



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



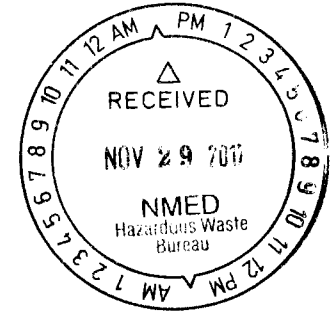
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21 November 2017

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 FI857a Former Bunker Munitions Response Site
 Holloman Air Force Base, NM**

Dear Mr. Hendrickson,

Holloman AFB is pleased to submit the Draft-Final Proposed Plan for the FI857a Former Bunker 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: 2017.11.22 08:12:24 -07'00'

ADAM M. KUSMAK, GS-13, USAF

Attachment: Draft-Final Proposed Plan FI857a 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
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(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

**FI857a FORMER BUNKER
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**

November 2017

PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

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PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

1.0 INTRODUCTION

This Proposed Plan (PP) concerning the FI857a Former Bunker 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 Non-Time Critical Removal Action (NTCRA) and provides reasons for this preference at the Former Bunker 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 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, Engineering Evaluation/Cost Analysis, and other documents contained in the Administrative Record file for this site.

MARK YOUR CALENDAR

PUBLIC COMMENT PERIOD:

December 30, 2017 – January 29, 2018

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 **January 29, 2018** 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 FI857a Former Bunker 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 FI857a Former Bunker MRS, please see the Administrative Record at the following web address:

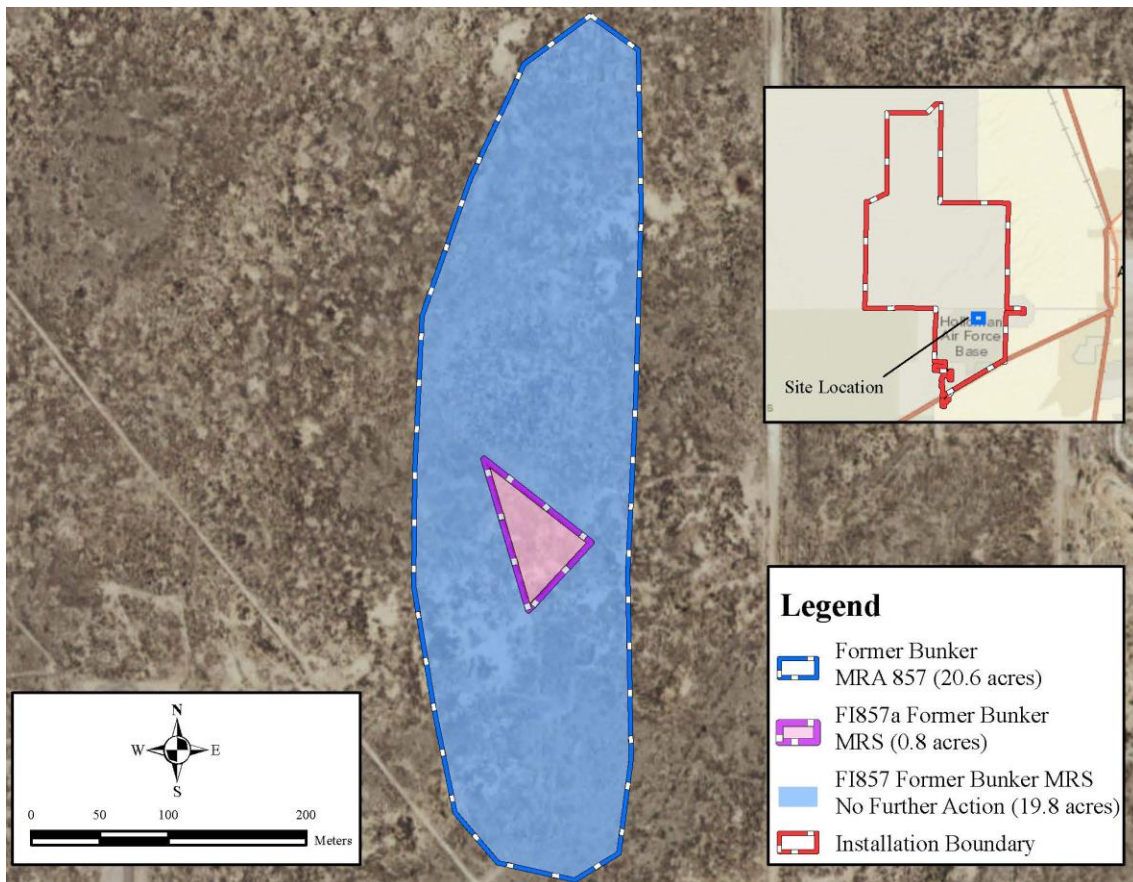
<http://afcec.publicadmin-record.us.af.mil>

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

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

PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

Figure 1 FI857a Former Bunker MRS



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. 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 runs north-south and is located northwest of the airfield.

The FI857a Former Bunker MRS is 0.8-acre site located east of Runway 22-16 and north-northeast of a water tower (**Figure 1**). Initially the site was identified as a 20.6-acre Munitions Response Area (MRA); however, the size of the site was reduced to 0.8 acres at the conclusion of the CSE Phase II to include only the area where Munitions Debris (MD) items were discovered during the CSE Phase II visual survey.

According to historical information, the site is a suspected former storage bunker and a former security forces training area. The 1996 archaeological survey performed at

PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

this site (Sale et al., 1996a) identified bomb tail section, four missile casings, nine bomb casings, drone parts, and a 1942 .30-06-caliber cartridge within the remnants of a collapsed wooden tower. Laboratory of Anthropology Site Record identifies one location at the site described as an “ammo storage (approx. 70 x 70 x 10’) hole” with ammunition boxes and approximately 350 .30-06 cartridges along with wood posts, wire mesh, and a sawhorse.

A **Modified CSE Phase I** was completed in 2010 (Shaw Environmental, Inc., 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 has 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 is required. For this Modified CSE Phase I, it was determined that a Conceptual Site Model, Munitions Response Site Prioritization Protocol (MRSPP), and Hazard Ranking System scoring elements were not required. The activities performed during the CSE Phase I included identification and review of data repositories located both on and off the installation, interviews with base personnel, and visual surveys.

CSE Phase I investigation at FI857 MRA included a visual survey. No evidence of MEC was found. The remains of a wooden platform, wood debris, and piles of lumber were observed at the MRA.

A **CSE Phase II** was completed in 2013 (HDR Operations and Construction, Inc., 2013). The visual survey was conducted to identify the location and features of the site as well as to determine whether evidence of MEC is present at the site and whether MC (metals and explosives constituents) are present above regulatory screening levels.

Large amounts of wooden debris consistent with possible towers as well as one large

rectangular area of wood debris from an unknown structure were observed during the visual survey. Two small depressions associated with wood and wire mesh debris were also documented.

Small arms debris identified at the site included .22, .32, 7.62 mm, and .50 caliber casings, as well as a 7.62 mm link and a .50 cal link. MD consisting of a grenade pin, one (1) M38 practice bomb box fin, and nine (9) M38 practice bomb casings with no spotting charges present were observed at the MRA. These inert practice bombs, which contained no explosives, were nearly intact with no damage and grouped together indicating that they were likely disposed of at the location. Other items of interest were four light fiberglass mock munitions, one displaying a bomb lug, lying near a wire mock aircraft. One (1) flight controller box, possibly from a drone aircraft, was also documented at the MRA. No MEC was encountered during the visual survey; therefore, no samples were collected for analysis of metals and explosives constituents as no MEC source was identified at the MRA.

Based on the presence of small arms debris thirty seven (37) surface soil samples were collected and analyzed for lead using X-Ray Fluorescence. Lead analysis results ranged from below the Level of Detection (LOD) (12 milligrams per kilograms [mg/kg]) to 24 mg/kg. Of the 37 samples collected, 18 were below the LOD (12 mg/kg). No samples exceeded the USEPA residential Human Health Screening Level (HHSL) of 400 mg/kg. Based on lead sampling results, it was concluded that there are no human health and ecological risks related to lead. The maximum and mean lead concentrations exceeded the ecological soil screening level for only the most sensitive receptor category, and were less than the 50th percentile lead background concentration for the western United States. Therefore, it was determined that lead does not pose a

PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

potential ecological risk at the Former Bunker MRS.

Based on CSE Phase II visual survey results the FI857 MRA was split into two MRSs: FI857 Former Bunker (19.8 acres) and FI857a Former Bunker (0.8 acres) (**Figure 1**). MEC and MC above the level of concern were not found at both sites; however, FI857a contains surface MD.

Both sites FI857 and FI857a were prioritized for further munitions response actions, based on relative risk, using the MRSPS scoring system. The MRS Priority is determined by selecting the highest rating from the Explosives Hazard Evaluation, Chemical Hazard Evaluation, and Human Health Hazard Evaluation modules and ranges from 1 to 8. Priority 1 and 8 indicate the highest and the lowest potential hazards, respectively. Only a site with a chemical warfare hazard can receive an MRSPS Priority of 1.

FI857 obtained an MRSPS score of 8 and was recommended for no further action, while FI857a obtained an MRSPS score of 7 and was recommended for further munitions response action. The relatively low potential hazard priority score of 7 was based on the fact that no MEC was found during the visual survey, however, the surface MD finds indicated the potential for the presence of subsurface MEC.

A NTCRA was completed in 2017 (FPM Remediations, Inc., 2017). The NTCRA field activities at the FI857a MRS included 100 percent instrument-aided surface clearance, 100 percent coverage Digital Geophysical Mapping (DGM) and intrusive investigation and excavation of all anomalies with responses above the site-specific threshold established at FI857a.

No MEC and a total of approximately 80 pounds of MD was removed from the MRS during the surface clearance.

The 100 percent coverage DGM survey, which creates images of metallic objects

underground, identified 104 discrete subsurface anomalies above the site-specific threshold (46 nanoTeslas per meter). All identified anomalies were intrusively investigated, meaning they were excavated, and removed from the MRS. No MEC or MD was found during the intrusive investigation. Approximately 17 pounds of non-MEC related material, cultural debris, was removed from the MRS during the intrusive investigation.

Since no potential source for MC contamination (i.e., no MEC finds or areas with significant amounts of MD) was identified during the NTCRA, no MC soil sampling was performed.

Based on the NTCRA results, the FI857a MRS obtained an MRSPS score of 8 (indicating the lowest level of risk) and was recommended for NFA for both MEC and MC.

3.0 SITE CHARACTERISTICS

The FI857a MRS is currently located on the active base property and consists of relatively flat topography. No wetlands or surface water are associated with the FI857a MRS. Soils associated with the FI857a MRS consists of the Yesum-Nasa complex and the vegetation is consistent with desert scrubland.

There are 716 buildings within a two-mile radius of the FI857a MRS, primarily to the south. These buildings include Base residential housing, recreational, operational and mission support buildings, and buildings that support the flight line. No buildings are located at the MRS.

FI857a MRS was part of the much larger historic/archaeological site which included drone parts as well as Security Forces Confidence Course (climbing poles and walls, rope ladders, and fox holes). This historic/archaeological site was recorded and determined not

PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

eligible for the National Register of Historical Places as of July 23, 1996.

The FI857a MRS is unused 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.

There are no fencing or other controls associated with FI857a; however, access to Holloman AFB requires admittance through the security gate and there is a fence around the Installation. Therefore, access to this site is restricted for the general public, but is open to Base personnel, contractors, Base residents, and visitors.

4.0 SCOPE AND ROLE OF THE ACTION

The recommended NFA response will involve no further investigation or cleanup at the site with respect to MEC or MC.

5.0 SUMMARY OF SITE RISKS

Based on the results from previous investigations (no MEC was found in the surface or subsurface of the MRS), there is no explosive hazard at the FI857a MRS associated with MEC.

Based on lead sampling results, there are no unacceptable risks to human health and the environment posed by the very low levels of lead contamination from potential small arms usage. In addition, since no potential source for MC contamination associated with MEC was found during the previous investigations, no MC soil sampling for analysis of analytes associated with MEC (i.e., metals and explosives constituents) was performed. As a result, there are no human health and ecological risks associated with MC (metals and explosives constituents) at the FI857a MRS.

6.0 DESCRIPTION OF THE PREFERRED REMEDY

The USAF recommends NFA for the FI857a MRS based on the NTCRA 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 FI857a MRS is supported by the following facts:

- No MEC was found at the MRS during the 100 percent surface and subsurface clearance of the site during the NTCRA. Therefore, 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 lead sampling results, there are no unacceptable risks to human health and the environment posed by the very low levels of contamination at FI857a.

7.0 COMMUNITY PARTICIPATION

The USAF and USEPA will provide existing information regarding the hazard exposure reduction at FI857a 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 details regarding the public comment period, the announcement and location of the public meeting (if required), 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.

PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

FPM Remediations, Inc., Non-Time Critical Removal Action Report FI857a Former Bunker MRS, Holloman AFB, New Mexico, August 2017.

Holloman AFB Installation Development and Design, 2011.

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

Sale, M., Gibbs, V., Landreth, M., Ernst, M., & McCarson, B. 1996. North Main Base Cultural Resources Survey, Holloman Air Force Base, Otero County, New Mexico. Plano: GEO-Marine Inc.

Shaw Environmental Inc., 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 the Superfund act, 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,

PROPOSED PLAN
FI857a – Former Bunker Munitions Response Site
Holloman Air Force Base, New Mexico

projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal.

Munitions Response – Response actions, including investigation, removal actions and remedial actions to address the explosives safety, human health, or environmental risks presented by unexploded ordnance, 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 unexploded ordnance, discarded military munitions or munitions constituents (e.g., former ranges or munitions burial areas).

Munitions Response Site (MRS) - A discrete location within a munitions response area 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 Comprehensive Environmental Response, Compensation, and Liability Act.

Range – A designated land or water area that is set aside, managed, and used for range activities by the Department of Defense. 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 - Those actions consistent with a 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.”

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

