the LUCs boundaries of the MRSs. Based on communication with Kirtland AFB Environmental, 7 dig permit requests for intrusive activities within the MRSs (one at AL120, four at ML125, one at DA130 and one at PT123) were made during the 2022 annual reporting period. Recommendation: Continue annual site inspections at all sites.
2023 (FPM, 2024b)	03/13/2023 - 07/24/2023 (under PBR)	All warning signs were in good condition. No damage to the fence at AL120, ML125, and PT123 was observed. No unusual land disturbances or activities were observed that could interfere with the effectiveness of the LUCs. No instances of unauthorized intrusive activities were reported. No incidents involving MEC encounters were reported and no Munitions Response Actions were taken by EOD inside the LUCs boundaries of the MRSs. Based on communication with Kirtland AFB Environmental, 7 dig permit requests for intrusive activities within the MRSs (five at ML125 and two at PT123) were made during the 2023 annual reporting period. Recommendation: Continue annual site inspections at all sites.

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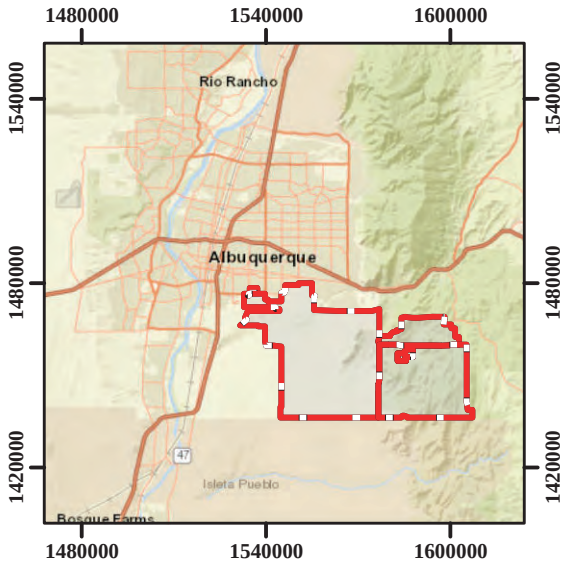
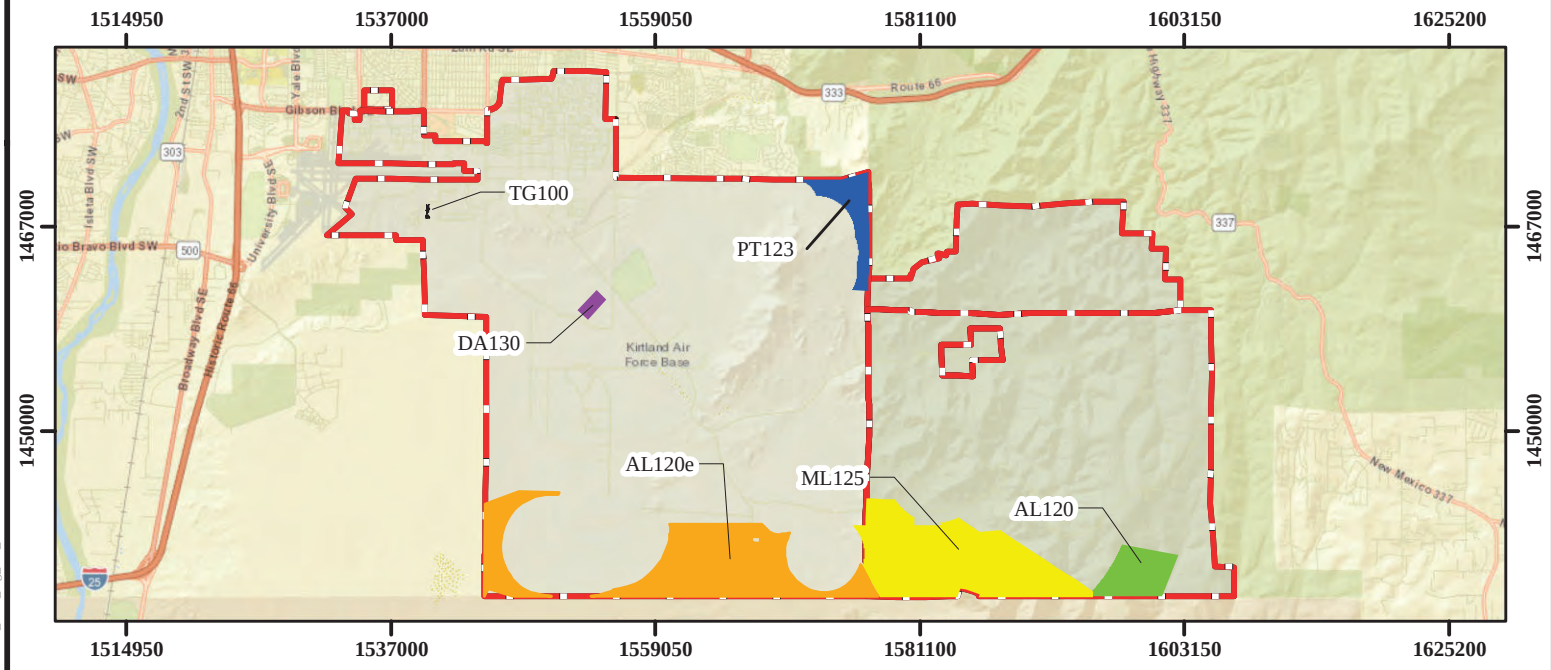
FIGURES





Key Features

- AL120e MRS (2,060.3 acres)
- PT123 MRS (434.2 acres)
- TG100 MRS (1.31 acres)
- DA130 MRS (61.0 acres)
- ML125 MRS (2232.9 acres)
- AL120 MRS (488.5 acres)
- Installation Boundary

NOTES:

Revision Date: 1/16/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
False Easting: 1,640,416.6667
False Northing: 0.0000
Central Meridian: -106.2500
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Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 16,000 feet

0 2,500 5,000 Meters

0 8,000 16,000 Feet

N W E S

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 1-1

Kirtland Air Force Base Location and AL120, AL120e, DA130, ML125, PT123 and TG100 MRS Locations

2025

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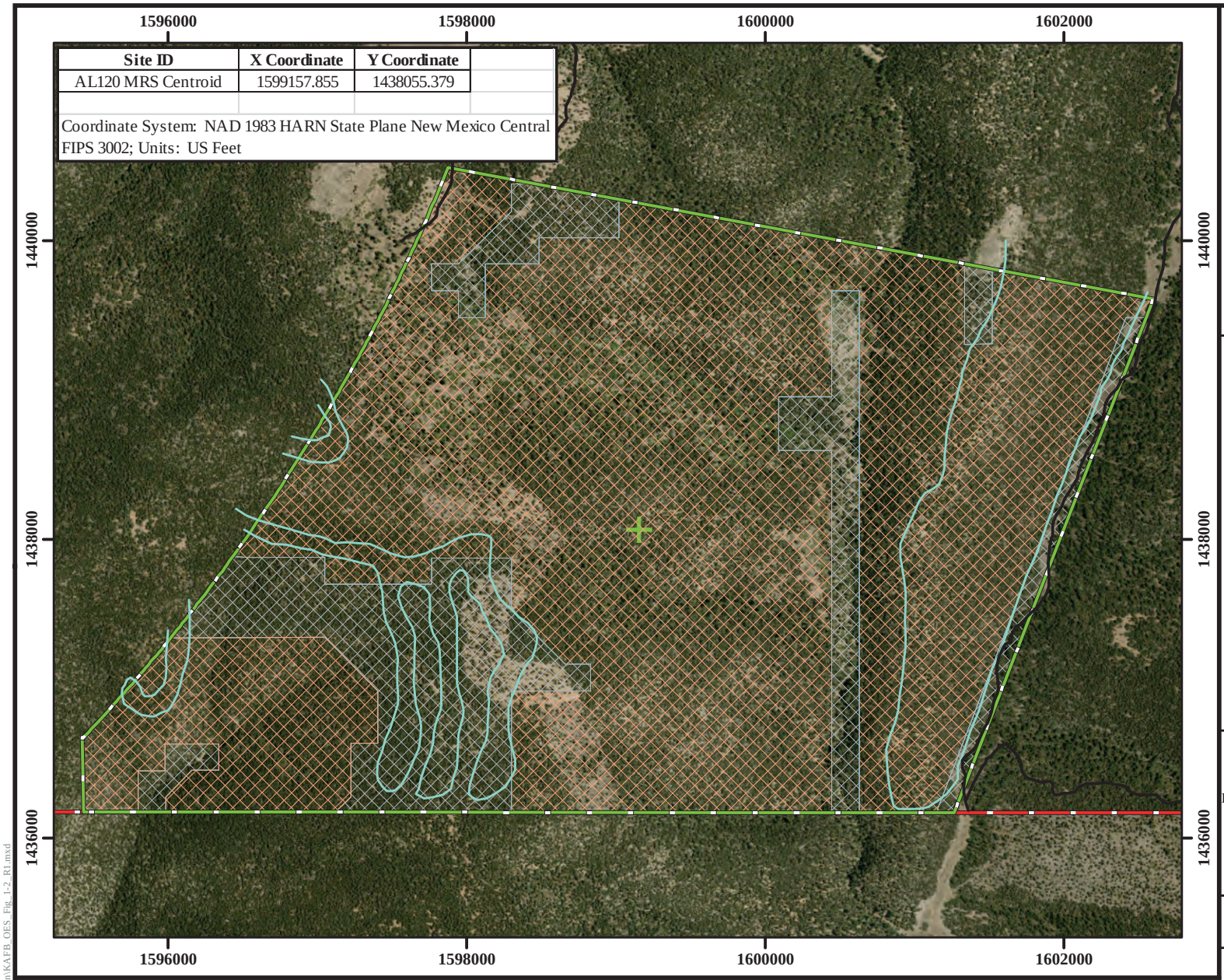
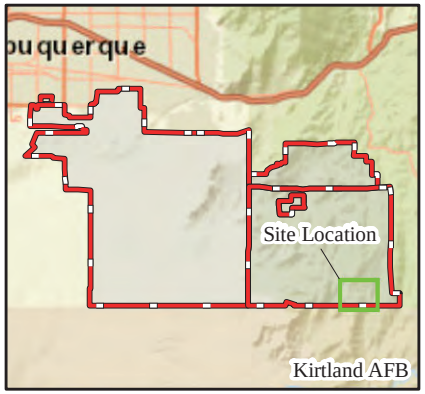


Site ID	X Coordinate	Y Coordinate	
AL120 MRS Centroid	1599157.855	1438055.379	

Coordinate System: NAD 1983 HARN State Plane New Mexico Central FIPS 3002; Units: US Feet



Key Features

- Road (4 wheel drive)
- Trail
- Accessible
- Inaccessible
- AL120 MRS Boundary (488.5 acres)
- Site AL120 MRS Centroid
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 1-2

AL120 Proximity Fuze Range MRS Site Features

2025

NOTES:
Revision Date: 1/16/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
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Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 1,000 feet

0 150 300 Meters

0 500 1,000 Feet

N W E S

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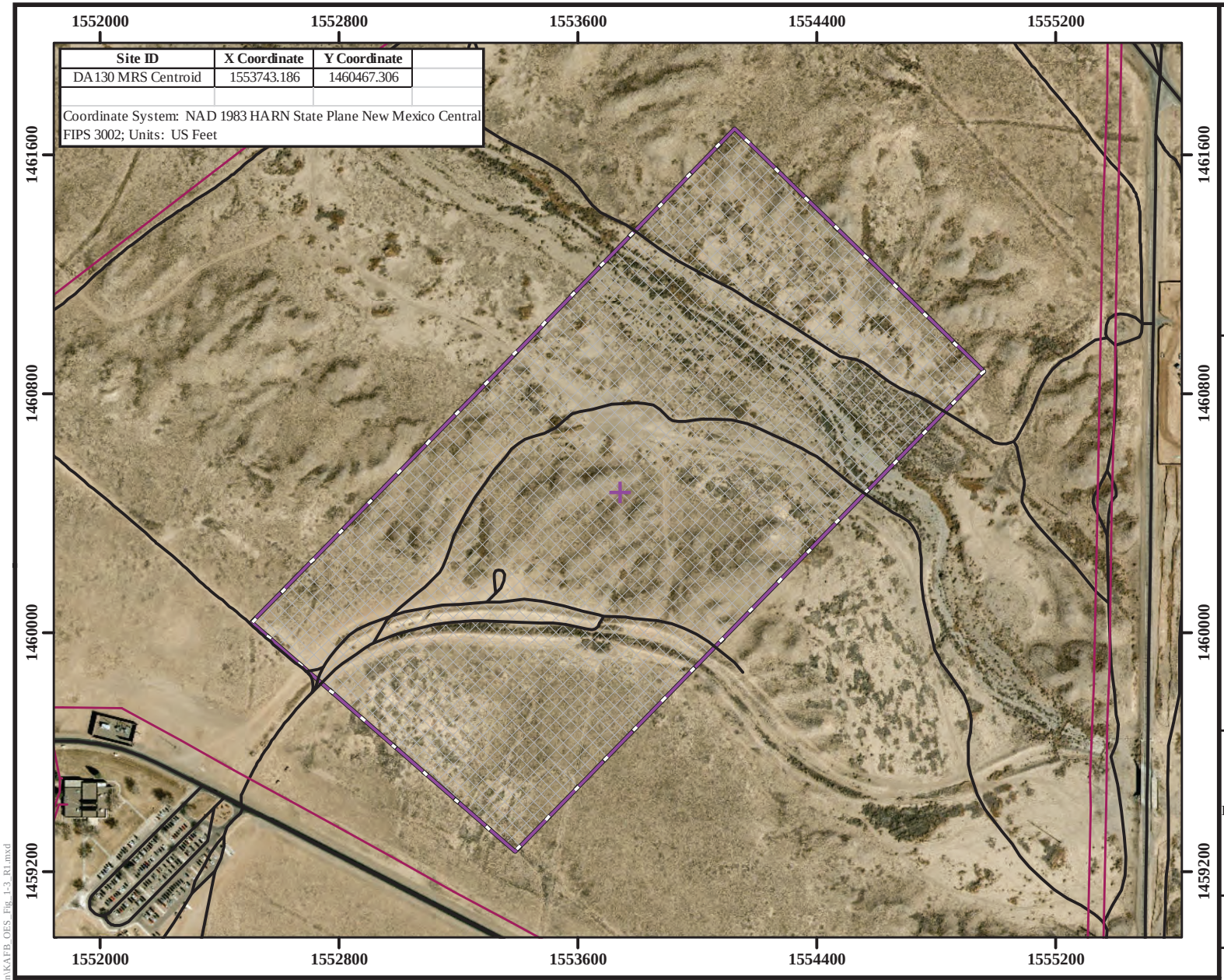

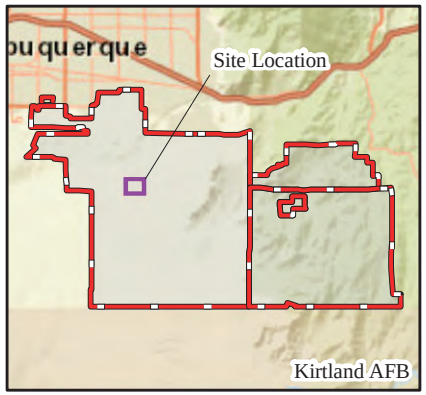

Key Features

- Power Line
- Road (4 wheel drive)
- DA130 MRS Boundary (61.0 acres)
- Accessible
- DA130 MRS Centroid
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 1-3

DA130 Arroyo Del Coyote Demolition Area MRS Site Features

2025

NOTES:
Revision Date: 1/16/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
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False Northing: 0.0000
Central Meridian: -106.2500
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 500 feet

0 75 150 Meters

0 250 500 Feet

N W E S

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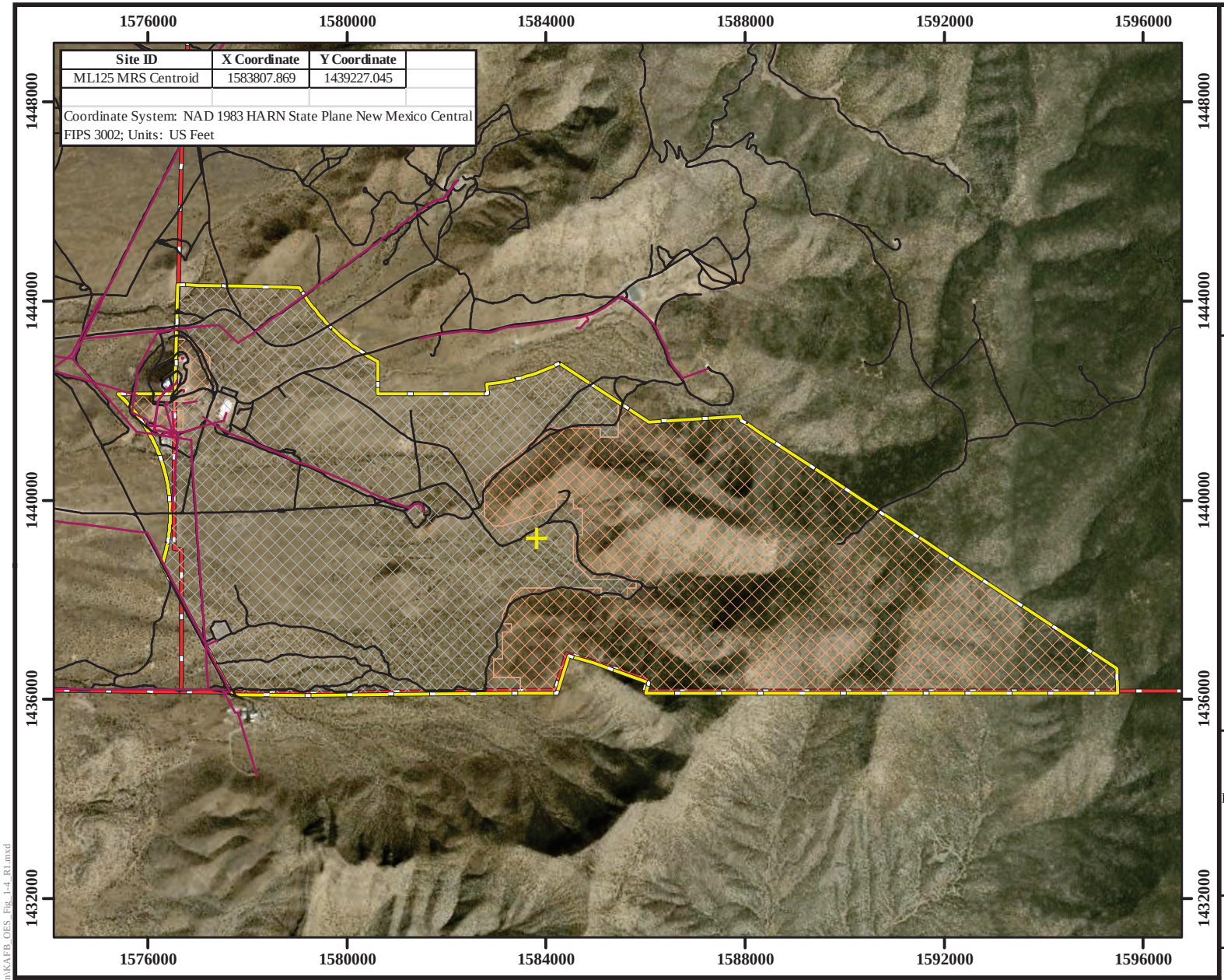
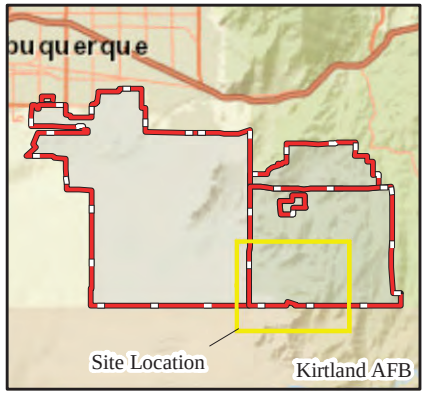


Site ID	X Coordinate	Y Coordinate
ML125 MRS Centroid	1583807.869	1439227.045

Coordinate System: NAD 1983 HARN State Plane New Mexico Central FIPS 3002; Units: US Feet



Key Features

- Power Line
- Road (4 wheel drive)
- Accessible
- Inaccessible
- ML125 MRS Boundary (2232.9 acres)
- ML125 Centroid
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 1-4

ML125 Field Firing Area MRS Site Features

2025

NOTES:

Revision Date: 1/16/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
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Central Meridian: -106.2500
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 3,000 feet

0 500 1,000 Meters

0 1,500 3,000 Feet

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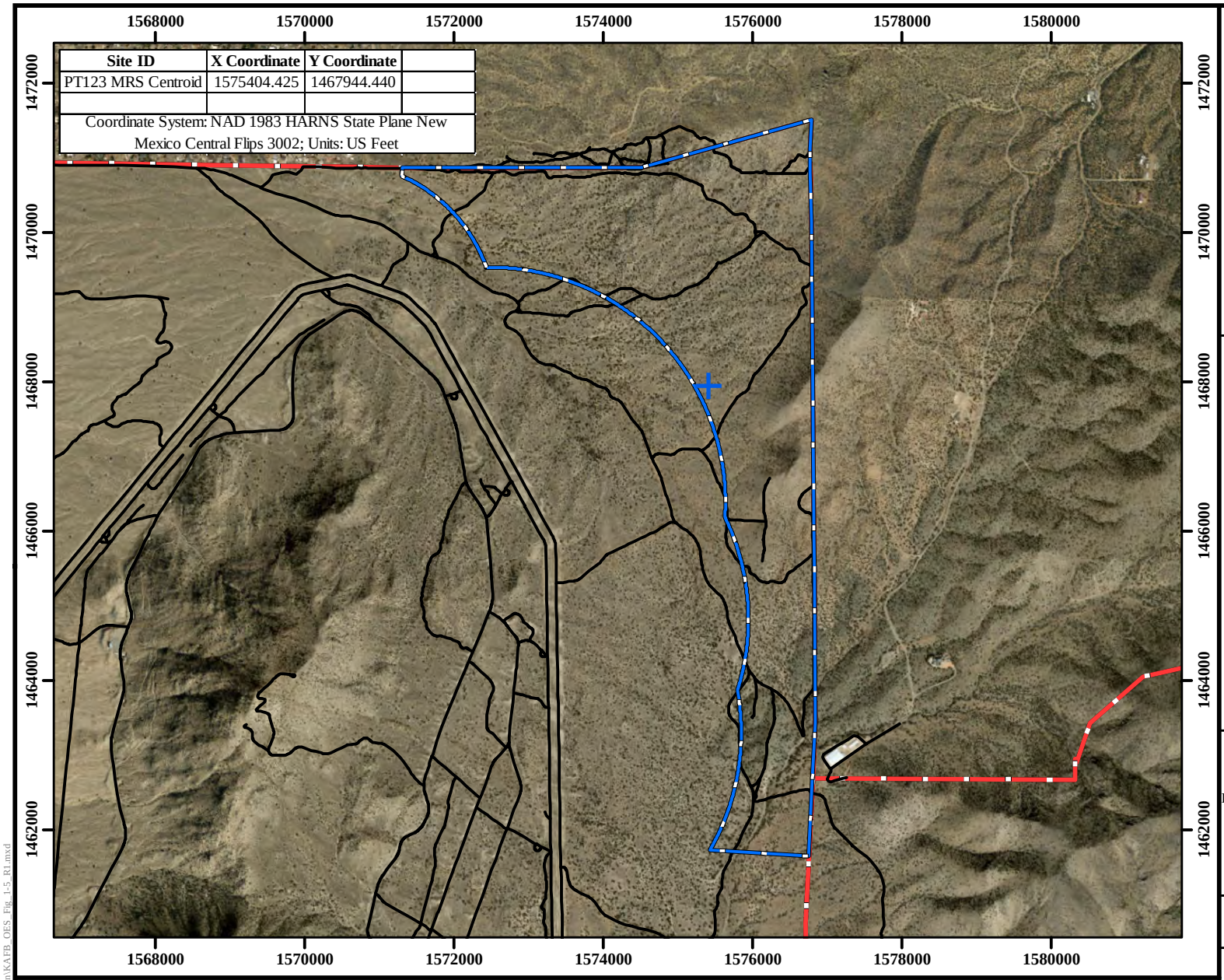
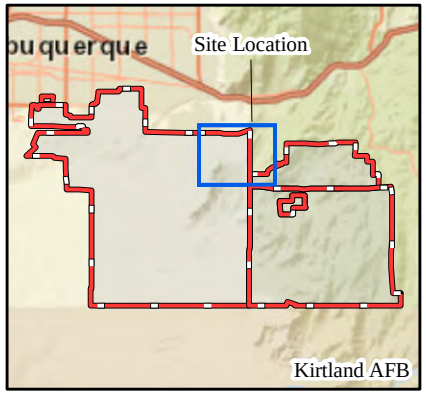


Site ID	X Coordinate	Y Coordinate	
PT123 MRS Centroid	1575404.425	1467944.440	

Coordinate System: NAD 1983 HARNS State Plane New Mexico Central Flips 3002; Units: US Feet



Key Features

- PT125 Centroid
- PT123 MRS Boundary (408.3 acres)
- Road (4 wheel drive)
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 1-5

PT123 Tijeras Small Arms Range MRS Site Features

2025

NOTES:

Revision Date: 5/13/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
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Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 2,000 feet

0 150 300 600 Meters

0 500 1,000 2,000 Feet

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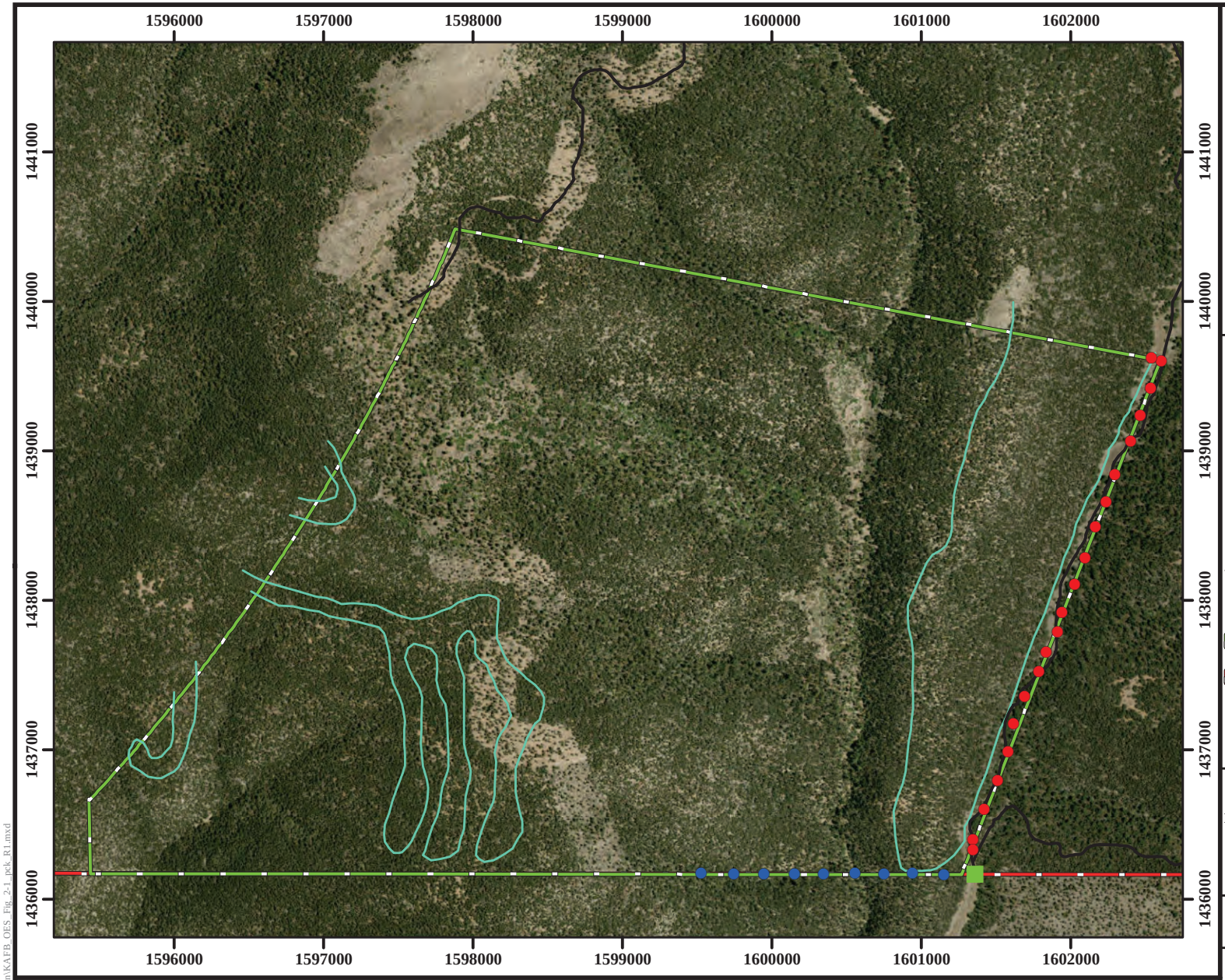

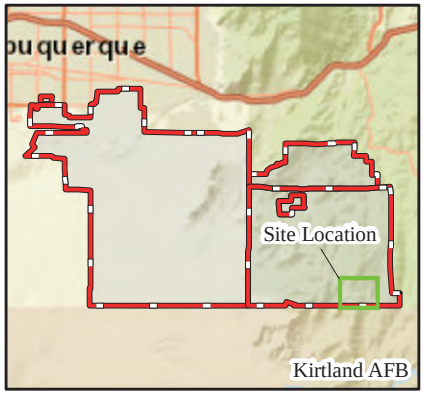

Key Features

- Post with Single Sign (21 sign posts)
- Single Sign on Fence Line (9 sign posts)
- Double-Faced Sign on Fence Line (one sign)
- Road (4 wheel drive)
- Trail
- AL120 MRS Boundary
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 2-1

Land Use Controls - Signage AL120 MRS

2025

NOTES:
Revision Date: 1/16/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
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Central Meridian: -106.2500
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Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 1,000 feet

0 75 150 300
Meters

0 250 500 1,000
Feet

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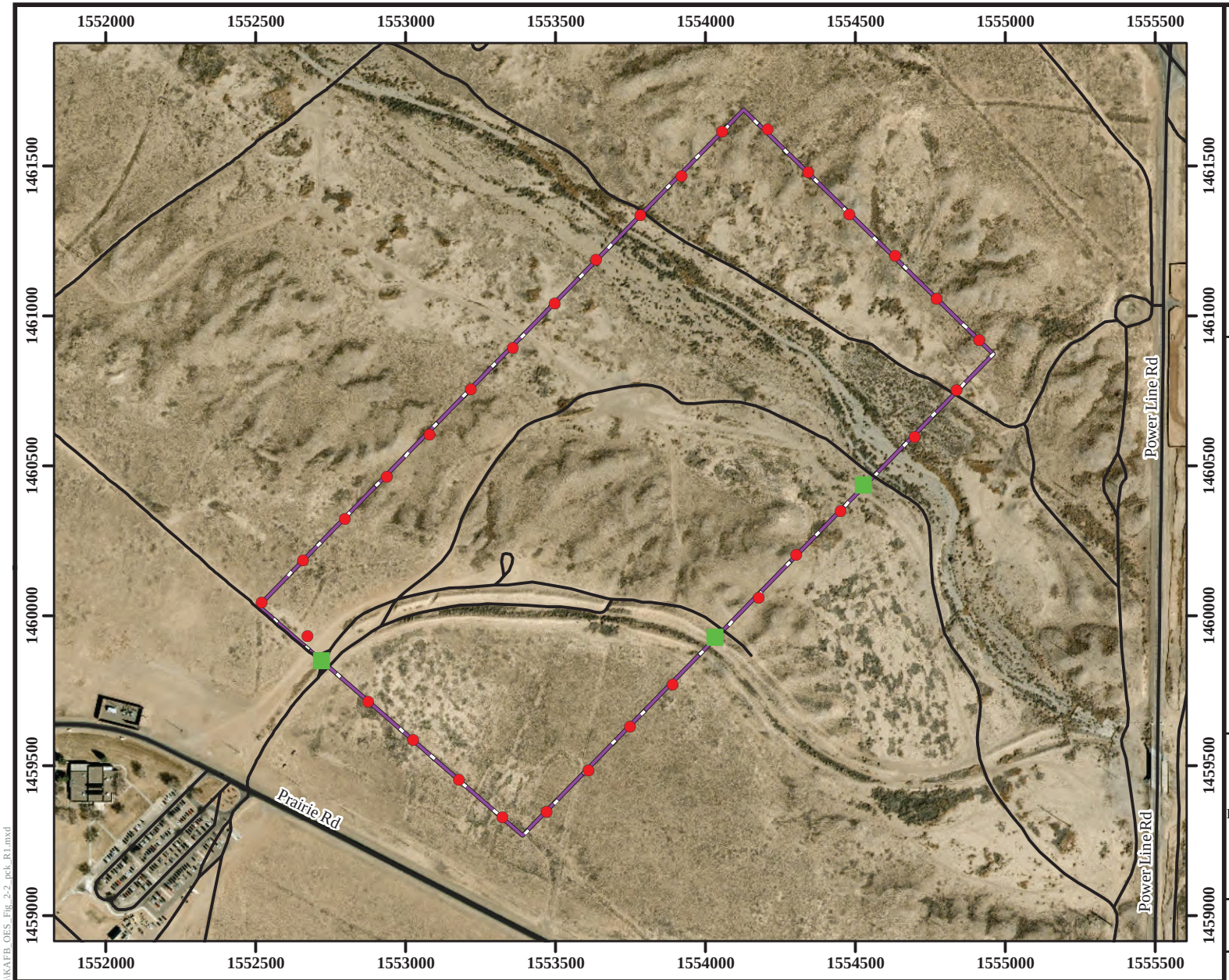
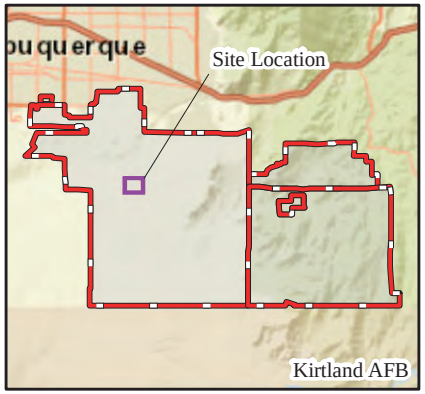




Key Features

LUCs Warning Signs

- Post with Single Sign (32 sign posts)
- Post with Two Large Opposing Signs (3 sign posts)
- Road (4 wheel drive)
- DA130 MRS Boundary
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 2-2

Land Use Controls - Signage DA130 MRS

2025

NOTES:
Revision Date: 1/16/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
False Easting: 1,640,416.6667
False Northing: 0.0000
Central Meridian: -106.2500
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

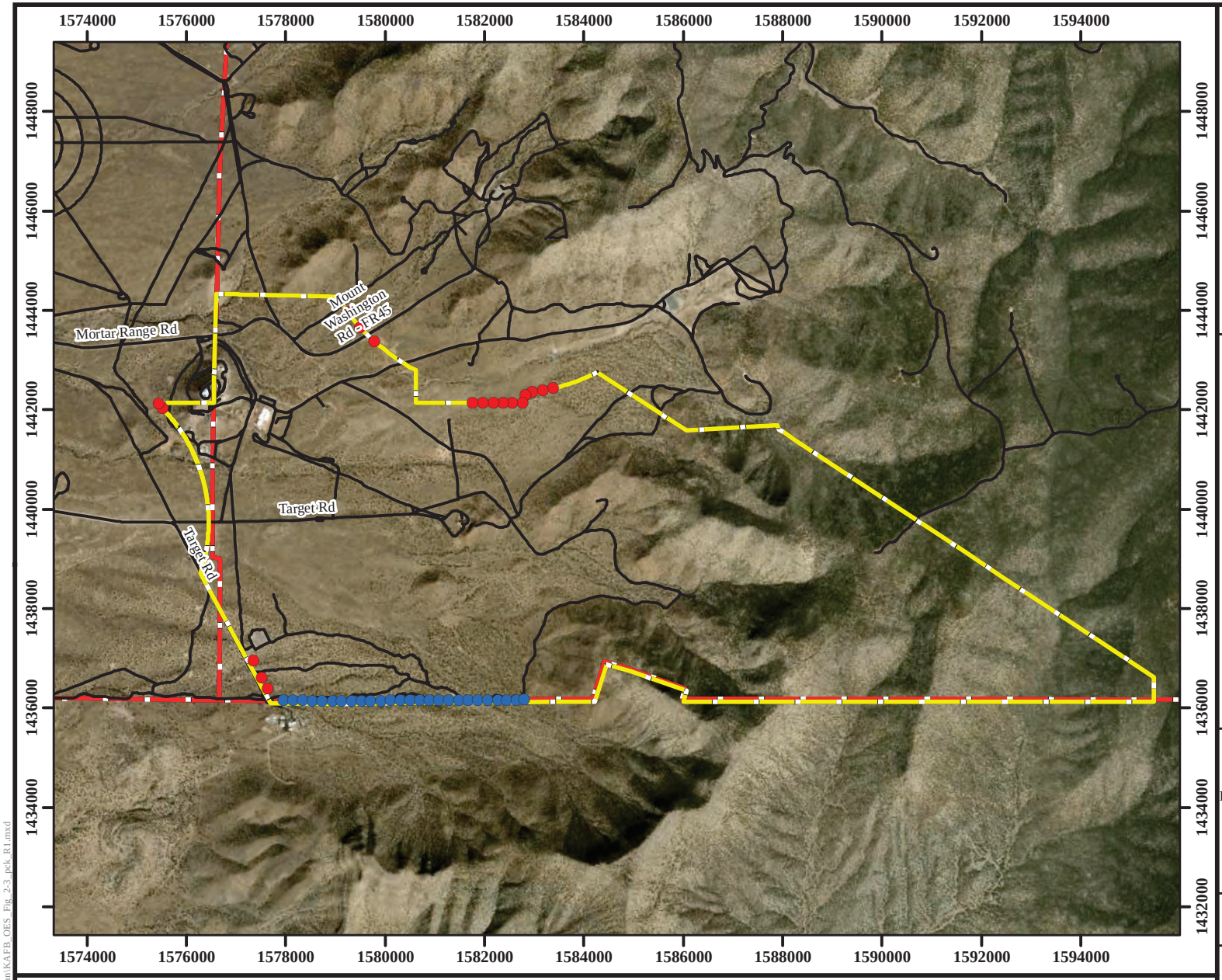
1 inch = 500 feet

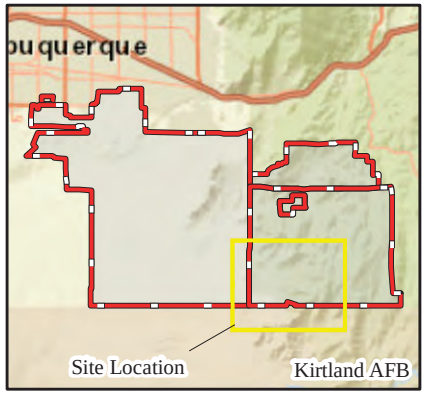
0 37.5 75 150
Meters

0 125 250 500
Feet

N
W E
S

Path: C:\Projects\Kirtland\OFS_plan\KAFB_OFS_Fig_2-2_pck_R1.mxd





Key Features

LUCs Warning Signs

- Post with Single Sign (18 sign posts)
- Single Sign on Fence Line (26 sign posts)
- Road (4 wheel drive)
- ML123 MRS Boundary
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 2-3

Land Use Controls - Signage ML125 MRS

2025

NOTES:

Revision Date: 1/16/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
False Easting: 1,640,416.6667
False Northing: 0.0000
Central Meridian: -106.2500
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 3,000 feet

0 150 300 600 900 Meters

0 500 1,000 2,000 3,000 Feet

N W E S

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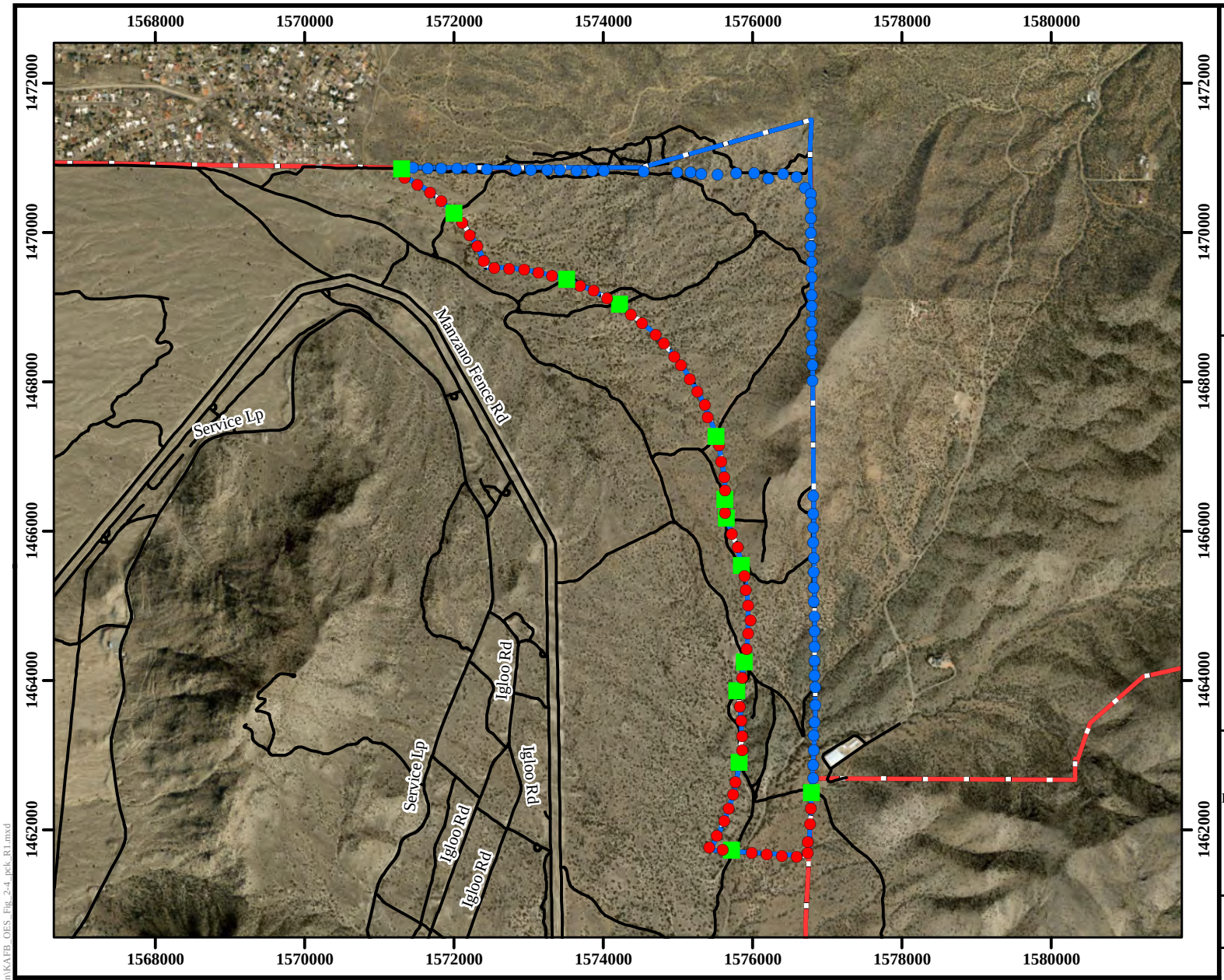

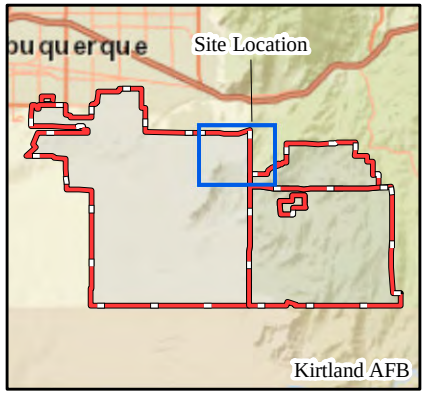

Key Features

LUCs Warning Signs

- Post with Single Sign (59 sign posts)
- Single Sign on Fence Line (58 sign posts)
- Post with Two Large Opposing Signs (13 sign posts)
- Road (4 wheel drive)
- PT123 MRS Boundary
- Installation Boundary

FIRST FIVE-YEAR REVIEW REPORT
AL120 PROXIMITY FUZE RANGE,
DA130 ARROYO DEL COYOTE DEMOLITION AREA,
ML125 FIELD FIRING RANGE, AND
PT123 TIJERAS SMALL ARMS RANGE MRSs
Kirtland Air Force Base
Albuquerque, NM

FIGURE 2-4

Land Use Controls - Signage PT123 MRS

2025

NOTES:

Revision Date: 5/12/2025

Coordinate System:NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet
Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
False Easting: 1,640,416.6667
False Northing: 0.0000
Central Meridian: -106.2500
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US
Base Map Date: 2011
Base Map Source: National Geographic Society, i-cubed

1 inch = 2,000 feet

0 150 300 600 Meters

0 500 1,000 2,000 Feet

N W E S

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APPENDIX A
PUBLIC NOTICE

Affidavit of Publication

STATE OF NEW MEXICO } SS
COUNTY OF BERNALILLO }

Ad Cost: $238.86
Ad Number: 124140
Account Number: 1111688
Classification: NON-GOVERNMENT LEGALS

I, J. Wayne Barnard, the undersigned, Ad Director of the Albuquerque Journal, on oath, state that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, chapter 167, Session Laws of 1937, and payment of fees has been made of assessed and a copy of which is hereto attached, was published in said publication in the daily edition, 1 times(s) on the following date(s):

October 17, 2024

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Ad Director

Subscribed to and sworn to me this 17th day of October 2024.

David Lindsey Montoya
Notary Public
County Bernalillo
ID#: 1140229
My commission expires: 04-26-2027

STATE OF NEW MEXICO
NOTARY PUBLIC
DAVID LINDSEY MONTOYA
COMMISSION NUMBER 1140229
EXPIRATION DATE 04-26-2027

FPM Remediations, Inc.
FPM REMEDIATIONS INC
181 KENWOOD AVE
ONEIDA, NY 13421

PUBLIC NOTICE

THE U.S. AIR FORCE CIVIL ENGINEER CENTER IS CONDUCTING A MULTIPLE SITE FIVE-YEAR REVIEW AT KIRTLAND AIR FORCE BASE, NEW MEXICO

The United States Air Force, in cooperation with the U.S. Environmental Protection Agency, plans to conduct the first five-year review for selected environmental remedies that have been implemented at four Military Munitions Response Program Sites at Kirtland Air Force Base, New Mexico, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The five-year review process provides an opportunity to evaluate the implementation and performance of a remedy to determine whether it remains protective of human health and the environment. The review will assess the current and future effectiveness of protective measures and make key recommendations to address any issues identified during the review. United States Air Force will review reports, perform inspections, and conduct interviews. Public participation is encouraged and welcomed. All parties interested in contributing to the review process should notify the contact e-mail listed below by October 31, 2024. This review will commence in November 2024 and conclude in July 2026. The Air Force will make the completed report accessible to the public at the following website: https://ar.afcec-cloud.af.mil/ and at the:

Kirtland AFB Information Repository
New Mexico Veterans Memorial
1100 Louisiana Blvd. SE
Albuquerque, New Mexico 87108

If you have any questions or comments or wish to participate in the review process, please contact:

Kirtland Environmental Restoration Program
KirtlandERP@us.af.mil

AVISO PÚBLICO

EL CENTRO DE INGENIEROS CIVILES DE LA FUERZA AÉREA DE EE. UU. REALIZA UNA REVISIÓN QUINQUENAL EN MÚLTIPLES SITIOS EN BASE DE LA FUERZA AÉREA DE KIRTLAND, NUEVO MÉXICO

El Centro de Ingenieros Civiles de la Fuerza Aérea de los Estados Unidos (AFCEC) planea realizar la primera revisión quinquenal de los métodos correctivos implementados oficialmente en cuatro sitios del Programa de Rectificación a Municiones Militares en la Base de la Fuerza Aérea Kirtland, Nuevo México, de acuerdo con la Ley de Responsabilidad, Compensación y Respuesta Ambiental Comprensiva (CERCLA). El proceso de revisión de cinco años brinda la oportunidad de evaluar la implementación y el desempeño de un remedio para determinar si sigue protegiendo la salud humana y el medio ambiente. La revisión evaluará la efectividad actual y futura de las medidas de protección y hará recomendaciones clave para abordar cualquier problema identificado durante la revisión. La Fuerza Aérea de los Estados Unidos revisará informes, realizará inspecciones y realizará entrevistas. Se alienta y acoge con agrado la participación pública. Todas las partes interesadas en contribuir al proceso de revisión pueden comunicarse con las personas que deben notificar al correo electrónico de contacto que se indica a continuación antes del 31 de octubre de 2024. Esta revisión comenzará en noviembre de 2024 y concluirá en julio de 2026. La Fuerza Aérea pondrá el informe completo a disposición del público en el siguiente sitio web: https://ar.afcec-cloud.af.mil/ y en el:

Repositorio de Información de la Base de la Fuerza Aérea Kirtland
Memorial de Veteranos de Nuevo México
1100 Louisiana Blvd. SE
Albuquerque, Nuevo México 87108

Si tiene alguna pregunta o comentario o desea participar en el proceso de revisión, comuníquese con:

Programa de Restauración Ambiental de Kirtland
KirtlandERP@us.af.mil
Journal: October 17, 2024

APPENDIX B
INSPECTION FORMS

OSWER No. 9355.7-03B-P

Site Inspection

I. SITE INFORMATION	
Site name: AL120	**Date of inspection:** 12/12/2024
Location and Region: East of KAFB within USFS set-aside land, adjacent to Cibola National Forest and Pueblo of Isleta	**EPA ID:**
Agency, office, or company leading the five-year review: USACE	**Weather/temperature:** Overcast, calm, 46ºF

Remedy Includes: (Check all that apply)

- ☐ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☒ Inspection team roster attached ☐ Site map attached

II. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: Only southern boundary with Pueblo of Isleta is fenced. Fence consisted of four-strand barbed wire, was obviously very old, and was mostly intact with an occasional tree fallen across the wire.

B. Other Access Restrictions

1. **Signs and other security measures** ☒ Location shown on site map ☐ N/A

Remarks: North end of site requires entrance through two locked gates and fence lines. National Forest and KAFB gates.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) Annual inspection

Frequency: Annual

Responsible party/agency AFCEC

Contact: Suzanne Devergie KAFB MMRP Lead 12/13/2024 505-379-2003

Name Title Date Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☒ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions:

2. **Adequacy** ☒ ICs are adequate ☐ ICs are inadequate ☐N/A

Remarks: Request for site access are sent to Ms. Devergie through the dig ticket system.

D. General

1. **Vandalism/trespassing:** ☐ Location shown on site map ☒No vandalism evident

Remarks: None

2. **Land use changes on site:** ☒ None

Remarks: None observed.

3. **Land use changes off site:** ☒ None

Remarks: None observed

III. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged**☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks: None.

B. Other Site Conditions

Remarks: Signs are placed along east boundary dirt road and about 1/3 of the southern (SE) boundary. Terrain is rugged, steep in areas, and vegetation is dense. Access to the area is difficult. Entrance to the site is through a locked Forest Service gate and a locked KAFB gate. Field team was unable to access dirt road leading to Manzano Outlook due to KAFB active training in the area. Site is remote. Southern boundary is shared with Pueblo of Isleta.

IV. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Access control – signs place every ~200 feet along east boundary road and 1/3 southern fence line. Steep terrain and dense vegetation can act as deterrent.

B. Adequacy of IC Monitoring

Describe issues and observations related to the implementation and scope of IC Monitoring procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

None noted

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the scope of IC Monitoring or a high frequency of unscheduled sign repairs/replacement, that suggest that the protectiveness of the remedy may be compromised in the future.

None noted

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Dan Sanchez (USFS Wildland Fire representative) mentioned to Kent Tibbitts (FPM) that KAFB was going to install a chain-link fence along the southern boundary of KARB. This would also include the southern boundary of AL120. Currently, there is only a barbed wire fence with four strands of wire.

I. SITE INFORMATION	
Site name: DA130	**Date of inspection:** 12/12/2024
Location and Region: KAFB	**EPA ID:**
Agency, office, or company leading the five-year review: USACE	**Weather/temperature:** Overcast, calm, 29ºF

Remedy Includes: (Check all that apply)

□ Landfill cover/containment	□ Monitored natural attenuation
☒ Access controls	□ Groundwater containment
☒ Institutional controls	□ Vertical barrier walls
□ Groundwater pump and treatment	
□ Surface water collection and treatment	

Attachments: ☒ Inspection team roster attached □ Site map attached

II. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable □ N/A

A. Fencing

1. **Fencing damaged** □ Location shown on site map ☐ Gates secured ☒ N/A

Remarks: Signage demarcates boundary. DA130 is in a secure area with sensors and cameras. Access to area granted by 898 MUNS (munitions squadron) only.

B. Other Access Restrictions

1. **Signs and other security measures** ☒ Location shown on site map □ N/A

Remarks: See A1 above. Area is monitored.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) Annual inspection

Frequency: Annual

Responsible party/agency AFCEC

Contact: Suzanne Devergie KAFB MMRP Lead 12/13/2024 505-379-2003

Name Title Date Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☒ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions:

2. **Adequacy** ☐ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks: Request for site access are sent to Ms. Devergie through the dig ticket system.

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident

Remarks: DA130 is in a monitored secure area.

Remarks: None

2. **Land use changes on site:** ☒ None

Remarks: None observed.

3. **Land use changes off site:** ☒ None

Remarks: None observed.

III. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks:

B. Other Site Conditions

Remarks: Access to the site is monitored with sensors and cameras and is watched by 898 MUNS (Munitions Squadron). Must receive permission by 898 MUNS to enter area.

IV. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

B. Adequacy of IC Monitoring

Describe issues and observations related to the implementation and scope of IC Monitoring procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

None noted.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the scope of IC Monitoring or a high frequency of unscheduled sign repairs/replacement, that suggest that the protectiveness of the remedy may be compromised in the future.

None noted.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

None noted.

OSWER No. 9355.7-03B-P

Site Inspection

I. SITE INFORMATION	
Site name: ML125	**Date of inspection:** 12/11/2024
Location and Region: SE corner of KAFB Installation	**EPA ID:**
Agency, office, or company leading the five-year review: USACE – Albuquerque District	**Weather/temperature:** Slight overcast, light breeze, 40ºF

Remedy Includes: (Check all that apply)

□ Landfill cover/containment	□ Monitored natural attenuation
☒ Access controls	□ Groundwater containment
☒ Institutional controls	□ Vertical barrier walls
□ Groundwater pump and treatment	
□ Surface water collection and treatment	

Attachments: ☒ Inspection team roster attached ☐ Site map attached

II. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable □ N/A

A. Fencing

1. **Fencing damaged** □ Location shown on site map ☒ Gates secured ☒ N/A

Remarks: Fence not specific to MRS. Fenced on South boundary. No observed damage.

B. Other Access Restrictions

1. **Signs and other security measures** ☒ Location shown on site map □ N/A

Remarks: See Section IIIB.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) Annual inspection

Frequency: Annual

Responsible party/agency AFCEC

Contact: Suzanne Devergie KAFB MMRP Lead 12/13/2024 505-379-2003

Name Title Date Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☒ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions:

2. **Adequacy** X ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks: Request for site access are sent to Ms. Devergie through the dig ticket system.

D. General

1. **Vandalism/trespassing:** ☐ Location shown on site map ☒ No vandalism evident

2. **Land use changes on site:** ☒ None

3. **Land use changes off site:** ☒ None

III. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

B. Other Site Conditions

Remarks Many roads pass through ML125. Site boundary is not sufficiently marked with signage. Many ingress/egress roads are not marked. Training facility appears to have been constructed within last 4 years (Google Earth).

IV. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Access control – Signs should be placed every ~200 feet around perimeter of ML125. Should have ingress/egress signs like PT123.

Institutional Controls – Escort when on site/performing work. Formal notifications through dig permitting system.

B. Adequacy of IC Monitoring

Describe issues and observations related to the implementation and scope of IC Monitoring procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Though evidence of operations within the site boundary were noted, these operations were approved by Suzanne Devergie as part of the dig permitting system.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the scope of IC Monitoring or a high frequency of unscheduled sign repairs/replacement, that suggest that the protectiveness of the remedy may be compromised in the future.

None noted.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Additional signage at all ingress/egress points of the site. It was not clear why some areas had signs installed along the site boundary and other areas did not.

OSWER No. 9355.7-03B-P

Site Inspection

I. SITE INFORMATION	
Site name: PT123	**Date of inspection:** 12/11/2024
Location and Region: NE corner of KAFB Installation	**EPA ID:**
Agency, office, or company leading the five-year review: USACE – Albuquerque District	**Weather/temperature:** Overcast, light breeze, 45ºF

Remedy Includes: (Check all that apply)

□ Landfill cover/containment	□ Monitored natural attenuation
☒ Access controls	□ Groundwater containment
☒ Institutional controls	□ Vertical barrier walls
□ Groundwater pump and treatment	
□ Surface water collection and treatment	

Attachments: ☒ Inspection team roster attached ☒ Site map attached

II. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable □ N/A

A. Fencing

1. **Fencing damaged** □ Location shown on site map ☐ Gates secured ☒ N/A

Remarks: Fence not specific to MRS. Only fenced on North and East boundaries. No observed damage.

B. Other Access Restrictions

1. **Signs and other security measures** ☒ Location shown on site map □ N/A

Remarks: Signs on fencing and posts every ~200 feet.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) Annual inspection

Frequency: Annual

Responsible party/agency AFCEC

Contact: Suzanne Devergie KAFB MMRP Lead 12/13/2024 505-379-2003

Name Title Date Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☒ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions:

2. **Adequacy** X ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks:__Request for site access are sent to Ms. Devergie through the dig ticket system.

D. General

1. **Vandalism/trespassing:** ☐ Location shown on site map ☒ No vandalism evident

Remarks:

2. **Land use changes on site:** ☒ None

Remarks: None observed.

3. **Land use changes off site:** ☒ None

Remarks: None observed.

III. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks: Roads appeared to be regraded in 2024.

B. Other Site Conditions

Remarks: Walked NE corner area fence line. Visible fence line does not match site figure. Used Garmin ETREX 22X to use as rough comparison. Brush removal was performed along North fence line, and some road grading was performed. Both tasks appeared to have been performed in 2024

IV. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Access control – Signs placed along fence line every ~200 feet, except in areas of extreme terrain. Ingress/Egress signs placed on site roads. Signs posts placed every ~200 feet.

Institutional Controls – Escort when on site/performing work.

B. Adequacy of IC Monitoring

Describe issues and observations related to the implementation and scope of IC Monitoring procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

None noted.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the scope of IC Monitoring or a high frequency of unscheduled sign repairs/replacement, that suggest that the protectiveness of the remedy may be compromised in the future.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

None noted.

APPENDIX C
PHOTOGRAPHS

SITE ACTIVITIES PHOTOGRAPHIC LOG

FPM AECOM JV2

Project: Kirtland Air Force Base Multiple Site Five-Year Review

Document: First Five-Year Review

Photograph No. 1

Description:

Site - ML125

Sign along southwestern boundary of MRS ML125. Photograph taken facing northeast.

Photograph No. 2

Description:

Site - ML125

Southern MRS ML125 boundary fence running along the left side of the photo. Photograph taken facing west.

The red arrow is showing a "USAF Installation" sign.

Photograph No. 3 **Description:** Site - ML125 Backside of sign along southern boundary of MRS ML125 boundary. Photograph taken facing south. The red arrow is showing a "Danger UXO" sign.	
Photograph No. 4 **Description:** Site - ML125 Front side of sign (typical "Danger UXO" signage) marking southern boundary of MRS ML125. Photograph taken facing north.	

Photograph No. 5 **Description:** Site - ML125 Concrete slab located within MRS ML125.	
Photograph No. 6 **Description:** Site - ML125 Marker and barricade in place by the United States Forest Service for wildlife and habitat protection within MRS ML125.	

Photograph No. 7 **Description:** Site - ML125 Training structure located within MRS ML125.	
Photograph No. 8 **Description:** Site - ML125 Sign along northern boundary of MRS ML125. Photograph taken facing south.	

Photograph No. 9 **Description:** Site - ML125 M83 Smoke TA located within MRS ML125. Dozens of M83s were sighted during the inspection.	
Photograph No. 10 **Description:** Site - ML125 Sign along northern edge of MRS ML125. Photograph taken facing west.	

Photograph No. 11 **Description:** Site – PT123 Sign along western edge of MRS PT123, alerting reader they are entering UXO area. Fence in photo runs along northern boundary of the MRS. Photo taken facing east.	
Photograph No. 12 **Description:** Site – PT123 Backside of sign from photograph number 11, alerting reader they are exiting the UXO area (MRS PT123).	

Photograph No. 13 **Description:** Site – PT123 Walking along eastern boundary fence of MRS PT123 to verify signs are in place. Photograph taken facing north. The red arrow is showing a "Danger UXO" sign.	
Photograph No. 14 **Description:** Site – PT123 Northeast corner of MRS PT123. The red arrow is showing a "Rifle Range – Keep Out" sign.	

Photograph No. 15 **Description:** Site – PT123 Sign along western boundary of MRS ML125 notifying reader they are leaving UXO area. Photograph taken facing southwest.	
Photograph No. 16 **Description:** Site – PT123 Sign along western boundary of MRS PT123. Photograph taken facing east.	

Photograph No. 17

Description:

Site – AL120

Signs at the northeast corner of the boundary of MRS AL120. Photograph taken facing southwest.

Photograph No. 18

Description:

Site – AL120

Backside of a sign along the southern boundary of MRS AL120. Photograph taken facing south.

Photograph No. 19 **Description:** Site – AL120 Front side of sign along southern boundary of MRS AL120. Photograph taken facing northwest.	
Photograph No. 20 **Description:** Site – AL120 Backside of fence along the southern boundary of MRS AL120. Photograph taken facing south.	

Photograph No. 21

Description:

Site – AL120

Bearing Tree marker located outside of the southern boundary of MRS AL120. Photograph taken facing south.

The top red arrows are showing Bearing Tree markers. The bottom red arrow is showing a survey marker.

Photograph No. 22

Description:

Site – AL120

Close up Bearing Tree marker.

Photograph No. 23

Description:

Site – AL120

Survey marker located along the southern boundary of MRS AL120.

Photograph No. 24

Description:

Site – AL120

Photograph taken facing southwest. Southern boundary fence of MRS AL120 runs along bottom left of photograph.

Photograph No. 25	
Description: Site – DA130	**No photographs taken due to sensitive nature of security.**

APPENDIX D
COMMUNITY SURVEY RESPONSES/INTERVIEWS

INTERVIEW RECORD
Kirtland AFB Five-Year Review

Site Name: MRSs AL120, DA130, ML125, and PT123	EPA ID Number:	
Subject: Five-Year Review	Time: 0200 MT	Date: 12/18/24

Type: Telephone ☒ Email ☐ Other ☐

Comments:

Contact Made By:		
Name: Greg Barnes	Title: Project Manager	Organization: AECOM
Individual Contacted:		
Name: David Sanchez	Title: Assistant Manager Wildland Support Module	Organization: United States Forest Service

Telephone Number: [redacted]

E-Mail Address: [redacted]

The United States Air Force is conducting the First Five-Year Review for selected environmental remedies implemented at:

Kirtland Air Force Base MRSs:

- **AL120, DA130, ML125, and PT123**

This interview is being conducted as part of the Five-Year Review. If you are unfamiliar for these sites and their selected remedies, additional background information is available at the AFCEC Administrative Record (https://ar.cce.af.mil/), by request to the Kirtland AFB Public Affairs Office by email at KirtlandERP@us.af.mil, or at the

Kirtland AFB Information Repository. The address of the information repository is:

New Mexico Veterans Memorial 1100 Louisiana Blvd. SE Albuquerque, New Mexico 87108

Please provide responses to the following questions. For those questions you do not feel you have an answer for, it is acceptable to respond, “I don’t have an opinion” or “I don’t wish to comment.”

1. What is your overall impression of the project? (general sentiment)

Notification process is easy.

2. Do you have access to information on the remedies in place and do you access that information (e.g., at the Administrative Record File, or at routine environmental meetings)?

Not familiar but contact the base for any needed information.

3. Do you feel well informed about the site's activities and progress?

Yes, keep in contact with range safety.

4. Are you aware of any changes in site conditions that you feel may impact the protectiveness of the remedies implemented at the sites listed above? If so, please indicate the site(s) and identify the changed site conditions that may have impacted remedy protectiveness.

No, if anything it has improved conditions.

5. To the best of your knowledge, have there been any violations of the land use controls at the sites listed above; with the exception of previously approved activities; that required a response from your office? If so, please provide details of the impacted sites, events, and results of the responses.

No.

6. Are you aware of any community concerns regarding the protectiveness of the remedies at the sites listed above? If so, please identify the site(s) and provide details.

No.

INTERVIEW RECORD
Kirtland AFB Five-Year Review

Site Name: MRSs AL120, DA130, ML125, and PT123	EPA ID Number:	
Subject: Five-Year Review	Time: 0900 MT	Date: 12/13/24

Type: Telephone ☒ Email ☐ Other ☐

Comments:

Contact Made By:		
Name: Greg Barnes	Title: Project Manager	Organization: AECOM
Individual Contacted:		
Name: Greg Lyssy	Title: Senior Project Manager RCRA Corrective Action Section	Organization: USEPA Region 6

Telephone Number: [redacted]

E-Mail Address: [redacted]

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Please provide responses to the following questions. For those questions you do not feel you have an answer for, it is acceptable to respond, “I don’t have an opinion” or “I don’t wish to comment.”

1. What is your overall impression of the project? (general sentiment)

The project is going as planned.

2. Do you have access to information on the remedies in place and do you access that information (e.g., at the Administrative Record File, or at routine environmental meetings)?

Yes, I access the Air Force Administrative Record when needed.

3. Do you feel well informed about the site's activities and progress?

Yes.

4. Are you aware of any changes in site conditions that you feel may impact the protectiveness of the remedies implemented at the sites listed above? If so, please indicate the site(s) and identify the changed site conditions that may have impacted remedy protectiveness.

No.

5. To the best of your knowledge, have there been any violations of the land use controls at the sites listed above; with the exception of previously approved activities; that required a response from your office? If so, please provide details of the impacted sites, events, and results of the responses.

Not that I am aware of.

6. Are you aware of any community concerns regarding the protectiveness of the remedies at the sites listed above? If so, please identify the site(s) and provide details.

Not for the listed sites.

INTERVIEW RECORD

Kirtland AFB Five-Year Review

Site Name: MRSs AL120, DA130, ML125, and PT123	EPA ID Number:	
Subject: Five-Year Review	Time: 0930 MT	Date: 11/27/24

Type: Telephone ☒ Email ☐ Other ☐

Comments:

Contact Made By:

Name: Greg Barnes	Title: Project Manager	Organization: AECOM

Individual Contacted:

Name: Robert Smith	Title: KAFB Public Affairs Media and Environment Chief	Organization: Kirtland AFB

Telephone Number: [redacted]

E-Mail Address: [redacted]

The United States Air Force is conducting the First Five-Year Review for selected environmental remedies implemented at:

Kirtland Air Force Base MRSs:

- **AL120, DA130, ML125, and PT123**

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1. What is your overall impression of the project? (general sentiment)

Been in this position for one year and do not have an impression of the project as I have not heard anything about it.

2. Do you have access to information on the remedies in place and do you access that information (e.g., at the Administrative Record File, or at routine environmental meetings)?

Yes, I would know where to go either the Air Force Administrative Record or reach out to Scott Clark.

3. Do you feel well informed about the site's activities and progress?

If necessary, I feel comfortable reaching out to be informed.

4. Are you aware of any changes in site conditions that you feel may impact the protectiveness of the remedies implemented at the sites listed above? If so, please indicate the site(s) and identify the changed site conditions that may have impacted remedy protectiveness.

No response.

5. To the best of your knowledge, have there been any violations of the land use controls at the sites listed above; with the exception of previously approved activities; that required a response from your office? If so, please provide details of the impacted sites, events, and results of the responses.

None to date (13 months).

6. Are you aware of any community concerns regarding the protectiveness of the remedies at the sites listed above? If so, please identify the site(s) and provide details.

Not aware of any issues.

INTERVIEW RECORD

Kirtland AFB Five-Year Review

Site Name: MRSs AL120, DA130, ML125, and PT123	EPA ID Number:	
Subject: Five-Year Review	Time: 0200 MT	Date: 12/18/24

Type: Telephone ☒ Email ☐ Other ☐

Comments:

Contact Made By:		
Name: Greg Barnes	Title: Project Manager	Organization: AECOM
Individual Contacted:		
Name: Scott Clark	Title: RPM – KAFB	Organization: AFCEC

Telephone Number: [redacted]

E-Mail Address: [redacted]

The United States Air Force is conducting the First Five-Year Review for selected environmental remedies implemented at:

Kirtland Air Force Base MRSs:

- **AL120, DA130, ML125, and PT123**

This interview is being conducted as part of the Five-Year Review. If you are unfamiliar for these sites and their selected remedies, additional background information is available at the AFCEC Administrative Record (https://ar.cce.af.mil/), by request to the Kirtland AFB Public Affairs Office by email at KirtlandERP@us.af.mil, or at the

Kirtland AFB Information Repository. The address of the information repository is:

New Mexico Veterans Memorial 1100 Louisiana Blvd. SE Albuquerque, New Mexico 87108

Please provide responses to the following questions. For those questions you do not feel you have an answer for, it is acceptable to respond, “I don’t have an opinion” or “I don’t wish to comment.”

1. What is your overall impression of the project? (general sentiment)

Going well. Remedy is protective.

2. Do you have access to information on the remedies in place and do you access that information (e.g., at the Administrative Record File, or at routine environmental meetings)?

Yes, when needed.

3. Do you feel well informed about the site's activities and progress?

Yes.

4. Are you aware of any changes in site conditions that you feel may impact the protectiveness of the remedies implemented at the sites listed above? If so, please indicate the site(s) and identify the changed site conditions that may have impacted remedy protectiveness.

No. There is a push to use the MRS space due to minimal space for munitions.

5. To the best of your knowledge, have there been any violations of the land use controls at the sites listed above; with the exception of previously approved activities; that required a response from your office? If so, please provide details of the impacted sites, events, and results of the responses.

No – "stay out" is effective.

6. Are you aware of any community concerns regarding the protectiveness of the remedies at the sites listed above? If so, please identify the site(s) and provide details.

None.

INTERVIEW RECORD

Kirtland AFB Five-Year Review

Site Name: MRSs AL120, DA130, ML125, and PT123	EPA ID Number:	
Subject: Five-Year Review	Time: 0200 MT	Date: 12/18/24

Type: Telephone ☒ Email ☐ Other ☐

Comments:

Contact Made By:		
Name: Greg Barnes	Title: Project Manager	Organization: AECOM
Individual Contacted:		
Name: Suzanne Devergie	Title: Physical Scientist, MMRP Lead	Organization: AFCEC

Telephone Number: [redacted]

E-Mail Address: [redacted]

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Kirtland Air Force Base MRSs:

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Please provide responses to the following questions. For those questions you do not feel you have an answer for, it is acceptable to respond, "I don't have an opinion" or "I don't wish to comment."

1. What is your overall impression of the project? (general sentiment)

Effective.

2. Do you have access to information on the remedies in place and do you access that information (e.g., at the Administrative Record File, or at routine environmental meetings)?

Yes, access to all.

3. Do you feel well informed about the site's activities and progress?

Yes, I do.

4. Are you aware of any changes in site conditions that you feel may impact the protectiveness of the remedies implemented at the sites listed above? If so, please indicate the site(s) and identify the changed site conditions that may have impacted remedy protectiveness.

No.

5. To the best of your knowledge, have there been any violations of the land use controls at the sites listed above; with the exception of previously approved activities; that required a response from your office? If so, please provide details of the impacted sites, events, and results of the responses.

No.

6. Are you aware of any community concerns regarding the protectiveness of the remedies at the sites listed above? If so, please identify the site(s) and provide details.

No, have not heard anything from public meetings.