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ANDERSEN RESTORATION ADVISORY BOARD MEETING MINUTES, MAY 3, 2018

02/01/2019

ELEMENT ENVIRONMENTAL LLC

RESTORATION ADVISORY BOARD MEETING
ARCADE 2 ROOM, HYATT HOTEL, TUMON, GUAM
MAY 3, 2018
MEETING MINUTES

The meeting started at 6:30 PM with a total of 13 participants (see Appendix A). Introduction and recognition of participants were given by Mr. Gregg Ikehara, Restoration Program Manager at Andersen Air Force Base (AFB). Mr. Ikehara briefly introduced Community Co-chairman John Jocson and Installation Co-chair Lieutenant Colonel Michael Jewell of the 36th Wing at Andersen AFB (AAFB), who gave some opening welcome remarks. Mr. Ikehara acknowledged the presence of attendees from the different agencies: GEPA and NAVFAC PAC and thanked all for their time to attend the RAB meeting.

6:32 PM
Presentation 1 by Vicente Ada, Remedial Project Manager, Andersen Air Force Base
Engineering Evaluation/Cost Analysis Overview of Non-Time Critical Removal Action at the Munitions Response Site UXO 4A

UXO 4A is located in the northern part of Northwest Field at Andersen Air Force Base, directly south of Ritidian Point. The area consists of 9.3 acres in which 3.1 acres is the Open Burn/Open Detonation (OB/OD) Area (former Explosive Ordnance Disposal [EOD] disposal range) and 6.2 acres of Kick-out Area.

UXO 4A was used for ordnance disposal dating back to the 1950s. It was not a former battle site, nor a munitions range or target impact area. It was discovered in 1981 by hunters that required EOD response to remove and dispose fuzes, boosters, and smoke pots.

The OB/OD area is relatively flat with scattered low vegetation. The Kick-out Area is undulating limestone surface with dense vegetation growth.

An Environmental Baseline Survey (Phase I), in 1995, consisted of designating a 380-acre survey area as AOC 16 based on visual reconnaissance and records review. A Phase II investigation, in 1998, reduced the area to 59 acres and re-designated the area as AOC 94. The site was re-designated as IRP Site 52 when a Remedial Investigation (RI) was performed in 2004. The RI included visual inspections, geophysical survey, and soil sample collection, and recommended a cleanup action. Comprehensive Site Evaluations (CSE) in 2007 and 2009, were performed to delineate the site boundaries. The CSE Phase I included a 6.4 acre area and the CSE Phase II extended the Kick-out Area to 9.1 acres.

A Time Critical Removal Action (TCRA) was performed in 2012. The area was re-designated as MRS UXO 4A and the site was divided into 168 investigation cells, each 50 feet by 50 feet. A 100% clearance was conducted in all (100%) of the Kick-out Area but in only three of the OB/OD grid cells. In the first 2 days of the OB/OD area clearance action, over 500 Munitions and Explosives of Concern (MEC) items were recovered and more than 25 burn pits were confirmed.

Further removal operations were suspended at that point due to the unexpected high density of munitions being recovered.

A RI was performed in 2015 to better characterize the condition of the OB/OD Area, provide quality control verification of the surface and subsurface removal performed in the Kick-out Area during the TCRA, and to collect and analyze soil samples in both areas for human health and ecological risk characterization.

Summarizing the previous investigations: there is a high density of ordnance related items remaining in the OB/OD Area, but the Kick-out Area has been 100% cleared of MEC/MPPEH, so no further action is required for the Kick-out Area. For munitions constituents in the soil within the OB/OD Area, there were exceedances of munition constituents for industrial and residential exposure risk screening levels, and munitions constituents that pose potential for unacceptable ecological risk. Concentrations of munitions constituents in soil samples collected from the Kick-out Area were below industrial worker risk screening levels and below levels that might be expected to pose ecological risk.

An Engineering Evaluation/Cost Analysis (EE/CA) has been prepared to define the Removal Action Objectives (RAOs) for UXO 4A. The purpose of the EE/CA is to identify and evaluate proposed non-time critical action alternatives to address MEC/Material Potentially Presenting and Explosives Hazard (MPPEH) and soil impacts related to munitions constituents at UXO 4A. Removal action alternatives were evaluated by three Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) evaluation criteria: effectiveness, implementability, and cost.

The RAOs defined for UXO 4A are 1.) to protect human health and the environment by reducing the risks associated with exposure to residual surface and subsurface MEC/MPPEH and, 2.) prevent unacceptable exposure by industrial and construction workers and ecological receptors to munitions constituents in the soil.

Alternative 1 is no action. This alternative will not achieve the RAOs, thus risk remains the same and per CERCLA guidance this alternative is used as a baseline for comparing against other alternatives.

Alternative 2 consists of installing fencing, signs, and institutional controls around the OB/OD Area, and no further action at Kick-out Area. This alternative would not completely satisfy the RAOs.

Alternative 3 consists of removal and disposal of any munition and non-munition debris from the surface of the OB/OD Area; placing a 2-foot soil cover over the OB/OD area; installing fencing, gates, and signage to prevent damage or unauthorized activities within the OB/OD Area; annual inspection requirements for the OB/OD Area; and 5-year reviews of OB/OD Area with no further action at the Kick-out Area. It would achieve the RAOs.

Alternative 4 consists of removal and disposal of any munition and non-munition debris from the surface of the OB/OD Area; digital geophysical mapping (DGM) survey to identify locations of

metallic objects in the subsurface; excavation and removal of debris, soil, and bedrock until detectible MEC/MPPEH has been removed; screening excavated material to remove MEC/MPPEH and subsequent placement of contaminated soil into the consolidation unit at AAFB; covering the area with clean soil; installing fencing, gates, and signage to prevent damage or unauthorized activities within the OB/OD Area; annual inspection requirements for the OB/OD Area; and 5-year reviews of OB/OD Area with no further action at Kick-out Area.

Alternative 5 consists of the full excavation, removal, and disposal of MEC/MPPEH, non-munition debris, and contaminated soil from the OB/OD Area; including a Quality Control Program to determine that the site conditions are acceptable for Unrestricted Use/Unrestricted Exposure; resulting in no further action at either the OB/OD Area or the Kick-out Area.

Alternative 6 includes implementation of Alternative 5 to only a portion of the OB/OD area affected by a proposed MILCON project, and implementation of Alternative 3 to a smaller portion (about 0.34 acres) of the OB/OD area. Per Alternative 3 the OB/OD Area would undergo fencing installation with signage, placement of a soil cover, and long-term management. The portion of the OB/OD Area addressed with Alternative 5 (2.75 acres) would not require further action, with no further action at the Kick-out Area.

The above alternatives were evaluated for effectiveness, implementability, and cost to achieve the RAOs.

Alternative 1 is no action and in turn, the site remains unchanged, with a no cost.

Alternative 2 is no removal with fencing and signage around the OB/OD Area, which protects human health but does not provide protection for ecological receptors (birds and animals), with no reduction in toxicity, mobility, or volume. Wastes and contaminated soils remain on site and the long-term residual risk remains unchanged because MEC/MPPEH still remains in the surface and subsurface. The estimated cost for this alternative is $4.9M with 30 years of long-term management.

Alternative 3 is removal and disposal of MEC/MPPEH and other debris from only the surface of the OB/OD Area. The site will require engineering controls such as soil cover, fencing, and signage, and institutional controls, providing risk mitigation for human health, but not ecological receptors. The risks of exposure to MEC/MPPEH and contaminated soil is reduced only on the surface but not on the subsurface. The estimated cost is $14.6M to include engineering controls and 30-years of long-term management for maintenance of institutional controls and the soil cover.

Alternative 4 is complete excavation, removal, and disposition of all MEC/MPPEH, non-munitions-related debris, and contaminated soil with ICs at the OB/OD Area. It will provide protection to human health and reduce ecological risk. Long-term risks of exposure to MEC/MPPEH and contaminated soil will be reduced due to excavation of all debris and contamination from the site. It can provide control through implementing institutional controls for the soil cover. The estimated cost for this is $10.3M to include 30-years of long-term management.

Alternative 5 is almost the same as Alternative 4 except more extensive MEC/MPPEH and contaminated soil removal would occur at the OB/OD Area, resulting in no need for institutional controls. It will provide protection to human health and eliminate ecological risk. Long-term risks of exposure to MEC/MPPEH and contaminated soil is reduced due to excavation of all debris and contamination from the site. Institutional controls are not required. The estimated cost is $6.9M.

Alternative 6 is a combination of implementation of Alternative 5 and Alternative 3 to the OB/OD Area. It will provide protection to human health and reduce ecological risk. Long-term risks of exposure to MEC/MPPEH and contaminated soil is reduced due to excavation of much but not all of the MEC/MPPEH and contamination from the site. Engineering controls and institutional controls would be implemented in areas not affected by a proposed MILCON project. The estimated cost is $10.5M to include 30-year long term management.

Based on the evaluations, Alternatives 1 and 2 do not meet RAOs for protection to human health and the environment. Alternative 3 has long-term operations and maintenance obligations and institutional controls that are not cost effective. Alternatives 4 and 5 are similar except that Alternative 5 does not require institutional controls. Alternative 6 is not suitable because a portion of the site will require soil cover and long term maintenance. Alternative 5 removes all site hazards as well as the need for long-term management and land-use controls. It is the most effective removal action, provides the best balance between costs and overall effectiveness and meets all the RAOs.

The Engineering Evaluation/Cost Analysis Report has been sent to the regulatory agencies for review. Subsequently, a Draft Action Memorandum, which describes the proposed removal action, will be prepared for public review. Following receipt and consideration of public review comments, the Navy will issue a Final Action Memorandum to document the selected removal action alternative. The removal action planning, implementation and reporting is anticipated to occur from 2018 through 2021.

6:56 PM
Presentation 2 by Lance Higa, Remedial Project Manager, NAVFAC Pacific
MRSPP Update for Andersen Air Force Base Sites UXO 17A and UXO 18A

The munitions response site prioritization protocol is based on the 32 Code of Federal Regulations, Part 179. The ranking system is used to determine relative priority for sequencing munitions response sites. It utilizes a 29-table system that evaluates human health and ecological hazards such as explosives, chemical, and health hazards. This scores a munitions site on a scale of 1 to 8, 1 being the top priority and 8 the lowest. The rank is used to sequence priority of investigation.

UXO 17A is a former skeet range that was closed in 2012. Lead and antimony (metals) were identified on the surface. Part of the site was cleaned up during a MILCON installation of a new structure at the site. No munitions items were reported at the site.

UXO 18A is the North Ramp munitions dump. It was discovered in 2012 during installation of a utility corridor. Discarded incendiary bombs and striker assemblies identified.

For the explosive hazard evaluation (EHE), UXO 17A has an explosive hazard factor data elements (munitions type and source of hazard) value of 3, while UXO 18A has a value of 20. UXO 17A has an accessibility factor data elements of 11, while UXO 18A has a value of 15. The areas are near each other so the receptor factor (population density, population near hazard, types of activities/structures, and ecological and/or cultural resources) are the same, at 15. Overall, 17A has a total of 29 (EHE rating G) and 18A has 50 (EHE rating E).

For the chemical hazard evaluation, the explosive hazard and accessibility factor data elements for both areas are 0 and the receptor factor data elements are both 15. Overall, the total for both areas is 15 with a CHE rating of G.

UXO 17A has undergone soil sampling. It has a medium evaluation with a total rating of D. UXO 18A doesn't have any rating yet, pending evaluation.

UXO 17A has an MRS Priority Rating of 5 and UXO 18A has an MRS Priority Rating of 6.

7:00 PM
Presentation 3 by Lance Higa, Remedial Project Manager, NAVFAC Pacific
Munitions Response Program, Site Updates

UXO 2A Grenade Range: A Remedial Investigation and Feasibility Study (RI/FS) started in 2014 through 2018. Munitions of concern at the site are practice 40 mm grenades. Currently, alternatives are being assessed for cleanup which will be presented in a Proposed Plan to be completed in 2019.

UXO 3A Dumped Munitions Area: These are ordnance burn and detonation areas. Incendiary bombs and fuzes were found in these areas with lead and explosive compounds. A RI/FS report will be completed by July 2018. A proposed plan will be submitted in 2019.

UXO 4A EOD Disposal Range: A time critical removal action was completed in 2015. High explosives from fuzes were found and a remedial investigation was conducted in 2016-2017. A non-time critical removal action is planned and the EE/CA is scheduled to be submitted in May 2018.

UXO 5A Former Burn and Dump Site: A remedial investigation began in 2015, which identified and delineated the OB/OD Areas. Incendiary bombs and fuzes were found in these areas with lead and explosive compounds. A RI/FS report will be completed in July 2018. A proposed plan will be submitted in 2019.

UXO 7A Cliff Dump Site: RI planning documents will be submitted in 2018. The Draft Work Plan will be prepared for agency review and fieldwork will be conducted in 2021.

UXO 11A UXO Burn and Dump: RI fieldwork was postponed to address site-related issues. Glass from chemical agent identification set training kits was encountered (with no evidence of chemical agents being present). Planning document amendments are scheduled for 2018 and fieldwork is planned for Spring 2019.

UXO 16A Landfill 13: Former IR site found to contain munitions. A remedial investigation will address potential munitions on the lower slope. MEC types discovered include 20mm rounds, small arms ammo, and incendiary munitions. Metals, explosive residues, PCBs, and pesticides were also found. Remedial investigation planning documents will be submitted this year and fieldwork is planned for 2020.

UXO 17A Skeet Range: Preliminary assessment and site inspection was conducted from 2015 to 2016. A 2-acre area was identified with elevated levels of lead and antimony. Remedial planning documents will be submitted this year and fieldwork is planned for 2020.

UXO 18A North Ramp Munition Dump: This area was discovered in 2012 during a utility corridor installation. Discarded incendiary bombs and striker assemblies were identified. RI planning documents will be submitted in 2019. The exact extent of the disposal area has not yet been defined and no sampling has been conducted during construction work. Fieldwork is planned for 2022.

MRP Timeline: This table is a summary of the Munitions Response Program sites, work in progress, Munitions Response Site Prioritization Protocol rankings, phase of work, and the year work is planned.

7:15 PM
Closing Remarks by Lieutenant Colonel Jewell

Lieutenant Colonel Jewell delivered closing remarks by thanking everyone for their attendance and emphasizing that this cleanup program is a team effort to ensure these issues are mitigated for future generations. He encouraged participants to be good stewards for One Team, One Guam.

The meeting concluded at 7:16 PM.

Appendix A: Public Meeting Sign-In Sheet

Andersen Air Force Base

Restoration Advisory Board Meeting

Hyatt Regency Guam, Arcade 2 Room

Thursday, May 3

6:30 p.m.

Name	Affiliation	Email
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