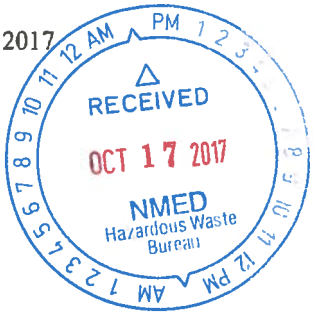
DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 49TH WING (ACC)
HOLLOMAN AIR FORCE BASE NEW MEXICO

13 October 2017




ADAM M. KUSMAK, GS-13, USAF
Chief, Installation Management Flight (49 CES/CEI)
49th Civil Engineer Squadron (49 CES)
Holloman Air Force Base, NM

Attn: Mr. Chuck Hendrickson, Project Manager
RCRA Corrective Action Section (6MM-RC)
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

SUBJECT: **Draft-Final Proposed Plan XU854 Able 51 Area Munitions Response Site Holloman Air Force Base, NM**

Dear Mr. Hendrickson,

Holloman AFB is pleased to submit the Draft-Final Proposed Plan for the XU854 Able 51 Area Munitions Response Site for your review.

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 fine and imprisonment for knowing violations.

If you have any questions regarding this submittal, please contact me at (575) 572-6675.

Sincerely,

KUSMAK.ADAM.M.1263331806

Digitally signed by KUSMAK.ADAM.M.1263331806
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USAF, cn=KUSMAK.ADAM.M.1263331806
Date: 2017.10.13 14:48:13 -06'00'

ADAM M. KUSMAK, GS-13, USAF

Attachment: Draft-Final Proposed Plan for the XU854 Able 51 Area Munitions Response Site, Holloman Air Force Base, NM.

cc:

(w/Atch)
Mr. David Strasser
Hazardous Waste Bureau
121 Tijeras Dr. NE, Ste.1000
Albuquerque NM 87102-3400

(w/Atch)
Mr. John Kieling, Chief
Hazardous Waste Bureau
2905 Rodeo Park Dr. East Bldg. 1
Santa Fe NM 87505-6303

(w/o Atch)
Mr. Cornelius Amindyas
Hazardous Waste Bureau
121 Tijeras Dr. NE, Ste. 1000
Albuquerque NM 87102-3400

# DRAFT-FINAL PROPOSED PLAN

# MILITARY MUNITIONS RESPONSE PROGRAM

# XU854 ABLE 51 AREA
# MUNITIONS RESPONSE SITE

# HOLLOMAN AIR FORCE BASE

# NEW MEXICO

**PERFORMANCE BASED REMEDIATION**
**Contract Number: FA8903-13-C-0008**

Prepared for:



**AIR FORCE CIVIL ENGINEER CENTER**
**2261 Hughes Ave., Suite 155**
**Joint Base San Antonio Lackland, Texas 78236-9853**

*Prepared by:*

**FPM** Remediations, Inc.

**181 Kenwood Avenue**
**Oneida, NY 13421**

**October 2017**

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**PROPOSED PLAN**
**XU854 – Able 51 Area Munitions Response Site**
**Holloman Air Force Base, New Mexico**

## 1.0 INTRODUCTION

This Proposed Plan (PP) concerning the XU854 Able 51 Area Munitions Response Site (MRS) located at Holloman Air Force Base (AFB), Otero County, New Mexico (**Figure 1**) is submitted for public review and comment. The PP recommends No Further Action (NFA) for both Munitions and Explosives of Concern (MEC) and Munitions Constituents (MC) following completion of a Remedial Investigation (RI) as well as NFA for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), pesticides, herbicides, metals, and Polychlorinated Biphenyls (PCBs) following the removal of buried drums/cans with paint-related material and surrounding contaminated soil. The PP also provides reasons for NFA preference at the XU854 MRS.

This document has been prepared by the United States Air Force (USAF), the lead federal agency for site activities, in agreement with the United States Environmental Protection Agency (USEPA), the support agency, and in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 117(a) and Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Under CERCLA and the NCP, it is appropriate for the lead agency to recommend NFA when no unacceptable risks exist under the residential use scenario.

This PP may be modified based on any new information acquired during the 30-day public comment period. The USAF, as lead agency, will make a final decision on the need for additional action following consultation with the USEPA. This decision will be made after reviewing and considering all information submitted during the designated public comment period. Therefore, the public is encouraged to review

**MARK YOUR CALENDAR**

**PUBLIC COMMENT PERIOD:**

**15 November, 2017 – 14 December, 2017**

The Proposed Plan is available for public review during the 30-day public comment period at the following location:

**Alamogordo Public Library,**
**920 Oregon Ave.**
**Alamogordo, N.M. 88310**
**Phone: (575) 439-4140**

The USAF will accept written comments on the Proposed Plan during the public comment period. Comment Letters must be postmarked by **14 December 2017** and should be submitted to:

49th Wing Public Affairs
490 First Street, Building 29, Suite 1500
Holloman AFB, NM 88330

Comments can also be submitted via email to:

49wg.paoffice@us.af.mil

For additional questions, comments or concerns please call (575)-572-7381.

**PUBLIC MEETING:**

Based on the level of interest, the USAF may hold a public meeting to explain the PP and the reasons for the NFA recommendation for the XU854 Able 51 Area MRS and accept oral and written comments. The public meeting will be announced in the Alamogordo Daily News, a newspaper of daily circulation in the city of Alamogordo area and includes Holloman AFB. If scheduled, the meeting will be held at the Alamogordo Public Library.

**ADMINISTRATIVE RECORD FILE:**

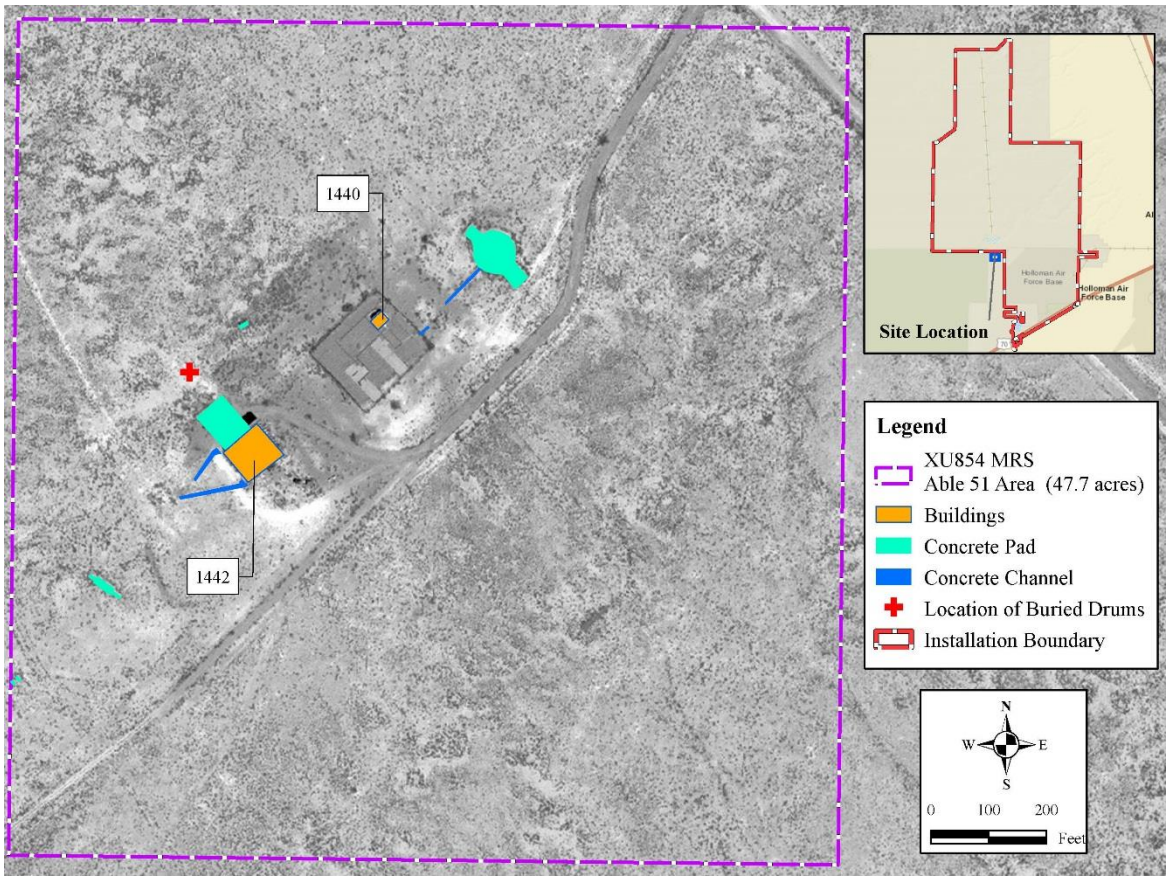
For more information on the XU854 Able 51 Area MRS, please see the Administrative Record at the following web address:

http://afcec.publicadmin-record.us.af.mil

Site-related documents are also stored at the following location:

49 CES/CEA
550 Tabosa Avenue
Holloman AFB
NM, 88330

**Figure 1 XU854 Able 51 Area MRS**




and comment on all information presented in this document.

Information presented in this document can be found in greater detail in the Comprehensive Site Evaluation (CSE) Phases I and II, RI, Interim Measures (IM) Report and other documents contained in the Administrative Record file for this site.

The USAF and USEPA encourage the public to review these documents to gain a better understanding of investigations conducted at this site.

## 2.0 SITE HISTORY AND BACKGROUND

Holloman AFB is located in south-central New Mexico, seven miles west of the city of Alamogordo in Otero County. Holloman AFB occupies approximately 50,763 acres of land and is adjacent to the much larger (2.2 million acre) White Sands Missile Range (WSMR). The southern portion of Holloman AFB contains the flight line, composed of a series of runways running north-south, east-west, and northeast southwest. The Main Base is located in the southeast corner of the installation, where Route 70 borders the site. The Main Base contains housing and administrative buildings. The High Speed Test Track (HSTT) runs north-south and is located northwest of the airfield.

The XU854 Able 51 Area MRS is 47.70-acre site located just west of the Holloman AFB main Base boundary fence, on land that belongs to the WSMR (**Figure 1**). Initially, the site was identified as 47.70-acre Munitions Response Area (MRA) 854 (Shaw

Environmental, Inc. [Shaw], 2010). Able 51 Area MRA was used as a launch facility in the late 1950s and early 1960s for testing of Mace and Matador missiles. Also referred to as the Zero Length site or BQM-34A Drone Launch site, this area was also used for research on mobile launch capability of both manned and unmanned aircraft, using rocket boosters, without the need for prepared airfields. Building 1440, completed in 1962, was used as an observation blockhouse for Mace and Matador missiles and drone launches. Since missile testing ended at the Able 51 Area in the early 1970s, Building 1440 has been either used for storage or has been vacant. Building 1442 was constructed in 1959 as a missile launch facility and is currently vacant. Missiles and aircraft were launched from a fixed launcher as well as mobile launchers tethered to concrete pads within the Able 51 Area. Since the activities were designed for missile launcher and Zero Launch launcher tests as well as testing of a missile guidance system,, it is unlikely that the test items contained high explosives.

A **Modified CSE Phase I** was completed in 2010 (Shaw, 2010). Prior to the start of the CSE Phase I, no MRAs had been discovered at Holloman AFB and it was believed that there was a low probability of a significant number of MRAs being found at the Base. Therefore, the USAF modified the CSE Phase I process by deferring some actions typically performed in a Phase I, to the CSE Phase II, if a Phase II was required.

During the Modified CSE Phase I visual survey was performed at the Able 51 Area MRA. No MEC or MD was observed during the visual survey. Several 5.56 millimeter (mm) blank cartridges were observed in the vicinity of buildings 1440 and 1442 and appeared to be unfired or possibly misfires. No environmental sampling was conducted at the MRA during the CSE Phase I. Since historical use of this site as a missile test/launch facility may have resulted in the release of Contaminants of Potential Concern (COPCs) into the environment, the site was recommended for further evaluation during the CSE Phase II.

A **CSE Phase II** (HDR Environmental, Operations and Construction, Inc., [HDR], 2013) was conducted to determine whether the Able 51 Area (MRA 854) warranted further munitions response action. Detector-aided (i.e., White's Electromagnetic DFX 300 metal detector) visual surveys were performed during this study.

No MEC was found during the visual survey. Munitions Debris (MD) observed included expended 40 millimeter (mm) flares, M74 airburst simulator pieces, projectile parts, expended slap flares, and expended smoke grenades. Small arms debris observed consisted of .22-caliber, 5.56mm, 7.62mm, .38-caliber, .45-caliber, and .50-caliber casings and blanks. Several intact small arms rounds (5.56mm and 7.62mm) were also observed during the visual survey. Intact small arms ammunition (5.56mm and 7.62mm) were documented and reported to Holloman AFB EOD. No missile debris was observed at the MRA.

Since no MEC was found during the visual survey; no MC (metals and explosive constituents) sampling was conducted in the MRA. Although intact small arms ammunition was observed during the visual survey, there is no historical record of small arms training conducted at the MRA and no evidence of formal small arms training (e.g., targets, berms, and firing positions) was observed during the survey. The small arms debris discovered at the MRA during the visual survey suggest recent but minor usage of small arms. Therefore, no soil sampling for lead was conducted in the MRA. Since no MC sampling was performed, no human health or ecological screening was conducted for this site. The CSE Phase II concluded that any human health or ecological risks at this site were expected to be similar to background conditions.

Based on the presence of surface MD within the MRA boundary, the entire 47.70-acre

MRA was designated as the XU854 MRS at the conclusion of the CSE Phase II (**Figure 1**) and recommended for further munitions response action.

An **RI** (FPM Remediations, Inc., 2016) was conducted at the 47.70-acre XU854 MRS to characterize the nature and extent of hazards associated with MEC and MC contamination. The RI field activities included performing instrument-aided (i.e., White's Electromagnetic DFX 300 metal detector) surface clearance, conducting Digital Geophysical Mapping (DGM), performing MC sampling, and intrusively investigating all anomalies with responses above the site-specific threshold established for XU854. DGM surveys create images of underground objects and can be used to determine which objects are likely to be munitions items. This was followed by intrusive investigation of all DGM anomalies and MC sampling.

During the surface clearance, no MEC and no missile debris were found. Two MD items (an expended M18 smoke grenade and a 40mm casing) were discovered and removed from the MRS. All subsurface anomalies were intrusively investigated, meaning they were excavated, except for those anomalies that were determined to be utility lines, which were left in place. No MEC and no missile debris were discovered during the intrusive investigation. Six MD items (2 40mm casings, 3 40mm flare pieces, and a grenade spoon) and 2 pounds (lbs) of small arms debris (5.56 and 7.62mm, and .45 caliber bullet casings and blanks) were discovered and removed from the MRS during the intrusive investigation.

Twelve incremental surface soil samples (0-6 inches) including one duplicate and three replicates were collected at the site in the areas immediately surrounding known historical and suspected missile/rocket launch pad sites.

Explosive compounds associated with missile and rocket propellants were not detected or were well below their respective residential Human Health Screening levels (HHSLs) and Ecological Screening Levels (ESLs). Both nitrate and perchlorate were detected at concentrations well below the residential HHSLs (no ESL values are available for nitrate and perchlorate). As a result, it was concluded that explosives, nitrate, and perchlorate in soil at XU854 do not pose any hazard to human health and the environment, and further human health and ecological risk evaluation of explosives, nitrate, and perchlorate in soil at the XU854 MRS was not necessary. No additional soil sampling for propellant constituents was performed as no evidence of potential contamination (e.g., discolored soil) was found during the RI. Composite surface soil samples for metals and explosives constituents were not collected at the XU854 MRS as no potential MC source (MEC) was found.

Unexploded Ordnance (UXO) Estimator, a software package developed by United States Army Corps of Engineers, was used as a statistical tool to determine the upper bound on the potential residual UXO remaining on the MRS with a 95% confidence level. Based on both available historical information and the results of previous investigations, there is no evidence (i.e., firing points, target structures, impact craters, and areas with high density of surface/subsurface anomalies consistent with target areas) indicating that the site was ever used as a range. This is an underlying assumption for the use of UXO Estimator. According to calculations performed using this software, if a total of 6.34 acres was investigated (area covered by transects and grids at XU854) within the 47.7 acres (size of MRS), then it can be claimed with a 95% confidence that there is no more than 0.44 UXO/acre at XU854. However, based on both historical usage of the MRS (launch facility for testing of missiles) and previous investigations (no UXO identified), the number of potential UXO is most likely closer to zero.

Based on the RI results, the XU854 MRS obtained an MRSPP score of 8 and was recommended for NFA for both MEC and MC (metals, explosives and propellant constituents). Both USEPA and New Mexico Environment Department (NMED) concurred with this recommendation.

**Unanticipated Discovery of Buried Drums during the RI -** During the intrusive investigation of DGM anomalies at XU854, the UXO team uncovered and removed a deteriorated small drum (approximately 25 to 30 gallons [gal]) with thick, grey liquid/sludge (the location of this drum is shown in **Figure 1**). One waste characterization sample was collected and analyzed for toxicity (Toxicity Characteristic Leaching Procedure [TCLP] for VOCs, SVOCs, herbicides/pesticides, PCBs, and 8 Resource Conservation and Recovery Act [RCRA] metals) and for ignitability, corrosivity, and reactivity. The material, determined to be paint related, was characterized as a non-hazardous waste.

Since the further excavation of the area discovered another drum, an additional 100% coverage DGM was performed in the area expanding outward from the original anomaly location to determine the extent of the buried metallic material. As a result of this survey, two irregularly shaped geophysical anomalies/areas, the Northwest Pit and Southeast Pit, were identified.

Intrusive investigations of these geophysical anomalies encountered approximately four additional buried drums which were not excavated. One of the drums contained material which was sampled for a waste characterization profile and analyzed for total VOCs, SVOCs, RCRA metals, herbicides/pesticides, and PCBs. The analytical results indicated no detections for the waste profile characterization, supporting a non-hazardous characterization. For the total SVOCs, the analytical results indicated the presence of one SVOC (butyl benzyl phthalate) above the screening level (USEPA industrial regional screening level).

Based on discovery of buried drums and sampling results of buried material, NMED determined that XU854 is a Solid Waste Management Unit (SWMU) or Area of Concern (AOC), and that it should be added to Table A of Permit Part 4, Appendix 4-A, SWMUs/AOCs requiring Corrective Action. NMED further required investigation and characterization of the contents of the remaining drums and surrounding soil.

**IM for Drum Removal** (FPM, 2017) – The IM was performed at the XU854 MRS to address the potential contamination of the soil due to presence of buried drums/cans with paint-related material and to prevent potential human and environmental exposure to contaminants.

Two irregularly shaped areas, the Northwest Pit and Southeast Pit, identified to contain deteriorated drums/cans with paint-related material were excavated during the IM. The approximate dimensions of excavations were (length x width x depth) 21 x15 x 18 ft (Northwest Pit) and 25 x 9 x 15 ft, (Southeast Pit). A total of approximately 16 deteriorated 25-to 30-gallon (gal) drums, 173 deteriorated 1-gal cans containing thick liquid/sludge, and approximately 103 cubic yards (CY) of impacted soil was removed from the two excavation areas. The excavated material was secured in United Nations (UN)-approved 55-gal steel drums, 65-gal and 95-gal overpack drums, as well as in plastic lined roll-off containers (16-, 20- and 30-CY) pending waste characterization and offsite disposal.

Nine waste characterization samples, three from the Southeast Pit and six from the Northwest Pit, were collected and analyzed for toxicity (TCLP for VOCs, SVOCs, herbicides/pesticides, PCBs, and 8 RCRA metals) and for ignitability, corrosivity, and reactivity. The excavated material was characterized as non-hazardous waste based on the waste characterization profile results.

The drums and roll-off containers containing the excavated waste material and impacted soil were transported to the Corralitos Regional Landfill, Las Cruces, NM.

A total of 17 discrete confirmatory end-point soil samples were collected from the Southeast Pit and Northwest Pit excavations. Eight discrete soil samples were collected from each excavation, six from the sidewalls and two from the floor. The samples were analyzed for VOCs, SVOCs, herbicides/pesticides, 8 RCRA metals, and PCBs.

All end-point soil sampling results were well below their respective NMED residential soil screening levels and/or USEPA residential regional screening levels. Two end-point soil samples taken from the wall and floor of the Southeast Pit excavation had selenium concentration exceeding its respective No-Effect ESL only for the most sensitive receptor (American robin). However, these samples were taken at approximate depths of 10 and 15 feet below ground surface which, according to NMED Risk Assessment Guidance for Investigation and Remediation, exceeds the soil interval (0-5 feet) at which this receptor is potentially affected. All other analytical results were either non-detect or were below their respective ESL values.

Following remedial action activities at the XU854 MRS, site conditions were restored to similar states as previous conditions. The excavated pits were backfilled with the clean soil and the excavation site was graded, compacted, and leveled with the surrounding ground surface.

Based on the confirmatory end-point soil sampling results, there are no human health and ecological risks related to VOCs, SVOCs, pesticides, herbicides, metals, or PCBs at the XU854 MRS and NFA was recommended at the conclusion of the IM Report. NMED approved the NFA recommendation and the site was not added to Table A of Permit Part 4, Appendix 4-A, SWMUs/AOCs requiring Corrective Action.

## 3.0 SITE CHARACTERISTICS

The XU854 MRS consists of relatively flat topography. No wetlands or surface water are associated with the site. The soils at XU854 consist of the Yesum-Nasa complex and the vegetation is consistent with desert scrubland.

Since XU854 MRS was associated with early missile development on Holloman AFB, it is architecturally unique and has potential to yield additional important information. The site is considered eligible to inclusion on the National Register of Historic Places (NRHP). The Laboratory of Anthropology Site Record for this MRS identified two buildings and 30 features associated with various testing programs operated between 1959 and 1970 including variety of concrete pads and stands, construction and/or destruction debris, lumber piles, an iron platform, and sandbag piles. Additionally, modern military debris is scattered throughout the site area. The scatter contains colored bottle g1ass, nuts and bolts, various construction materials, electrical wire, rubber hose, discharged cartridge casings, and tin and metal scraps. According to the Integrated Cultural Resources Management Plan (ICRMP) (Holloman AFB, 2015) only one cultural site, Building 1442, is located within XU854. This cultural site was not affected by the RI or IM field activities.

The XU854 MRS is closed and according to Holloman AFB Installation Development and Design (Holloman AFB, 2011), there are no future land usage changes for this site as it is classified as open space.

The MRS is located outside the main Base boundary fence on land administered by WSMR which is also enclosed by a fence. Access to the MRS is via Holloman AFB through a locked gate. Therefore, access to the XU854 MRS is restricted for the general public, but is open to Base personnel and contractors. Due to manned security access gates, trespasser access to the MRS is unlikely.

## 4.0 SCOPE AND ROLE OF THE ACTION

The NFA response will involve no further investigation or cleanup at the site with respect to MEC, MC (metals, explosives, and rocket/missile propellant constituents), VOCs, SVOCs, pesticides, herbicides, metals, and PCBs

## 5.0 SUMMARY OF SITE RISKS

Based on historical information and the results from previous investigations (no MEC was found in the surface or subsurface of the MRS), there is no explosive hazard at the MRS associated with MEC. In addition, all contaminants of potential concern were either not detected or detected well below their respective residential human health and ecological screening levels. Therefore, there are no human health and ecological risks associated with MC (metals and explosives and propellant constituents), VOCs, SVOCs, pesticides, herbicides, metals, and PCBs at the XU854 MRS.

## 6.0 DESCRIPTION OF THE PREFERRED REMEDY

The USAF recommends NFA for the XU854 MRS based on the RI and IM results. This NFA designation requires no land-use controls or restrictions, and no capital, operational, or maintenance costs and no Five Year Review. An NFA recommendation for the XU854 MRS is supported by the following facts:

- Based on both historical information (there are no records of historical use of explosives and no evidence of craters or other features observed in field data that would suggest the use of explosives) and results from previous investigations (no MEC was found during the CSE Phase I or II, or the RI), which involved the intrusive investigation and excavation of metallic anomalies found at the site, there is no explosive hazard at the MRS associated with MEC.
- Based on the lack of sources for MC (metals and explosive constituents) and based on propellant constituent sampling results, there are no unacceptable risks to human health and the environment posed by the very low levels of contamination at XU854.
- Based on removal of drums/cans with paint related material and surrounding contaminated soil as well as end-point confirmation sampling, there are no human health and ecological risks related to VOCs, SVOCs, pesticides, herbicides, metals, or PCBs at the XU854 MRS.

## 7.0 COMMUNITY PARTICIPATION

The USAF and USEPA will provide existing information regarding the hazard exposure reduction at XU854 to the public through public meetings, the Administrative Record file for the site, and announcements published in the Alamogordo Daily News newspaper, City of Alamogordo, New Mexico. The USAF and the USEPA encourage the public to gain a more comprehensive understanding of the site and the remedial activities that have been conducted at the site.

The dates for the public comment period, details regarding the announcement and location of the public meeting, and the locations of the Administrative Record files, are provided on the front page of this PP.

## 8.0 REFERENCES

EPA 540-R-98-031, Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents; USEPA, July 1999.

FPM, Final Interim Measures Report for Drum Removal XU854 Able 51 Area MRS Holloman AFB New Mexico, March 2017.

FPM, Final Remedial Investigation Report, Able 51 Area Munitions Response Site (MRS) (XU854), Poorman Range MRS (SR864), Ballistics Rain Field MRS (ML865), and Debris Field MRS (RR869a), Holloman AFB, New Mexico, May 2016.

HDR, Final Comprehensive Site Evaluation Phase II Report, Holloman AFB, New Mexico, September 2013. HDR for United States Army Corps of Engineers (USACE) - Omaha District.

Holloman AFB, Installation Development and Design Holloman AFB, New Mexico, 2011.

Holloman AFB. Integrated Cultural Resources Management Plan, Holloman AFB, New Mexico, 2015.

Shaw, Final Modified Comprehensive Site Evaluation Phase I Report, Holloman AFB, New Mexico, May 2010. Shaw for USACE - Omaha District.

## 9.0 GLOSSARY AND TERMS

**Administrative Record -** The body of documents that "forms the basis" for the selection of a particular response at a site. Documents that are included are relevant documents that were relied upon in selecting the response action. Until the Administrative Record is certified, it shall be referred to as the "Administrative Record file."

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) -** Congress enacted CERCLA (42 USC § 9620 et seq.), commonly known as Superfund, on 11 December 1980. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment.

**Digital Geophysical Mapping (DGM)** - Techniques that utilize electronic instruments to detect, measure, and map the physical characteristics of buried source items (i.e., anomalies).

**Explosive Hazard** – A condition where danger exists because explosives are present that may react (e.g., detonate, deflagrate) in a mishap with potential unacceptable effects (e.g., death, injury, damage) to people, property, operational capability, or the environment.

**Intrusive Investigation -** An activity that involves or results in the penetration of the ground surface, and in many cases, the excavation of metallic anomalies located underground.

**Military Munitions** – Military munitions means all ammunition products and components produced for or used by the armed forces for national defense and security, including confined gaseous, liquid, and solid propellants; explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives, and chemical warfare agents; chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges; and devices and components thereof.

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

**Munitions and Explosives of Concern (MEC)** – Specific categories of military munitions that may pose unique explosives safety risks, including unexploded ordnance, discarded military munitions, or munitions

constituents present in high enough concentrations to pose an explosive hazard.

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

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

**Munitions Response Area (MRA)** - Any area on a defense site that is known or suspected to contain unexploided ordnance (UXO), discarded military munitions (DMM) or munitions constituents (MC) (e.g., former ranges or munitions burial areas)

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

**National Oil and Hazardous Substance Pollution Contingency Plan (NCP) -** Revised in 1990, the NCP provides the regulatory framework for responses under CERCLA.

**Range** – A designated land or water area that is set aside, managed, and used for range activities by the DoD. The term includes firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas. The term also includes airspace areas designated for military use.

**Remedial Action (RA) -** Those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health, welfare, or the environment.

**Remedial Investigation (RI) -** The RI process can be thought of as the site characterization phase in which the nature and extent of contamination is determined and potential risks posed to human health and the environment are evaluated. The RI gathers necessary information to develop and evaluate remedial alternatives for the site. Per 40 CFR 300.430(d), the purpose of the RI is to "collect data necessary to adequately characterize the site for the purpose of developing and evaluating effective remedial alternatives."

## USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Proposed Plan for the XU854 Able 51 Area Munitions Response Site (MRS) at Holloman AFB is important. Comments provided by the public are valuable in helping the Air Force and United States Environmental Protection Agency select a final cleanup remedy for the site.

You may use the space below to write your comments and mail to the address given below. Comments must be postmarked by 14 December 2017. If you have additional questions, comments or concerns please call 575-572-7381. Those with electronic communications capabilities may submit their comments to the Air Force at the following e-mail address: 49wg.paoffice@us.af.mil.

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Name: _____

Address: _____

City: _____

State: _____ Zip: _____

*Telephone: (_____)_____

*E-mail: _____

*Optional

Please send all comments to the following address:

49th Wing Public Affairs
490 First Street, Building 29,
Suite 1500
Holloman AFB, NM 88330