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In reply, please refer to:
File:
205800 JO

January 23, 2024

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Transmitted via e-mail to: Richard.H.Tanaka@usace.army.mil

Facility/Site: **FUDS Waikoloa Maneuver Area, Area A and FUDS Waikoloa Maneuver Area, Area G**

Subject: **Comments on Draft Final Remedial Investigation Report for Former Waikoloa Maneuver Area, Project 1 (Area A West, Area A East, and Area G), FUDS Project No. H09HI035901; dated November 2023**

Dear Mr. Tanaka:

The Hawaii Department of Health (HDOH) Hazard Evaluation and Emergency Response (HEER) Office has reviewed the Draft Final Remedial Investigation (RI) at the former Waikoloa Maneuver Area (WMA) Area A and G, and has the following comments:

General Comments

1. Section ES.1.4., PDF page 5 states that “*outdated terminology used in the 2018 Draft Final RI Report has been updated, as appropriate.*” However, throughout the RI Report document including tables and figures, small arms ammunition (SAA) is not referred to as a military munition, nor is recovered small arms debris referred to as munitions debris (MD). In accordance with approved and codified Department of Defense (DoD) munitions response terminology, and as defined in this reports “Glossary of Terms” section, SAA fall under the definition of military munitions and SAA debris, including links for small arms, falls under the definition of MD, not range related debris (RRD) as called out throughout the RI report. Since there is an effort to update terminology in the revised RI report, recommend scrubbing the entire report to correctly refer to SAA as a military munitions, and revising small arms debris as a MD, not RRD.
2. Since MD in the form of ammunition links were found in Area A West – Remaining Area, Area A West – Remaining Areas may not be categorized as an NEU area, as an NEU area is defined as “an area within a MRA where the weight of evidence indicates that no munitions were used or disposed of.” Please remove the NEU determination of Area A West – Remaining Areas globally throughout the report.

Specific Comments

3. Section ES.2.3, Page ES-2 (PDF p.7), 8th and 9th sentences: The ninth sentence of ES.2.3 is in contradiction of what is stated in the eighth sentence of the same paragraph. Eighth sentence states, “*Intrusive investigations found no MEC or MD within Area A East, Area G, and Area A West.*” Then, the following sentence states, “*Intrusive investigations found one MD (fragment of a 155-mm projectile) within Area A West – Northwest Live Fire Fan Area*” which contradicts the previous sentence. Recommend revising/editing the eighth sentence by deleting “Area A West” since MD was found in both the Area A West - Northwest Live Fire Area and Area A West - Remaining Area, as SAA is defined as a military munition and small arms debris (e.g., small arms links) is defined as MD. Refer to Comment #1.
4. Section ES.3, Page ES-4 (PDF p.8), 3rd sentence: The third sentence incorrectly states the absence of MD and should be corrected to read, “Based on the absence of MEC and **limited** MD, no MC source is present within Project 1 – Area A West, Area A East, and Area G.” Refer to Comment #1.
5. Section ES.4, Page ES-4 (PDF p.8), 4th sentence: Recommend revising “Area A West Remaining Lands” to “Area A West - Remaining Area” and to refer to this area consistently throughout the report.
6. ES.6.1, Page ES-5 (PDF p.9), last sentence: Referenced sentence is incorrect as written. Consider revising the last sentence to correctly read, “Based on the data collected during the RI, MEC and MC hazards are not **suspected to be** present at Area A West – **Remaining Area**, Area A East, and Area G...”
7. Section ES.6.3, Page ES-5 (PDF p.9), 1st sentence: Referenced sentence reads, “*Area A West – Remaining Area, Area A East, and Area G of the Project 1 MRS have been determined to be NEU areas.*” Since MD in the form of small arms debris was recovered within Area A West – Remaining Area, that subarea does not qualify to be designated as an NEU area. Please correct the sentence. Refer to Comment #2.

NEU area is defined as, “An area within a MRA where the weight of evidence indicates that no munitions were used or disposed of. Low Density (LD) areas are for which the Conceptual Site Model (CSM) contains adequate evidence that no munitions were used or disposed of in the area. This includes areas where historical information provides no evidence of munitions use or disposal (e.g., no evidence of range fans, targets, maneuver areas, storage/staging, etc.); LD areas where field investigations and other lines of evidence, as documented in the CSM, have confirmed historical target locations or other munitions use or disposal areas were never constructed, or munitions were never used.”
8. Figure ES.2, Page ES-11 (PDF p.13), Map and Legend: Area A West – Remaining Area does not meet the definition of an NEU area. Please remove the hatching for NEU for Area A West – Remaining Area. Refer to Comment #2.
9. Figure ES.3, ES-11 (PDF p.15): In accordance with DoD munitions response terminology and definitions, SAA falls under the definition of military munitions. Any recovered small arms debris (e.g., small arms links) should be classified as MD in accordance with

DoD terminology. Although the recovery of small arms debris is not an indication of MEC, specifically .50 caliber links, it is MD by definition and should be portrayed as such. Figure map and legend should be revised to show the small arms debris locations as MD. The colors on the map may remain the same, but the legend should specify for each color what type of MD, for example, “Munitions Debris (MEC fragment)” and “Munitions Debris (Small Arms).” This change should be made globally to all figures throughout the report. Refer to Comment #1.

10. Section 1.2.5.6, Page 1-5 (PDF p.33), last sentence: In addition to “soil and rock movement” resulting from sheet wash, please include that sheet wash can also move MEC and MC.
11. Section 1.4.6.1, Page 1-10 (PDF p.38), 3rd bullet: Please confirm that the MEC in the form of a 75-mm HE APC-T M61 projectile found/recovered in Area E is consistent with a maneuver area, as MEC of this size (75-mm projectile) and intended use is usually indicative of an Impact/Target Area.
12. Section 2.1.1.6, Page 2-2 (PDF p.52):
 - a. 1st sentence: The sentence states that it was “the preliminary CSM” that indicated MEC in the form of discarded military munitions (DMM) may be present within Project 1 MRS based on munitions recovered during previous investigations. What was the munition(s)/MEC recovered to support DMM may be present in the MRS? Intrusive data results and historical MEC/MPPEH recoveries provided for the MRS do not appear to support this rationale. Consider revising the sentence to remove DMM from the discussion, or just state “MEC” and delete “unexploded ordnance (UXO)” and “discarded military munitions (DMM).”
 - b. 2nd and 4th sentences: Replace “HUA” with “HD areas.” Please check the use of “HD areas” and “HUAs” for consistency in this section, and throughout the report.
13. Table 2.1, Pages 2-5 to 2-6 (PDF pp.55-56): Please check the table for correct usage of HUA and LUA, or non-use of HD and LD.
14. Section 2.2.3, Page 2-9 (PDF p.59): As MD was found within the MRS, please revise the sentence. Suggest revising to, “Based on the absence of MEC and **limited** MD, no MC source is present within Project 1 MRS...” Refer to Comment #1.
15. Section 2.3.3, Page 2-20 (PDF p.60), 2nd sentence: As MD was found within the MRS, please revise “...and MD...” to “...and **limited** MD...” or something similar. Refer to Comment #1.
16. Section 2.3, Page 2-10 (PDF p.60), Table 2.2: Was a request for Applicable or Relevant and Appropriate Requirements (ARARs) sent to the State of Hawaii as required, including the Department of Land and Natural Resources? The list of ARARs needs to be expanded. Potential ARARs and To Be Considered (TBC) should be included in the table, evaluated, and an ARAR/TBC determination made. Please include additional ARARs and TBCs, including but not limited to the following:

- a. Areawide Environmental Hazard Management Plan for Waikoloa Maneuver Area: Hawaii Hazard Evaluation and Emergency Response (HEER) Office
- b. Housing of Urban Development Notices for WMA
- c. Hawaii Technical Guidance Manual: HEER Office
- d. Hawaii Water Quality Standards: Hawaii Administrative Rules (HAR) 11-54
- e. Clean Water Act: 33 U.S. Code (U.S.C.) 1251 et. seq., 40 Code of Federal Regulations (CFR) 100-136, 401-471
- f. Protection of Wetlands: Executive Order (EO) 11990
- g. Floodplain Management: EO 11988
- h. Resource Conservation and Recovery Act (RCRA) Non-Hazardous Waste Management: 41 U.S.C. Section 6901 et. seq., 40 CFR 240-282
- i. Native American Graves Protection and Repatriation Regulations: 43 CFR 10.4
- j. National Historic Preservation Act: 16 U.S.C. 470; 36 CFR 800
- k. Protection of Archaeological Resources: 43 CFR 7.4 and 7.5
- l. Migratory Bird Treaty Act: 16 U.S.C 703-712, 50 CFR 10.13
- m. Hawaii Rules of Practice and Procedure Relating to Burial Sites and Human Remains: HAR 13-300
- n. Hawaii Historic Preservation: Hawaii Revised Statutes (HRS) Chapter 6E
- o. Hawaii Endangered Species: HRS 195D; HAR 13-124
- p. RCRA Subpart M (i.e., Military Munitions Rule): 62 Federal Register (FR) 6622, 40 CFR 266 Subpart M
- q. Open Burning/Open Detonation (Treatment) of Waste Explosives: 38 U.S.C. 704(b)(2); 40 CFR 265.382
- r. Explosives Storage: 62 FR 6652; 27 CFR 555.201 et. seq.; 40 CFR 264 Subpart EE
- s. Oil Pollution Prevention: 33 U.S.C. 1251; 40 CFR 112
- t. Use of Sandbags for Mitigation of Fragmentation and Blast Effects Due to Intentional Detonation of Munitions: HNC-ED-CS-98-7
- u. Establishing a Temporary Open Burn and Open Detonation Site for Conventional Ordnance and Explosives Projects: EP 1110-1-17

- v. Establishing And Maintaining Institutional Controls for Ordnance and Explosives (OE) Projects: EP 1110-1-24
 - w. Ordnance and Explosives Response: EP 1110-1-18
 - x. Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities: 40 CFR 364 Subpart EE
 - y. Management and Disposition of Material Potentially Presenting and Explosives Hazards (MPPEH): DoD Instruction 4140.62
 - z. DoD Ammunition Safety Standards: DoD Manual 6055.09-M
 - aa. Munitions and Explosives of Concern (MEC) Support During Hazardous, Toxic, and Radioactive Waste (HTRW) and Construction Activities: U.S. Army Corps of Engineers (USACE) EP 75-1-2
 - bb. Fugitive Dust: HAR 11-60.1-33
 - cc. State Water Code and Water Pollution: HRS Title 342D-50; HAR 12-174C
 - dd. National Pollution Discharge Elimination System Appendix C: HAR 11-55
 - ee. Soil Erosion and Sediment Control (i.e., Grading, Excavation, Clearing, and Grubbing): HRS 12-180C
 - ff. Hawaii Litter Control: HAR 11-68
 - gg. Hawaii Noise Pollution Control: HRS 19-342F-30; HAR 11-46
 - hh. Hawaii Environmental Response Law: HRS 128D
 - ii. Hawaii State Contingency Plan: HAR 11-451
 - jj. Hawaii Uniform Environmental Covenants Act: HRS 508C
 - kk. Hawaii Hazardous Waste Management: HRS 342J, HAR 11-261, 262, and 268
17. Section 3.2.2.3, Page 3-3 (PDF p.71), last sentence: In the referenced sentence, specify the units for the threshold (e.g., 25 counts) and define the sum channel as the sum of channels 1 and 2.
18. Section 3.3, Page 3-11 (PDF p.79), 4th and 8th sentences: There appears to be contradiction regarding the amount of MD recovered between the two referenced sentences. The fourth sentence states that one MD was found, then in the eighth sentence it is states, “...*the drums were opened to consolidate the MD*” which leads the reader to believe there was more than one MD item. The DD Form 1348-1A in Appendix A indicates approximately 40 pounds of MD was inspected, documented as safe, and shipped off-site for proper disposal. Please provide additional information for clarity on the amount of MD recovered (e.g., one MD item or more than one).

19. Figure 3.4, Page 3-19 (PDF p.87), Map and Legend: In accordance with DoD munitions response terminology and definitions, small arms debris is not defined or classified as RRD. The correct munitions response definition/classification for small arms debris is MD. Correct the figure map and legend to correctly label the recovered small arms debris as MD and make this change globally throughout the report. Refer to Comment #1.
20. Section 4.2.1, Page 4-1 (PDF page 93), last sentence: The reference sentence states that only one MD item was found in the northwestern portion of Area A West. The small arms debris recovered in Area A West should be correctly classified as MD, therefore there would have been three MD items recovered in Area A West. Understanding that MD in the form of SAA debris does not indicate the potential presence of MEC, consider revising the referenced last sentence to read, “To date, no MEC have been found at Area A West, Area A East, or Area G and only one MD item **from MEC** was found...” or something similar. Refer to Comment #1.
21. Section 4.4.2, Page 4-5 (PDF p.97):
 - a. 1st bullet: “*No landowners have reported to USACE the discovery of any MD or MEC on their properties or any stories of their neighbors finding munitions.*” Provide supporting information on how these stories were acquired. Were interviews conducted? If yes, provide the additional information on the interviews and interviewees such as the number of interviews conducted, who was interviewed, interview methodology, etc.
 - b. 6th bullet, last sentence: Concur that SAA is not a category of MEC and is not considered indicative of a potential presence of MEC. However, as commented previously, SAA is classified as a military munition and in turn, small arms debris is classified/defined as MD, which would mean that MD was recovered along Saddle Road. Therefore, please correct the statement that there was no evidence of MD within a 3-mile radius around Area A East. Refer to Comment #1.
22. Section 4.4.2, Page 4-1 (PDF p.97), 6th bullet, last sentence: Concur that SAA is not a category of MEC and is not considered indicative of a potential presence of MEC. However, as commented previously, SAA is classified as a military munition and in turn, small arms debris is classified/defined as MD which would mean that MD was recovered along Saddle Road. So, to state there is/was no evidence of MD within a 3-mile radius around Area A East is incorrect and should be corrected. Refer to Comment #1.
23. Section 4.5.3.1, Page 4-5 (PDF p.97):
 - a. Section 4.5.3.1 appears to be mislabeled. Please confirm that Section 4.5.3.1 is correct or revise to “4.5.1”.
 - b. 4th sentence: The sentence states “*No MEC or MD were found near **Area A East** during the investigation of adjacent...*” Since this section is specific to Area G Data Gap Analysis, should “Area A East” stated in the sentence be “Area G”? Please correct the sentence as necessary.

24. Section 4.5.3.2, Page 4-5 (PDF p. 97): Section 4.5.3.2 appears to be mislabeled. Please confirm that Section 4.5.3.2 is correct or revise to 4.5.1.
25. Figure 4.1 to 4.4, Pages 4-7, 4-9, 4-11, and 4-13 (PDF pp.99, 101, 103, and 105): In accordance with DoD munitions response terminology and definitions, small arms debris is not defined or classified as RRD. The correct munitions response definition/classification for small arms debris (i.e., small arms links), is MD. Correct all referenced figure maps and legends to correctly label the recovered small arms debris as MD and make this change globally throughout the report. Refer to Comment #1.
26. Figure 4.2, Page 4-9 (PDF p.101), Legend, “Investigated Targets”: Should this be “uninvestigated targets”? If these targets were investigated, then shouldn’t they be categorized as one of the anomaly types (e.g., MEC, MD, etc.) listed in the legend? Confirm that the legend is correct and explain why these “investigated targets” are not categorized or correct the legend.
27. Figure 4.4, Page 4-13 (PDF p.105):
 - a. Legend, “Uneven Intrusive Investigation”: The black outline representing “uneven intrusive investigation” is used in this figure to show other areas such as the noise ratio profile lines, rough terrain area, and along the southeast MRS boundary and within Area C and I. Recommend using different line types or adding notes.
 - b. Legend, “Geophysical Survey Location”: The light gray line is not portrayed on the figure and should be revised to the correct color.
 - c. Line AW-78 and 83: Please explain the significance of these lines in the figure (e.g., as notes) and link them to Figure 4.5.
28. Figure 4.5 (PDF p.107): Recommend linking this figure to Figure 4.4 to explain where the lines are from.
29. Figure 4.7 (PDF p.111): Please provide in the text an explanation (e.g., inaccessibility) why no transects were conducted on the western portion of Area G nearest to Saddle Road and adjacent to Area S, where munitions use would most likely be encountered. Recommend showing the inaccessible areas of the MRS on the existing figures.
30. Section 5.1.1.2, Page 5-1, (PDF p.113):
 - a. 2nd sentence: For the statement, “...munitions and range-related items were found during investigation...”, please clarify the range-related items found. If the range-related items being referred were the SAA, please revise this statement as SAA are not considered RRD. Refer to Comment #1.
 - b. 3rd sentence: The third sentence states, “No MD was found within any other areas.” As previously commented, this is an incorrect statement given that MD in the form of small arms debris was recovered in other areas of Area A West.

Suggest revising the third sentence to read, “No MD from MEC was found within any other areas.”

31. Section 5.1.1.4, Page 5-3, (PDF p.115), 4th sentence: The sentence is confusing with the text “and Addition” located after “Hinai” and before “Impact.” Are these two separate areas? Pu’u Hinai is not shown on the preceding figures in this section and it is unclear how the presence of the Pu’u supports the split into two separate areas. Please revise this sentence for clarity. Also, based on previous comments regarding small arms debris not correctly classified as MD, the use of “MD” as is in this same sentence is misleading.
32. Table 5.1, Page 5-2 (PDF page 114), “Type Column, 7th Row, and Table Notes: In accordance with DoD munitions response terminology and definitions, small arms debris (e.g., small arms links) are not defined or classified as RRD. Correct the table to list the recovered small arms debris links as MD and Note (2) to reflect the same. Recommend using the table notes to explain/breakdown the MD as one MD being from MEC and two MD items in the form of small arms debris. Refer to Comment #1.
33. Section 5.1.2, Page 5-3 (PDF page 115), 2nd sentence: It is stated here that one piece of MD was recovered. Appendix A, DD Form 1348-1A indicates approximately 40 lbs of MD/material documented as safe (MDAS) obtained from Area A West which seems heavy for a single piece of MD. Please explain why the DD Form 1348-1A indicates 40 lbs of MDAS for only one piece of MD. Refer to Comment #18.
34. Section 5.1.3.2, Page 5-3 (PDF p.115), Item 2, 3rd sentence: The referenced sentence states, “No MEC-related items were found...” Please define the term “MEC-related items” or use MEC and/or MD, as these terms are used exclusively throughout the report.
35. Section 5.1.4.4, Page 5.5 (PDF p.117): SAA is considered “munitions” therefore, the RA cannot conclude no munitions use in Area A West – Remaining Areas. Please correct this sentence. Refer to Comment #1.
36. Section 5.2.1, Page 5-5 (PDF p.117), 1st sentence: The sentence states, “*Based on the absence of MEC and only one MD found within Area A West...*” As previously commented, with incorrect classification of small arms debris throughout this report, stating “only one MD found within Area A West” is incorrect. Recommend changing sentence to read “*Based on the absence of MEC and limited MD found within Area A West...*” Refer to Comment #1.
37. Section 5.3.1, Page 5-5, (PDF p.117), 2nd sentence: The sentence states, “*...there is no evidence of MEC contamination within the Project 1 MRS Area A West – Remaining Area, Area G, and Area A East, and these areas are confirmed to be NEU areas.*” Per the approved guidance for the definition of NEU, there needs to be a weight of evidence that indicates no munitions were used or disposed of at the MRS. With the recovery of MD in the form of small arms debris at two separate locations within Area A West – Remaining Area, NEU cannot be confirmed with the limited data that was collected during the previous investigations. Correct this sentence to exclude NEU determination in Area A West – Remaining Area. Refer to Comment #2.

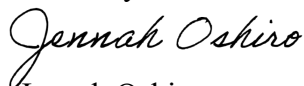
38. Section 5.3.2, Page 5-6 (PDF p.118): The sentence incorrectly states the absence of MD. Suggest revising to “Based on absence of MEC and recovery of **limited MD**, no MC...” Refer to Comment #1.
39. Section 5.4.2, Page 5-6 (PDF p.118): The sentence incorrectly states the absence of MD. Suggest revising to “Based on absence of MEC and recovery of **limited MD**, no MC...” Refer to Comment #1.
40. Table 5.2:
 - a. Page 5-9 (PDF p.121), 2nd column, 1st and 3rd rows: The statement indicating “*No MEC or MD have been found within Area A West, to date*” is incorrect since MD have been found in both areas. Please correct the table for “Area A West – Northwest live fire fan area” and “Area A West – Remaining Area”.
 - b. Page 5-10 (PDF p.122), last column “Complete Exposure Pathway”, 1st row: For the statement, “*This area determined to be a NEU Area,*” Area A West - Remaining Area cannot be considered an NEU area as MD has been recovered in the form of small arms links. Please revise the complete exposure pathway for this area. Refer to Comment #2.
41. Figure 5.1, Page 5-12 (PDF p.124), Figure Map and Legend: In accordance with DoD munitions response terminology and definitions, small arms debris is not defined or classified as RRD. The correct munitions response definition/classification for small arms debris (e.g., small arms links) is MD. Correct all referenced figure maps and legends to correctly label the recovered small arms debris as MD and make this change globally throughout the report.
42. Section 6.1, Page 6-1 (PDF p.128), 1st sentence: Based on previous comments regarding the incorrect classification of small arms debris throughout this report, suggest revising the first sentence of referenced section to read “Based on absence of MEC or MD **from MEC**, a discussion of the fate and transport process for MEC is not warranted for Area A West – Remaining Area...”
43. Table 7.2, Page 7-5 (PDF p.134): Consider adding table notes to define A, B, C, and D.
44. Table 7.3, Page 7-6 (PDF p.135): Consider adding table notes to define 1, 2, and 3.
45. Table 7.4, Page 7-6 (PDF p.135): Expand/enlarge cell at beginning of second row “Results from...” as the rest of the text/label within this cell is illegible.
46. Section 8.1.1.1, Page 8-1 (PDF p.141), 2nd sentence: The referenced sentence provides incorrect information based on previous comments regarding the misclassification of small arms debris throughout the report. Suggest revising the referenced sentence to read, “Of these 12,785 anomalies, MD from MEC (fragment from a 155-mm projectile) was found at only one location with Area A West.” Refer to Comment #1.
47. Section 8.1.1.2, Page 8-1 (PDF p.141), last sentence: The referenced sentence states, “For Area A West – Northwest Live Fire Fan Area, MD and range-related items were found

during the investigation...” What range-related items were found during the investigation of the MRS? There is no data within this report to support range-related items being located with Area A West – Northwest Live Fire Fan Area. Please clarify and/or revise the sentence with correct information.

48. Section 8.2.1, Page 8-2 (p.142), 1st paragraph, 1st sentence: Based on the presence of MR, Area A West - Remaining Area cannot be considered an NEU area. Please correct the sentence. Refer to Comment #2.
49. Section 8.3.1, Page 8-2 (p.142), 3rd sentence: Area A West - Remaining Area cannot be considered an NEU area as MD in the form of small arms debris has been recovered. A determination of NEU cannot be justified for these areas since evidence of munitions use does exist based on the limited investigation. Please revise this sentence. Refer to Comment #2.
50. Appendix A, PDF p.152, DD Form 1348-1A: DD Form 1348-1A indicates approximately 40-lbs of MD/MDAS obtained from Area A West which seems like a heavy weight for one piece of MD. Please explain why the DD Form 1348-1A indicates 40-lbs of MDAS for a single piece of MD.
51. Appendix C: This appendix should also include Area A West - Remaining Area as the area cannot be considered an NEU area. Refer to Comment #2.

Should there be any questions, please do not hesitate to contact me at 808-586-4249 or via e-mail at jennah.oshiro@doh.hawaii.gov.

Sincerely,



Jennah Oshiro
Remediation Project Manager
Hazard Evaluation and Emergency Response Office
Hawaii Department of Health