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June 8, 2010

Mr. Kevin Cloe
Project Manager
Commander Atlantic Division
Naval Facilities Engineering Command
6506 Hampton Boulevard
Norfolk, VA 23508-1278

Re: Review of the Draft Time Critical Action/Interim Action – After Action Report, Surface Munitions and Explosives of Concern at Munitions Response Area –Live Impact Area, and Eastern Conservation Area, Former Vieques Naval Training Range, Vieques, Puerto Rico

Dear Mr. Cloe:

The U.S. Environmental Protection Agency (EPA) completed the review of the Draft Time Critical Action/Interim Action – After Action Report, Surface Munitions and Explosives of Concern at Munitions Response Area –Live Impact Area, and Eastern Conservation Area, Former Vieques Naval Training Range, Vieques, Puerto Rico, dated April 2010. Enclosed you will find our comments.

If you have any questions or comments, please contact me at (787) 741-5201.

Sincerely,

A handwritten signature in blue ink, appearing to read "Daniel Rodríguez", is written over a blue circular stamp or seal.

Daniel Rodríguez
Remedial Project Manager
Response and Remediation Branch

Enclosure

cc: Wilmarie Rivera, EQB, w/ encl.
Richard Henry, FWS, w/encl.
Daniel Hood, Navy, w/encl.
John Tomik, CH2M Hill, w/ encl.

**EPA COMMENTS ON THE
DRAFT TIME CRITICAL REMOVAL ACTION INTERIM ACTION-
AFTER ACTION REPORT
SURFACE MUNITIONS AND EXPLOSIVES OF CONCERN
AT
MUNITIONS RESPONSE AREA-
LIVE IMPACT AREA AND EASTERN CONSERVATION AREA
FORMER VIEQUES NAVAL TRAINING RANGE
VIEQUES, PUERTO RICO
April 2010**

Presented below are comments on the *Draft Time Critical Removal Action Interim Action-After Action Report, Surface Munitions and Explosives of Concern at Munitions Response Area-Live Impact Area, and Eastern Conservation Area, Former Vieques Naval Training Range, Vieques, Puerto Rico*, dated April 2010 (hereinafter referred to as the Draft TCRAIA-AAR Surface MEC AA Report-LIA & ECA).

GENERAL COMMENTS

1. Some of the terminology presented in the Glossary of Terms (Section 6) is obsolete and should not be used. These include “Abandoned Ordnance and Explosives” (replaced by Discarded Military Munitions [DMM]), and “Ordnance and Explosives” (replaced by Munitions and Explosives of Concern [MEC]). In addition, there are questionable definitions of the meanings of the explosives titled “RDX” (Royal Demolition Explosive is provided in the text) and “HMX” (High melting Point Explosive is provided in the text). Both of these definitions are generally questioned as to whether they are appropriate terms to use as the meanings of the letters that are the names of these two explosives. Further, the definition of the term “UXO Personnel” does not appear to be as inclusive as it should be to match the intent of that term as used in Department of Defense Explosives Safety Board (DDESB) Technical Paper (TP) 18 (Minimum Qualifications for Unexploded Ordnance (UXO) Technicians and Personnel). TP 18 includes “UXO Sweep Personnel” in the term “UXO Personnel.”

In addition, the list of Acronyms and Abbreviations incorrectly defines the following items:

- ATF (defined as “Bureau of Alcohol, Tobacco, and Firearms” – should read “Bureau of Alcohol, Tobacco, Firearms, and Explosives”)
- EOD (defined as “Explosives Ordnance Disposal” - should read “Explosive Ordnance Disposal”)
- ESS (defined as “Explosive Safety Submission” - should read “Explosives Safety Submission”)

- MGFDF (defined as “Munitions with Greatest Fragment Distance” – should read “Munitions with the Greatest Fragmentation Distance”) Note: This acronym is incorrectly defined in NAVSEA OP 5 Volume 1 (Ammunition and Explosives Safety Ashore) as “Munitions with the Greatest Fragmentation Distance.” The correct definition is presented in the Department of Defense Ammunition and Explosives Safety Standards (DoD 6055.09-STD).
- OE (an obsolete term defined as “Ordnance Explosives” – should read “Ordnance and Explosives”)
- SIA (defined as “Site Impact Area” – should read “Surface Impact Area”)

Please review the Glossary section of the Draft TCRAIA-AAR Surface MEC AA Report-LIA & ECA, and correct it as noted above. Further, please review the Acronyms and Abbreviations section and correct the noted definitions. In addition, please correct the noted definitions throughout the document in those instances where they are incorrectly defined at their first use.

2. The use of the terms “5X” and “3X” to describe the explosives safety condition of materials, although currently noted in NAVSEA OP 5, Volume 1, is being phased out by the Department of Defense. These terms have been/are being replaced by the categories found in DoD Instruction (DODI) 4140.62 (Material Potentially Presenting an Explosive Hazard). Further, these terms are no longer found in DoD 6055.09-STD. In addition, the DoD will soon publish a Material Potentially Presenting an Explosive Hazard (MPPEH) manual that describes in detail the process and terms to be used to classify and control munitions related material recovered during cleanup activities. While no changes concerning this are requested for the Draft TCRAIA-AAR Surface MEC AA Report-LIA & ECA, it should be noted that future use of the terms “5X” and “3X” instead of the terminology found in DoD 6055.09-STD, DODI 4140.62, and the to-be-published DoD MPPEH manual is discouraged.
3. The Executive Summary section and six other sections of the document list the amount of munitions debris (MD) and range related debris (RRD) processed to date as 12.4 million tons. However, the tonnages listed in Section 4.5, MPPEH Scrap Processing, in Figure 4-15, Monthly Inspection and Recovery (I&R) of Munitions debris (MD) and Range Related Debris (RRD), appear to be less than 12.4 million tons. In addition, the tonnages processed that are listed on Figure 4-16, The Quantities of Munitions Debris Demilitarized for Each Type of Processing Equipment, are significantly different from the 12.4 million tons, and the numbers in the preceding narrative of Section 4.5.2, CPC Processing, do not match the total figures in Figure 4-16. Please review all of the MD and RRD figures in the cited sections and make them consistent.
4. There is no discussion in the Draft TCRAIA-AAR Surface MEC AA Report-LIA & ECA report of the current surface MEC removal taking place at the LIA. The report

should include discussion the current surface MEC removal efforts and how this work will be documented when completed. Why is an after action report being developed if the TCRA work is currently taking place?

SPECIFIC COMMENTS

- 1. Executive Summary, page iii, lines 1-6 and lines 14-17:** Please revise these sentences in the first and second paragraphs..
- 2. Section 2.4.2, TCRA Area, page 2-3, lines 7-12, 20-23, 30-32, and 39-40:** The paragraph of the section found on lines 7-12 reads, “In 1965, ATG training activity began in the MRA-LIA where several mock-ups, such as old tanks and vehicles, bulls-eye targets and a strafing target were used as targets for aerial bombing (Figure 2-5). Although ATG training was initiated in 1965, live ordnance was not used regularly until December 1974 (Tippets et al., 1979). The activity at Vieques increased after July 1975 when training activities stopped on Culebra. Table 2-1 illustrates the type and amount of ATG ordnance fired on the LIA from 1974 to 1998.” No statement is provided concerning the quantities and types of ordnance fired from 1965 through 1973.

In addition, lines 20-23 state that, “Within the LIA, two separate locations were designated for treatment of retrograde (unserviceable) ordnance through OB/OD. The retrograde munitions also included the expired ammunition stored at the former Naval Ammunition Support Detachment (NASD) located in western Vieques. The location of the site is shown on Figure 2-5.” A review of the cited figure does not reveal any location identified as an OB/OD (Open Burn/Open Detonation) location. Further, the section states that there are two sites but only refers to one location.

The section indicates in lines 30-32 that, “MEC clearance and target refurbishment in the LIA was conducted semiannually in accordance with MEC neutralization provisions of the October 11, 1983, Vieques Memorandum of Understanding.” Lines 39-40 further note that, “Recovered items were treated by open detonation within the USEPA-permitted OB/OD pits located in the LIA.” No statement is made concerning the destruction of any munitions by detonation in place where they were discovered.

Please revise the appropriate portions of the Draft TCRAIA-AAR Surface MEC AA Report-LIA & ECA to accomplish the following:

- Provide a discussion of the potential ordnance expended in the area prior to 1974 or state why this cannot be done.
- Present a consistent indication of the number of OB/OD sites present in the area.

- Identify the sites on Figure 2-5, Range Related Site Features within the LIA, to appropriately identify the OB/OD site(s) located thereon.
 - State whether or not any of the munitions recovered during the semiannual MEC clearance and target refurbishment in the LIA were destroyed at any locations other than the “USEPA-permitted OB/OD pits located in the LIA.”
3. **Section 3.1, Guidance, Regulations, and Policy, page 3-3, lines 7 and 8:** Portions of the last bullet in this section read, “Bureau of Alcohol, Tobacco, and Firearms (ATF) ATF P 5400.7, *Explosives Law and Regulations*.” This citation is incorrect. Please correct the lines to read, “Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) ATF P 5400.7, *Federal Explosives Law and Regulations*.”
 4. **Section 3.2, Project Organization and Personnel, pages 3-3 to 3-7:** The entire section is written in future tense. It describes the roles of the personnel as if the TCRA work will be executed in the future. This section should describe the actions/roles the personnel undertook while executing the TCRA.
 5. **Section, 3.3, Composition of Munitions Removal Teams, pages 3-7 and 3-8:** Same as comment # 4.
 6. **Section 3.3, Composition of Munitions Removal Teams, page 3-7, lines 37-38:** The sentence found here states that, “The UXOSO and UXOQCS duties may be performed by the same person when 15 or fewer people are onsite.” It is unclear as to exactly what is intended by the statement “...when 15 or fewer people are onsite.” For example, the term “onsite” is not qualified as to what constitutes a site. In addition, does this refer to all people on the defined site, or does it only refer to the working team members and/or contractor personnel? Are Navy personnel and visitors included in the 15? Please revise the cited sentence to fully define its intent and applicability.
 7. **Section 3.4.1, Vegetation Clearance, page 3-8, lines 28-32:** This section states that, “Once the UXO Technicians have completed the magnetometer assisted visual surface sweep they would move ahead to areas awaiting magnetometer assisted visual surface sweeping to ensure a minimum team separation distance is maintained in accordance with the ESS(CH2M HILL, 2006c). If the operator saw anything in his path that warrants re-inspection, vegetation removal is halted while the UXO Technicians inspected the item of concern.” It is unclear as to the intent of this verbiage and whether or not a UXO-Qualified Technician remains to assist the “operator” if an unidentified item is discovered. Please revise the noted verbiage to better explain the operations discussed.
 8. **Section 3.4.3, MEC Removal Procedures, page 3-9, lines 13-15:** The noted lines state that, “The MEC removal contractors conducted the surface removal of MEC, UXO, MPPEH, MD, and RRD during the TCRA in accordance with the Master Work

Plan (CH2M HILL, 2006d) and contractor SSWPs and SOPs listed on Table 3-1.” However, a review of Table 3-1 determined that no SOPs are listed therein. Please correct this discrepancy.

9. **Section 3.4.4, Explosives Safety Procedures, page 3-10, lines 7-9:** It is stated here that, “MEC items were handled by qualified UXO personnel only. Non-UXO qualified site personnel were closely supervised to ensure MEC was not handled. MEC related scrap was not handled or touched unless it had been checked by qualified UXO personnel.” This assumes that the terms “qualified UXO personnel” and “UXO-qualified personnel” are synonymous, which is incorrect. UXO-qualified personnel include all persons that are classified as UXO Technician II and III. It does not include UXO Sweep Personnel or UXO Technician I personnel. As UXO Sweep Personnel and UXO Technician I personnel that meet the qualification requirements presented in DDESB TP 18 are considered to be qualified UXO personnel, any attempt to use the two noted terms (i.e., “qualified UXO personnel” and “UXO-qualified personnel”) as interchangeable synonyms is both incorrect and could result in a safety issue. Please revise the cited section to eliminate the noted issue.
10. **Table 3-2, ECA and LIA Exclusion Zones, page 3-11:** The notes at the table bottom refer to “K40” and “K328” with no explanation as to what these terms represent. Please provide an explanation as to what these two terms represent and how they are used (i.e., K40 is 40 times the cube root of the net explosives weight present in pounds).
11. **Section 3.4.7, MEC Transportation, page 3-12, lines 15-19:** The Determination to Transport MEC subsection states that, “Recovered military munitions or MEC was not to be moved by personnel unless it was safe to do so. Movement of MEC by hand was authorized only after positive identification and a determination by the UXO Technician III and either the SUXOS or UXOSO that the MEC is safe to move. A conservative approach to MEC transportation was taken and only considered when the item is positively identified as safe to move.” While this is basically correct with respect to movement of the items at issue, the use of the word ‘safe’ is questionable as an absolute. Section 3.4.8, Demolition Procedures, states that, “If at any time MEC was deemed acceptable to move, the MEC contractor consolidated items at a pre-determined location at the site.” The use of the term “acceptable to move” instead of the term “safe” appears to be a more accurate description of the actual circumstances under discussion. Please revise the Determination to Transport MEC subsection to reflect the terminology used in Section 3.4.8.
12. **Section 3.4.8, Demolition Procedures, page 3-12, lines 25-28:** The first paragraph in the section reads, “The MEC contractor removed and disposed of all MEC, UXO, and MPPEH encountered on the ground surface during clearance operations. The MEC contractor maintained detailed accounting of all MEC/MPPEH encountered in log books and data were also recorded in personal digital assistants (PDAs) and imported and stored in the NAVFAC MRP database.” This verbiage is redundant.

MPPEH includes MEC. MEC includes UXO. Please revise the cited paragraph to remove the redundancy.

13. **Section 3.4.10, Explosives Transportation, page 3-13, line 14:** The word “Drive” found in the title of the document under discussion in the section should read “Driver.” Please make this correction.
14. **Figure 3-3, Air Monitoring Locations, TCRA:** The figure should be modified so that monitors are labeled exactly as in Appendix F. This will allow the public to correctly identify monitors and data associated with it. PR-1 should be labeled on Fig. 3-3. The date of operation for each monitor should also be identified either in the text or the figure along with a description of why monitors were shut down and where they were relocated. Also Figure 3-3 was included in the electronic version (CD), however, was not included in the printed document (hard copy).
15. **Section 4.1, Summary of MEC Removal, page 4-1, line 4:** The sentence partially states, “Under the TCRA, 1,090 acres have been surface cleared of munitions...” Figure 4-2, shows cumulative acres cleared to be less than 1,000 acres. Please correct discrepancy.
16. **Section 4.2.2, Areas Inundated with Water, page 4-4, lines 24-26:** These lines note that, “As illustrated on Figure 4-1 some of the grids were partially cleared but QA was completed for 100 percent of the available area because of water remaining in grids.” This sentence is confusing. Please revise it to better express what is intended.
17. **Section 4.3, Explosives Management, page 4-4, lines 35-36:** The first sentence in this section states that, “During the detonation events a total of 27,322 MEC items were either destroyed from the detonations or vented to reduce the explosive safety hazard of the MEC.” Venting is normally accomplished to prove that an item is inert or to function the energetic material in the item to eliminate the explosives hazard present. Please revise the cited sentence in light of this.
18. **Figure 4-14, Target Locations with Range Related Site Futures:** Please include location of aircraft targets (ex. A-6 Intruder) in the figure.
19. **Figure 4-15, Monthly Inspection and Recovery (R&R) of Munitions Debris (MD) and Range Related Debris (RRD), page 4-6:** There is a typo in the title of this figure (i.e., R&R versus I&R). Please correct.
20. **Appendix C, Photograph Logs:** The appendix includes pictures of geophysical investigation and subsurface anomalies investigation and removal. Please remove those photographs since the TCRA was only intended for the removal of MEC at the surface. Those photographs should be included in the after action report for the NTCRA of subsurface MEC and selected roads and beaches.

21. Appendix D, Demolition Event Logs: Demolition information for 2005 and part of 2006 was not included in the table. Please explain why the data is missing. Also, the table includes demolition events in the SIA. Clarify if these are events of the TCRA or NTCRA at the SIA. If the events are part of the NTCRA at the SIA, please remove from the TCRA after action report.

