

U.S. Army Corps of Engineers Proposed Plan
Former Camp Wheeler MRS R07H
FUDS Project Number IOGA003305
Macon, Georgia

May 2020

MARK YOUR CALENDAR

PUBLIC COMMENT PERIOD:

June 10, 2020 to July 25, 2020

USACE will accept written comments on the Proposed Plan during the public comment period. Public comments are considered before any action is selected and approved. Please submit written comments to the CEPOH:

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PUBLIC MEETING:

Representatives from USACE and GAEPD will hold a public meeting to explain the Proposed Plan and all the alternatives presented in the Feasibility Study. Oral and written comments will also be accepted at the meeting. The meeting will be held virtually via Web Meeting at a time to be determined.

For more information, see the Administrative Record at the following locations:

Washington Memorial Library
1180 Washington Ave.
Macon, GA 31201
478-744-0800



This Proposed Plan is being presented by the United States Army Corps of Engineers (USACE) to allow the public to review and comment on the preferred remedial alternative to address the potential remaining **munitions and explosives of concern (MEC) at the at the Former Camp Wheeler (FCW) Munitions Range Site R07H, also known as “Benning Range”, **Formerly Used Defense Sites (FUDS)** Project No. IOGA003305. This Proposed Plan provides basic background information on the project site, identifies the **Preferred Alternative** for remedial action (which is removal of MEC in the surface and subsurface and implementation of **land use controls [LUCs]**), explains why this alternative is preferred, and describes the other alternatives that were considered. The proposed remedial action is designed to protect the public from explosive hazards associated with MEC located within the boundaries of the property. The public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.**

The FUDS program addresses the potential explosives safety, health, and environmental issues resulting from past munitions use at former defense sites under the Department of Defense (DoD) *Military Munitions Response Program*, established by the U.S. Congress under the *Defense Environmental Restoration Program*. The FUDS program only applies to properties that were transferred from DoD control before October 17, 1986. The Army is the executive agent for the FUDS program. USACE is the program’s **Lead Agency** and is required to fulfill the requirements of **CERCLA 117(a)** and **NCP 300.430(f)(2)**. The State of Georgia Environmental Protection Division (GAEPD) is the regulatory agency.

The Former Camp Wheeler site is located approximately 6 miles southeast of Macon, Georgia (Figure 1). MRS R07H, “Benning Range”, is a portion of the original Range Complex Number 1 (MRS R07) and is 121 acres in size. It is situated in the northeastern portion of the MRS R07. (Figure 2) Previously 28.2 acres were cleared for MEC, and 92.8 acres remain that need remedial action under this Proposed Plan.

FIGURE 1: SITE LOCATION MAP

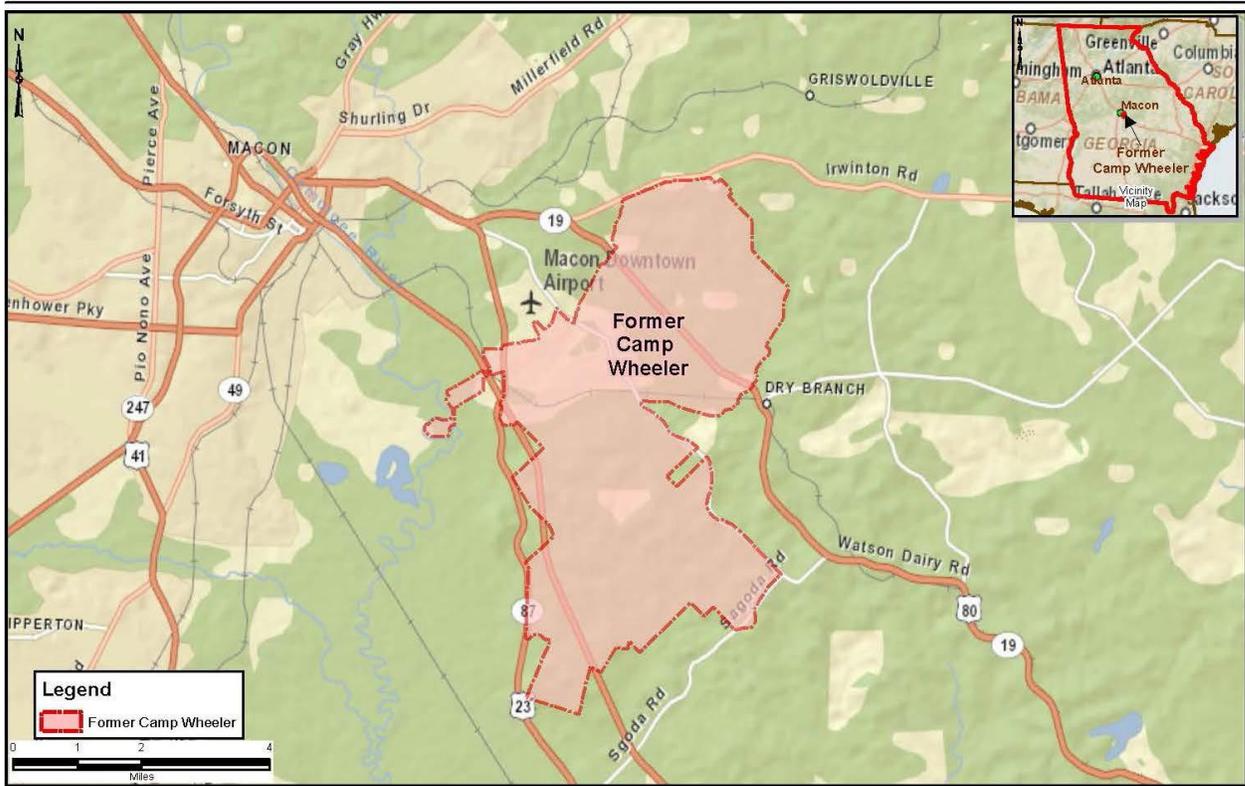
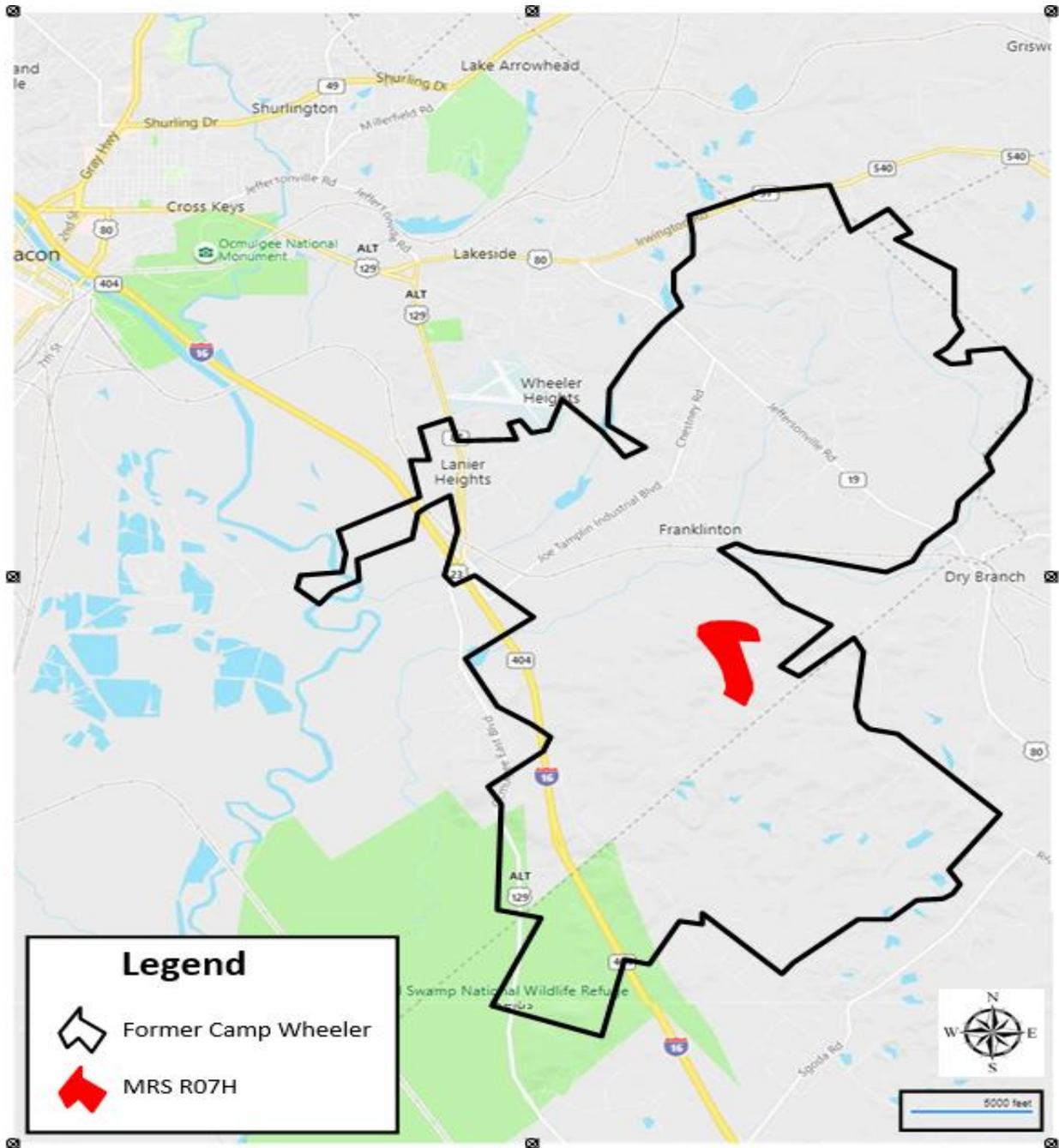


FIGURE 2: MRS R07H AREA



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SITE BACKGROUND

Site History

Camp Wheeler was used by the War Department as a mobilization center from 1917 to 1918 and as an infantry replacement center from 1940 to 1945. The first Camp Wheeler was established on 18 July 1917 and was officially closed on 10 April 1919 (Sterling, 2015).

On 8 October 1940, the second Camp Wheeler was established with construction beginning on 21 December 1940. The camp was an infantry replacement training center where new recruits received basic and advanced individual training to replace combat casualties. The camp was divided into three major portions: a cantonment area, maneuver areas, and the main impact area. The types of ammunition fired into the impact area were those common to the infantry weapons of World War I (WWI) and World War II (WWII). This ordnance included small arms ammunition (e.g., rifle and pistol rounds), anti-tank rockets, and mortar projectiles. To add realism to the training, 105 millimeter (mm) artillery projectiles were fired over the heads of troops during training in one of the impact areas. On the periphery of the impact area, explosive infantry weapons including grenades, Bangalore torpedoes, demolition charges, and booby traps were used in the maneuver and training exercises areas.

The camp was declared excess on 19 January 1946. After a dedudiving operation was conducted in the fall of 1946 to clear MEC, the land was returned to private ownership. Soon after the Camp Wheeler property was returned to private ownership, MEC items were discovered on the property. A second dedudiving operation was conducted in 1947, and a third dedudiving attempt was made in 1949. Immediately following the third dedudiving attempt, more MEC items were discovered. Subsequently some of the land was restricted from use because of the high density of MEC. Rather than attempt another

dedudiving operation, USACE South Atlantic Division instituted a policy that provided for an annual visual inspection of FCW. MEC items were discovered during the majority of these inspections. This policy remained in place until 1966.

Site Investigations

In 1991 a Site Investigation (SI) was conducted at the FCW in which 30 five-acre plots were investigated on the surface and 15 one-acre subplots were investigated in the subsurface. MD was discovered on the surface, and MEC and MD were discovered in the subsurface. A total of 60 MEC items (all 60 mm mortars) were recovered during the SI.

A Preliminary Assessment of Eligibility of the FCW was conducted in 1997. The assessment concluded that the site was an eligible category under the DERP-FUDS program.

An Archive Search Report (ASR) for the FCW was performed by USACE in 2000. The ASR reports that three WWII era range maps were found that showed the location of the main impact area. The ASR reported that the range maps do not clearly show the boundaries of the main impact area and that none of the maps indicate the location of the buffer area. The ASR reported that there were many discrepancies between the ordnance that was reported to have been fired on these range fan maps and what was actually being found onsite.

In 2004 an EE/CA Investigation was performed at FCW to determine the presence/absence of MC contamination. The EE/CA report was available for public review and comment, and a public meeting was held July 26, 2005 to review and discuss investigation findings.

An ASR Supplement was performed by USACE in 2004 after EE/CA field activities were conducted. The supplement was an effort to more clearly delineate the various range fans and their

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respective munitions. The Supplement also provided the MRS designations of seven areas. MRS07H was part of what was, at that time, designated as MRS R07, Range Complex No. 1. MRS R07 was shown as overlapping surface ranges (infiltration and grenade ranges) on a historical map. Records indicate usage included but not limited to small arms, rifle, anti-aircraft, machine gun ranges, mortar and artillery ranges.

In 2010, a Remedial Investigation was performed at MRS R07. The RI included sampling of surface and subsurface soil to determine if MC's were present and contributing to environmental impacts at the site as a result of historical DoD operations. No MC was discovered at MRS R07H above screening level values. Two MEC items (60 mm mortars) as well as additional MD were discovered during the RI. The RI recommended MRS R07 be sub-divided into the 12 newly aligned MRSs (R07A thru R07L). Given the current and projected land uses for R07H, the RI concluded potential for a completed pathway exists for site visitors and workers.

Between June 2012 and February 2013, a Non-Time Critical Removal Action (NTCRA) was conducted to remove MEC from the boundaries of a powerline corridor. This corridor lies through the northern portion of R07H. During the NTCRA, numerous M49 60 mm mortars were discovered in the eastern portion of the corridor, all 2 feet bgs or less with the exception of one mortar (2.5 ft. bgs). During the NTCRA, a total of 9.4 acres within R07H boundaries were cleared of MEC items in the surface and subsurface.

The Feasibility Study (FS) was completed in 2015 to develop remedial alternatives for 10 MRS sites, which included MRS R07. The FS developed and assessed five different remedial alternatives for mitigating explosives safety hazards associated with potential MEC.

A Proposed Plan was developed in 2015 that included the 10 MRS sites. A public notice was published on November 14, 16, and 17, 2015 to announce the completion of the final RI/FS and to introduce the Proposed Plan. Public comments were accepted for a 30-day period, and no responses were received.

Separate Decision Documents were completed for each MRS. The Decision Document for MRS R07H was approved, and the remedial alternative was contracted. However, during the contract award it was discovered that the cost estimates completed in the 2015 FS were significantly lower than current cost, mainly due to advancing technologies used for MEC removal. The cost difference was large enough to require a revised Proposed Plan. Due to the size and scope of each MRS, it was determined that it would be better to write an individual Proposed Plan and DD for each MRS site.

In February 2016, a removal action was conducted from portions of MRS 7 (within MRS R07H and MRS R07D) to clear MEC from the surface and subsurface to support an expansion of the nearby Kaolin mining operations. Approximately 34.75 acres were cleared, and 13.75 acres were not cleared due to contractual limitations. Of the acreage that was cleared, 18.8 acres were within MRS 07H.

NATURE AND EXTENT

MEC Characteristics and Distribution

Cumulatively, numerous MEC items have been identified in MRS R07H which were primarily M49 60 mm mortars. One 81 practice mortar and one 37 mm Armor Piercing Tracer (APT) projectile (at 5 inches bgs) were also discovered. All but one MEC item were located 2 feet bgs or less. Numerous MD items were found and removed which included 37 mm projectiles, 60 mm mortars, and 81 mm mortars. Since the presence of MEC items has been confirmed and a potentially complete exposure pathway exists for

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MEC, an unacceptable risk due to the presence of MEC exist at MRS R07H.

MC Assessment

Surface soil samples were collected and analyzed for MC (i.e. MEC-related metals and explosive compounds). Results indicated no concentration of MC exceeded risk-based screening criteria. During the risk assessment, it was determined there are no unacceptable risks due to the presence of MC to human health or ecological receptors present in MRS R07H.

PHYSICAL CHARACTERISTICS

MRS R07H is a 121 acre range in the eastern portion of the original MRS R07 of the FCW. MRS R07H is a majority of undeveloped, wooded land. Trees consist of primarily pine with some hardwoods. Vegetation in the undeveloped areas is heavy with thick underbrush in those areas that have naturally re-vegetated by volunteer species after past mining operations. Huber kaolinites (clay) are mined in the area and on portions of MRS R07H.

The FCW site is located in the Coastal Plain uplands. The landscape is somewhat rolling or hilly. The very gently sloping ridges are broad. Many streams and drainage ways dissect the area. In some areas, slopes exceed safety limits for investigation, predominately in natural drainage channels or areas that have been susceptible to severe erosion. There are no discernable streams in MRS R07H. There are some secondary roads, both paved and unpaved.

No federally endangered species were encountered during the RI field activities at FCW. There are no known areas of archeological or historical importance within MRS R07H.

LAND USE

MRS R07H is currently privately owned

lands. The land is used for recreational activities (e.g. four wheeling, camping, hunting and hiking) and mining. Future land use at the site is expected to remain the same.

ARARs

Response actions under the Military Munitions Response Program must identify and attain or formally waive applicable or relevant and appropriate requirements (ARARs) under federal and state laws. One ARAR was identified for the site—RCRA Subpart X 40 CFR 264.601. This rule applies to munitions moved from the ground and released to the environment (e.g. during a consolidated shot where multiple MEC items are moved to a single location for destruction in one detonation). It requires testing and management actions for each munition moved before, during and after detonation to prevent the release of new contamination to the environment.

SCOPE AND ROLE OF RESPONSE ACTION

The proposed remedial action is designed to reduce munitions-related hazards within the MRS R07H through a combination of MEC removal in the surface and subsurface and land use controls. The proposed remedial action for MRS R07H protects the public and environment from the hazards related to MEC potentially present at the site.

SITE HAZARDS AND RISK

The conclusions of the baseline risk assessment performed during the FS determined there is a risk for humans to come into contact with MEC at MRS R07H. Current and future land uses were determined to be recreational and mining. The receptors were determined to be for site visitors and site workers. The exposure route for receptors is primarily direct contact as a

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result of some form of human intrusive activity (e.g. digging) and mishandling of the sources.

It is the lead agency'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 or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

REMEDIAL ACTION OBJECTIVES

The remedial action objective (RAO) identified for MRS R07H is to provide protection from interaction with MEC, which poses an unacceptable risk to receptors, by removing 37 mm MEC from the surface and subsurface to a depth of 5 inches and 60 mm and 81 mm MEC from the surface and the subsurface to a depth of 2 feet bgs. Current and future land use was taken into account when developing the RAO for MRS R07H. The defined objective will be achieved through surface clearance, subsurface removal, and LUCs (e.g. community awareness pamphlet distribution, signage in the area, and a project specific informational website.) LUCs will inform the landowners and site visitors of the possible hazards and depict the proper safety and reporting procedures in the event MEC is encountered.

SUMMARY OF REMEDIAL ALTERNATIVES

Five remedial alternatives were evaluated during the FS for MRS R07H. However, only four were carried forward after the initial screening process because complete MEC removal by sifting was determined to be impractical. A description of each of the five alternatives developed for consideration is presented below. Additional details related to the analysis of alternatives, including cost estimates, are

included in the FS Report.

Alternative 1 – No Action

Under Alternative 1, no response action would be taken. Potential MEC would be left in place as-is, without implementing any LUCs or remedial actions. The no-action alternative is not considered an effective response action that meets the requirements of CERCLA because it does not address the explosive hazard posed to humans or the environment by potential MEC at the site. No cost is assumed for this alternative. The No Action Alternative does not adequately meet the RAOs and is used solely as a baseline for comparison, as required by the National Contingency Plan (NCP) under 40 CFR 300.430(e)(6).

Alternative 2 – Land Use Controls

Alternative 2 implements LUCs as the primary means for reducing exposure to explosive hazards. LUCs meet the RAOs by reducing the probability of a human encounter with MEC and the potential for unintentional MEC detonation, which may result in injury or death to humans. LUCs will consist of engineering and educational controls.

The LUCs implemented as Alternative 2 would include:

Engineering Controls: Signage is considered an engineering control and would provide warnings and specific restrictions due to a history of munitions use in the area. Signage would help reinforce the link between inappropriate/uncontrolled access and safety concerns. Periodic maintenance would be conducted to replace and repair damaged signs. Signage locations will be a coordinated effort between land owners and the government representatives or contractors. Specific locations would be determined at the time implementation contracts are awarded.

Educational Controls: Safety and awareness education would be made available thru

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distribution of site pamphlets and made available on a site-specific public website. The pamphlets and website would focus on educating the public of the presence and dangers of MEC.

This alternative does not reduce the toxicity, mobility, or volume of potential explosive hazards through treatment nor does it eliminate access to areas with potential explosive hazards. Therefore, the hazard level would not be significantly reduced from the baseline condition when implementing this alternative. This alternative does modify human behavior to minimize interaction with MEC and provides information on the correct actions to take if MEC is encountered. This alternative does not rely on innovative technology for implementation.

In addition to implementing LUCs, five-year reviews are a requirement for alternatives not allowing for unlimited use/unrestricted exposure (UU/UE) in accordance with 40 CFR 300.430(f)(4)(ii). Under this option, five-year reviews would be required because MEC remains on the site above levels that allow for UU/UE.

Alternative 3 – Surface Clearance with LUCs

Alternative 3 incorporates LUCs (those described for Alternative 2) with surface clearance in the areas within the MRS where access is granted by land owners for completion of the clearance efforts. Instrument assisted surveys designed to detect metallic items would be conducted. MEC would only be removed from the ground surface. If MEC is discovered, it may require onsite destruction. As part of this alternative, LUCs would provide additional protection by increasing public awareness concerning munition hazards at the site. In addition, notices would be published and meetings held to inform residents of MEC clearance activities and to help plan for evacuations, if required.

This alternative uses a combination of measures that reduces the presence of MEC, modifies behavior to minimize interaction with MEC and provides information on the correct actions to take if MEC is encountered. This alternative employs current standard approaches and does not rely on innovative technology for implementation.

Five-year reviews will also be conducted, as described under Alternative 2, since Alternative 3 does not allow for UU/UE.

Alternative 4 – Subsurface Removal with Surface Clearance and LUCs

Alternative 4 includes removal of MEC on the surface as described in Alternative 3 and removal in the subsurface to a depth of 2.0 feet bgs. Metallic anomalies, which include potential MEC items, will be mapped using geophysical methods, with preference given to technologies that have a high rate of effectiveness used to support remedial actions. Metallic anomalies identified as requiring excavation (those that are potential MEC items) would be excavated to a depth of 2.0 feet bgs. If MEC is encountered, the munitions would be removed and destroyed by blow in place procedures, or munitions that are acceptable to move would be moved to a nearby designated area for demolition. If any discovered MEC items are destroyed on site, evacuation and protective actions may be required. This alternative does not rely on technology which may be limited due to steep terrain or dense vegetation.

As part of this alternative, LUCs, as described under Alternative 2 would provide additional protection by increasing public awareness concerning munition hazards at the site. In addition, notices would be published and meetings held to inform residents within the vicinity of removal activities and to help plan for evacuations if needed.

Five-year reviews will also be conducted, as described under Alternative 2, since Alternative 4 does not allow for UU/UE.

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Alternative 5 – Complete Removal

This alternative provides the best possibility of totally eliminating explosives safety hazards but is the most difficult to accomplish. Alternative 5 is included in the list of remedy alternatives to provide the decision makers a remediated action to a condition closest to achieving UU/UE as required per DoD Manual 4715.20. This alternative requires 100% physical removal of UXOs within site boundaries.

This alternative will essentially be a dig and sift operation over the remaining 92.8 acres of MRS R07H site to a depth giving assurance 100% of MEC has been removed. This alternative would also require 100% removal of all vegetation and trees from the site prior to digging. Engineering controls or evacuation may be needed when working close to occupied areas. If MEC is encountered, it is anticipated that the munitions would be destroyed using blow in place procedures. Munitions that are acceptable to move could be moved to a nearby designated area for demolition. If any discovered MEC items are destroyed on site, evacuation and protective actions may be required. If this remedial alternative is implemented, there is no requirement for Five Year Reviews.

Alternative 5 was considered for initial screening for MRS R07H. However, based on the analysis and the site characteristics (heavily wooded and underlying clay), Alternative 5 was determined to be an impracticable alternative and was eliminated after initial screening.

EVALUATION OF ALTERNATIVES

The rationale for selecting the Preferred Alternative was based on nine criteria used to compare alternatives to one another in a detailed analysis as required by the NCP. The nine criteria fall into three groups: threshold criteria, primary balancing criteria,

and modifying criteria (see Table 1). Threshold criteria are requirements that each alternative must meet to be eligible for selection. Primary balancing criteria are used to weigh major tradeoffs among alternatives. Modifying criteria (which include State/Support Agency Acceptance and Community Acceptance) may be considered to the extent that information is available during the FS, but they can be fully considered only after public comment is received on the Proposed Plan. In the final balancing of tradeoffs between alternatives upon which the final remedy selection is based, modifying criteria are of equal importance to the balancing criteria. A comparative analysis of the alternatives for each criteria is provided in the following sections.

The following remedial alternatives were evaluated against the threshold and primary balancing evaluation criteria:

- Alternative 1: No Action
- Alternative 2: Land Use Controls
- Alternative 3: Surface Clearance with LUCs
- Alternative 4: Subsurface removal with Surface Clearance and LUCs

Threshold Criteria

Overall Protectiveness of Human Health and the Environment

Overall protection of human health and the environment is a threshold criterion. Protection is not measured by degree; rather, each alternative is considered as either protective or not protective. Alternatives 2, 3, and 4 are protective. Alternative 1 is not protective.

Compliance with Applicable or Relevant and Appropriate Requirements

Compliance with ARARs is a threshold criterion. An alternative must either comply with ARARs or provide grounds for a waiver. There is one ARAR

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identified for MRS R07H—RCRA Subpart X. To be compliant with this ARAR testing and management actions must be implemented before, during, and after detonation of munitions. Alternatives 1 and 2 will not include munition recovery and detonation, thus the ARAR is not applicable. Alternatives 3 and 4 will comply with the ARAR with proper planning.

Balancing Criteria

Long-Term Effectiveness and Permanence

The long-term effectiveness and permanence of Alternative 4 is rated the highest with a rating of excellent because it would remove surface and subsurface MEC from the target anomalies identified during the geophysical survey, thereby permanently removing explosive hazards to the public and environment from potential MEC. Alternative 3 is rated very good because it would significantly reduce the explosive hazard to the public and environment from potential MEC; however, under Alternative 3, MEC may remain in inaccessible areas of the site and present a low but not zero hazard. Alternative 2 is ranked poor because MEC would not be removed and the threat of human exposure to explosive hazards is subject to the effectiveness of the LUCs being implemented by the landowner over the long term. Alternative 1 is rated not acceptable because it does not provide any long-term effectiveness or permanence since no response action would be undertaken.

Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment

Alternative 4 is rated highest with a rating of excellent because it would remove surface and subsurface MEC from the target anomalies identified during the geophysical survey and permanently remove the mobility, toxicity, and volume of MEC through demolition. Alternative 3 is rated very good because it would also reduce the

mobility, toxicity, and volume of MEC through destruction but will not remove MEC in the subsurface. Alternatives 1 and 2 are rated poor because neither alternative includes a reduction component for MEC.

Short-Term Effectiveness

Alternative 3 is rated highest with a rating of excellent for short-term effectiveness because the removal action conducted in accessible areas and the LUCs could be implemented within 6 to 12 months and would reduce explosive hazards to the public from potential MEC in the short term. The limited removal actions and LUC implementation in Alternative 3 would not result in increased hazards to the public or site workers and would have minimal impact on the environment. Alternative 3 achieves the RAO in a reasonable period of time. Alternative 2, LUCs, is rated good because while it also can be implemented quickly and reduces the potential for public interaction with MEC in the short-term, it does not achieve the RAOs in a reasonable period of time. Alternative 4 is rated good because it would not result in increased hazards to the public or site workers during implementation and it achieves the RAOs in a reasonable period of time, but it takes longer to implement than Alternatives 2 and 3. Alternative 1 is rated not acceptable for short-term effectiveness because, by undertaking no response action, explosive hazards to the public would remain from MEC potentially present at the site.

Implementability

Alternatives 1 and 2 were rated excellent for implementability because they are technically and administratively feasible; the alternatives are conventional and commonplace; and the technical expertise, labor, equipment, and materials would be readily available. Alternative 3 was rated very good because it is technically and administratively feasible but would require specialized personnel and development of a detailed work plan. Alternative 4 (Removal of MEC in Surface and Subsurface to 2.0 feet bgs) was rated good because it is both

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technically and administratively feasible but also requires specialized personnel and development of a detailed work plan. Additionally, there may be areas at the site that area densely vegetated or with steep inclines making it more difficult to obtain geophysical data or to remove MEC intrusively.

Cost

Alternative 1 requires no action; therefore, no costs are associated with this alternative. Alternative 2 is the least costly at a total cost of \$209,800 because it is limited to LUCs. Alternative 3, which includes a limited removal in addition to LUCs, has a total cost of \$733,100. Alternative 4, which entails a removal over 92.8 acres of vegetated terrain, is the most expensive alternative at a total cost of \$9,874,508.

Modifying Criteria

State/Support Agency Acceptance

GAEPD acceptance of the Alternative 4 will be evaluated after comments are received from the State.

Community Acceptance

Community acceptance of the Preferred Alternative will be evaluated after the public comment period ends and will be described in the **Decision Document** for MRS R07H.

SELECTION SUMMARY

Table 1 (following page) summarizes the comparison of each remedial alternative to the seven CERCLA criteria evaluated. The ranking categories used in the discussion of the alternatives are (1) protective or not protective, and meets ARARs or does not meet ARARs, for the two threshold criteria; and (2) excellent, very good, good, poor, and not acceptable for the five balancing criteria.

Alternative 3 and Alternative 4 both received an overall rating of very good. Alternative 4 has a higher rating for long term effectiveness and reduction of mobility, toxicity or volume through

treatment, and Alternative 3 has a higher rating for short-term effectiveness, implementability, and cost.

Because MEC hazards will be removed from the surface and subsurface of the 121 acre site (92.8 acres under this action), the long-term effectiveness and permanence and reduction of mobility, or volume of the potential hazards criteria for Alternative 4 were rated as very good. The implementability and short-term effectiveness were rated as good as it achieves the RAO within a reasonable amount of time. The cost for Alternative 4, which is the highest cost, is rated as poor.

Alternative 3 reduces the probability of human interaction with MEC by removing MEC from the surface, but it does not reduce the probability of interaction as much as Alternative 4. Short-term effectiveness and implementability were rated very good. Long-term effectiveness and performance and reduction of mobility, toxicity or volume were both rated good because Alternative 3 does not reduce the risk to receptors during intrusive activities such as digging or staking. The cost for Alternative 3, which is higher than Alternative 2 but lower than Alternative 4, is rated as good.

Alternative 2 would reduce the probability of a human interaction with MEC and the probability that such an encounter would result in an unintended detonation of MEC; however, the site would not be cleared of MEC, resulting in a greater hazard to the public and environment than under Alternative 3 or 4. The long-term effectiveness and permanence and the reduction of mobility were rated as poor. The implementability, costs, and short-term effectiveness were rated as excellent, very good and good, respectively resulting in Alternative 2 receiving an overall rating of good.

Alternative 1 is not protective of the public or the environment; therefore, it is not

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eligible for selection as the preferred alternative.

Preferred Alternative

Alternative 4 Removal of MEC in the subsurface with surface clearance and LUCs is the recommended alternative for remedial action for MRS R07H. Metallic anomalies identified as requiring excavation (those that are potential MEC items) would be excavated to a depth of 2.0 feet bgs. The proposed removal area is shown on Figure 3 (following pages). Alternative 4 would meet the RAOs and achieve a substantial reduction in the hazards posed by MEC by conducting surface and subsurface MEC removal and implementing LUCs. Although due to technology limitations MEC could potentially remain at the site, the exposure pathway is significantly reduced and is protective to human health. It should be noted, however, that the Preferred Alternative may change in response to public comments or new information.

Based on the information currently available, Alternative 4 meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives for the balancing and modifying criteria. The Preferred Alternative meets the statutory

requirements of CERCLA§121(b), which include protectiveness of human health and the environment, compliance with ARARs, cost-effectiveness, uses permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, and satisfies the preference for treatment as a principle element.

The Preferred Alternative is implementable and is expected to be highly effective in the long-term by reducing and managing potential MEC hazards with minimal impact to the environment. No adverse impacts to MRS R07H are anticipated with implementation of this alternative.

COMMUNITY PARTICIPATION

USACE provides information regarding the remedial action of MRS ROH to the public through public meetings, the Administrative Record file, and announcements published in the newspaper.

The dates for the public comment period, date, location and time of the public meeting, and the location of the Administrative Record files are provided on the front page of this Proposed Plan.

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Table 1: Summary Comparison of Remedial Alternatives with CERCLA Criteria

Alternatives	Overall Protection of Human Health and the Environment	Compliance with ARARs	Long-Term Effectiveness and Permanence	Reduction of Mobility, Toxicity, or Volume through Treatment	Short-Term Effectiveness	Implementability	Cost	Overall Rating
<i>Threshold Criteria</i>			<i>Balancing Criteria</i>					
Alternative 1: No Action	Not Protective	N/A	NA	P	NA	E	E	NA
Alternative 2: LUCs	Protective	N/A	P	P	G	E	VG	G
Alternative 3: Removal of MEC on surface w/LUCs	Protective	Complies	G	G	VG	VG	G	VG
Alternative 4: Complete Removal of MEC (92.8 s) w/LUCs	Protective	Complies	VG	VG	G	G	P	VG

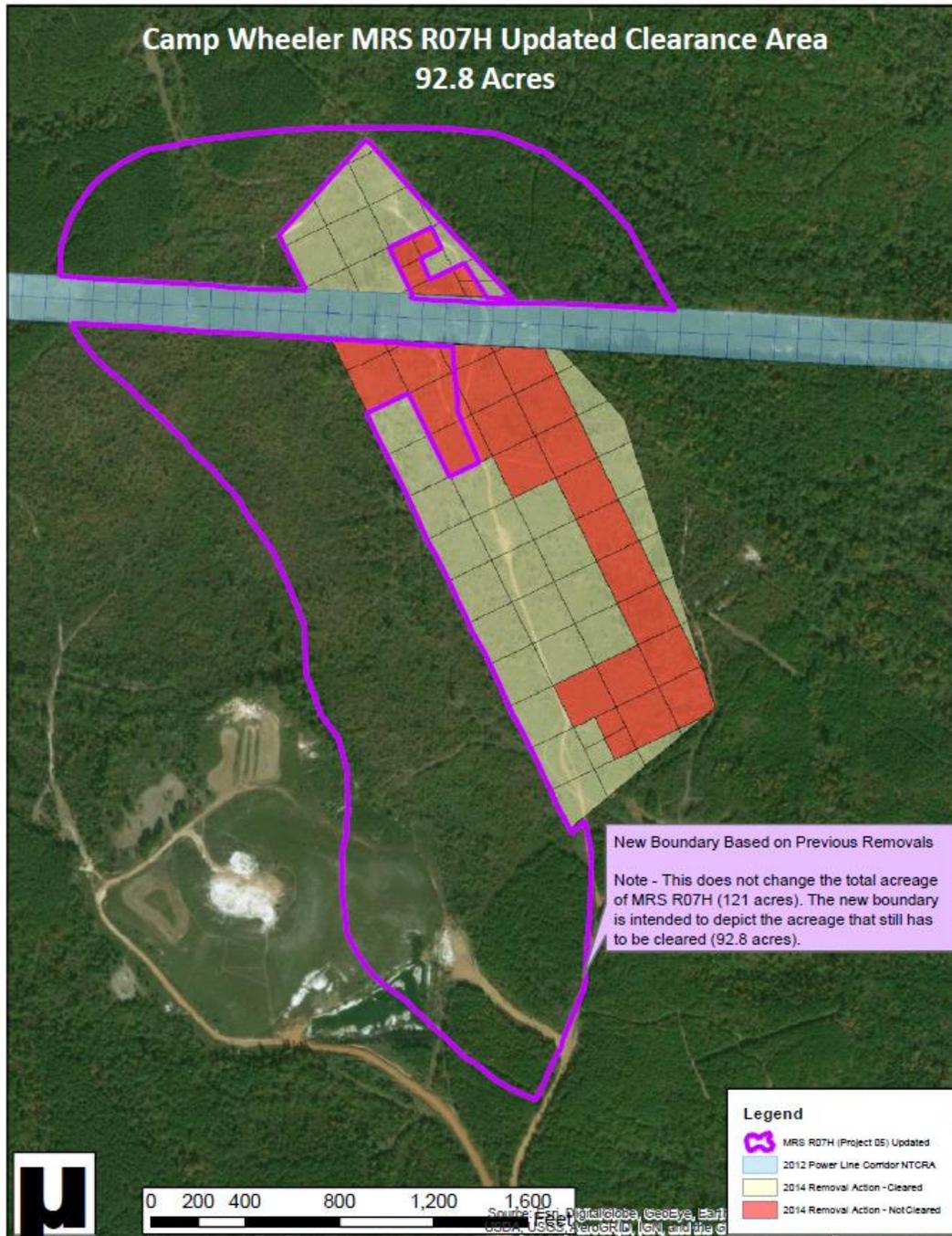
Notes:

ARARs = applicable or relevant and appropriate requirements

G = good N/A = not applicable V = very good E = excellent

NA = not acceptable P = poor

FIGURE 3: MRS R07H PROPOSED REMOVAL AREA



GLOSSARY OF TERMS

Administrative Record (AR)	A compilation of all documents relied upon to select a remedial action pertaining to the investigation and remediation of the project site.
Anomaly	An electronic or audible signal received by detection equipment indicating a subsurface metallic object.
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, otherwise known as Superfund)	A federal law that addresses the funding for and remediation of abandoned or uncontrolled hazardous waste sites. This law also establishes criteria for the creation of key documents such as the Remedial Investigation, Feasibility Study, Proposed Plan, and Decision Document.
Decision Document	The USACE uses the term “Decision Document” for the documentation of remedial response decisions at FUDS properties. Concurrence on the Decision Document by Environmental Protection Agency (EPA) or the state regulatory agency is sought and the Army approves the document.
Dedudding	A term used for clearance of UXO/MEC or Munitions Debris (MD) in and around the WWII timeframe to clear known areas of suspected munitions of hazards. Typically the preferred method of clearance was a visual surface sweep utilizing available military personnel with ordnance related experience and/or training to identify known hazards or munitions types.
Feasibility Study (FS)	The study evaluates possible remedies using the information generated from the RI. The FS becomes the basis for selection of a remedy that effectively eliminates or mitigates the threat posed by contaminants (MPPEH or MC) at the site.
Formerly Used Defense Site (FUDS)	Locations that were owned by, leased to, or otherwise used by the Department of Defense. The term does not include any operational range, operating storage or manufacturing facility, or facility that was used for or was permitted for the treatment or disposal of military munitions.
Munitions Constituents (MC)	Any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.
Munitions Debris (MD)	Remnants of munitions (e.g., penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization or disposal. Munitions debris is confirmed inert and free of explosive hazards by technically-qualified personnel.
Munitions and Explosives of Concern (MEC)	This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks, means: (a) unexploded ordnance (UXO); (b) discarded military munitions; or (c) Explosive MC (e.g., TNT, RDX) present in high enough concentrations to pose an explosive hazard.
Munitions Response Site (MRS)	A discrete location within a defense site that is known to require a munitions response (investigation, removal action and/or remedial actions).
Preferred Alternative	The alternative that, when compared to other potential alternatives, was determined to best meet the CERCLA evaluation criteria and is proposed for implementation at a site.

Proposed Plan --Former Camp Wheeler MRS R07H

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Proposed Plan (PP)	A plan that identifies the preferred remedial alternative for a site, and is made available to the public for comment.
Remedial Action Objective (RAO)	A specific goal for protecting human health and the environment
Remedial Investigation (RI)	Exploratory inspection conducted at a site to define the nature and extent of contamination present.
Superfund	See Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) above.