

Draft Final Proposed Plan

EOD Range (SR502)

Air National Guard Military Munitions Response Program

Duluth Air National Guard Base Duluth, Minnesota

Prepared For:



Air National Guard

Prepared by:



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November 2017

The public is invited to comment on a Proposed Plan for No Further Action at the EOD Range (SR502) Munitions Response Site at the Duluth Air National Guard Base.

PUBLIC COMMENT PERIOD

15 December 2017 through 15 January 2018

PUBLIC MEETING*

*A public meeting will be held if requested by the public. Interested parties should contact Captain Ryan Blazevic, Environmental Manager on or before 30 December 2017.

Comments on the Proposed Plan will be accepted during the public comment period. A sheet for comments is attached to the last page of this Proposed Plan. Comments or questions concerning this Proposed Plan, or the Preferred Alternative, should be addressed to:

Captain Ryan Blazevic
Environmental Manager
Duluth Air National Guard Base, 148th FW/CEV
4630 Mustang Drive
Duluth, MN 55811-7338
Ryan.M.Blazevic.mil@mail.mil
218-788-7868

For more information, please visit the Information Repository, which contains project documentation such as work plans and reports:

Duluth Public Library

520 W. Superior Street
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Hours of Operation:

Monday – 10:00 am to 800 pm
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Thursday– 10:00 am to 800 pm
Friday – 10:00 am to 6:00pm
Saturday – 10:00 am to 5:00pm

US Air Force Administrative Record

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

Air National Guard, 148th Fighter Wing

<http://www.148fw.ang.af.mil/>

Proposed Plan – Explosive Ordnance Disposal Range (SR502)

Important Information

PUBLIC COMMENT PERIOD:

15 December 2017 – 15 January 2018

The ANG will accept written comments on the Proposed Plan during the public comment period.

PUBLIC MEETING

A public meeting on the Proposed Plan will be held, if requested

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investigation and subsequent remediation of DoD facilities is managed through its Defense Environmental Restoration Program (DERP), which encompasses the MMRP. The DERP strictly adheres to and complies with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The ANG is the lead agency responsible for the implementation of the DERP at Duluth ANGB, with regulatory support from the Minnesota Pollution Control Agency (MPCA).

The Proposed Plan is part of the community relations program, which is a component of the requirements of Section 117(a) of the CERCLA. It follows the requirements of the U.S. Environmental Protection Agency (USEPA) guidance provided in *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents*, EPA 540-R-98-031 (USEPA, 1999). This Proposed Plan provides a summary of the site characteristics, risks, removal actions implemented to date, and the ANG's rationale for recommending the stated Preferred Alternative (see page 6).

This Proposed Plan presents the Preferred Alternative of remedial action for the EOD Range (SR502) MRS to the public, and solicits comments on the recommendation. Upon review and finalization of the Proposed Plan, a Record of Decision will be prepared, which will formally document the final remedial alternative selected by the ANG.

This Proposed Plan highlights key information contained in the Final Remedial Investigation (RI)/ Feasibility Study (FS) Report (Munitions Management Group, LLC – TLI Solutions, Inc. Joint Venture [MMG-TLI JV], 2016). This report is included in the Administrative Record, and is available to the public in the Information Repository. The reader should refer to the Information Repository for more information regarding investigation results and the remedial alternatives developed for the EOD Range (SR502) MRS.

1.0 Introduction

This Proposed Plan is presented by the Air National Guard (ANG) to involve the public in the remedial action selection process for the Explosive Ordnance Disposal (EOD) Range (SR502) Munitions Response Site (MRS) at the Duluth Air National Guard Base (ANGB), Duluth, Minnesota (**Figure 1**).

The work conducted to date at the EOD Range (SR502) MRS has been performed under the Military Munitions Response Program (MMRP), a program initiated by the Department of Defense (DoD) in 2002 to address potential munitions and explosives of concern (MEC) and munitions constituent (MC) contamination. The

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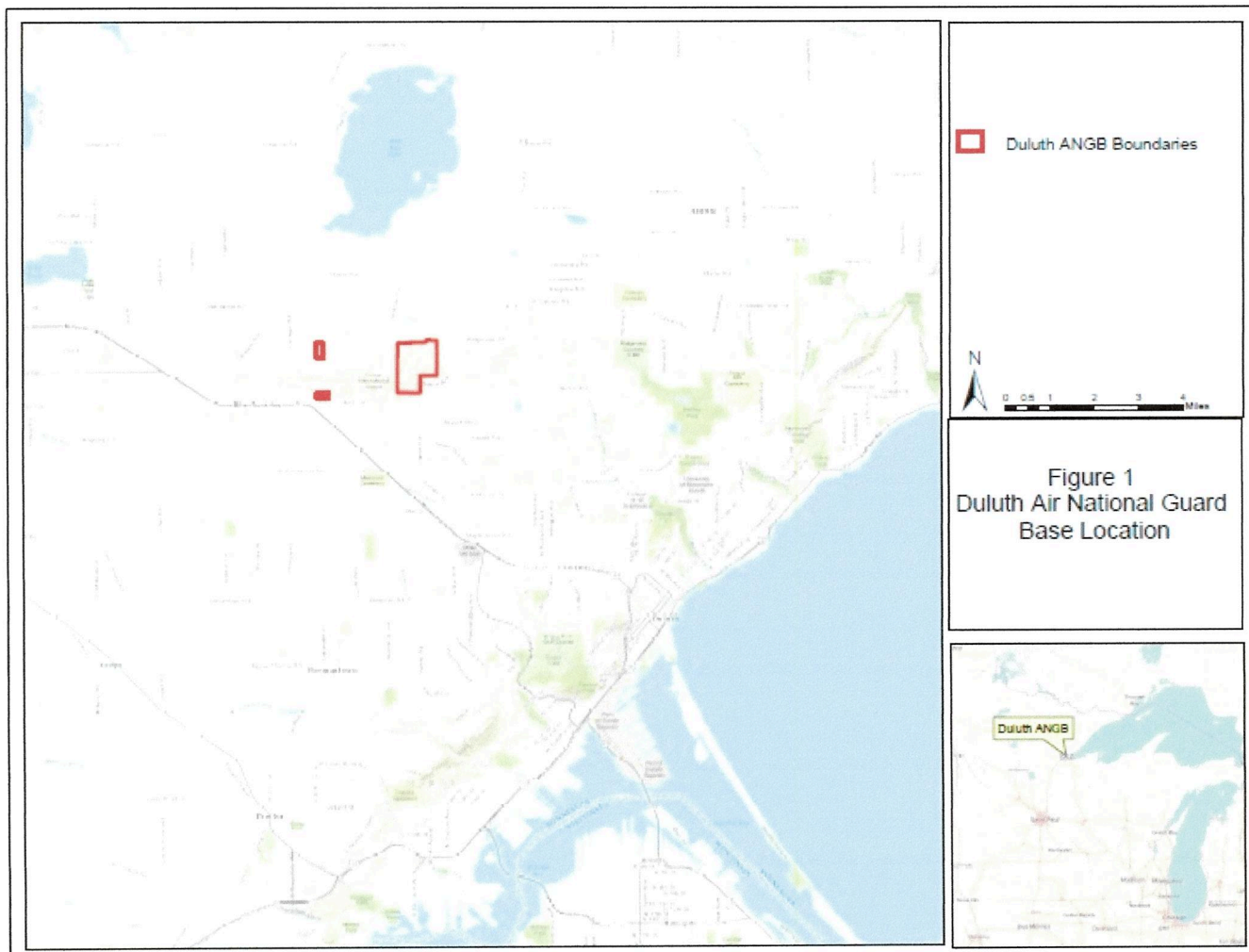


Figure 1. Duluth Air National Guard Base Location

Public Involvement Process

Local community members, landowners, and other interested parties are encouraged to review this Proposed Plan and submit comments. A comment form is attached to the last page of this Proposed Plan. The ANG and MPCA will consider comments from the public prior to final selection of a remedial action and approval of any action. Information on how to comment is provided in the Community Participation section (see Page 7).

Public comments on the Proposed Plan will be accepted during a 30-day public review period. A public meeting, if requested, will be held during the public review period to explain the Proposed Plan and the Preferred

Alternative. Public comments will be considered during preparation of the Record of Decision.

2.0 Site History and Background

Operational History

The Duluth ANGB is co-located with Duluth International Airport in St. Louis County, Minnesota, approximately 7 miles northwest of the City of Duluth, Minnesota (**Figure 1**). The main base occupies 153.3 acres on the northeast corner of the airport. The base consists of 37 buildings – 18 industrial and 19 administrative. The normal base population is approximately 420 personnel, but surges to approximately 1,100 personnel occur once each month during drill sessions. The main base portion of Duluth ANGB is a secure facility that is fenced on the north, east,

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and south sides. Security personnel from the 148th Fighter Wing (FW) and the Duluth Airport Authority (DAA) patrol the base/airport at all times (AECOM, 2010).

The EOD Range (SR502) MRS consists of a rectangular shaped parcel that is approximately 0.30 acres in size and is located west of the main base, northeast of the Duluth ANGB's active munitions storage area (MSA) (**Figure 2**). The MRS is on property owned by the DAA, outside of the airport security fencing. Access from the south is through a locked gate controlled by DAA personnel. There are no access restrictions from the north, east, or west.

The EOD Range (SR502) MRS was used by the U.S. Air Force (USAF) from 1960 to 1994 for open burn/open detonation (OB/OD) training activities, and to detonate and dispose of munitions. Munitions typical to OB/OD operations that may have been used for training or disposed of at this range include detonators, blasting caps, fuses, boosters, bursters, primers, squibs, bulk high explosives, demolition charges, and pyrotechnics (flares, signals, simulators, etc.).

The EOD Range (SR502) MRS was closed in 1994. The MRS is currently a flat, primarily grassy area located within a restrictive easement owned by the DAA, outside of the airport security fencing. The DAA established the restrictive easement to create a buffer area around the active MSA (**Figure 2**). The restrictive easement prohibits any development within the buffer area, including at the EOD Range (SR502) MRS, due to its proximity to the active MSA.

Previous Investigations

Comprehensive Site Evaluation Phase I

URS performed a Comprehensive Site Evaluation (CSE) Phase I investigation in 2007, which identified potential impacted soil and groundwater at the EOD Range (SR502) MRS from previous OB/OD activities. The result of the CSE Phase I recommended sampling of potentially impacted soil and groundwater to determine if any MC had been released into the environment, and to perform geophysical mapping of the site to assess the extent and density of any subsurface anomalies.

Comprehensive Site Evaluation Phase II

A CSE Phase II investigation was conducted by AECOM in

2010. It included the soil and groundwater sampling and geophysical mapping recommended in the CSE Phase I, to determine if further munitions response activities were required at the MRS.

Soil and groundwater samples were collected from borings and temporary well points within the MRS and analyzed for MC. Composite surface and subsurface soil samples were also collected from the area of the former OB/OD pit in the center of the MRS. The results of the sampling showed low levels of site-related MC in the soil and groundwater. The MC were detected below screening criteria. The CSE Phase II report recommended no further sampling of soil (surface and subsurface), surface water, sediment, and groundwater for MC.

Digital Geophysical Mapping (DGM) was also performed at the MRS utilizing electromagnetic (EM) sensing equipment to define the extent and density of any subsurface geophysical anomalies that could represent MEC or munition debris (MD). The results of the DGM identified 19 subsurface anomalies. Based upon these findings, a non-time critical removal action (NTCRA) was recommended to investigate the anomalies and dispose of any MEC or MD encountered.

Engineering Evaluation/Cost Analysis

An Engineering Evaluation/Cost Analysis (EE/CA) was performed by AECOM in 2011 to evaluate removal alternatives at the MRS. Three alternatives were examined in the EE/CA for the EOD Range (SR502) MRS using the alternative technology selection criteria established by the NCP. The three alternatives evaluated were 1) No Action; 2) Institutional Controls; and 3) MEC Removal. After a comparative analysis, Alternative 3 (MEC Removal) was recommended to address the potential MEC hazard at the EOD Range (SR502) MRS because it would provide a permanent remedy by physically treating (via explosive detonation) and removing the hazard from the site.

Non-Time Critical Removal Action Completion Report

The NTCRA was performed at the MRS by AECOM in October and November 2011. Fieldwork was undertaken to locate and excavate the 19 geophysical anomalies

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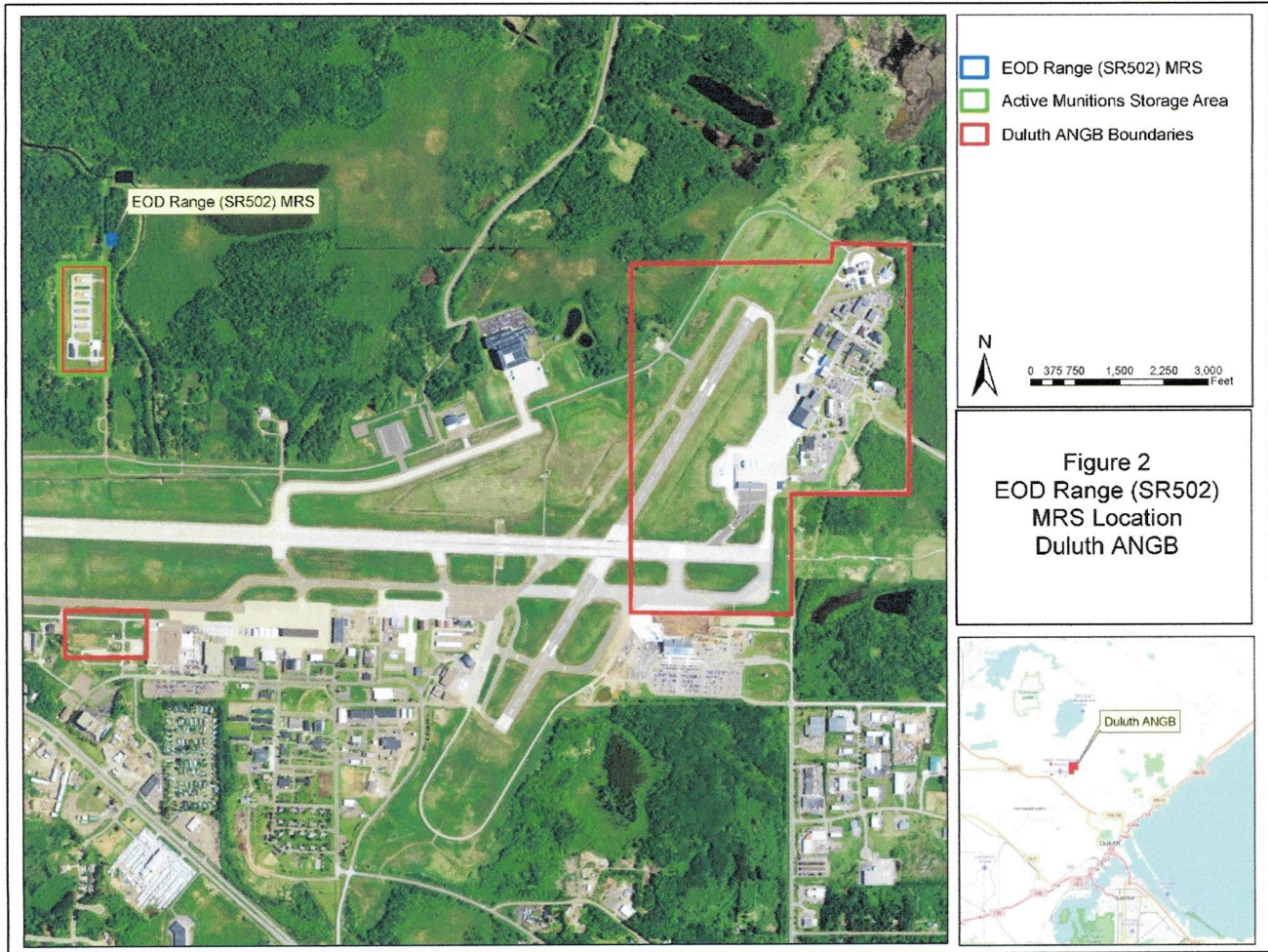


Figure 2. EOD Range (SR502) MRS Location

identified in the CSE Phase II; inspect the anomaly sources to determine the associated hazards (if any); explosively dispose of any MEC and material documented as an explosive hazard (MDEH) in accordance with DoD requirements; and dispose of material documented as safe (MDAS). In addition to the 19 anomalies, a “mag and dig” operation was performed across the site to complete MEC clearance of the MRS.

For the “mag and dig” operation, an unexploded ordnance (UXO) clearance team, consisting of a senior UXO supervisor (SUXOS) and two UXO technicians II, used magnetometers (Schonstedt GA 52cx and White metal detectors) to remove and clear MEC/material potentially presenting an explosive hazard (MPPEH) from the ground surface and subsurface. The UXO clearance team swept the MRS utilizing evenly distributed search lanes across the MRS, not exceeding a width of five feet.

Items on or partially exposed at the ground surface were cleared prior to magnetometer sweep activities. Detected subsurface anomalies were intrusively investigated utilizing a hand shovel. Once the probable source of the anomaly was removed, the excavation was checked with the magnetometer to verify the source was adequately removed. If an anomaly remained, the hole was further excavated until clear of all metallic anomalies.

Approximately 666 pounds of material were recovered from the EOD Range (SR502) MRS, including one MK-82 concrete-filled inert practice bomb weighing 565 pounds, and approximately 101 pounds of scrap metal. All material was designated as MDAS and transferred to the 148th FW EOD unit for disposal at an on-base metal recycling facility.

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Based on the results of the NTCRA, the NCTRA Completion Report recommended that a streamlined desktop RI/FS be completed to evaluate any residual risk from potential subsurface MPPEH at the MRS.

Remedial Investigation and Feasibility Study

MMG-TLI JV completed a streamlined desktop RI/FS in May 2016. The RI/FS report provided a detailed analysis of remedial action alternatives for the EOD Range (SR502) MRS.

A desktop RI was performed using historical data in combination with a limited visual survey of the MRS. The purpose of the RI was to characterize MEC and to identify and quantify associated MEC hazards.

The FS served to document the conclusions of the RI and to document that no further action is warranted at the MRS. After the detailed analyses of all alternatives, a single remedial action was recommended as the Preferred Alternative for implementation. The RI/FS findings are the basis for the information of this Proposed Plan.

3.0 Site Characteristics

The EOD Range (SR502) is located outside of airport fencing, on a restrictive easement owned by the DAA that prohibits development at the site. The MRS consists of approximately 0.3 acres of flat, primarily grassy land and is bordered to the north and east by wooded areas, to the south by a grassy field, and to the west by a gravel road (**Figure 3**). Access from the south is restricted by a locked gate. There are no access restrictions to the north, east, and west.

The closest surface water is a drainage ditch and detention basin that is part of the Duluth International Airport storm water drainage system. The ditch is approximately 250 feet to the east of EOD Range (SR502) MRS, and the detention basin is approximately 750 feet to the north.

The area will continue to serve as a buffer area around the MSA located to the south of the MRS. As a buffer, a restriction of no future development is in place.

4.0 Scope and Role of Response Action

The remedial strategy for the EOD Range (SR502) MRS reflects the public and MPCA interest in mitigating risk and protecting the public where areas of historic MEC hazards have been present. In keeping with this objective, multiple remedial alternatives were evaluated for the MRS. These remedial alternatives took into account the extensive investigations and remedial actions previously performed prior to the RI/FS. Based on the results of the CSE Phase II and the NTCRA, No Further Action is recommended for the EOD Range (SR502) MRS.

5.0 Summary of Remaining Site Risks

A qualitative MEC exposure pathway analysis was conducted using information from previous studies and the RI site visit to determine the potential explosive hazards to humans from MEC. The pathway analysis considered the following factors:

- Presence and nature of MEC sources;
- Site characteristics that affect pathways between the MEC and humans; and
- Types of activities that may result in exposure.

Results of the MEC pathway analysis for the EOD Range (SR502) MRS showed that an incomplete pathway exists for current and future receptors for possible MEC exposure based upon the following:

- No MD or MEC identified on the surface during previous investigations;
- DGM during the CSE Phase II identified 19 subsurface anomalies. All 19 anomalies were removed during the NTCRA and designated as MDAS. No MEC or MDEH were identified during the removal action; and
- 100 percent mag and dig to detectable depth was performed during the NTCRA, resulting in no MEC or MDEH identified.

The presence of contaminant sources, release mechanisms and environmental transport media, potential exposure routes, and potential receptors is necessary for an exposure pathway to be complete. An incomplete pathway means that exposure cannot occur.

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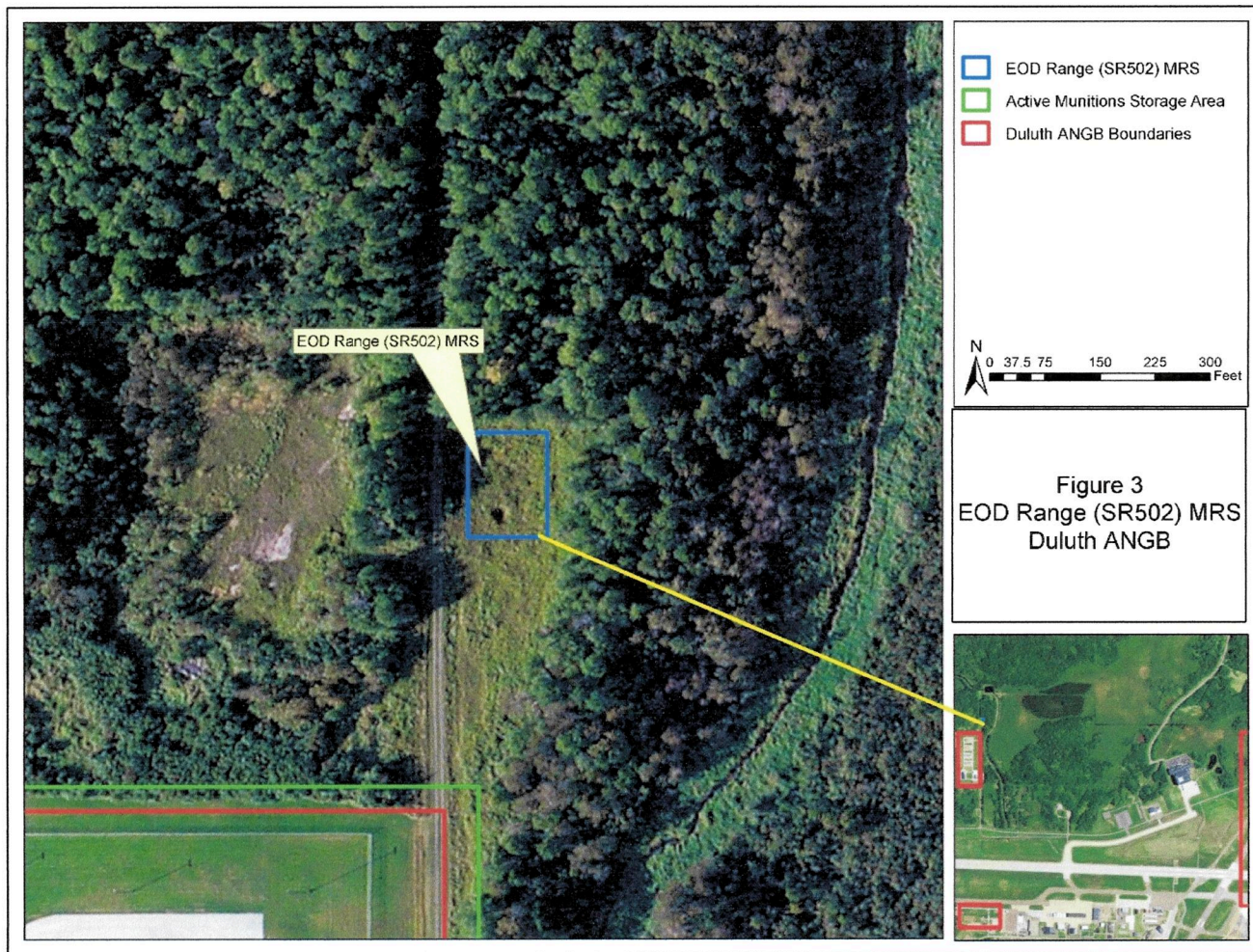


Figure 3. EOD Range (SR502) MRS

In regards to MC at the EOD Range (SR502) MRS, no further sampling was recommended and approved based on analytical results of soil and groundwater samples collected during the CSE Phase II.

6.0 Remedial Action Objectives

No Further Action is recommended, and no remedial action objectives (RAO) are proposed for the final remedy at the EOD Range (SR502) MRS. This is based on the results of previous investigations that show:

- An incomplete MEC exposure pathway exists for current and future receptors. Neither MD nor MEC has been identified on the surface during previous investigations. Also, no MEC or MDEH were identified during the NTCRA.

- MC in soil and groundwater samples collected during the CSE Phase II were detected below screening criteria.

7.0 Preferred Alternative

The No Action Alternative is the Preferred Alternative. Based on information currently available, there has not been a release of MC that threatens human health or the environment, and the MEC exposure pathway is incomplete. The Preferred Alternative has no cost and is immediately implementable. The ANG expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA §121(b):

- Be protective of human health and the environment;
- Comply with ARARs;

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- Be cost-effective;
- Utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and
- Satisfy the preference for treatment as a principal element.

8.0 Community Participation

The ANG is soliciting public comments on the Preferred Alternative proposed for the EOD Range (SR502) MRS. A comment form is attached at the back of this Proposed Plan. The public is encouraged to comment, and comments received will be considered before any remedial action is selected and approved. Written comments on this Proposed Plan will be accepted by mail or email throughout a 30-day public comment period from 14 November 2017 through 15 December 2017. Please submit written comments to Captain Ryan Blazevic, who can also be contacted for additional information:

Captain Ryan Blazevic
Environmental Manager
Duluth Air National Guard Base, 148th FW/CEV
4630 Mustang Drive
Duluth, MN 55811-7338
Ryan.M.Blazevic.mil@mail.mil
218-788-7868

The comment period includes an opportunity for a public meeting where the ANG would present more detailed site information. A meeting will be held if there is a request from members of the public before the end of the comment period. Representatives from the ANG and the MPCA will be present at the meeting to explain this Proposed Plan, listen to concerns raised, answer questions, and accept public comments.

Since the Preferred Alternative is proposed based on current information, it may be modified or changed in response to public comments received or significant new information. The ANG, in consultation with the MPCA, will consider public comments received during the public meeting and comment period. After considering the public comments, the ANG will make a final decision

concerning future action to be taken at the EOD Range (SR502) MRS. This decision will be presented in a Record of Decision, which will include a “Responsiveness Summary” presenting responses to public comments on this Proposed Plan.

9.0 Acronyms and Abbreviations

| | |
|------------|---|
| ANG | Air National Guard |
| ANGB | Air National Guard Base |
| ARAR | Applicable or Relevant and Appropriate Requirements |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CSE | Comprehensive Site Evaluation |
| DAA | Duluth Airport Authority |
| DERP | Defense Environmental Restoration Program |
| DGM | Digital Geophysical Mapping |
| DoD | Department of Defense |
| EE/CA | Engineering Evaluation/Cost Analysis |
| EM | Electromagnetic |
| EOD | Explosive Ordnance Disposal |
| FS | Feasibility Study |
| FW | Fighter Wing |
| MC | Munitions Constituents |
| MD | Munitions Debris |
| MDAS | Materials Documented as Safe |
| MDEH | Materials Documented as an Explosive Hazard |
| MEC | Munitions and Explosives of Concern |
| MMG-TLI JV | Munitions Management Group, LLC – TLI Solutions, Inc. Joint Venture |
| MMRP | Military Munitions Response Program |
| MPCA | Minnesota Pollution Control Agency |
| MPPEH | Material Potentially Presenting an Explosive Hazard |
| MRS | Munition Response Site |
| MSA | Munitions Storage Area |
| NCP | National Oil and Hazardous Substance Pollution Contingency Plan |
| NTCRA | Non-Time Critical Removal Action |
| OB/OD | Open Burn / Open Detonation |
| RAO | Remedial Action Objective |
| RI | Remedial Investigation |
| USAF | United States Air Force |

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USEPA United States Environmental Protection Agency

10.0 Glossary

Administrative Record – A record or file made available to the public that includes all information considered and relied on in selecting a remedy for a site.

Anomaly – Any identified subsurface mass that may be geologic in origin, unexploded ordnance (UXO), or some other man-made material. Such identification is made through geophysical investigation and reflects the response of the sensor used to conduct the investigation.

Applicable or Relevant and Appropriate Requirements – Applicable requirements are cleanup standards, standards of control, and other substantive environmental protection requirements promulgated under Federal or state environmental law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstance found at a CERCLA site. Relevant and appropriate requirements are cleanup standards that, while not “applicable,” address situations sufficiently similar to those encountered at a CERCLA site where their use is well suited to the particular site.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – A Federal law enacted in 1980 and amended in 1986. CERCLA, administered by the USEPA and commonly known as Superfund, outlines a process to evaluate hazardous waste conditions that may pose a threat to human health or the environment.

Information Repository – A public file containing technical reports, reference documents, and other materials relevant to the site cleanup.

Military Munitions Response Program (MMRP) – A program established by the Department of Defense to manage and address environmental impacts and health and safety concerns at former military ranges.

Munitions and Explosives of Concern (MEC) – Military munitions that are 1) unexploded ordnance, as defined in 10 U.S.C. 101(e)(5); 2) abandoned or discarded, as defined in 10 U.S.C. 2710(e)(2); 3) MC (e.g., TNT, RDX)

present in soil, facilities, equipment, or other materials in high enough concentrations so as to pose an explosive hazard.

Munitions Constituent (MC) – Any material that originates from UXO, DMM, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.

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

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

Proposed Plan – A public participation document detailing the preferred response action at a site.

Record of Decision (ROD) – A public document explaining selected cleanup alternatives at a site. The ROD is based on information and technical analysis, and on consideration of public comments and concerns. The ROD is issued and signed by the lead agency and support agency.

Responsiveness Summary – A section of the ROD summarizing the significant public comments received and the responses to the comments.

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

11.0 References

AECOM, 2010. *Final Comprehensive Site Evaluation Phase II Report*, Duluth ANGB, Duluth Minnesota. February.

AECOM, 2011a. *Final Engineering Evaluation/Cost Analysis for the Explosive Ordnance Disposal Range*

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and Lead Contaminated Soils Area, Duluth ANGB, Duluth, Minnesota. February.

AECOM, 2011b. *Final Action Memorandum for the Explosive Ordnance Disposal Range and Lead Contaminated Soils Area, Duluth ANGB, Duluth, Minnesota. July.*

AECOM, 2012. *Draft Final Non-Time Critical Removal Action for the Explosive Ordnance Disposal Range and Lead Contaminated Soils Area, Duluth ANGB, Duluth, Minnesota. Revised September 2012.*

MMG-TLI JV, 2016. *Final Remedial Investigation/Feasibility Study for Explosive Ordnance Disposal Range (SR502), Duluth ANGB, Duluth, Minnesota. May.*

URS, 2007. *Comprehensive Site Evaluation Phase I, Duluth Air National Guard Base, Minnesota. July.*

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PLEASE USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Proposed Plan for the Explosive Ordnance Disposal (EOD) Range (SR502) Munitions Response Site (MRS) at Duluth Air National Guard (ANG) Base is important to the ANG. Comments provided by the public are valuable in helping select a final remedial action for the site. If you have any questions about the comment period or the Proposed Plan, please contact Captain Ryan Blazevic at 218-788-7868.

You may use the space below to write your comments. Comments must be mailed and postmarked by 30 December 2017. Fold and mail to:

Captain Ryan Blazevic
Environmental Manager
Duluth Air National Guard Base, 148th FW/CEV
4630 Mustang Drive
Duluth, MN 55811-7338
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218-788-7868

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____