



**US Army Corps
of Engineers** ®

Proposed Plan

Assateague Island FUDS

Worcester County, Maryland



April 2019

1 Introduction

This **Proposed Plan** identifies the Preferred Approach for the Assateague Island **Formerly Used Defense Site (FUDS)** and provides the rationale for this preference. The **U.S. Army Corp of Engineers (USACE)** proposes **no remedial action** is necessary for protection of human health and the environment at two Munitions Response Sites (MRS): Rocket Range North (MRS 01) and Rocket Range South (MRS 03), located in Worcester County, Maryland.

This document is issued by USACE for the Army as the **U.S. Department of Defense's (DoD)** administrative agent for the FUDS program. USACE will make the final decision on the Preferred Approach for the Assateague Island FUDS after reviewing and considering all information submitted during the public comment period. USACE may modify the Preferred Approach or select another action based on new information or public comments. Therefore, public comment on the Proposed Plan is invited and encouraged. Information on how to participate in this decision-making process is presented below and in Section 7.

USACE is issuing this Proposed Plan as part of its public participation responsibilities under the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** and Section 300.430 (f)(3) of the **National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 40 C.F.R. part 300)**. This Proposed Plan summarizes information that can be found in greater detail in the Final Remedial Investigation Report and other documents contained in the **Administrative Record file** for this site. This plan summarizes the following:

- Site background and previous investigations (Section 2)
- Site characteristics (Section 3)
- Scope and role of response action (Section 4)
- Site risks (Section 5)
- Preferred Approach rationale (Section 6)
- Opportunities for public participation (Section 7).

A glossary defining terms (identified by bold text) used in this document is included; as well as an acronym list and a document reference page.

Mark your Calendar for the Public Comment Period

**Public Comment Period - April 29th, 2019
through June 3rd, 2019**

Submit Written Comments

USACE will accept written comments on the Proposed Plan during the public comment period. To submit comments or obtain further information please refer to the insert page at end of proposed plan.

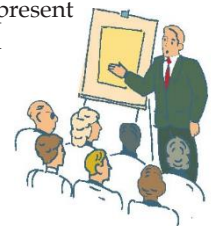


Attend the Public Meeting - May 2nd, 2019

Time - 6:00 pm - 8:00 pm

Place - Assateague Island Environmental Education Center
7206 National Seashore Lane, Berlin, MD 21811

USACE will hold a public meeting to present the Proposed Plan. Verbal and written comments will be accepted during the public comment period, and at the public meeting.



Location of Information Repository

For more information about the Assateague Island FUDS, use
<https://www.nab.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/>
or see the Information Repository at the following location:

Worcester County Library - Berlin Branch 13 Harrison Ave, Berlin, MD 21811

2 Site Background

2.1 Site Description and Background

The Assateague Island FUDS encompasses the 37-mile-long barrier island located along the eastern shore of Maryland and Virginia on the Delmarva Peninsula (**Figure 1**). From 1944 to 1947, the U.S. Navy (Navy) and the U.S. Army Air Corps established two separate rocket ranges on Assateague Island, the northern (MRS 01) and the southern (MRS 03) (see **Figure 1**), which were used by the Navy during World War II (WWII) for target practice by land-based aircraft.

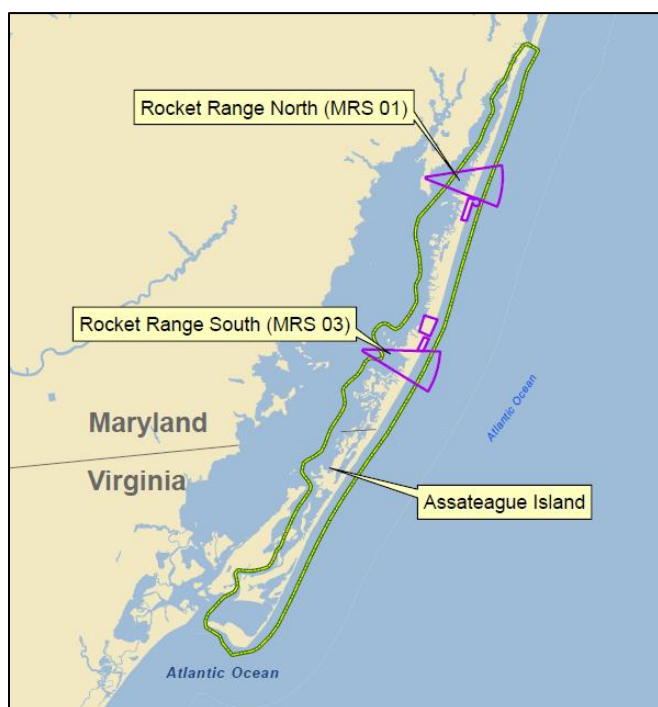


Figure 1: Munitions Response Sites (MRS) at the Assateague Island FUDS.

The training activities on Assateague Island consisted of air-to-ground target practice; using practice rockets and practice bombs, as well as inert 20-millimeter (mm) projectiles used for strafing. Most of the planes that used these ranges originated from Chincoteague Naval Air Station and traveled up the eastern shore of Assateague Island. Once north of the target area, the planes circled around the Island and fired eastward during the approach to the western shore of Assateague. The practice munitions reportedly discharged smoke on impact. At the end of WWII, it was reported that the DoD created two (possibly three) burial areas during site

cleanup for the spent munitions used. The locations of the rocket ranges are based on an interview with, and drawings provided by, a Navy veteran who was the “spotter” stationed at Assateague Island during a portion of WWII. The veteran drew the ranges from memory and described very specifically the operations.

In 1943, the Chincoteague National Wildlife Refuge was established, and in 1965, Assateague Island was established as a national seashore. Assateague Island is currently owned by the National Park Service (NPS), the State of Maryland (MD), the U.S. Fish and Wildlife Service, the State of Virginia, and the U.S. Coast Guard. The FUDS property where the munitions response sites are located is owned by NPS and State of MD.

2.2 Summary of Previous Investigations

Case Incident – 1988

In July 1988, Army and Navy **Explosive Ordnance Disposal (EOD)** Teams were deployed to Assateague Island when WWII era ordnance¹ washed ashore onto North Ocean Beach in the Rocket Range North (MRS 01). From 14-15 July 1988, the Army ordnance team recovered and disposed of four inert 5-inch (in.) rockets that had washed ashore. At the time of the deployment, it was noted that it appeared that the ordnance was coming from what was described as a “hole” approximately 15 meters offshore. From 16-20 July 1988, the Navy ordnance team also arrived at the site and conducted an underwater survey of the area around the “hole.” Following the survey, the “hole” was believed to be a trench historically dug to bury expended items found during range clearance operations in the late 1940s. The ordnance items recovered by both ordnance teams totaled: 11 inert 2.25-in. rockets (rocket motors and heads), 6 inert 5-in. rockets (2 were only rocket heads), 2 inert 3.25-in. rocket heads, and numerous ballistic tips used to improve the aerodynamics of practice rockets.

Inventory Project Report – 1991

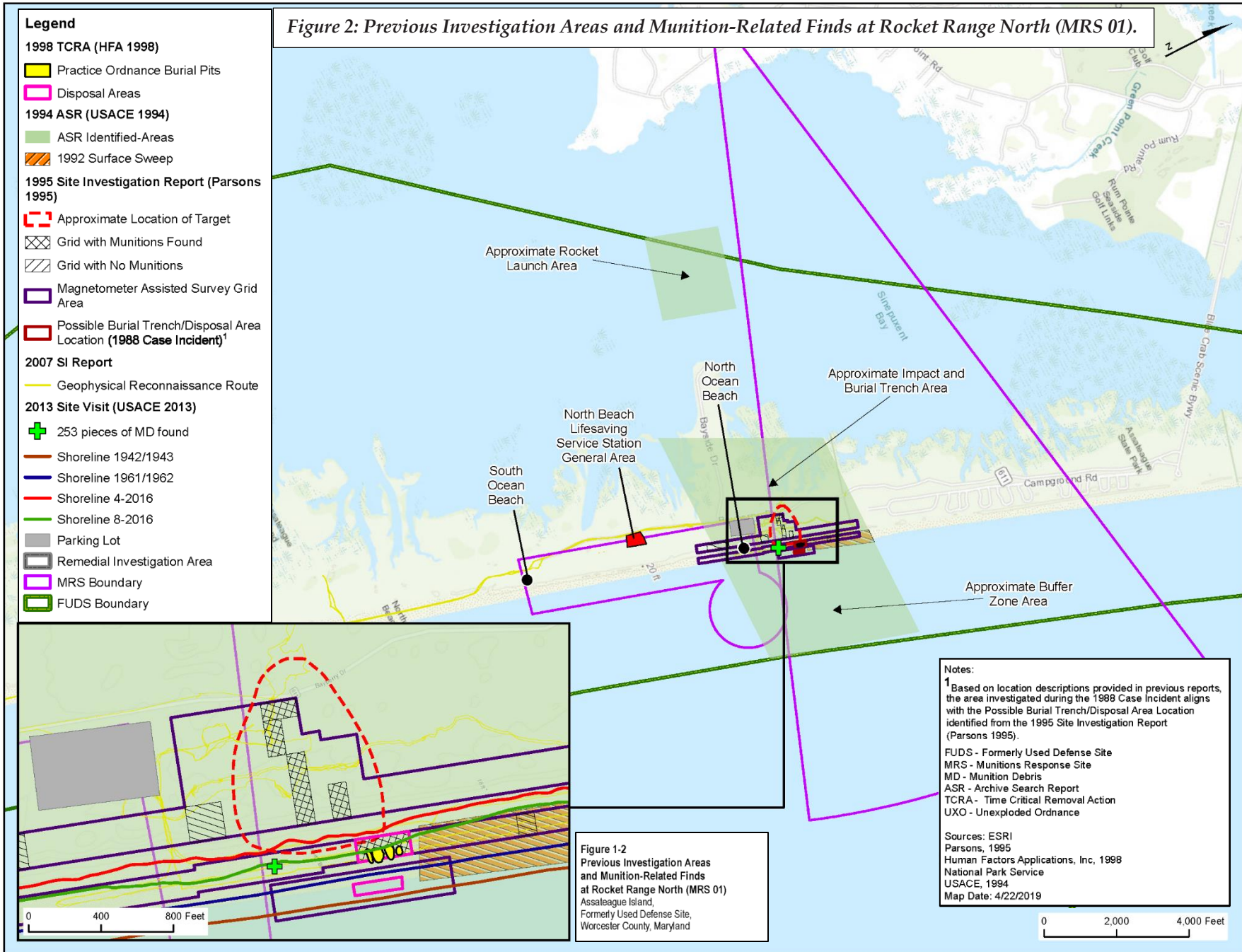
An **Inventory Project Report (INPR)** was prepared for Assateague Island by USACE Baltimore District. The report identified the entire 17,552-acre island as a FUDS property.

Use of Assateague Island by DoD was substantiated by the Navy spotter's statements that he had worked on the northern range (MRS 01) (**Figure 2**), and also from

¹ The term “ordnance” was the precursor to the term “munitions and explosives of concern (MEC)” and was used to

describe any munitions-related items, including inert munitions debris.

Figure 2: Previous Investigation Areas and Munition-Related Finds at Rocket Range North (MRS 01).



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former residents of the island at that time who stated that the Navy had used Assateague Island. Additionally, DoD use was also confirmed by the discovery of ordnance at the reported location of MRS 01 and the offshore "hole" believed to represent an ordnance burial trench (Figure 2).

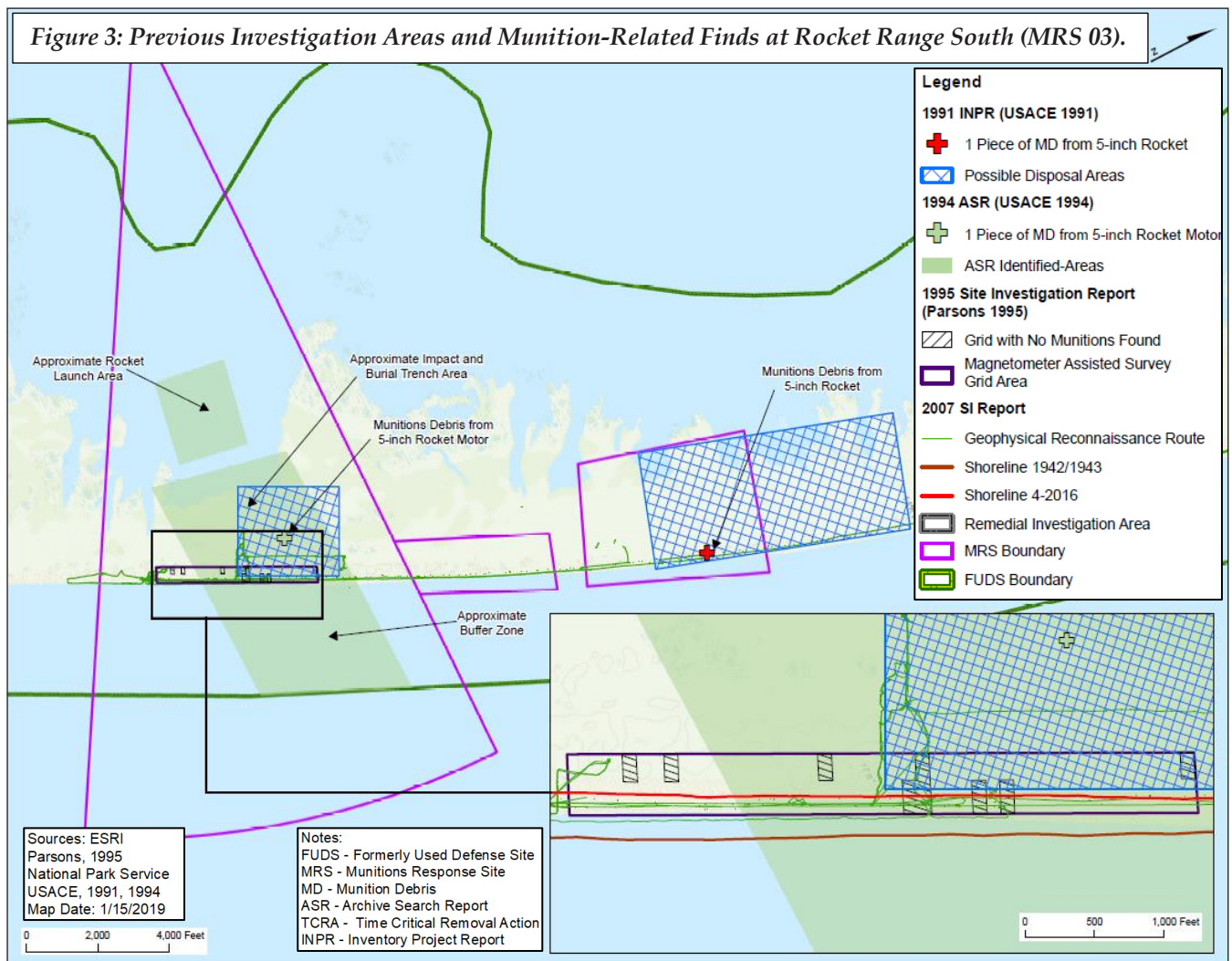
In 1991, a site visit was conducted to complete the INPR for Assateague Island. During the site visit, the field team was shown an expended inert Mark 43 practice bomb and 20-mm Target Practice (TP) projectile casing (inert) that had been found previously by an NPS ranger and subsequently identified as **munitions debris (MD)**. Additional munitions debris (part of a 5-inch rocket) was identified near the reported location of the southern rocket range (MRS 03) during the site visit (Figure 3). The INPR concluded that an **ordnance and explosive waste (OEW; precursor to Military Munitions Response Program [MMRP])** investigation was warranted and a large-scale clearance was recommended.

Interim Sweep of North Ocean Beach - 1992

As recommended by the 1991 INPR, an instrument-assisted (metal detector) "sweep" of the North Ocean Beach area (near MRS 01) was conducted in 1992 where ordnance had previously washed ashore. Over a 3-week period, a 570,000-square foot area of the beach was swept by ordnance teams using metal detectors to locate and identify metallic items. During this investigation, no ordnance nor ordnance-related items were discovered, however cultural debris including fencing and metal piping were discovered and reported.

Archive Search Report - 1994

The **Archive Search Report (ASR)** provided a summary of the previous investigations, results of the historic records search, a site description, and findings from the associated site inspection. The ASR noted two target ranges, identified as MRS 01 and MRS 02 (subsequently renamed MRS 03), that were developed on Assateague Island in the mid-1940s and used for target practice by the Navy (Figures 2 and 3).



During the 1993 visual reconnaissance conducted for the ASR, munitions debris from a 3.25-in. rocket was observed in the sand dunes at MRS 01 and munitions debris from an expended 5-in. high-velocity aircraft rocket was identified at MRS 03. No ordnance disposal/burial areas were observed at either MRS.

The ASR recommended further investigation for MRS 01 and MRS 03 to evaluate the potential presence of **munitions and explosives of concern (MEC)** and/or **munitions constituents (MC)**.

Site Investigation Report - 1995

USACE's Huntsville Center conducted a site investigation on Assateague Island to determine the nature and extent of potential live munitions. Field work focused on the beach and dune zones within each MRS where the probability of encountering munitions associated with the targets and burial trenches would be the highest. Two grid systems were set up in both areas and an instrument-assisted sweep of the areas was conducted at 50 ft intervals (**Figures 2 and 3**).

Eighteen grids in MRS 01 and nine grids in MRS 03 were selected for intrusive (subsurface) investigations to a depth of 2 ft below ground surface (bgs). The sweeps in the northern area revealed 20 munitions debris items on the surface and 125 munitions debris items in the subsurface. All munitions debris items were consistent with previous inert or practice munitions, including practice rockets and practice bombs. The number and location of surface and subsurface munitions debris confirmed the location of the target area as previously identified by the former range spotter. Additionally, suspect burial trenches, one on the shoreline and one in the surf, were identified at MRS 01. Partial excavation of the burial trench on the shoreline uncovered an additional 36 items, all of which were determined to be inert.

At MRS 03, no live munitions nor explosives of concern or munitions debris items were identified on the surface or in the subsurface during the instrument-assisted sweeps. The report concluded that MRS 03 may have been cleaned up when DoD use of the site ceased.

Time Critical Removal Action - 1998

USACE's Huntsville Center conducted a **Time Critical Removal Action (TCRA)** within MRS 01. The action addressed a suspect disposal/burial area where 150 munitions were exposed after a storm. The TCRA was conducted on approximately 2.41 acres of MRS 01 (**Figure 2**). This was the same area reported in the 1995 Site Investigation Report as the suspect burial trench located on the shoreline. Twelve grids were investigated to a depth of 4 ft bgs resulting in 212 pieces of munitions

debris being removed from the disposal/burial area in MRS 01. The munitions debris was consistent with previously identified items, primarily practice rockets and practice bombs.

Baltimore District Site Visit - 2003

USACE Baltimore District completed a site visit to further characterize the potential munitions and explosive risk on Assateague Island as part of long-term monitoring for the 1998 TCRA. Another instrument-assisted sweep was conducted to assess the impact/target areas and potential disposal/burial areas along the beach areas at MRS 01 and MRS 03. Suspect metallic **anomalies** and two possible burial pits were located at MRS 01. Additionally, "several dozen" anomalies were identified in the area of MRS 03. No removal action was completed as a result of the sweep.

Site Inspection - 2007

A **Site Inspection (SI)** was performed by USACE to evaluate if a live munitions or munition constituents (chemicals related to the munitions) hazard existed at the Assateague Island FUDS and if further response was warranted. The site inspection included instrument-assisted sweeps of the property as well as environmental sampling and laboratory analysis. Instrument-assisted sweeps were conducted across approximately 32 acres within or adjacent to the two MRSs to identify any potential MEC or munitions debris (**Figures 2 and 3**). Cultural debris (bottle caps, barbed wire, etc.) and possible munitions debris, metal fragments that were badly corroded and difficult to identify, were identified at MRS 01 during the site inspection. Additionally, numerous underground metallic anomalies were detected at the FUDS. However, intrusive investigations (i.e., digging on anomalies) were not conducted during the site inspection, this activity is usually performed as part of the more thorough **remedial investigation (RI)** to identify anomalies in the subsurface. No live munitions nor munitions debris was identified at MRS 03 during the site inspection.

To evaluate whether a release of munitions constituents had occurred, USACE collected environmental samples, including soil (surface and subsurface), **groundwater**, sediment, and surface water samples. The environmental samples were analyzed for explosives and metals that were associated with the munitions known to have been used at the Assateague Island FUDS.

One munitions constituent (aluminum) was reported above the human health screening criteria for groundwater in MRS 03. No other munitions constituents were reported above human health

screening criteria for surface water, sediment, soil, or groundwater in either MRS. The sample with the elevated aluminum concentrations was collected from a temporary well that likely contained suspended sediment particles that contributed to the elevated levels of aluminum. As such, aluminum was not considered a chemical of potential concern.

Since the Assateague Island FUDS contains wetland areas and valuable habitat for ecological **receptors** that is regulated by the Maryland and Virginia Coastal Zone Management Programs, a **screening level ecological risk assessment (SLERA)** was conducted using the munitions constituents sampling results. The SLERA identified one chemical (antimony) as exceeding ecological soil screening criteria at both MRSs; however, detected antimony concentrations were within the range of background concentrations found in the area's soils. Therefore, these exceedances were considered insignificant and antimony was not retained as a chemical of potential ecological concern in either MRS. No other munitions constituents were reported above the ecological screening criteria.

No live munitions were identified at the FUDS, therefore, the site inspection concluded that munitions and explosive risk was low to moderate: based on the types of munitions debris that was discovered, that the previous finds at the site were only munitions debris, and that there were numerous anomalies detected in the subsurface not identified. As a result, the site inspection recommended a remedial investigation for both MRS 01 and MRS 03. Based on risk screening results, no risks for exposure to munitions constituents were identified.

Explosive Ordnance Disposal Team - 2013

On 24 June 2013, a team responded to a discovery of additional munitions debris that had washed up on the beach in MRS 01. A total of 234 munitions debris items were identified at MRS 01 and safely disposed of by the team.

USACE Site Visit - 2013

Subsequent to the action above, USACE Baltimore District personnel conducted an instrument-assisted sweep of the suspect impact areas in each MRS (approximately 14 acres) and an additional 19 munitions debris items were recovered and removed from MRS 01; however, no munitions debris was identified in MRS 03.

Findings - 2017

On 12 June 2017, NPS notified USACE that munitions debris had been found in MRS 01 which were consistent with items previously found and removed from the area.

NPS also reported items in the water that were half-buried in a vertical position, creating a swimming hazard. NPS posted signs in the area to alert swimmers of the dangers and to prevent swimming in the area. As of 3 July 2017, the items were naturally re-buried by sand and were no longer considered a swimming hazard.

Remedial Investigation - 2019

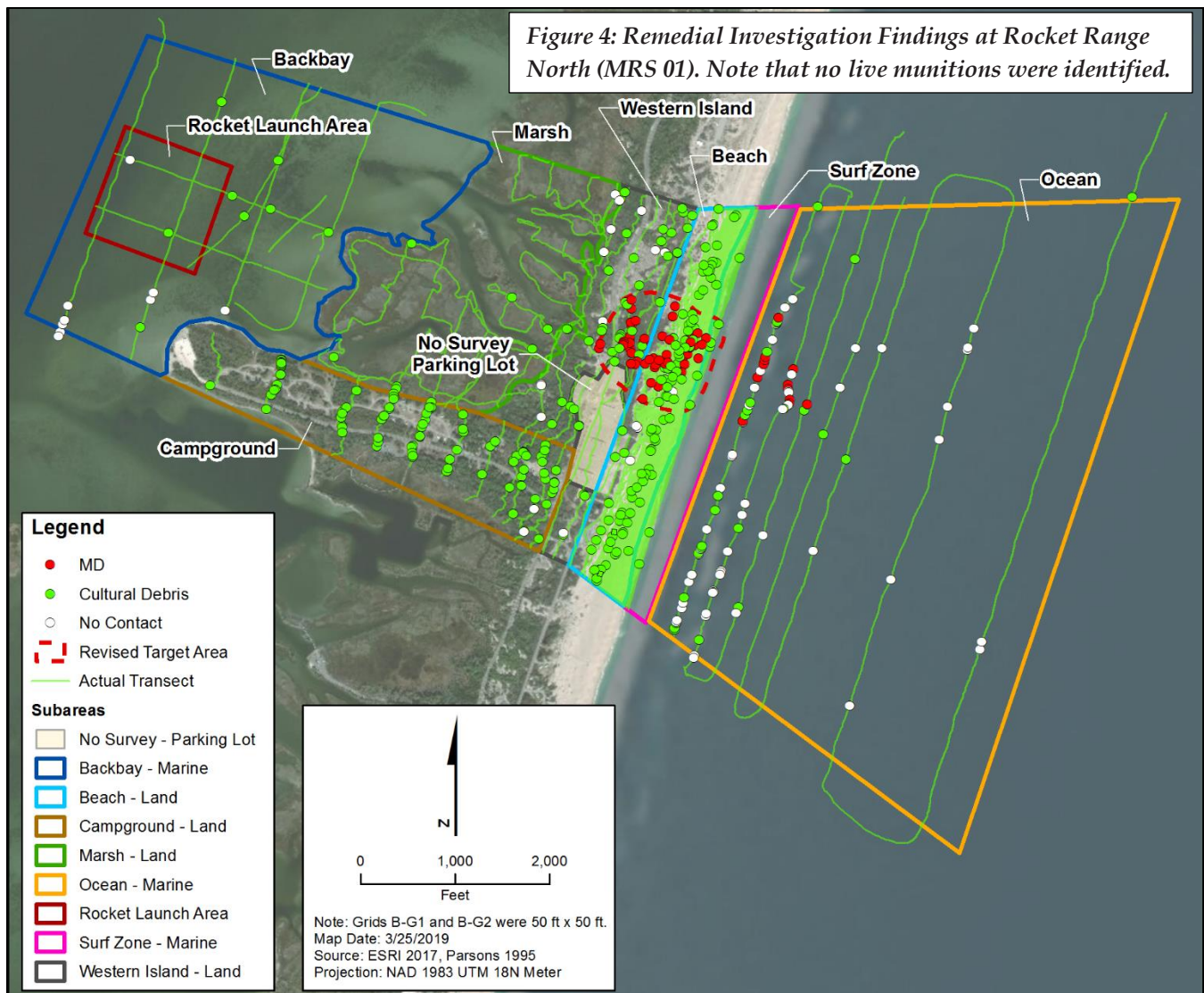
As recommended by the 2007 site inspection, a remedial investigation was conducted to characterize the nature and extent of potential munitions and explosives of concern at Rocket Range North (MRS 01) and Rocket Range South (MRS 03). To accomplish this, **digital geophysical mapping (DGM)** data were collected on land and in the water at MRS 01 and MRS 03 by foot, motorized vehicle, and by boat along transects (**Photos 1 and 2**). The DGM data presents hits or "**anomalies**" measured by the instrumentation on the surface and in the subsurface. The DGM data were later analyzed to identify areas with a high-density of anomalies (e.g., target areas or burial areas) and for specific subsurface anomalies or "targets" (**Figures 4 and 5**) to dig up during the intrusive investigation. Teams of unexploded ordnance (UXO) technicians dug up the target anomalies on land and in the water and categorized the items. All items were categorized as either munitions safe to dispose of or cultural debris (such as tent stakes, barbed wire, cans, etc.). No live munitions nor explosive hazards were identified. The results of the intrusive investigations for each MRS are discussed below.



Photos 1 and 2: Land-based digital geophysical mapping on the beach and in the marsh.

Rocket Range North (MRS 01)

At MRS 01, a total of 445 anomalies located both on land and in the water were selected to be intrusively investigated (i.e., dug up and categorized) (**Figure 4**). Of the 445 anomalies investigated, only 64 were categorized as being related to munitions, all of which were



identified as munitions debris. All munitions debris identified at MRS 01 was located in and around the former target area and was consistent with munitions debris items historically found at the site, including practice rockets, practice bombs, and inert 20-mm TP projectiles and casings. The practice rockets and the 20-mm TP projectile can contain propellant and the practice bombs can contain spotting charges if they did not function as intended. However, neither spotting charges nor propellant was found in any of the items. Due to the harsh conditions at the site (i.e., exposure to salt water), the majority of the items had severe rust and corrosion. No live munitions have ever been identified at MRS 01. Therefore, the remedial investigation concluded that any military munitions encountered in the future at MRS 01 are anticipated to be only munitions debris.

Rocket Range South (MRS 03)

At MRS 03, 260 anomalies were intrusively investigated both on land and in the water (Figure 5). None of the 260

anomalies investigated were related to munitions. Historically, only two pieces of munitions debris from practice rockets were reportedly found at MRS 03. Based on the findings of the remedial investigation and the previous investigations, the remedial investigation report concluded that it is unlikely MRS 03 was used by the Navy as a practice bombing and strafing range. No munitions debris was identified during the remedial investigation nor have live munitions ever been identified at MRS 03.

Remedial Investigation Conclusions

Based on the findings of the remedial investigation, no munitions nor explosives of concern were identified at either MRS, and as such, there is no unacceptable risk to human health or the environment. Therefore, no remedial action is recommended for MRS 01 and MRS 03.

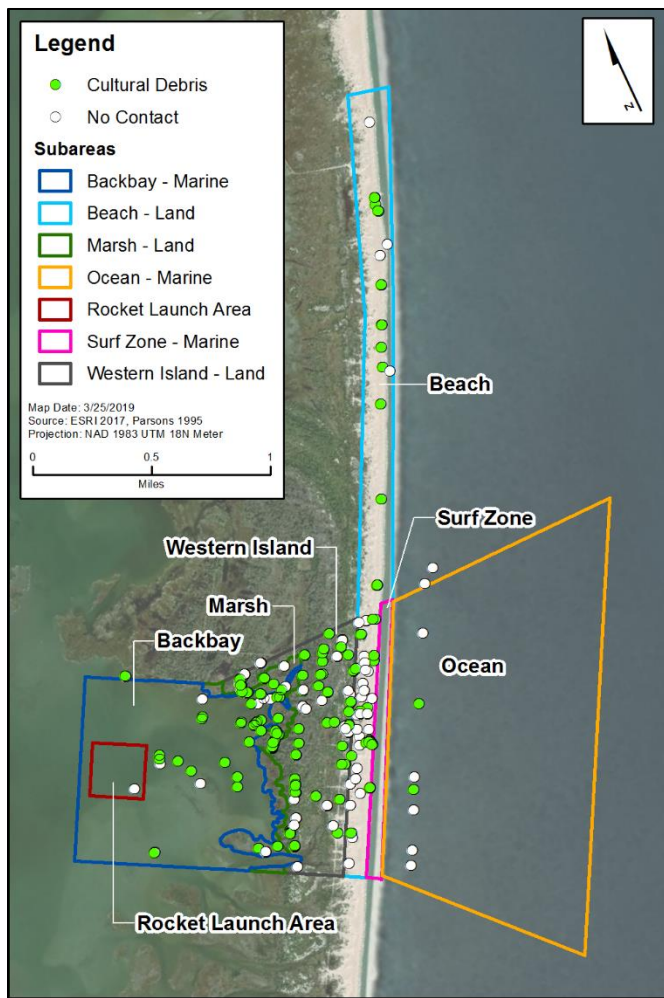


Figure 5: Remedial Investigation Findings at Rocket Range South (MRS 03). Note that no munitions debris or live munitions were identified.

Summary of Previous Investigation Findings

Historically, MRS 01 and MRS 03 were used as rocket ranges (Figure 6) where training consisted of air-to-ground target practice, using inert and practice munitions (i.e., rockets, bombs, and 20-mm projectiles). Since investigations began at the site approximately 30 years ago, no evidence of the use of live munitions (containing explosives) has been found at the MRSs or anywhere on the Assateague Island FUDS. Munitions debris items found to date at the Assateague Island FUDS confirm the types of ordnance used and their associated low hazard. As concluded in the remedial investigation report, no further action is recommended for MRS 01 and MRS 03.

3 Site Characteristics

MRS 01 is situated on the northern portion of Assateague Island approximately 10 miles south of Ocean City, Maryland and MRS 03 is located approximately 10 miles

south of MRS 01. MRS 01 encompasses 3,412.2 acres that overlap Assateague Island State Park to the north and the Assateague Island National Seashore to the south (Figure 6). MRS 03 is located entirely on the Assateague Island National Seashore and encompasses 3,245.5 acres. Approximately 80 percent of the MRSs are located in water (i.e., Atlantic Ocean or Chincoteague Bay); while the remaining portions of land consists of beaches, sand dunes, and dense brushy areas. No freshwater streams or river are located on Assateague Island; however, numerous salt-marsh wetlands and freshwater wetlands are present on and surrounding the Island.

The topography of the Island is relatively flat with elevations that range from sea level to approximately 15 ft. Barrier islands like Assateague are dynamic in nature; summer to winter high-tide lines may vary up to 40 meters at MRS 01 and 60 meters at MRS 03. Because of

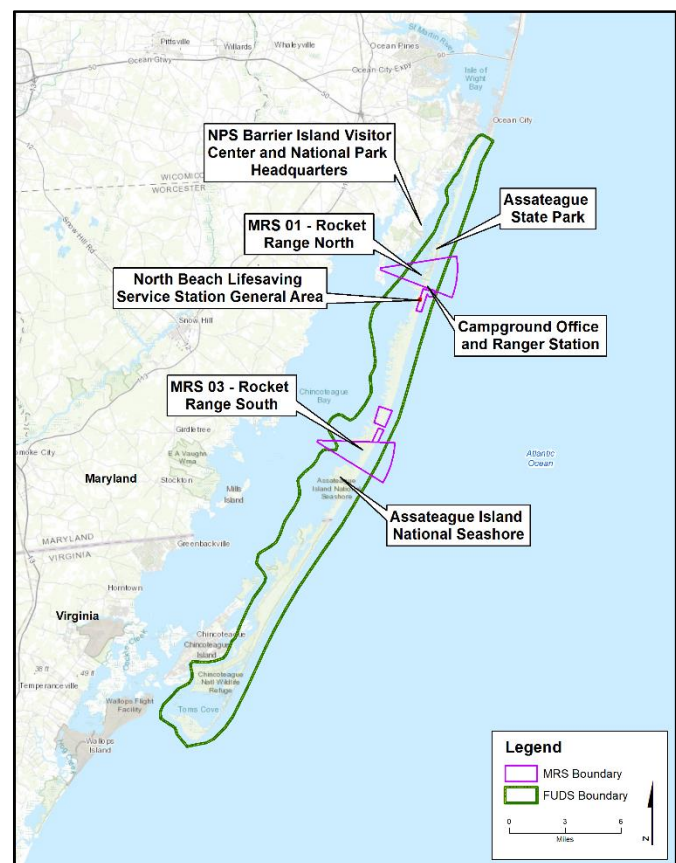


Figure 6: Munitions Response Sites and layout of the Assateague Island FUDS

the dynamic conditions along the shoreline (i.e., barrier island subject to extreme wind and wave energy), items buried in the subsurface could potentially migrate to the surface or be covered with additional sands/sediment.

Additionally, the shoreline has steadily migrated towards the west over the past 60 years claiming

portions of the eastern shore that were previously exposed (Figures 2 and 3).

Both MRSs are designated as recreational areas as part of the Assateague Island National Seashore, and as such, public access to the MRSs is unlimited. No permanent residences are located on either MRS, but approximately 350 campsites and 1 back country campground are located on MRS 01 and MRS 03, respectively. MRS 01 is located near the Assateague Island National Seashore Ranger Station and North Ocean Beach parking lot (Figure 6) and receives a significant influx of visitors during the summer months (up to 7,500 visitors per day). MRS 03 is only accessible by foot or by vehicle with an Over-Sand Vehicle Special Use Permit. Due to the remote nature of MRS 03, visitor use is significantly less than MRS 01 (less than 1,500 visitors annually).

4 Scope and Role of Response

The site inspection report determined that there were no munitions constituents on the FUDS that posed a risk to human health or the environment at MRS 01 or at MRS 03 of the Assateague Island FUDS.

The remedial investigation report noted that no live munitions or explosives of concern had been identified at either MRS 01 or 03; therefore, the remedial investigation concluded that acceptable conditions exist (i.e., negligible risk is posed by the FUDS).

Based on the results of the remedial investigation, no remedial action is proposed for the two MRSs at the Assateague Island FUDS. Therefore, no **remedial action objectives (RAOs)** were developed nor remedial alternatives considered.

5 Summary of Site Risks

A detailed discussion of the risk screening performed on the munitions constituents at the two MRSs at the Assateague Island FUDS can be found in the 2007 site inspection report.

For the munitions debris identified on the FUDS, a detailed discussion of the risk management methodology used to assess the explosive risk posed is presented for MRS 01 and MRS 03 within the remedial investigation report.

Human Health Risk Assessment

No human health risk assessment was warranted for MRS 01 or MRS 03 based on the risk screening of the

analytical results from the sampling conducted during the site inspection. As such, no unacceptable risks to human receptors associated with munitions constituents were identified for MRS 01 or MRS 03.

Ecological Risk Screening

Based on the findings of the screening level ecological risk assessment conducted during the 2007 site inspection, antimony was the only chemical potentially associated with the munitions used on site that was reported with a concentration above its ecological screening level. However, the antimony concentrations were consistent with background values in the area and are likely not related to the munitions found on site. Therefore, no munitions constituents were identified to pose a risk for ecological receptors at MRS 01 or MRS 03.

Risk Management Methodology

The Risk Management Methodology (USACE 2016) is the current evaluation system being used to assess risk from live munitions and explosives of concern at military munitions response FUDS and it accounts for a variety of factors related to the potential risks at a given MRS. These factors include the likelihood of encountering live munitions/explosives (accessibility), the severity of an explosive incident should one occur (severity), and the likelihood of a detonation (sensitivity of the items) (Tables 1 and 2). The methodology utilizes these factors to illustrate site-specific conditions and differentiate acceptable from unacceptable conditions.

Table 1: Evaluation for MRS 01

Matrix	Evaluation	Risk
#1 Likelihood of Encounter	Amount of Live Munitions - None Found	Seldom
#2 Severity of Incident	Encounters with Live Munitions Items - None	Rare Occurrence - Modest Injury
#3 Likelihood of Detonation	Sensitivity of Detonation - Low	Low
# 4 Site Conditions	Seldom to Encounter, Rare Occurrence of Injury, Low Sensitivity	ACCEPTABLE SITE CONDITIONS

Sufficient area was investigated during the remedial investigation to support the conclusions presented in the Risk Management Methodology. Although practice and inert munitions have been identified at both MRSs, no live munitions (i.e., containing explosives) have been found.

Since no live munitions nor explosives of concern have been identified at either MRS 01 or MRS 03 during previous investigations or during the remedial investigation, it is unlikely for a future encounter to occur. Therefore, the Risk Management Methodology evaluation for both MRS 01 and MRS 03, determined acceptable site conditions.

Table 2: Evaluation for MRS 03

Matrix	Evaluation	Risk
#1 Likelihood of Encounter	Amount of Live Munitions - None Found	Unlikely
#2 Severity of Incident	Encounters with Live Munitions Items - None	Improbable - No Injury Anticipated
#3 Likelihood of Detonation	Sensitivity of Detonation - Not Sensitive	Inconsequential - Not Likely to Impart Energy
# 4 Site Conditions	Unlikely, Improbable, Not Sensitive	ACCEPTABLE SITE CONDITIONS

6 Preferred Approach

Based on the results of the remedial investigation for the Assateague Island FUDS, there is no unacceptable risk to human health or the environment at the site. Therefore, the Proposed Plan for the FUDS site is a **No Action** decision, recommended by USACE.

A community relations program is currently being conducted for the Assateague Island FUDS and input from the public is a key element in the decision-making process. USACE has provided complete information regarding the investigation of the Assateague Island FUDS in the Administrative Record file for the site at the Worcester County Library - Berlin Branch and will be available at the public meeting. In addition, for easy

access the remedial investigation report and the proposed plan can be obtained electronically at <https://www.nab.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/>.

This Proposed Plan fulfills the public participation requirements of CERCLA Section 117(a), which specifies that the lead agency (i.e., USACE) must publish a plan outlining any remedial alternatives evaluated for the site and identifying the proposed decision. All documents referenced in this Proposed Plan are available for public review as part of the Administrative Record file at the Worcester County Library - Berlin Branch.

The public comment period for the Proposed Plan is an opportunity to provide input regarding the proposed No Action decision for MRS 01 and MRS 03. The public comment period will be held from April 29th to June 3rd, 2019, and the public meeting will be held on May 2nd, 2019, at 6:00 pm (see below for details). All interested parties are encouraged to attend the meeting to learn more about the Assateague Island FUDS from the project team members. The public meeting will also provide an additional opportunity to submit comments to USACE on the Proposed Plan.

The insert page may be used to provide comments to USACE, although the use of this form is not required. Comments must be postmarked no later than June 3rd, 2019. On the basis of comments or new information, USACE may modify the proposed decision or choose another alternative, if appropriate. USACE will summarize and respond to comments in a responsiveness summary, which will become part of the official **Decision Document (DD)**. After the public comment period, USACE will determine whether the Proposed Plan should be modified on the basis of comments received. After modification, or if no modification is necessary, the Decision Document will be signed by USACE.

7 Mark your Calendar for the Public Comment Period

Public Comment Period
April 29th, 2019 through June 3rd, 2019



Submit Written Comments
 USACE will accept written comments on the Proposed Plan during the public comment period. To submit comments or obtain further information please refer to the insert page.

Attend the Public Meeting

May 2nd, 2019 at 6:00 – 8:00 PM
 Assateague Island Environmental Education Center
 7206 National Seashore Lane
 Berlin, MD 21811

USACE will hold a public meeting to explain the Proposed Plan. Verbal and written comments will be accepted during the public comment period, including at the meeting.

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Glossary

Administrative Record file: Site information is compiled in an Administrative Record file and placed in the general Installation Restoration Program information repository for public review.

Anomaly: Something that deviates from what is standard, normal, or expected. As it relates to this document, an anomaly is a suspected metallic object that is identified using magnetometers, a type of metal detector.

Archive Search Report (ASR): A detailed investigation to report on past MEC activities conducted on an installation. The principal purpose of the Archives Search is to assemble historical records and available field data, assess potential ordnance presence, and recommend follow-up actions at a FUDS. There are four general steps in an Archives Search: records search phase, site safety and health plan, site survey; archives search report including risk assessment

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A Federal law enacted in 1980 and amended in 1986 by the Superfund Amendments and Reauthorization Act, which concerns investigation and response actions regarding hazardous substances, pollutants, and contaminants.

Decision Document (DD): A public document that describes the remedy selected for a site, the basis for the choice of that remedy, and provides responses to public comments.

Digital Geophysical Mapping: The use of specialized instruments on the ground surface to detect metallic items such as munitions or munitions debris below the ground. The instruments used are known as sensors.

Ecological Risk Screening: An evaluation of the risk posed to the environment if remedial activities are not performed at the site.

Explosive Ordnance Disposal (EOD): A specialized organization made up of personnel specially trained to destroy munitions.

Formerly Used Defense Site (FUDS): A FUDS includes property that was owned by, leased to, or otherwise possessed by the United States and under the jurisdiction of the Secretary (including governmental entities that are the legal predecessors of DoD or its components) that were transferred from DoD control prior to 17 October 1986. The term "Secretary" means the Secretary of Defense and the Secretaries of each the

Military Departments, as well as the Secretaries of any predecessor department or agency.

Groundwater: Subsurface water that occurs in soils and geologic formations that are fully saturated.

Human Health Risk Assessment: An evaluation of the risk posed to human health should remedial activities not be implemented.

Inventory Project Report (INPR): The report resulting from the preliminary assessment of eligibility. The INPR includes data as well as a recommendation for further action and guides investigators through further site studies. The INPR documents whether a property and projects are eligible for the FUDS program.

Military Munitions: All ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the DoD, the U.S. Coast Guard, the U.S. Department of Energy, and the National Guard. The term includes 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.

The term does not include wholly inert items, improvised explosive devices, and nuclear weapons, devices, and nuclear components, other than nonnuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) have been completed.

Military Munitions Response Program (MMRP): The DoD developed the Military Munitions Response Program (MMRP) in 2001 to address munitions-related concerns, including explosive safety, environmental, and health hazards from releases of unexploded ordnance (UXO), discarded military munitions (DDM), and munitions constituents found at locations other than operational ranges on active and Base Realignment and Closure (BRAC) installations and Formerly Used Defense Sites (FUDS) properties. The MMRP addresses non-operational range lands with suspected or known hazards from munitions and explosives of concern (MEC) which occurred prior to September 2002, but are not already included with an

Installation Response Program (IRP) site cleanup activity.

Munitions and Explosives of Concern (MEC): This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks means:

- (A) UXO, as defined in 10 U.S.C. 101(e)(5);
- (B) Discarded military munitions (DMM), as defined in 10 U.S.C. 2710(e)(2); or
- (C) Munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. 2710(e)(3), present in high enough concentrations to pose an explosive hazard.

Munitions Constituents (MC): Any materials originating 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., penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization or disposal.

Material Documented as Safe (MDAS): Munitions or munitions-related items that have been assessed by qualified personnel and documented as not presenting an explosive hazard.

Munitions Response Site (MRS): A site that was formerly used to train soldiers in how to use weapons but is no longer in use. An MRS may contain munitions and/or munitions constituents. An MRS requires some action to address munitions explosive hazards and/or munitions constituent contamination.

No Further Action: A determination for sites where a CERCLA remedial or removal action has been conducted that, based on analysis of chemical concentrations remaining in place and risks they may pose to human health and the environment, no additional actions are required. The response is complete because site contaminants have been remediated in accordance with all applicable laws and regulations. The site is protective of human health and the environment.

Ordnance and Explosive Waste (OEW): Consists of either (1) or (2) below:

- (1) Ammunition, ammunition components, chemical or biological warfare material or explosives that have been abandoned, expelled from demolition pits or burning pads, lost, discarded, buried, or fired. Such ammunition, ammunition components, and explosives are no longer under accountable

record control of any Department of Defense organization or activity.

- (2) Explosive soil, which refers to mixtures of explosives in soil, sand, clay or other solid media at concentrations such that the mixture itself is explosive.

Proposed Plan: In the first step in the remedy selection process, the lead agency identifies the alternative that best meets the requirements in CERCLA 300.430(f)(1) and presents that alternative to the public in a proposed plan. The purpose of the proposed plan is to supplement the RI and provide the public with a reasonable opportunity to comment on the proposed remedial action, and to participate in the selection of remedial action at a site.

Public Comment Period: The time allowed for the members of an affected community to express views and concerns regarding an action proposed to be taken by USACE.

Receptors: Humans, animals, or plants that may be exposed to risks from contaminants related to a site.

Remedial Action: Action of the lead remedial agent that addresses a contaminant, hazard, receptor, or the connection between the receptor and the hazard, which is taken to eliminate or minimize the risk to the receptor at a remedial site.

Remedial Action Objective (RAO): Objectives of remedial actions that are developed based on contaminated media, contaminants of concern, potential receptors and exposure scenarios, human health and ecological risk assessment, and attainment of regulatory cleanup levels, if any exist.

Remedial Investigation (RI): A study of a facility that supports the selection of a remedy where hazardous substances have been disposed or released. The RI identifies the nature and extent of contamination at the facility.

Risk Management Methodology: A risk evaluation method for munitions and explosives of concern used to provide information to support risk management decisions upon completion of site characterization; develop remedial action objectives; and provide a basis for assessing achievement of remedial action objectives relative to acceptable end states.

Screening Level Ecological Risk Assessment (SLERA): An evaluation of the risk posed to the environment if remedial activities are not performed at the site

Site Inspection (SI): Activities undertaken to determine the presence, type, distribution, density, and location of

contaminants, including MEC. Includes physical detection and identification of MEC as well as chemical sampling and monitoring.

Spotter: An enlisted person who communicates with a gunner (in aircraft or on the ground) and orders or advises adjustment of fire on a target by observations.

Sweep: The action of walking over an area using a metal detector to find munitions and munitions debris up to 6 inches below surface of the soil or sediment or to find metallic anomalies in the subsurface soils or sediments.

Time Critical Removal Action (TCRA): Removal actions conducted to respond to an imminent danger posed by the release or threat of release, where cleanup

or stabilization actions must be initiated within six months to reduce risk to public health or the environment.

U.S. Army Corps of Engineers (USACE): A branch of the DoD with special expertise in carrying out CERCLA/NCP investigations and response actions at former DoD sites.

U.S. Department of Defense (DoD): an executive branch department of the federal government of the United States charged with coordinating and supervising all agencies and functions of the government concerned directly with national security and the United States Armed Forces.

Acronyms

ASIS	Assateague Island National Seashore
ASR	Archive Search Report
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DD	Decision Document
DoD	U.S. Department of Defense
DMM	Discarded Military Munitions
EOD	Explosive Ordnance Disposal
ft	feet
FUDS	Formerly Used Defense Site
In.	inch(es)
INPR	Inventory Project Report
MC	Munitions constituents
MD	Munitions debris or Maryland
MDAS	Munitions documented as safe
MEC	Munitions and explosives of concern
mm	millimeter
MMRP	Military Munitions Response Program
MRS	Munitions Response Site
Navy	United States Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OEW	Ordnance and explosive waste
PP	Proposed Plan
RAO	Remedial Action Objective
RI	Remedial Investigation
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection
SLERA	Screening level ecological risk assessment
TCRA	Time Critical Removal Action
TP	Target Practice
USACE	U.S. Army Corps of Engineers
UXO	Unexploded Ordnance
WWII	World War II

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