

9/28/05-02449



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION  
CENTRO EUROPA BUILDING, SUITE 417  
1492 PONCE DE LEON AVENUE, STOP 22  
SAN JUAN, PR 00907-4127

September 28, 2005

Mr. Jeffrey Harlow  
Western Vieques Remedial Project Manager  
Commander Atlantic Division  
Naval Facilities Engineering Command  
6506 Hampton Boulevard  
Norfolk, VA 23508-1278

Re: Review of the Draft Engineering Evaluation/Cost Analysis for AOC J and R and SWMU 6 and 7 at the Former US Naval Ammunition Support Detachment (NASD) Vieques Island, Puerto Rico

Dear Mr. Harlow:

The U.S. Environmental Protection Agency (EPA) and the Puerto Rico Environmental Quality Board (EQB) have completed the review of the Draft Engineering Evaluation/Cost Analysis for AOC J and R and SWMU 6 and 7 dated August 2005. Enclosed you will find our comments.

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

Sincerely yours,

Daniel Rodriguez  
Remedial Project Manager  
Enforcement and Superfund Branch

Enclosures (2)

- cc: Yarissa Martinez, EQB, w/ encl.
- Felix Lopez, FWS, w/ encl.
- Oscar Díaz, FWS, w/ encl.
- Brett Doerr, CH2M Hill, w/ encl.

**EPA's Comments**  
**Draft Engineering Evaluation/Cost Analysis**  
**for Areas of Concern J and R**  
**Solid Waste Management Units 6 and 7**  
**Former Naval Ammunition Support Detachment**  
**Vieques, Puerto Rico**  
**August 2005**

1. Executive Summary: The Site Descriptions for AOC J, SWMU 6 and SWMU 7 included in this EE/CA state that the draft RI reports conclude that each site does not pose an unacceptable risk. However, since these reports are draft, they have not yet been accepted and approved by the regulatory agencies, and any conclusions presented in the draft RI reports are solely based on the perspective of the Navy. This potential misrepresentation of the status of the reports continues throughout the document. The text should be written to more clearly state that the draft RI reports contain information on the nature and extent of contamination and that these reports are currently under review by the regulatory agencies.
2. Section 1.1, Regulatory Framework, page 1-2: In the first complete paragraph on this page, the text states, “[i]t is important to note that no unacceptable levels of potential risks were identified for AOC J, SWMU 6, and SWMU 7 (AOC R is currently being investigated).” This implies that all agencies have reached this conclusion, which is not the case. Please revise the text to more accurately reflect the status of the evaluation of these sub sites, which is that the draft RI reports suggest that no unacceptable levels of risk are associated with these sub sites, and these reports are currently being reviewed by the appropriate agencies.
3. Section 1.3, Site Description and Background, page 1-4: In the first complete paragraph on this page, please include the use designation of the aquifer. This is important, as it is critical in identifying ARARs.
4. Section 1.3.1.1, AOC J, and Section 1.3.1.2, AOC R, page 1-5: Please note that this Site is adjacent to an intermittent stream whose head waters are in Monte Pirata and not a “water-filled ditch.” The reference made to the “water filled ditch” at AOC J should be changed to ephemeral stream. The report should note that the ephemeral stream that traverses a portion of the western boundary of AOC R actually is part of the ephemeral stream (up gradient) at AOC J.
5. Section 1.4, Previous Site Investigations, page 1-7: In the discussion of data, please note whether the comparisons to “applicable screening criteria” include screening against values protective of ecological receptors. Though the report notes that an RI will be conducted for AOC R to further delineate the nature and extent of contamination and assess whether or not the site poses an unacceptable risk to human health and/or the environment, the report also indicates that the draft RIs completed for AOC J, SWMU 6 and SWMU 7 concluded that the human health and

environmental risk assessments conducted for the sites support the conclusion that the contaminants present do not pose an unacceptable risks (See comment number 1).

6. Section 1.4.5.2, AOC R, page 1-14: The relationship of the waste pile near the ditch to the area that is planned for surface water and sediment sampling for the RI for AOC R should be clarified. If they are in the same area, the timing of the two activities should be discussed.
7. Section 1.4.6, Streamlined Risk Evaluation, page 1-16: This section is inadequate. Although EPA agrees that the streamlined risk assessment can be focused to “address the risks related only to the source of contamination”, post-removal soils samples are necessary to ensure that the removal action has effectively eliminated any potential threats via direct contact with contaminated soil under the debris piles as well as any possible impacts to groundwater. The EE/CA work plan does not discuss how many post-removal samples will be collected or how these data will be used to ensure that the goals of eliminating potential threats to public health are met.
8. Figure 1-2, Location Map: The map should show the ephemeral stream that connects AOC R and AOC J. Also, please clarify why SWMU 4 is identified by the thatched area on this figure.
9. Section 2.4, Applicable or Relevant and Appropriate Requirements (ARARs), page 2-2 and Appendix A: Missing from the list of Location-specific ARARs is the Magnuson-Stevens Fishery Conservation and Management Act (1996), a federal law that requires federal agencies to consult with NOAA National Marine Fisheries Service (NMFS) regarding any action they authorize, fund or undertake that may adversely affect essential fish habitat (EFH). EFH is defined as, “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.” This would include the mangrove estuary area located to the east of AOC J and the mangrove swamp, tidal marsh area and lagoons at SWMU 6. Efforts should be taken, to the extent practicable, to minimize adverse impacts to these areas that might result from debris removal. For more information regarding EFH consultations, please contact Lisamarie Carrubba of NOAA’s NMFS Habitat Conservation Division at (787) 851-3700.
10. Section 2.4, Applicable or Relevant and Appropriate Requirements (ARARs), page 2-3, Paragraph 3: The statement that, “No constituents of concern have been identified at these sites,” should be modified to reflect the draft status of the RI documents and pending RI for AOC R (as discussed above).
11. Section 3.1.3, Alternative # 3 - Excavation, Off-site Disposal and Site Restoration, page 3-2, and Table 3-2 Alternative 3 - Excavation/Restoration Details/Sequence: Please note that a sampling plan outlining how post-excavation samples will be collected and analyzed and how data will be interpreted should be submitted to EPA for review.

12. Section 3.1.3, Alternative # 3 - Excavation, Off-site Disposal and Site Restoration, page 3-2: Prior to excavating areas, the type of vegetation currently on-site should be noted. Clearing should be kept to a minimum to minimize the potential damage to the surrounding landscape and to minimize the site restoration activities. More details need to be provided regarding the actual anticipated impacts to the marsh and mangrove areas and what the re-vegetation activities will involve. The decision to backfill excavated areas should be made in conjunction with USFWS to maximize the success of re-vegetation efforts and to restore the areas to conditions that reflect what the areas were like prior to the Navy's activities.
13. Figure 3-3, SWMU 6 Proposed Excavation/Waste Removal Areas: The site boundary shown in this figure does not extend to the south of Highway 200 as shown in Figure 1-5.
14. Section 4, Detailed Analysis of Removal Action Alternatives, page 4-1: As the waste has not been sampled and will undergo TCLP analysis prior to disposal, it may not necessarily be true that the waste in these four areas has been determined to be non-hazardous. Similarly, in the discussion of the effectiveness of the remedy, the reduction of toxicity of the waste does not make sense if this waste is not considered to be hazardous.
15. Section 4.1.1.2, Alternative # 2 - Construction of Soil Cover and Long-term Monitoring, page 4-3: Please discuss the protectiveness of this action to ecological receptors.
16. Section 4.1.2, Protection of Workers During Implementation, page 4-3: The protection of workers implementing a remedy is not typically considered in an evaluation of the EE/CA alternatives. This population is usually considered in a site health and safety plan. EPA typically evaluates the effectiveness of the alternatives for the protection of workers once the remedy has been implemented, meaning, construction or utility workers that will access the site once the action has been taken. Please revise the text accordingly.
17. Section 4.1.3, Compliance with Chemical, Action and Location Specific ARARs, page 4-4: In addition to ARARs, a list of TBCs should also be included in Appendix A. TBCs should include media-specific screening values protective of ecological receptors. Also, please ensure that the PR EQB ARAR for TPH is included in the ARAR evaluation.
18. Section 4.1.5.3 and Section 4.1.6.3, Alternative # 3 - Excavation, Off-site Disposal and Site Restoration, pages 4-4 and 4-5: Please note that removal of waste material may not automatically result in the preparation of a NFA ROD.

## Area Specific Comments

### **AOC J**

AOC J was used as a solid waste disposal site for construction activities from 1965 until 1973, when some of the unidentified waste materials were removed and placed in an off-base municipal landfill. This EE/CA addresses only removal of the debris and underlying soil containing debris located at AOC J. The EE/CA recommends removal of vegetation and excavation/ removal of trash piles and re-vegetation with native vegetation. Please note that all efforts should be made to preserve the mangrove area to the east of the Site.

### **AOC R**

AOC R was used as a construction staging and public works operational area from 1965-1971. There are four areas on site containing solid waste to be removed. A more detailed survey of the waste in the stream may need to be conducted by the Navy to determine the extent of the dumping. The stream should be clearly identified in the accompanying Site figures. The stream banks are steep and heavily vegetated; vegetation removal should be kept to a minimum. Stream bank restoration should be coordinated with FWS.

### **SWMU 6**

Similarly, SWMU 6 was used for disposal of solid waste. This EE/CA addresses removal of wastes, including debris and any contaminated soil beneath the waste piles. In order to adequately remove and excavate all the material it will be necessary to remove some or all of the existing mangrove vegetation. Close coordination with FWS Refuge Staff is recommended. Restoration and reforestation plans should be discussed with Refuge personnel prior to implementation. After the removal of the known trash piled, additional geophysical work should be conducted to ensure that there are no buried items.

### **SWMU 7**

At SWMU 7 a steep ditch at the Site was used for the disposal of solid waste materials. Disposal activities appear to have been concentrated in a segment of the ditch approximately 420 feet along the length of the dirt access road where waste materials were pushed over the edge. This EE/CA addresses waste, including debris and any contaminated soil beneath the waste piles. Because the stream is deeply incised at this site, care should be taken to avoid excess vegetation removal along the stream banks. Ingress and egress sites should be clearly marked and used exclusively to access the waste piles. Staging areas should also be pre-selected to avoid impacts to the stream. Re-vegetation of the stream banks should be coordinated with FWS.

## EQB's Technical Comments

*Draft Engineering Evaluation/Cost Analysis  
For  
Areas of Concern J and R Solid Waste Management Units 6 and 7  
Former Naval Ammunition Support Detachment  
Vieques Island, Puerto Rico  
August 2005*

### I. INTRODUCTION

TRC has reviewed and provides the attached comments to the Draft Engineering Evaluation/Cost Analysis for Areas of Concern J and R Solid Waste Management Units 6 and 7, Former Naval Ammunition Support Detachment, Vieques Island, Puerto Rico, dated August 2005.

The Draft Engineering Evaluation/Cost Analysis (EE/CA) describes the proposed non-time-critical removal action for Area of Concern (AOC) J, AOC R, Solid Waste Management Unit (SWMU) 6, and SWMU 7 of the former Naval Ammunitions Support Detachment (NASD) in the western portion of Vieques Island, Puerto Rico. Previous investigations had been completed at AOC J, AOC R, SWMU 6, and SWMU 7 to identify the nature and extent of waste. The EE/CA evaluates alternatives in order to protect human health and the environment, and to reduce or eliminate the potential for future threat of contamination.

The EE/CA recommends:

- AOC J – Excavation, off-site disposal, and site restoration;
- AOC R – Excavation, off-site disposal, and site restoration;
- SWMU 6 – Excavation, off-site disposal, and site restoration;
- SWMU 7 – Excavation, off-site disposal, and site restoration.

The above are recommended because of high level of efficiency in meeting RAO, moderate ease of implementation, lack of LTM requirements and subsequent O&M, and moderate cost. Implementation of the recommendation will result in no further action and unrestricted land use.

This review presents issues identified in the EE/CA, as well as requests to clarify cited issues.

#### General Comment

Section 1.1 and the summaries of previous investigations presented in Section 1.4 should indicate that the information provided is based on draft remedial investigation (RI) reports and that agency comments on the draft reports have not been incorporated into the summaries presented in the EE/CA.

## II. PAGE-SPECIFIC COMMENTS

Page 1-5, Section 1.3.1.1, paragraph 1 – The first sentence states that AOC J was used as a solid waste disposal site for construction staging activities. However, Section 1.4.1.3 lists ordnance-related items that were found during an MEC avoidance survey conducted at AOC J. Therefore, the description of the historic use of AOC J should be revised to indicate that it was a solid waste disposal site, and the phrase “for construction staging activities” should be removed from the sentence.

Page 1-5, Section 1.3.1.1, paragraph 2 – Please clarify whether the “water-filled ditch” is a man-made surface water feature. If not, then the surface water body should be identified as a natural surface water feature and labeled appropriately.

Page 1-5, Section 1.3.1.2 – Please add a discussion of solid waste disposal activities that took place at AOC R to be consistent with the rest of this section.

Page 1-8, Section 1.4.1.4 - The Remedial Investigation Report for AOC J dated April 2004 is a draft document with outstanding regulator comments. The status of reports should be noted in this section. The summary of the RI presented does not address PREQB comments provided on the Draft RI report. For example, the summary indicates that metals concentrations in groundwater within the range of background are the basis for risk exceedances; however, the draft report indicates that perchlorate also contributes to elevated risk. Also, PREQB has requested additional perchlorate analysis to address elevated detection limits. This comment also applies to Sections 1.4.3 (SWMU 6) and 1.4.4 (SWMU 7) with respect to denoting the status of the RI reports and that agency comments have not been addressed in drafting the summaries presented in these sections.

Section 3 - The EE/CA should specify the analytical methods and frequency for the post-excavation sampling. The EE/CA cost estimate in Appendix B indicates that “Analytes vary by site – See RI Report(s)”. The analyses, and the rationale for the analyses, should be specified in the EE/CA.

Section 3 - The frequency/density of post-excavation sampling at each location should be specified. The cost estimate in Appendix B reveals that post-excavation samples will be conducted at a frequency of one per 1,000-square feet. This coverage may be insufficient at some sites as they may rely on only have two post-excavation samples. The EE/CA should specify that a minimum of 4 to 5 samples will be obtained from each area to ensure adequate coverage.

Page 3-2, Section 3.1.3, First full paragraph on the page and Table B-1 – The text and Table B-1 should be revised for consistency. The text states for scoping and costing purposes it was assumed the maximum depth of waste is 2 feet below grade. A review of Table B-1 shows that the costing actually considered depths of waste ranging from 3 to 8 feet below grade.

Page 3-2, Section 3.1.3 – The last line should be deleted as Table 3-2 does not provide remedy sequence or detail. Detail regarding the activities and sequence of the proposed remedies will need to be reviewed and approved prior to implementation.

Page 6-1, Section 6 – Remove the last sentence of the final paragraph of this section. The last sentence states that “Implementation of Alternative 3 will result in no further action necessary and unrestricted land use.” This conclusion is premature, considering the RI reports are draft. Results will need to be reviewed from soil samples collected from beneath the debris once the debris has been removed to determine if further impacts are present.

Table A-3 – The EE/CA should clarify why the solid waste being removed will not be characterized to determine if it is hazardous. Currently, only soil and sediment excavated during the removal actions will be characterized for disposal.