



COMMONWEALTH OF PUERTO RICO
Office of the Governor
Environmental Quality Board

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ENVIRONMENTAL EMERGENCIES RESPONSE AREA

April 12, 2010

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

RE: Technical Review of the Draft Proposed Plan for Areas of Concern J and R and Solid Waste Management Unit 7, Former Naval Ammunitions Support Detachment, Vieques, Puerto Rico

Dear Mr. Cloe:

The Puerto Rico Environmental Quality Board (PREQB) has conducted a technical review of the Draft Proposed Plan for Areas of Concern J and R and Solid Waste Management Unit 7, Former Naval Ammunitions Support Detachment, Vieques, Puerto Rico, dated February 2011. Our comments are provided in the attachment.

If you have any questions or comments, please contact me at (787) 767-8181 x. 6129.

Cordially,

Wilmarie Rivera
Federal Facilities Coordinator

cc: Daniel Rodríguez, EPA
Richard Henry, FWS
Brett Doerr, CH2M Hill
Daniel Hood, Navy

**Technical Review of the Draft Proposed Plan for AOCs J and R and SWMU 7,
Former Naval Ammunition Support Detachment, Vieques, Puerto Rico,
Dated February 2011**

1. Page 1, Introduction, paragraph 3: Consistent with EPA guidance (1999), please consider including the following sentence after the second sentence of this paragraph: “Therefore, it is importance to the remedy selection process that the public provide input on all alternatives and on the rationale for the Preferred Alternative.”

2. Page 2, Section 2, Site Description, Summary of Previous Investigations and Removal Actions, Site characteristics and Site Risks: As part of the Site Background, EPA guidance states that the Proposed Plan should address “[w]hat previous efforts have been made by the lead agency to involve the public in matters related to site cleanup. Describe major public participation activities, prior to the issuance of the Proposed Plan (e.g., special community outreach related to environmental justice concerns, or identification of reasonably anticipated future land and groundwater uses).” Please include this information in the Site Background sections for all three sites. For example, site visits with members of the RAB and public were conducted to present site conditions upon completion of the removal actions.

3. Page 4, Section 2.1.2:
 - a. Please revise the formatting at the top of the page as the end of the first sentence is currently located at the top of the second column.
 - b. Background Investigation: Please indicate whether the agencies approved/concurred with the background study.
 - c. Remedial Investigation: In paragraph 3, please consider inserting the reference for the pre-removal risk assessments the first time it is mentioned (in the parenthetical phrase in the first sentence) to make it clear there is a document related to that work.

4. Page 5, Section 2.1.3:
 - a. Physical Characteristics:
 - i. In paragraph 3, please indicate that although groundwater is classified as potable, groundwater beneath AOC J is generally brackish to saline due to sea water intrusion. Please provide a brief description of the groundwater data collected that supports this characterization of groundwater quality at AOC J.
 - ii. In the first sentence of paragraph 3, please consider stating that “The site is *within* a designated wildlife refuge...” rather than stating the site is *on* a wildlife refuge.
 - b. Nature and Extent of Contamination:
 - i. Please revise paragraph 1 to state “...nature and extent of *contaminated* soil, surface water...”

- ii. Please provide references for all data provided in this section. For example, this section states that "...TCE was not detected in the subsequent sampling event..." What document provides the details of that subsequent sampling event?
 - iii. In paragraph 3, please clarify whether the pesticide concentration detected in site sediments is within the range of pesticide concentrations detected in background samples and clarify if the background samples are sediment samples.
 - iv. In paragraph 4, please clarify which environmental media had exceedances of inorganics, consistent with the other paragraphs discussion other classes of contaminants detected at AOC J. Please also clarify if any of the inorganic concentrations exceeded Puerto Rico Water Quality Standards for SG classified waters.
- c. Fate and Transport: Please clarify the intent of this section for each site in supporting the remedy selection process and preferred remedy. Please note that a discussion of fate and transport of contaminants is not required by EPA except for highly toxic/mobile chemicals of concern (refer to Section 3.3.3 of the guidance). Considering that removal actions were conducted that removed the sources of contamination, and no residual contamination (i.e., no COCs were identified) that poses a risk via transport remains at any of the three sites, it is unclear that transport of contaminants is a concern for these sites.

5. Page 6, Section 2.1.4, Human Health Risk Assessment:

- a. Please consider revising or removing the parenthetical statement "(variously based on the receptor)." A suggested revision is to state "Conservative exposure pathways evaluated, as appropriate, include..." This comment applies to all three sites.
- b. Please define what is meant by "relative to background" in Table 1. This comment applies to Tables 2 and 3 also.

6. Page 7, Section 2.1.4, Human Health Risk Assessment:

- a. Please format the text box so that all of the text is visible within the outlined box.
- b. The HHRA summary uses the phrase "noncarcinogenic risk" and the text box describing the HHRA process uses the phrase "noncancer hazard." Please consider using the same phrase or ensuring that the public knows that these two phrases have the same meaning. This comment applies to all three sites.
- c. Please consider adding text to the HHRA Process text box that clarifies that constituents are not excluded from the risk assessment process if they are within the range of background. This helps clarify why inorganics were included in the risk assessments even though they are attributable to background.
- d. Please revise the third sentence on this page to remove the circular reasoning. Note that it states "... inorganic constituents were determined

to be related to background concentrations due ... to background concentrations.”

- e. PREQB prefers the following language to replace the text at the end of this section. No concepts have been deleted, the text has just been revised to emphasize that treatment of groundwater would be required due to natural groundwater conditions and to clarify that no COCs were identified in groundwater (this information was missing from the original text):

“In addition, total inorganic constituent concentrations detected in groundwater were used for risk assessment purposes. Dissolved concentrations were much lower, indicating the presence of these constituents is likely the result of suspended particulates in groundwater typical of the naturally high turbidity conditions. Groundwater at AOC J is not suitable for potable use without filtration and desalinization due to its naturally high turbidity and salinity, and the site is located on property mandated by law to remain a wildlife refuge. Therefore, future use of groundwater is unlikely. No COCs were identified for groundwater.”

- f. Please clarify why risks associated with perchlorate are discussed, as a prior section states that perchlorate was not detected in the more recent sampling event where a more appropriate analytical method was used.

7. Page 7, Ecological Risk Assessment: Please add detail on the ecological risk assessment conducted at AOC J. Note that this section states that “Based on the ecological setting, no unacceptable risks were identified...” The ecological setting discussed in this brief paragraph only shows that ecological habitat and receptors are present at the site. This section needs to present the risk assessment conducted and the results of the assessment (i.e., what environmental media and ecological receptors were evaluated and the resulting risks. How far into the 3-tiered ERA process described in the text box did the ecological risk assessment proceed before it was shown that the site has unacceptable risks to ecological receptors? This comment applies to all three sites.

8. Page 8, Section 2.2.1:

- a. Please edit the text to correct the line spacing in the text on this page.
- b. Please clarify that the potable water lift/chlorination building is not associated with Navy activities and was not investigated as part of AOC R.
- c. Please clarify the apparent discrepancy between the following statements “the MOV agreed that use and access to the area defined by the Remedial Land Use Restriction boundary shall be limited to non-residential until CERCLA related activities are completed” and “The site use is currently restricted from the public...(page 11, Section 2.2.3). Non-residential land use and access does not appear to restrict public access for any other use,

such as recreational. Please clarify. This comment also applies to the same text in Sections 2.3.1 and 2.3.3 for SWMU 7.

9. Page 9, Figure 4: Please identify the potable water lift/chlorination building on this figure.
10. Page 11, Section 2.2.2, Remedial Investigation: Please also state that risks associated with exposure to groundwater, surface water and sediment were also characterized. Currently, the paragraph states that the nature and extent of contamination and potential human health and ecological risks were characterized for soil.
11. Page 11, Section 2.2.3, paragraph 3:
 - a. Please clarify the following phrase “The site use is currently restricted from the public...” Suggest rewording to “Public access to the site is currently restricted...”
 - b. Groundwater is classified as potable. Therefore, future groundwater use needs to be considered and evaluated. Please remove the statement “... there are no plans for potable use of groundwater in this area...” Note that the results of the HHRA indicate no unacceptable risks from site-related constituents associated with potable use of groundwater. This rationale forms the basis of not requiring any action to remediate groundwater. Please revise the text accordingly.
12. Page 12, Section 2.2.3, Nature and Extent of Contamination: Please consider clarifying what is meant by a CERCLA-related release as this forms the basis for not taking action for the pesticide and fungicide detected in site media.
13. Page 13, Section 2.2.4, Human Health Risk Assessment, last paragraph:
 - a. The final RI report, Section 4.1.2.5 states that the subsequent round of groundwater sampling did not detect aluminum. Please consider adding this information to this section. Also, a discussion of background concentrations for aluminum, iron and manganese, and the relative concentrations in total and dissolved groundwater samples would be helpful and consistent with the level of detail presented in Section 2.1.4 for AOC J.
 - b. The language for SWMU 7 where inorganics “*were determined to be attributable to background*” appears to be less ambiguous than the language here, which states that “*their presence is likely due to the chemical weathering of volcanic rocks...*” Please consider using the phrase “were determined to be attributable to” rather than “their presence is likely due to...”
14. Page 19, Glossary: Please consider revising the definitions of Cancer Risk and Non-cancer Risk to add that a person exposed to the site under the conservative

exposures assumed in the risk assessment that has the defined cancer risk or noncancer risk.

Reference

USEPA 1999. *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents*. US Environmental Protection Agency, Office of Solid Waste and Emergency Response. EPA 540-R-98-031 OSWER 9200.1-23P PB98-963241 July 1999.
<http://www.epa.gov/superfund/policy/remedy/rods/index.htm#toc>