PROPOSED PLAN

FORMER RARITAN ARSENAL
AREA 11 AND DREDGE SPOIL AREA 2; AREA 12, OPEN BURN/OPEN DETONATION AREA AND DREDGE SPOIL AREA 3; AREAS 16 AND 16A
FUDS PROJECT NO. CO2NJ008403 AND CO2NJ008416
MIDDLESEX COUNTY, NEW JERSEY

Text in bold and underlined is the first mention of a word or phrase that is included in the glossary at the end of this Proposed Plan.

The Proposed Plan

This **Proposed Plan** addresses both **Munitions and Explosives of Concern** (MEC) and **Munitions Constituents** (MC) at Area 11 and Dredge Spoil Area (DSA) 2; Area 12, the Open Burn/Open Detonation (OB/OD) Area and DSA 3; Areas 16 and 16A. A No Action decision is proposed for MC soil and sediment contamination.

Because potential risks associated with MEC were identified, this PP also identifies the preferred alternative for addressing MEC at these areas.

Public Comments Are Requested

PUBLIC COMMENT PERIOD

December 8, 2025 through January 14, 2026

Written comments on this Proposed Plan may be submitted to USACE during the comment period. Comment letters must be postmarked no later than January 14, 2026, and may be sent to James Kelly (USACE, New England District, Project Manager):

U.S. Army Corps of Engineers
Attn: James Kelly
696 Virgina Road
Concord, MA 01742

james.a.kelly@usace.army.mil

PUBLIC MEETING

December 17, 2025 at 7:00 PM
Meeting Location: Edison Senior Citizen Center, 2963 Woodbridge Avenue, Edison, NJ 08837

INTRODUCTION

The U.S. Army Corps of Engineers (USACE) is presenting this Proposed Plan to allow the public the opportunity to review and comment on the **remedial alternatives** for Area 11 and Dredge Spoil Area (DSA) 2; Area 12, the Open Burn/Open Detonation (OB/OD) Area and DSA 3; Areas 16 and 16A at the Former Raritan Arsenal **Formerly Used Defense Site** located in Middlesex County, New Jersey.

The areas of the Former Raritan Arsenal covered in this Proposed Plan are grouped together due to their geographical proximity and include Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; Areas 16 and 16A. The areas are located in the southern portion of the former Arsenal, adjacent to the Raritan River, and encompass a contiguous area of 717 acres (**Figure 1 and Table 1**), including 16 acres within the Raritan River. These 717 acres are within the total Former Raritan Arsenal **Munitions Response Site** (MRS), which includes 3,283.5 acres.

Table 1. Areas of Investigation

Area of Investigation	Township	Total acres
Area 11 /DSA 2	Edison Township	130
Area 12, OB/OD Area and DSA 3	Edison Township	235
Area 16 and 16A	Edison Township	352
TOTAL		717

Investigation and environmental restoration of the Former Raritan Arsenal has been conducted under the **Defense Environmental Restoration Program–Formerly Used Defense Sites**. This Proposed Plan highlights key information from the **Remedial Investigation** (USACE-Huntsville Center, 2019a-b and 2021), which determined whether Site cleanup is necessary based on the unacceptable human health and/or ecological risks. This Proposed Plan also provides a summary of the remedial alternatives (the options for Site cleanup) evaluated in the **Feasibility Study** (USACE-Huntsville Center, 2024), and the basis for the identification of the **Preferred Alternative**.

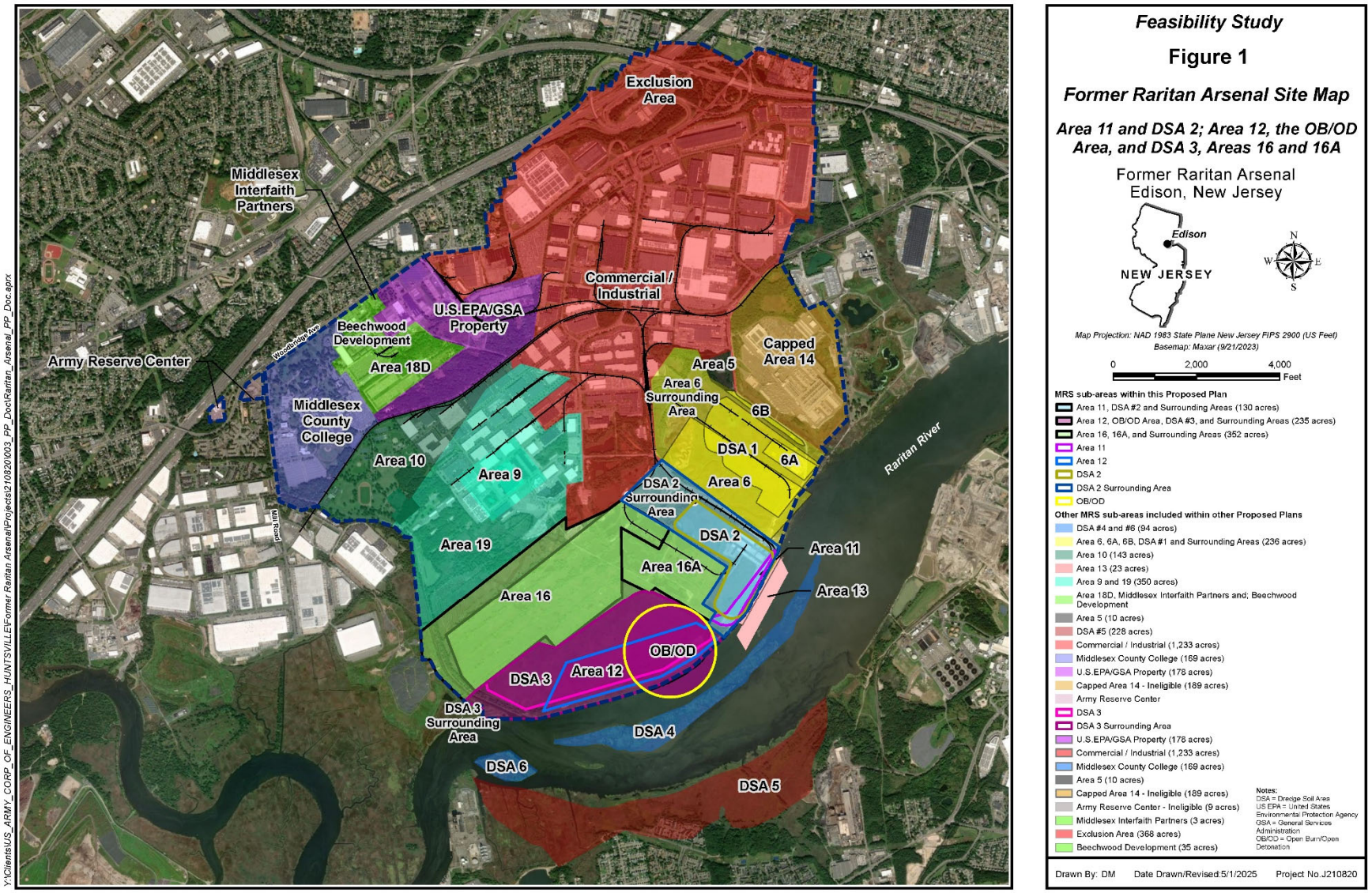

Figure 1. Location of the Former Raritan Arsenal

USACE will select a final remedial alternative for the site after reviewing and considering all information submitted during the **public comment period** and may modify or change the Preferred Alternative based on public comments. Therefore, the public is encouraged to review and comment on the alternatives presented in this Proposed Plan

The USACE is the lead agency that provides direction and guidance for the execution of the project. The USACE-New York District is managing the project, while the U.S. Army Engineering and Support Center, Huntsville, and USACE – New England District provide technical support. The lead regulatory agency is the New Jersey Department of Environmental Protection (NJDEP). The overall goal of DERP-FUDS is to address unacceptable human health and environmental risks associated with past Department of Defense (DoD) activities. USACE is required by DERP-FUDS to execute the environmental restoration program in accordance with **Comprehensive Environmental Response, Compensation, and Liability Act** of 1980 (CERCLA), a federal environmental statute, and the **National Oil and Hazardous Substances Pollution Contingency Plan** (NCP). USACE evaluates potential impacts from past DoD activities at the Former Raritan Arsenal and identifies appropriate remedial responses. The NJDEP has been involved in this process. In accordance with federal law and regulations, state involvement is sought in the form of reviews and comments. USACE has also been conferring with local stakeholders about community concerns regarding the Former Raritan Arsenal since 1990.

As the lead agency implementing the environmental response program for the Former Raritan Arsenal, USACE has prepared this Proposed Plan in accordance with Comprehensive Environmental Response, Compensation, and Liability Act Section 117(a) and Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan to continue its community awareness efforts and to encourage public participation. After the public has had the opportunity to review and comment on this Proposed Plan, USACE will respond to the comments received during the public comment period, including any comments received during the public meeting. The comments will be included in the responsiveness summary of the **Record of Decision**. Information about the **public comment period** and the public meeting is shown above.

This Proposed Plan highlights key information from previous reports prepared for Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; Areas 16 and 16A, including site characterization details provided in the Remedial Investigation (RI) Report (USACE-Huntsville Center, 2019 a-b and 2021) and the Feasibility Study (USACE, 2024). The Former Raritan Arsenal currently constitutes two MRSs – MRS 03, which is 3,283.50 acres, and MRS 04, which is 1.40 acres. This Proposed Plan addresses 717 acres of MRS 03. This Proposed Plan also pertains to a portion of Hazardous, Toxic, and Radioactive Waste (HTRW) Project 16. Other areas of Project 16 have already been completed and have a signed Decision Document supporting No Further Action. Final reconciliation of total site acreages will be resolved during the final delineation effort and confirmed in the Remedial Design. A MRS is discrete location within a Munitions Response Area (MRA) that is known to require a munitions response. Based on historic operations of the Former Raritan Arsenal the entire property boundary was identified as both a MRA and a MRS. This Proposed Plan is for areas of a 717 acre portion as listed in Table 1 above and shown on Figure 1. USACE completed an investigation to determine the potential presence of munitions and MC and the results of the investigation are included within this Proposed Plan.

The **Administrative Record** file and other documents that support this Proposed Plan are available for review at the information repositories or through the USACE website for the Former Raritan Arsenal:

https://www.nae.usace.army.mil/missions/projects-topics/former-raritan-arsenal/

Information Repository:

U.S. Army Corps of Engineers, New York District
2890 Woodbridge Avenue
Edison, NJ 08837

Administrative Record Location
USACE New York District Office
26 Federal Plaza
New York, NY 10278

SITE HISTORY AND BACKGROUND

The Former Raritan Arsenal is located on the northern bank of the Raritan River in Middlesex County, New Jersey (Figure 1).

The majority of the Former Raritan Arsenal land area lies within the Township of Edison, with a portion located in Woodbridge Township. It is bordered to the north and northwest by Woodbridge Avenue, to the southwest by Mill Road and the Industrial Land Reclamation Landfill, and to the east by the Raritan River.

The Former Raritan Arsenal was initially developed to facilitate military shipments during World War I. The initial land purchased for development of the Former Raritan Arsenal consisted of tidal marsh, quarries, and farmland. The War Department purchased the land in December 1917, and construction of the Raritan Arsenal was underway by the beginning of 1918. Ordnance was first received at the Raritan Arsenal during the early phases of construction. On May 2, 1918, the Raritan Arsenal contained military facilities that included magazines, a railway network, locomotive houses, docks, warehouses, assembly and process buildings, administration buildings, storage buildings, and living quarters, and was declared operational.

The principal function of the Raritan Arsenal was to store, handle, and ship various classes of ordnance and military supplies. Other activities and missions included assembly of automobiles, trucks, tanks, and motorized artillery; preservation, renovation, and manufacture of munitions; salvaging, linking, belting, clipping, packing, demilitarizing, and maintaining ammunition; requisition, research, and development of ordnance; military supply chain management; and troop training.

In March 1961, the DoD announced the proposed disposition of the Raritan Arsenal, and in 1964, the General Services Administration began selling the Former Raritan Arsenal property. At the time of the disposition announcement, the Former Raritan Arsenal contained approximately 440 buildings and more than 62 miles of roads and railways. Since closure, the Former Raritan Arsenal has been redeveloped extensively, primarily for commercial and industrial uses, particularly in the northern portion of the facility.

SITE CHARACTERISTICS

Area 11 and DSA 2. Area 11 and DSA 2 are located in the southeastern portion of the Former Raritan Arsenal adjacent to the Raritan River (Figure 1). These areas consist predominately of undeveloped wetlands encompassing a total of 130 acres. Area 11 is a narrow, elongated strip of land that runs parallel to Dock Road and the Raritan River and occupies 11 acres, mostly within the limits of DSA 2. DSA 2 extends to the northwest, encompassing another 54 acres. The associated areas surrounding DSA 2 account for an additional 65 acres. Both Area 11 and DSA 2 lie parallel to the Raritan River and are surrounded by wetlands to the northwest, northeast, and southwest. Area 11 and DSA 2 are bordered to the southeast by the Raritan River and Dock Road, the northeast by Sweetwater Lane, and the southwest by March Road. The former arsenal docks are located across Dock Road from Area 11 and DSA 2 along the Raritan River. Portions of Area 11 and DSA 2 were formerly used for dock loading operations.

Area 11 and DSA 2 are presently privately owned property. A developed industrial area owned by a private landowner is located within the central portion of DSA 2, which is accessible via Sweetwater Lane. Property owned by Middlesex County Sewerage extends slightly into the northeastern corner of Area 11.

The developed portions of Area 11 and DSA 2 are accessible by vehicles and pedestrians. Both areas are underlain by dredge spoils from the Raritan River channel. Raritan River dredging operations included dredging the river bottom in front of the former Arsenal dock, which contained **Munitions and explosives of concern (MEC)** per historical reports. Archive records document dredging of the Raritan River in 1923, when numerous hand grenades were recovered and dumped with the dredge spoils behind the dock warehouses in Area 11.

In addition, historical photographs from the 1940s show objects, disturbed soil, fill areas, and pits located behind the docks. The photographs show the property used to support dock operations was approximately as long as the dock itself and was up to 100 yards wide, with a portion of the land falling within Area 11. The historical evidence suggests the dredge spoils disposed of at Area 11 and DSA 2 have the potential to contain MEC (USACE, 2007).

Area 12, OB/OD Area and DSA 3. Area 12 and DSA 3 are in the southern portion of the former Arsenal adjacent to the Raritan River. Area 12 encompasses 85 acres of undeveloped wetland within

the limits of DSA 3. DSA 3 encompasses an additional 103 acres of land north and west of Area 12. The remaining portions of the OB/OD area, including the portion within Raritan River, account for 17 acres, and the associated areas surrounding DSA 3 account for 30 acres.

The combined 235 acres has been identified as having received dredge spoils from the Raritan River channel and was filled with dredge material from the river channel boundary between approximately 1940 and 1956. Because Raritan River dredging operations included dredging the river bottom in front of the former Arsenal dock, which contained MEC per historical reports, the dredge spoils disposed of at Area 12 and DSA 3 were identified as potentially also containing MEC.

Area 12 and DSA 3 are predominantly densely vegetated wetlands, primarily owned by a single property owner, with a small portion in the southeast corner owned by another property owner and two small parcels totaling 3.21 acres on the western boundary owned by another property owner. The area of the Raritan River that includes the southern portion of the OB/OD Area is owned by Edison Township. Access to undeveloped portions of Area 12 and DSA 3 is difficult because of the vegetation and stream channels in the wetlands. Accessibility by vehicles and pedestrians is primarily by March Road and the unnamed access road along the Raritan River.

In the 1980s, a 0.5-acre area on the eastern side of Area 12 was established as an OB/OD range. USACE contractors used the OB/OD range for on-site detonation of MEC recovered during remedial activities at the Former Raritan Arsenal. No munitions encountered at the site to date have been identified as being associated with entities other than DOD. The OB/OD Area and associated kickout area encompass 87 acres of land, including the entire eastern portion of Area 12, a portion of DSA 3 north of Area 12, and a portion of riverbank and open water along the Raritan River immediately south of Area 12. The kickout areas represents an area where MEC has the potential to be distributed throughout the land area because it was released through kickout or expelling of munitions from intentional detonations, resulting in MEC scattered outside the point of detonation and on the ground surface or within the shallow subsurface within the kickout boundary

Area 16 and 16A. Area 16, 16A, and associated surrounding areas are located in the southern portion of the former Arsenal and encompass 352 acres north of DSA 3. Area 16 and 16A are predominately undeveloped, except for the remains of several former magazine buildings and their connecting rail spurs. The majority of the remaining magazine buildings have been removed or abandoned in place, but a few have been rented out by the current property owners for use by small businesses.

The western portion of Area 16 is currently zoned for Light Industrial/Planned Unit development. The eastern portion of Areas 16 and 16A are zoned for Light Industrial development. Accessibility by vehicles and pedestrians is primarily by March Road.

The historical rail spur causeways that once connected the former magazine buildings remain in place and intersect March Road, providing possible off-road access within Area 16. Access to undeveloped portions of Area 16 is otherwise difficult because of the vegetation and stream channels in the wetlands.

The parcel of land that is now the location of Areas 16 and 16A were formerly known as the Lower Magazine Area and consisted of aboveground magazine buildings used to store smokeless powder, primers, and fuses. A total of 95 magazine buildings located along 11 rail spurs were historically present in Area 16. Operations at the former magazine area were mainly limited to storing, loading, and unloading trains and transporting smokeless powder. The Lower Magazine Area operated from July 1918 through 1961.

In 1961, the magazines in Area 16 were inspected, and propellant was observed in cracks of the concrete floor. As a result of the inspection, decontamination of the powder magazines at Area 16 commenced in 1963, including a floor-to-ceiling check for explosive chemicals and munitions.

Munitions and explosives of concern (MEC) potentially present across the site include 2.36-inch rockets, Mk II hand grenades, rifle grenades, and small and large caliber projectiles. These items are anticipated to occur from the ground surface down to depths of approximately 3 feet below ground surface (bgs) based on previous investigation findings.

Land Use

Site Access. Access to Area 11 and DSA 2; Area 12, the OB/OD Area, and DSA 3; Areas 16 and 16A; and the associated surrounding areas is controlled through a combination of site fencing, restricted-use access gates, "No Trespassing" and other warning signs, and active site monitoring by security and safety patrol contractors employed by the two primary property owners —Federal Business Centers and Sumit Associates—who collectively own 96 percent of the site. These controls are intended to restrict unauthorized public access. However, authorized personnel affiliated with the property owners or operating entities may be permitted limited access in accordance with established site security protocols. As such, while access is restricted to the general public, the presence of authorized individuals should be considered when evaluating land use and potential exposure pathways.

Site Receptors. Current potential receptors at all sites evaluated in this Proposed Plan could include wetland species, recreational user/trespassers, authorized users such as maintenance workers, as well as industrial/commercial workers, and construction/utility workers. The current land use is industrial/commercial. Based on communications with property owners during the FS, reasonably anticipated future land use may also include residential development in addition to continued industrial/commercial use.

Area 11 and DSA 2. The combined 130 acres of land that encompasses Area 11 and DSA 2 overlies historical dredge disposal areas and is currently used for limited industrial activities. A concrete batch plant is located on the southern end of Area 11 and a heavy equipment storage area and parking lot are located on the northern half of the area. An industrial warehouse facility and equipment storage areas are located within DSA 2, approximately 800 feet northwest of Area 11.

Area 12, OB/OD Area and DSA 3. Area 12, DSA 3, and associated surrounding areas encompass 235 acres of undeveloped, densely vegetated wetland and riverbank located adjacent to the Raritan River in the southern portion of the former Arsenal. These areas have and are presently used for industrial activities. The OB/OD Area encompasses 87 acres of wetland, riverbank, and open water.

Areas 16 and 16A.

Area 16, 16A, and associated surrounding areas are in the southern portion of the former Arsenal and encompass 352 acres. Area 16 is predominantly undeveloped and is characterized by wetlands, surface water ponds and streams, and abandoned magazine buildings and railroad spurs along 11 former magazine rows. The magazine buildings that remain at Area 16 are unoccupied, but in the past, several of them have been temporarily leased for industrial and commercial uses.

Physical and Environmental Setting

The majority of Area 11 and DSA 2; Area 12, the OB/OD Area, and DSA 3; Areas 16 and 16A; and the associated surrounding areas consists of undeveloped, estuarine wetlands and disturbed old field habitat. Based on the proximity of the wetlands to the Raritan River, the tidal wetlands in this area are classified as estuarine emergent, even though they are seldom inundated by the tide because of the dikes along the river and tide gates that restrict and/or eliminate tidal flows. Soils in these areas generally consist of reworked native soils and suspected dredge spoils. There are also some industrial uses in these areas, including buildings, work yards, and paved areas.

Groundwater. The depth to shallow groundwater in the former Arsenal overburden ranges from 2 to 30 feet below ground surface (bgs), and saturated portions of this unit are relatively thin and discontinuous. In the southern marsh areas, the shallow groundwater can be within 3 feet or less of the ground surface. Previous groundwater data indicate the bedrock aquifer is not affected by activities at the Former Raritan Arsenal.

Middlesex Water Company provides potable drinking water for these areas.

Area 11 and DSA 2. These areas consist predominately of undeveloped wetlands. The developed portions of Area 11 and DSA 2 are accessible by vehicles and pedestrians. Both areas are underlain by dredge spoils from the Raritan River channel. Subsurface characterization results suggest that Area 11 and DSA 2 are underlain by up to 30 feet of Upper Sand unit consisting of reworked native soils and suspected dredge spoils. Sediments identified as dredge spoils were observed to be thicker near the river and southern parts of the site based on soil borings.

Area 12, OB/OD Area and DSA 3. Area 12 and DSA 3 are predominantly densely vegetated wetlands with stream channels present. A portion of the OB/OD area includes the riverbank and open water of the Raritan River.

Area 16. Area 16 (and 16A) is predominately undeveloped, except for the remains of several former magazines and their connecting rail spurs.

SUMMARY OF REMEDIAL INVESTIGATIONS , ACTIVITIES AND CONCLUSIONS

The areas of the Former Raritan Arsenal covered in this Proposed Plan are grouped together due to their geographical proximity and include Area 11 and Dredge Spoil Area 2; Area 12, the Open Burn/Open Detonation Area and Dredge Spoil Area 3; Areas 16 and 16A. Three separate Remedial Investigation Reports were completed for each of these areas. A summary for each area is presented below for both MEC and for Hazardous, Toxic, and Radioactive Waste (HTRW), including munitions constituents (MC), which are chemical constituents such as metals or explosive residuals resulting from breakdown or degradation of munitions.

Area 11 and DSA 2.

MEC Summary: Multiple investigations have been conducted across Area 11 and DSA 2. Historical findings of munitions debris (MD) in surface and subsurface contexts suggest past burial activity within Area 11 and DSA 2, potentially through subsurface pits, trenches, or placement of dredged spoils from the Raritan River. Based on historical records and intrusive investigation munitions, Mk II hand grenades, French rifle grenades, small and large caliber projectiles, and 2.36-inch bazooka rockets have been identified or can reasonably be suspected to be present at the site. No known military munitions training or live fire activities occurred within Area 11 or DSA 2 during operation of the Former Raritan Arsenal.

Many items were removed from Area 11 during these past investigations and removal actions, primarily consisting of Mk II hand grenades, French rifle grenades, small and large projectiles, and small arms cartridges (USACE-Huntsville Center, 2019a). Due to the historical recovery of thousands of ordnance across the site, the prior discovery of multiple 2.36-inch bazooka rockets in a previously investigated area that was not further evaluated, and the apparent clustering of subsurface MD observed during the 2014 intrusive investigation of DSA 2, the human health risk due to the potential for MEC within Area 11 and DSA 2 was rated as "Unacceptable" using the **MEC Risk Management Methodology tool**.

MD refers to the remnants of munitions that remain after use, demilitarization, or disposal—including fragments, penetrators, projectiles, shell casings, links, and fins. During the 2014 follow-up intrusive investigation, no MEC items were recovered; MD was recovered from eight geophysical **anomaly** locations and consisted of 13 empty Mk II hand grenade bodies identified between 3 and 12 inches bgs, clustered along one transect immediately north of Area 11. No additional 2.36-inch bazooka rockets or other identifiable MD types were found during this investigation. The nature of the observed MD clustering suggests a historical disposal or burial area; however, the specific types of munitions beyond the recovered Mk II grenade bodies remain unknown.

As a result, an FS was recommended to evaluate potential remedial action alternatives.

The MEC Risk Management Methodology was applied to evaluate if there are acceptable or unacceptable site conditions due to potential MEC presence. Taking into consideration current land use and reasonably anticipated future land use, this methodology evaluates:

- The likelihood of a MEC encounter based on access conditions and the amount of MEC;
- The severity of an incident based on the likelihood of encounter and severity associated with unintentional detonation of the MEC items at the site; and
- The likelihood of detonation based on MEC sensitivity and the likelihood to impart energy on an item.

As detailed in the RI, the human health risk due to the possible presence of MEC within Area 11 and DSA 2 was determined to be "Unacceptable" based on the MEC Risk Management Methodology (USACE-Huntsville Center, 2019a). Therefore, USACE

conducted a Feasibility Study (FS) to evaluate potential remedial action alternatives that would mitigate the potential MEC hazard at Area 11 and DSA 2.

HTRW and MC Summary. A total of 13 surface soil, six subsurface soil, seven surface water, and five sediment samples were analyzed for various parameters including semi volatile organic compounds (SVOCs), VOCs, pesticides, PCBs, and MC including explosives and metals. No chemicals were identified at levels that would pose unacceptable risk to human health for Area 11 and DSA 2 based on the current and planned future land use for the site.

Area 12, OB/OD Area and DSA 3.

MEC Summary: Multiple investigations have been conducted across Area 12 and DSA 3. MEC types identified or suspected across Area 12 and DSA 3 include 20-mm high-explosive projectiles, Mk II hand grenades, and other munitions items associated with historical OB/OD activities and dredge spoil deposition, based on site records and intrusive investigation findings. MEC items that were discovered during historical investigations are the result of activity within the OB/OD Area or the result of placement of dredged spoils from the Raritan River.

Thousands of MEC items and several tons of MD have been removed from the ground surface and subsurface of Area 12 and DSA 3 during past actions, beginning in 1992 through 2012. (USACE-Huntsville Center, 2021) The majority of the MEC and MD items recovered during previous removal action work were associated with the OB/OD Area and kickout area (USACE-Huntsville Center, 2021).

The last Field effort was completed in winter of 2014 in order to address areas that required further investigation. This included 8.5 acres of unmapped areas of Area 12, portions of the OB/OD area and across DSA 3. Geophysical mapping identified 287 anomalies of which 147 were randomly selected for intrusive investigations. During the intrusive investigation, 1 MEC item (fuzed, 20-mm, high-explosive [HE] projectile) and 28 MD items were recovered from within the OB/OD Area and kickout area. No MEC or MD were identified in the aquatic portions of the site.

A summary of all field investigations and findings is documented in the 2021 Final RI Report. A Final FS Report dated July 2024 evaluated potential remedial action alternatives in the FS that would mitigate the potential MEC hazard at Area 12, OB/OD Area and DSA 3.

HTRW and MC Summary: Between 1994 and 2011, a total of 92 surface soil, 26 subsurface soil, 13 surface water, and 27 sediment samples were analyzed for SVOCs, VOCs, pesticides/PCBs, explosives, and metals. No contaminants of concern (COC) were identified at levels that would pose unacceptable risk to human health. Therefore, no further action is recommended at Area 12, OB/OD Area and DSA 3 for HTRW and MC. A summary of all field investigations and findings is documented in the 2021 Final RI Report.

Areas 16 and 16A.

MEC Summary: Investigations and removal activities have confirmed the presence of MEC in Areas 16 and 16A, particularly in the vicinity of the former Lower Magazine Area. A 1991 investigation and associated remediation effort targeted known MEC burial locations around former Magazine Buildings 643 and 644. MEC types identified or suspected in this area include smokeless powder containers, primers, fuzes, and a variety of general munitions historically stored or disposed of in these locations.

The area surrounding Building 643 underwent extensive remediation including clearing, magnetometer surveys, and mass excavation down to 15 feet bgs, extending below the water table. During this operation, 29,194 MEC items were recovered, with field records indicating that many had been buried or dumped in bulk. An additional 955 MEC items were recovered around Building 644, confirming widespread MEC burial and disposal practices.

The 2016 RI/FS concluded that the area had been adequately characterized based on investigations conducted between 1963 and 2005. No further field efforts were recommended. These findings were compiled in the 2019 RI Report.

The MEC Risk Management Methodology (RMM) applied during the RI process determined that the potential for MEC exposure in Area 16 remains

"Unacceptable" under current and reasonably anticipated land use conditions. MEC is expected to remain clustered in subsurface soils at varying depths, extending as deep as 15 feet bgs.

The FS (2024) evaluated remedial alternatives to address these hazards and reduce risks to future site users.

HTRW and MC Summary: The Human Health Risk Assessment (HHRA) analyzed the potential risks to human receptors associated with exposures to constituents detected in surface soil, subsurface soil, surface water, and sediment. A total of 81 surface soil, 99 subsurface soil, 20 surface water, and 29 sediment samples were analyzed for COCs, including SVOCs, VOCs, pesticides/PCBs, explosives, and metals. No COCs were identified for Area 16 at levels that would pose unacceptable risk to human health. The Baseline Ecological Risk Assessment found no risk to ecological receptors. There are no unacceptable risks to human health and the environment associated with chemical constituents, and therefore no further action is recommended for Areas 16 and 16A for HTRW and MC.

SCOPE AND ROLE OF THE ACTION

The Former Raritan Arsenal is a FUDS Property encompassing multiple project areas, of which Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; and Areas 16 and 16A are a subset of components. The overarching strategy for the FUDS property involves investigating and, where appropriate, remediating areas potentially impacted by historical military use. These efforts are conducted in phases and prioritize areas based on risk, accessibility, and stakeholder input.

A RI was completed, targeting both MEC and MC. Previous actions have included surface clearance in upland areas, geophysical surveys, and focused removals where MEC was confirmed.

The remedial action described in this Proposed Plan addresses Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; and Areas 16 and 16A specifically—as potentially impacted by historical munitions disposal activities. This action fits into the broader remediation strategy by addressing an area where site-specific conditions warranted separate evaluation. The remedy will reduce potential exposure risks while supporting protectiveness across the full site portfolio. Coordination with ongoing and future efforts at other portions of the FUDS Property will continue to ensure consistent land use controls and communication strategies are maintained.

SUMMARY OF SITE RISKS

Risk assessments were performed to evaluate whether MEC or MC posed unacceptable risks to human health or the environment for the areas included in this Proposed Plan. A munitions hazard assessment and a HTRW/MC risk assessment were used to aid in the development, evaluation, and selection of appropriate response alternatives.

Human Health Risks

MEC Risk Summary: Based on the results of the MEC RMM under current and reasonably anticipated future conditions, MEC poses unacceptable risks to human health at Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; Areas 16 and 16A. This is due to the findings of the RI and is in alignment with the conceptual site model that suggests the primary release mechanism is from MEC that may have been embedded within the sediments that were dredged from the Raritan River in the vicinity of the Area 13 dock and placed at the DSAs. Consistent with CERCLA guidance, the MEC RMM applied conservative assumptions to account for these data limitations and site history, resulting in a determination of unacceptable risk. Therefore, remedial alternatives for MEC in Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; Areas 16 and 16A were evaluated in the FS.

It is USACE's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health based on the unacceptable explosive hazard posed by potential MEC remaining in subsurface areas of Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; Areas 16 and 16A. This determination is supported by the MEC RMM, which applied conservative assumptions. The recommended action addresses the risk of inadvertent encounter with subsurface munitions that may pose an imminent and substantial endangerment to human health.

MC Risk Summary: The **Human Health Risk Assessment** conducted during the RI did not identify

an unacceptable risk associated with exposure of current or future receptors at Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; Areas 16 and 16A for contaminants of potential concern associated with DoD releases.

Ecological Risk Summary: The ecological risk assessment did not identify any unacceptable risk to ecological receptors at Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; Areas 16 and 16A.

REMEDIAL ACTION OBJECTIVE

The Remedial Action Objective applies only to MEC, not to MC or other contaminants of potential concern, as only MEC was determined to be associated with unacceptable human health or environmental risks in the RI. While no MEC items were discovered during the Remedial Investigation archival documentation indicate the potential for MEC—such as Mk II hand grenades, 2.36-inch bazooka rockets, and other recovered munitions— on the ground surface and below ground surface up to 18 feet bgs:

Surface (0–3 feet bgs): applies to maintenance workers, recreational users, and trespassers.

Subsurface (to 18 feet bgs): applies to construction and utility workers.

This modeled depth of concern supports the development of the RAO and the protective measures recommended. Accordingly, the following RAO was developed during the Feasibility Study (USACE, 2024) based on reasonably anticipated future use and conservative exposure assumptions: Prevent interaction with MEC items—such as Mk II hand grenades, 2.36-inch bazooka rockets, and other recovered munitions—on the ground surface and to 18 feet bgs within Area 11 and DSA 2; Area 12, the OB/OD Area, and DSA 3; Areas 16 and 16A; the objective is to achieve a condition of no unacceptable risk to current and future maintenance workers, industrial/commercial workers, recreational users/trespassers, construction/utility workers, and residents under current and reasonably anticipated land use scenarios.

SUMMARY OF REMEDIAL ALTERNATIVES

The following alternatives were evaluated:

Alternative 1 – No Further Action
No Action means that no action, including no implementation of a public awareness program, will be undertaken to reduce, control, or mitigate exposure. This alternative is used in the evaluation of other alternatives to provide a baseline for comparison.

Alternative 2 – Land Use Controls (The Preferred Alternative)
A land use control is any physical (fences), legal (deed restrictions), or administrative (notices and educational materials) mechanism that restricts the use of or limits access to real property to prevent or reduce risks to human health and the environment. This alternative uses educational controls to inform and educate the public (i.e., site visitors and landowners) of the danger posed by potential munitions and how to respond if a munitions or explosive hazard is found. Public awareness and outreach will be implemented under the 3Rs Explosives Safety Education Program (Recognize, Retreat, Report). The 3Rs Program outlines the three key steps individuals should follow if they encounter a potential munition:

Recognize: when you may have encountered a munition and that munitions are dangerous,

Retreat: do not approach, touch, move, or disturb it, but carefully leave the area, and

Report: contact local authorities.

Under Alternative 2, USACE would develop and maintain a Land Use Control Implementation Plan (LUCIP) that describes the implementation and maintenance of the following specific Land Use Controls:

1. *Annual Notification Letters*: Annual notification letters discussing the history of the property and the potential presence of munitions and the associated risks will be developed and mailed to the property owners for the subject areas and to appropriate offices in the local community (emergency services, Edison Township Engineering Department and Code & Construction Division, other town offices) once per year. These letters will also include information on the Edison Township Dig Permit Process, which is an existing dig permit program implemented, enforced,

and maintained by Edison Township, as all the subject areas are located in Edison Township.

2. *Implement a 3Rs (Recognize, Retreat, Report) Explosives Safety Education Program*: The education program will include a fact sheet on the history of the property that will be provided to the property owners and appropriate offices in the local community. Materials may also be provided via online content at the Former Raritan Arsenal website. Property owners and community stakeholders will be provided 3Rs Explosive Safety Education materials that include information that helps protect property owners, public and/or site users from the potential dangers associated with the presence of munitions. Specifically, the 3Rs Explosives Safety Guide for the Construction Industry will be provided to property owners and to Edison Township for inclusion for their dig permit materials.

The town of Edison Township currently implements, enforces, and maintains a dig permit program for areas of the Former Raritan Arsenal located in Edison Township. All of the subject project areas are located within Edison Township. This is a pre-existing land use control established by Edison Township that supports USACE's RAO of eliminating unacceptable risk, identification of a preferred alternative, and eventual implementation of a selected remedy. USACE is not responsible for this LUC.

Additional LUCs, such as signage, were considered during the FS. However, a LUC including signs was dropped from further consideration because property owners indicated that they did not want signs installed on their property. Property owner input was requested during the FS and documented in a questionnaire included in the FS Report.

Capital costs for this alternative are $22,000, with operations and maintenance costs totaling $379,100. The total present value cost for this alternative is $640,900.

Alternative 3 – Surface MEC Removal and Land Use Controls

This alternative consists of a surface clearance of MEC conducted across 100% of accessible acreage within the 717-acre site, and implementation of the same LUCs as described in Alternative 2. The removal action would begin with a visual survey and analog detector investigation throughout the subject areas. The analog detectors will assist UXO technicians locate and identify metallic objects on the surface that may be obscured by vegetation. Items identified will be inspected by qualified UXO staff and classified as either potential MEC, munitions debris or non-munitions related debris. Potential subsurface munitions will be managed through the LUCs detailed in Alternative 2. These LUCS are designed to mitigate exposure risks to receptors from MEC that may exist down to 18 feet below ground surface.

The MEC RMM model conducted during the FS used conservative assumptions to evaluate potential explosive hazards under data limitations. This modeling supported the need for a protective remedy despite the absence of recovered MEC.

Surface MEC Removal is intended to be performed across accessible portions of the 717 acres, subject only to constraints that preclude access. These "Exception Areas" are anticipated to be limited to parcels where property owners do not provide access, and immovable infrastructure features that physically prevent clearance. Because these conditions are variable and may change over time, the specific boundaries of Exception Areas cannot be reliably mapped until the Remedial Design phase. Exception Areas will therefore be formally designated during the Remedial Design phase and identified in materials provided in either the annual notifications or 3Rs education program.

Once identified by the visual and analog detector survey during the surface clearance, MEC item positions will be documented and the item will be disposed of using an appropriate detonation method based upon the MEC type, size, explosive potential, and site-specific features and concerns. Disposal methods may include a single consolidated shot and/or in situ detonation. Engineering controls and protective measures, including soil berms and sandbags, will be used to significantly reduce the effects and hazards associated with blast and high-speed fragments during consolidated shot operations.

Munitions debris will then be processed through an off-site metal shredder or crusher into metal scrap, containerized, and transported by truck to a facility for recycling. This alternative addresses the exposure pathway for current and future maintenance workers, current and future industrial/commercial workers and recreation users/trespassers who may be exposed to

potential MEC on the ground surface during non-intrusive activities.

Portions of Area 11 and DSA 2; Area 12, the OB/OD Area and DSA 3; and Areas 16 and 16A contain wetlands, which may be impacted due to surface clearance during surveys or MEC detonation. Project applicable or relevant and appropriate requirements (ARARs) include the Clean Water Act, 40 CFR § 230.10(a), which prohibits the discharge of dredged or fill material into waters of the United States if there is a practicable alternative that would have less adverse impact on the aquatic ecosystem, and Resource Conservation and Recovery Act (RCRA) Subpart X 40 CFR § 264.601, which applies to munitions moved from the ground and released to the environment and requires testing and management actions to prevent release of new contamination to environment. This alternative complies with ARARs. If necessary, any fill material discharged into wetlands will comply with 40 CFR § 230.10(a), and, for each munition moved prior to detonation, USACE will conduct testing and management actions before, after, and during detonation in compliance with 40 CFR § 264.601.

Capital costs for this alternative are $2,848,200, with operations and maintenance costs totaling $503,400. The total present value cost for this alternative is $3,597,200

Alternative 4 – MEC Removal to 3-foot depth and LUCs
Alternative 4 consists of MEC removal conducted across 100% of accessible acreage within the 717-acre site to a 3-foot depth, which is the frost line, and implementation of LUCs as described in Alternative 2. MEC removal consisting of both manual and mechanized intrusive operations to remove MEC from the ground surface and, where detected in the subsurface, down to a depth of 3 feet bgs.

This alternative addresses the exposure pathway for current and future maintenance workers who may be exposed to potential MEC on the ground surface during non-intrusive activities and within the subsurface down to a depth of 3 feet bgs. All remaining deeper MEC hazards to 18 feet bgs will be managed by LUCs.

MEC removal to 3-foot depth will be supervised and conducted by UXO-qualified personnel. MEC removal to 3-foot depth is intended to be performed across all accessible portions of the 717 acres, subject only to constraints that preclude access. These Exception Areas are anticipated to be limited to parcels where property owners do not provide access, and immovable infrastructure features that physically prevent removal. Because these conditions are variable and may change over time, the specific boundaries of Exception Areas cannot be reliably mapped until the Remedial Design phase. Exception Areas will therefore be formally designated during the Remedial Design phase and identified in materials provided in either the annual notifications or 3Rs education program.

Alternative 4 is anticipated to cause limited, isolated fill of wetlands due to vegetation clearance for MEC detection, excavation down to 3 feet bgs, and backfilling those locations with clean fill. Detection during frozen, winter months may facilitate onsite detection activities and would mitigate wetland or other ecological impacts. If necessary, any fill material discharged into wetlands will comply with 40 CFR § 230.10(a).

For each munition moved prior to detonation, USACE will conduct testing and management actions before, after, and during detonation in compliance with 40 CFR § 264.601.Applicable noise control and mitigation measures will be implemented to limit unacceptable noise levels from earthwork equipment and planned disposal detonations.

Capital costs for this alternative are $5,907,600, with operations and maintenance costs totaling $353,800. The total present value cost for this alternative is $6,488,400.00.

Alternative 5 – MEC Removal to 18-foot depth
This alternative was not retained for detailed evaluation in the FS. Alternative 5, which remediates the property to a condition that allows for Unlimited Use/Unrestricted Exposure (UU/UE), was screened out during the initial evaluation phase due to its low implementability, lack of landowner acceptance, and extraordinarily high cost. While the alternative is favorable in terms of long-term effectiveness and permanence, it presents substantial technical and administrative challenges. Implementation would require the prolonged shutdown of active commercial and industrial operations, significant disruption to private property, and would carry a high likelihood of

adverse impacts to the built environment and surrounding ecosystems. These activities would likely result in extensive ecological disturbance, pose complex operational constraints due to water saturation and access limitations, and face considerable landowner resistance.

While the detailed cost analysis was not developed further, a rough order-of-magnitude estimate exceeds $900 million, primarily driven by the volume of material greater than 700 acres requiring intrusive investigation and remediation to a depth of 18 ft, and the associated effort for survey, clearance, relocation of infrastructure, and restoration in difficult conditions.

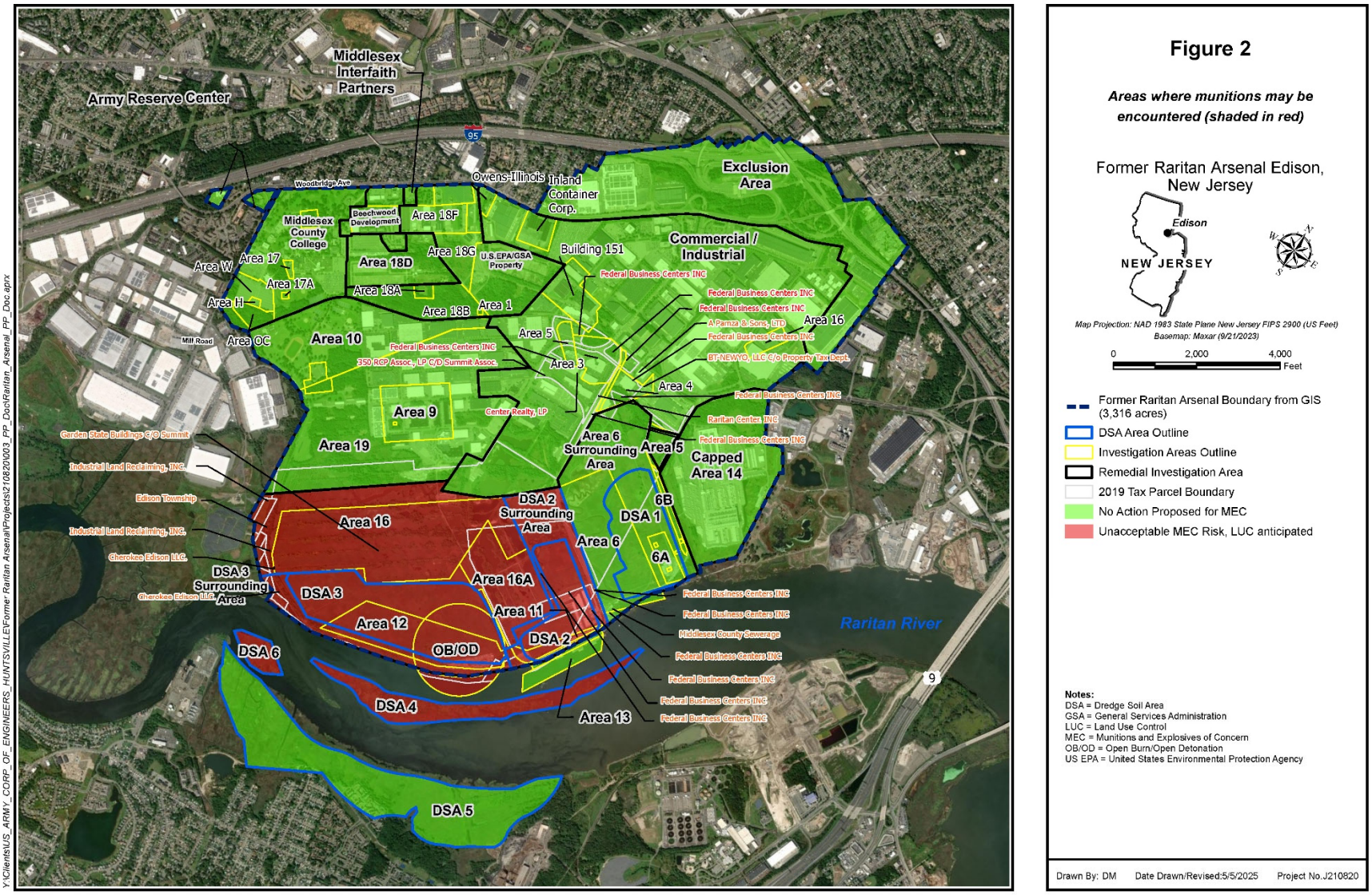

Figure 2. Areas where munitions may be encountered (shaded in red)

EVALUATION OF ALTERNATIVES

Seven criteria and two additional modifying criteria (nine total) were used to evaluate each alternative individually and against each other to select a remedy. The nine criteria fall into three groups: threshold, primary balancing, and modifying criteria. The detailed "Comparative Screening of Response Alternatives" can be found in the Feasibility Study.

SUMMARY OF ALTERNATIVE EVALUATION RESULTS

Each alternative was evaluated against the nine criteria and then against each other. The nine criteria include the following:

1. Overall Protection of Human Health and the Environment
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)
3. Long-Term Effectiveness and Permanence,
4. Reduction of Toxicity, Mobility, or Volume Through Treatment
5. Short Term Effectiveness
6. Implementability
7. Cost
8. State Acceptance
9. Community Acceptance

The following conclusions were derived from the comparative analysis.

The NCP requires consideration of nine evaluation criteria to evaluate the proposed remedial alternatives. Explanations of the Nine Evaluation Criteria are included in **Table 2** below.

Comparative Analysis of Alternatives

Alternative 1 – No Further Action does not protect human health because it does not mitigate the potential risk associated with MEC. Alternative 1 is not effective in the short or long term because no actions would be taken that would reduce potential contact with munitions. Alternative 1 is readily implementable since it requires no actions and has no associated costs.

Alternative 2 –Land Use Controls (Preferred Alternative) is protective of human health and the environment and meets the threshold criteria by using educational LUCs to modify behavior and reduce the likelihood of munitions encounters. Although no MEC was recovered during the RI, the MEC RMM model indicated potential unacceptable risk due to uncharacterized geophysical anomalies and historical evidence of disposed munitions. Alternative 2 achieves the Remedial Action Objectives by preventing human interaction with munitions through implementation of a 3Rs education program and annual notices to landowners and the local community. Edison Township implements, enforces, and maintains its own dig permit program, and the USACE will support this existing program by providing the 3Rs Explosives Safety Guide for the Construction Industry to Edison Township for distribution to permit applicants.

Alternative 2 is implementable and cost-effective. It poses no short-term risks associated with intrusive work and has no environmental impact. It does not reduce volume, mobility, or toxicity through treatment, but achieves long-term effectiveness through behavior modification to reduce the likelihood of exposure. Stakeholder engagement during the FS indicates this alternative has broad community support.

Alternative 3 – Surface MEC Removal and Land Use Controls is protective of human health and the environment and provides protection by physically removing munitions from the surface soil and modifying human behavior through LUCs for MEC potential located in the subsurface. Compared to Alternative 2, Alternative 3 includes higher cost, logistical and implementability challenges, and lower property owner acceptance. It offers long-term effectiveness but presents short-term health and safety risks during implementation.

Alternative 4 – MEC Removal to 3 feet and Land Use Controls is protective of human health and the environment by removing munitions to 3 feet bgs and modifying human behavior through LUCs for MEC potentially located between 3 feet bgs to 18 feet bgs. However, Alternative 4 has a significantly higher cost, logistical and implementability challenges, increased environmental disturbance, and lower property owner acceptance. It offers long-term effectiveness but presents short-term health and safety risks during implementation.

State and Community Acceptance of Alternatives

NJDEP concurred with the findings and conclusions of the RI and FS. Community input from the Institutional Analysis Questionnaire reflected strong support for LUCs, while expressing concern over the intrusive nature and environmental impact of surface and subsurface MEC clearance. Community preference indicates a desire for a less disruptive remedy. State and Community Acceptance will be further detailed after the public comment period and public meeting in the Record of Decision.

Table 2 Individual Analysis of Remedial Alternatives

Criterion	Alternative 1 No Action	Alternative 2 Land Use Controls	Alternative 3 Surface Clearance with LUCs	Alternative 4 MEC Removal to 3-foot depth and LUCs
Threshold Criteria				
1 Overall Protection of Human Health and the Environment	No. Unacceptable. Does not achieve the Remedial Action Objectives. Provides no protection of human health or the environment.	Yes. Acceptable. Reduces receptor exposure to MEC by providing education and raising public awareness of the history of the site and potential for munitions to remain in the subsurface. Uses annual notification letters and an informational pamphlet to directly influence property owner decision making and receptor behaviors.	Yes. Acceptable. Reduces receptor exposure to MEC and protection of human health and the environment by 1) removing MEC from the surface; and 2) mitigating potential receptor exposure to subsurface MEC hazards by providing education and raising public awareness of the history of the site and potential for munitions to remain in the subsurface. Uses annual notification letters and an informational pamphlet to directly influence property-owner decision making and receptor behaviors.	Yes. Acceptable. Reduces receptor exposure to MEC and protection of human health and the environment by 1) removing MEC to 3 feet bgs and, 2) mitigating potential receptor exposure to MEC hazards deeper than 3 feet bgs by providing education and raising public awareness of the history of the site and potential for munitions to remain in the subsurface. Uses annual notification letters and an informational pamphlet to directly influence property-owner decision making and receptor behaviors.
2 Compliance with ARARs	Not Applicable.	Not Applicable.	Acceptable. Complies with the identified ARARs.	Acceptable. Complies with the identified ARARs.
Primary Balancing Criteria				
3 Long-term Effectiveness and Permanence	Provides no long-term effectiveness or protection from existing MEC hazards onsite.	The alternative meets long term effectiveness criterion. LUCs will ensure receptor MEC exposure is limited through annual notifications and implementation of a 3Rs Explosives Safety Education Program. LUCs will be maintained in perpetuity or until remedial goals are achieved.	The alternative meets long term effectiveness criterion. Active MEC surface removal will reduce the quantity of MEC items on the surface and LUCs will ensure exposure to deeper MEC is limited through annual notifications and implementation of a 3Rs Explosives Safety Education Program. LUCs will be maintained in perpetuity or until remedial goals are achieved.	The alternative meets long term effectiveness criterion. Active MEC removal will reduce the quantity of MEC items to 3 feet bgs, and LUCs will ensure that exposure to MEC deeper than 3 feet bgs is limited through annual notifications and implementation of a 3Rs Explosives Safety Education Program. LUCs will be maintained in perpetuity or until remedial goals are achieved.
4 Reduction in Toxicity, Mobility, or Volume Through Treatment	This alternative does not involve treatment.	This alternative does not involve treatment.	This alternative uses treatment (i.e., removal and disposal of MEC) at the surface. Toxicity, mobility, or volume of MEC is reduced at the surface and is technologically feasible. This alternative does not involve treatment below the surface level.	This alternative uses treatment (i.e. removal and disposal of MEC) to 3 feet bgs. Toxicity, mobility, or volume of MEC is reduced to 3 feet bgs and is technologically feasible. This alternative does not involve treatment deeper than 3 feet bgs.

Table 2 Individual Analysis of Remedial Alternatives

Criterion		Alternative 1 No Action	Alternative 2 Land Use Controls	Alternative 3 Surface Clearance with LUCs	Alternative 4 MEC Removal to 3-foot depth and LUCs
5 Short-term Effectiveness		This includes no remedial actions and therefore would not present significant additional risk to the community or to workers.	Because this alternative includes no construction activities, there is no risk for adverse effects on workers, the community, or the environment during implementation of this alternative. This alternative is effective in the short term and can achieve protection upon implementation of the LUCs (less than 1 year).	The remedy is effective as soon as surface MEC removal is completed and LUCs are in place. Moderate risk posed to construction workers and the adjacent community for surface MEC removal. Increased risk to the community during removal of MEC would be significantly mitigated by the use of engineering controls. Moderate environmental impacts will result from temporary access, clearing vegetation for detection, and conducting consolidated shot and/or BIP detonations. RAOs will be achieved in approximately 1 to 2 years—as soon as removal activities are complete and LUCs are implemented. No additional risk or environmental impacts will result from implementing the LUCs.	The remedy is effective as soon as MEC removal is completed and LUCs are in place. Moderate risk posed to construction workers and the local community during MEC removal to 3 ft bgs. Increased risk to the community during removal of MEC would be significantly mitigated by the use of engineering controls . Moderate/high environmental impacts will result from constructing temporary access trails and roads, clearing vegetation for detection, more extensive excavations to 3bgs , and conducting consolidated shot and/or BIP detonations. RAOs will be achieved in approximately 1 to 2 years—as soon as removal activities are complete and LUCs are implemented. No additional risk or environmental impacts will result from implementing the LUCs.
6 Implementability		Readily implementable Because it requires no action.	LUCs are easily implemented because they pose no technical difficulties and the materials and services needed are available.	Implementation of surface MEC removal and LUCs are both technically feasible and readily executable. There is well-established precedence for using both MEC removal and LUCs at munitions sites.	Implementation of MEC removal to 3 feet bgs and instituting LUCs are both technically feasible and readily executable. There is well-established precedence for using both MEC removal and LUCs at munitions sites.
7	Total Present Value Cost	$0	$640,900	$3,597,200	$6,488,400
	Capital Costs		$22,200	$2,848,200	$5,907,600
	O&M Costs		$353,800	$353,800	$353,800

PREFERRED ALTERNATIVE

The Preferred Alternative is Alternative 2 (Land Use Controls). The LUCs will include the distribution of Annual Notification Letters to property owners and the local community and implementation a 3Rs (Recognize, Retreat, Report) Explosives Safety Education Program.

This remedy will be effective at behavior modification by raising public awareness of the history of the site and potential for munitions to remain on the surface and within the subsurface and by informing the public of an appropriate response (3Rs) should MEC be encountered.

Because the Remedial Action Objective defines unacceptable risk as any interaction with munitions to a depth of 18 feet, the land use controls are designed to reach both surface users and those engaged in subsurface activities. This includes mechanisms to influence behavior during construction or utility work, which could disturb munitions at depth.

Edison Township also maintains its own independent dig permit program. While not a component of the preferred alternative, the existing dig permit program provides an additional opportunity for distributing 3Rs materials and reinforcing community awareness.

Compared to Alternative 1, no further action, and Alternatives 3 (surface MEC removal and LUCs) and 4 (3bgs MEC removal and LUCs), Alternative 2 offers the best overall balance of the five CERCLA balancing criteria. Alternative 2 meets the threshold criteria for protectiveness and ARAR compliance. The LUCs recommended in Alternative 2 provide long term effectiveness. Because no construction activities are associated with Alternative 2, it does not present any additional risk to the community or to workers in the short term and does not cause any environmental damage associated with clearing MEC. It is more effective in the short-term than Alternatives 3 and 4. Alternative 2 could also be easily implemented and poses no technical difficulties because the materials and services needed to LUCs are available. While is does not reduce the Toxicity, Mobility, or Volume of MEC through treatment, Alternative 2 has significantly lower costs than Alternatives 3 and 4. Alternative 2 has far greater community support among property owners than the instructive construction activities associated with Alternatives 3 and 4.

Based on information currently available, USACE believes the Preferred Alternative meets the threshold criteria and provides the best balance of trade offs among the other alternatives with respect to the balancing and modifying criteria.

USACE expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA §121(b): to be protective of human health and the environment, comply with ARARs, and be cost-effective. Implementation of treatment technologies or permanent solutions (such as excavation and disposal) was determined not to be practicable because property owners do not support an alternative that includes excavation or disruptions to existing infrastructure, which includes numerous occupied tenant buildings. Therefore, the Preferred Alternative does not meet the statutory preference for treatment; however, this preference is waived because the modest benefits of treatment are outweighed by the environmental impacts and costs of detecting and disposing of any MEC that may be present and long-term protectiveness can be achieved through LUCs that prevent exposure. This preferred alternative is the most cost effective easiest to implement compared to Alternatives 3 and 4. NJDEP concurred with USACEs Remedial Investigation Reports (USACE, 2019a, 2019b. 2021) and the Feasibility Study (USACE, 2024). This is the preferred alternative with the primary landowners. The NJDEP will review this Proposed Plan as part of the public review period.

The Preferred Alternative presented in this Proposed Plan may be modified based on public comments and new information.

COMMUNITY PARTICIPATION

One of the purposes of this Proposed Plan is to solicit comments from members of the public. USACE encourages the public to gain a more comprehensive understanding of the Former Raritan Arsenal and the activities that have been conducted there. USACE maintains the information repository and administrative record for the Former Raritan Arsenal.

Detailed information about the previous studies and restoration activities can be found in the reports and documents contained in the information repository located at the address below:

Information Repository:

U.S. Army Corps of Engineers, New York District
2890 Woodbridge Avenue
Edison, NJ 08837

Administrative Record Location
USACE New York District Office
26 Federal Plaza
New York, NY 10278

Information can also be found through the USACE website for the Former Raritan Arsenal:
https://www.nae.usace.army.mil/missions/projects-topics/former-raritan-arsenal/

The public comment period for this Proposed Plan is December 8, 2025 through January 14, 2026.

For further information on the Proposed Plan, please contact:

U.S. Army Corps of Engineers – New England District
Attn: James Kelly
696 Virgina Road
Concord, MA 01742

Email address: james.a.kelly@usace.army.mil

REFERENCES

USACE-Huntsville Center, 2007. Revised Draft Management Action Plan for the Former Raritan Arsenal, Edison, New Jersey. January.

USACE-Huntsville Center, 2016. Remedial Investigation/Feasibility Study Work Plan, Former Raritan Arsenal, Edison, New Jersey. Final (Revision 3). October.

USACE, Huntsville Center, 2019a. Area 11 and Dredge Spoil Area 2 Remedial Investigation Report, Former Raritan Arsenal, Edison, New Jersey. Final. July.

USACE, Huntsville Center, 2019b. Area 16 Remedial Investigation Report, Former Raritan Arsenal, Edison, New Jersey. Final. January.

USACE, Huntsville Center, 2021. Area 12 and DSA 3 Remedial Investigation Report, Former Raritan Arsenal, Edison, New Jersey. Draft Final. April.

USACE, Huntsville Center, 2024. Feasibility Study, Area 11 and Dredge Spoil Area 2; Area 12, the Open Burn/Open Detonation Area and Dredge Spoil Area 3; Areas 16 and 16A, Former Raritan Arsenal, Edison, New Jersey. July.

ABBREVIATIONS AND ACRONYMS

3Rs	Recognize, Retreat, Report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DERP	Defense Environmental Restoration Program
DGM	digital geophysical mapping
DoD	Department of Defense
DSA	dredge spoil area
FS	feasibility study
FUDS	Formerly Used Defense Site
MC	munitions constituents
MD	munitions debris
MDAS	material documented as safe
MEC	munitions and explosives of concern
MPPEH	material potentially presenting an explosive hazard
MRS	munitions response site
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NJDEP	New Jersey Department of Environmental Protection
OB/OD	Open Burn/Open Detonation
RI	remedial investigation
USACE	U.S. Army Corps of Engineers
UXO	unexploded ordnance

GLOSSARY OF TERMS

Administrative Record: The body of documents that informs the public of the site investigation and "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 as well as relevant documents that were considered but were ultimately rejected.

Anomaly: A location identified during a geophysical survey where the signal response differs from the surrounding area, potentially indicating the presence of a buried metallic object.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980: A federal law that authorizes the President to respond to releases or threatened releases of hazardous substances into the environment. This law also establishes criteria for the creation of key documents such as the Remedial Investigation Report, Proposed Plan, and Record of Decision document.

Defense Environmental Restoration Program: Congressionally authorized in 1986, DERP promotes and coordinates efforts for the evaluation and cleanup of contamination at Department of Defense installations and Formerly Used Defense Sites (FUDS). The DERP statue [10 U.S.C. 2701(a)] requires that the environmental restoration program be subject to, and in a manner consistent with, the Comprehensive Environmental Response, Compensation, and Liability Act and the National Oil and Hazardous Substances Pollution Contingency Plan.

Feasibility Study: A study undertaken by the lead agency to ensure appropriate remedial alternatives are developed and evaluated such that relevant information concerning the Remedial Action options are available to decision makers and an appropriate remedy is selected. The Remedial Investigation data is used to define the objectives of the response action, to develop Remedial Action alternatives, and to undertake an initial screening and detailed analysis of the alternatives. The term also refers to a report that describes the results of the study.

Formerly Used Defense Site Property: A Formerly Used Defense Site Property is defined as real property that was owned by, leased to, or otherwise possessed by the United States and under the jurisdiction of the Secretary that was transferred from DoD control prior to 17 October 1986 (10 USC § 2701(c)(1)(B)). The term "Secretary" means the Secretary of Defense and the Secretaries of each of the Military Departments, as well as the Secretaries of any predecessor departments or agencies of DoD. Formerly Used Defense Site Properties can be located within the 50 States, District of Columbia, Territories, Commonwealths, and possessions under the jurisdiction of the United States.

Human Health Risk Assessment: A Human Health Risk Assessment evaluates the carcinogenic and noncarcinogenic risks presented by contaminants at a site for current and potential future property uses.

Information Repository: A repository, generally located at libraries or other publicly accessible locations in or near the community affected by the FUDS Project, which contains accurate and up to date documents reflecting the on-going environmental restoration activities. This may include the EE/CA, CRP, RAB meeting minutes, RI, FS, PP, public notices, public comments and responses to those comments, ROD, etc. (EP 200-3-1).

Land Use Controls: Any type of physical, legal, or administrative mechanism that restricts the use of or limits access to real property to prevent or reduce risks to human health and the environment.

MEC Risk Management Methodology: A system used by the U.S. Army Corps of Engineers (USACE) to assess the risk associated with Munitions and Explosives of Concern (MEC) at sites like former military installations, considering factors like the likelihood of encountering MEC, the potential severity of an explosive incident, and the sensitivity of the munitions involved, allowing them to identify and manage potential risks at these locations.

Military Munitions: All ammunition products and components produced for or used by the United States armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the 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 of any item specified herein. The term does not include wholly inert items, improvised explosive devices, or nuclear weapons, nuclear devices, and nuclear components, other than non-nuclear 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 USC § 2011, et seq.) have been completed. (10 USC § 101(f)(4)).

Munitions Constituents: Any materials originating from munitions, including explosive and non-explosive materials and emission, degradation, or breakdown elements of ordnance or munitions.

Munitions Debris: Remnants of munitions remaining after munitions use, demilitarization, or disposal.

Munitions and Explosives of Concern: Specific categories of military munitions that may pose unique explosive safety risks, such as unexploded ordnance, discarded military munitions, or munitions constituents, that are present in high enough concentrations to pose an explosive hazard.

Munitions Response Site: A discrete location within a munitions response area that is known to require a munitions response.

National Oil and Hazardous Substances Pollution Contingency Plan: Also called the National Contingency Plan or NCP, it is the federal government's blueprint developed and published in 1968 for responding to both oil spills and hazardous substance releases.

Preferred Alternative: The alternative that, when compared to other alternatives, best meets the Comprehensive Environmental Response, Compensation, and Liability Act evaluation criteria, and is proposed for implementation at a site.

Proposed Plan: The plan that identifies the preferred remedial alternative for a site that best meets the requirements in the National Oil and Hazardous Substances Pollution Contingency Plan and is made available to the public for comment.

Public Comment Period: A prescribed period during which the public may comment on various documents and actions taken by the government and regulatory agencies.

Record of Decision: A public document that reflects the decision of an authorized agency official selecting a Remedial Action to respond to a release that requires a remedy at a Comprehensive Environmental Response, Compensation, and Liability Act site.

Remedial Alternative: A proposed cleanup method or strategy considered during the process of environmental remediation at a contaminated site.

Remedial Investigation/Feasibility Study: An in-depth study designed to gather the data necessary to determine the nature and extent of a release or threat of a release of contamination at a site, assess risk to human health and the environment related to the release, and establish criteria for cleaning up the site. During the FS, the RI data are analyzed and remedial alternatives are identified and evaluated for their ability to satisfy the remedy selection criteria required by CERCLA and the NCP. The FS serves as the mechanism for the development, screening, and detailed evaluation of alternative remedial actions(40 CFR 300.430).