



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION  
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May 19, 2011

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

Re: Review of the Draft No Action / No Further Action Decision Document PI 7,  
PAOC Q, and PAOC R, Former Vieques Naval Training Range, Vieques, Puerto  
Rico

Dear Mr. Cloe:

The U.S. Environmental Protection Agency (EPA) completed the reviews of the Draft No Action / No Further Action Decision Document PI 7, PAOC Q, and PAOC R, Former Vieques Naval Training Range, Vieques, Puerto Rico, dated March 2011. 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".

Daniel Rodríguez  
Remedial Project Manager  
Response and Remediation Branch

Enclosure

cc: Wilmarie Rivera, EQB, w/ encl.  
Richard Henry, FWS, w/encl.  
Brett Doerr, CH2M Hill, w/ encl.  
Julio Vazquez, EPA-ERRD, w/ encl.

**DRAFT NO ACTION / NO FURTHER ACTION DECISION DOCUMENT  
PI 7, PAOC Q, AND PAOC R  
FORMER VIEQUES NAVAL TRAINING RANGE  
VIEQUES, PUERTO RICO  
MARCH 2011**

Presented below are EPA comments on the *Draft No Action / No Further Action Decision Document PI 7, PAOC Q, and PAOC R, Former Vieques Naval Training Range, Vieques, Puerto Rico*, dated March 2011.

1. Figure ES-2 and Figure 1-2: These figures imply that areas such as Isabel Segunda are within the Former Vieques Naval Training Range. Please correct.
2. **Section 2.2, PI 7 Release Assessment Decision Analysis, Step 1: Is the site potentially CERCLA-eligible?, page 2-8:** It is noted that the SVOC data for PI7-3 have been replaced with SVOC data for SS/SB42. Please note whether these replacement data represent post-excavation samples that were collected following drum removal.
3. **Section 2.2, PI 7 Release Assessment Decision Analysis, Step 4: Are there any inorganic constituents above background or non-inorganic constituents that are potentially attributable to historic CERCLA-related releases at the site?, page 2-12:** Please include a table comparing pesticide concentrations (DDE, Endrin, etc.) identified at PI 7 to background concentrations, similar to the information provided in Appendix O of the Final SI/ERI Report (CH2MHILL, 2010).
4. **Section 2.2, PI 7 Release Assessment Decision Analysis, Step 6: Can more realistic evaluations of the data be performed, and if so, do they suggest contaminant levels warrant no further investigation or action?, pages 2-17, 2-19, 2-22:** Under the **Ecological Evaluation** sections it is noted that food web exposures for upper trophic level receptors (birds and mammals) are not evaluated due to the small size of the sites and the fact that the areas are heavily vegetated. The Vieques Master SOP does not indicate that risk to upper trophic level receptors will be calculated based upon the size of the sites being investigated. This change in protocol needs to be further discussed among the Navy and the regulatory agencies. Further, without an understanding of the diversity of the vegetative community, it is unclear whether plants may have been impacted by potentially elevated concentrations of inorganics. Presence of vegetation does not necessarily mean that the vegetation has not been impacted by the presence of inorganics. However, as the level of inorganic exceedances is relatively low, there is agreement that no further action is warranted for these areas.
5. **Table 2-4, HHRA COPC Summary Table, Site PI-7:**
  - a. Please explain why hazard quotients and ECLRs are not calculated for all chemicals for which toxicity values are available. For example, cancer risks were not calculated for Benzo(a)pyrene in PI-7 Central Subsurface Area, and non-

cancer hazards were not estimated for chromium, cobalt, iron, and manganese at PI-7 Northern Surface Soil, and HI is presented for aluminum in the Northern Surface Soil but not in the Central Surface Soil.

- b. Please explain why HI values are not calculated for dissolved chromium in groundwater in the Central area and the Southern Area.
  - c. Please explain how the HI values were summed. The values for total risk at the bottom of the table are unclear.
  - d. Please explain why the three areas are not summed together. The text does not state that exposure to an individual is not anticipated in all three areas.
6. **Section 3.2, PAOC Q Release Assessment Decision Analysis, Step 6: Can more realistic evaluations of the data be performed, and if so, do they suggest contaminant levels warrant no further investigation or action?, Human Health Evaluation, page 3-5:**
- a. The text indicates that the maximum target organ-specific HI value is 0.9. However, Table 4-3 shows an HI value of 1.8 for CNS effects, associated with exposure to aluminum and manganese. Please revise the text to clarify why this HI value is not of concern.
  - b. Please explain why hazard quotients and ECLRs are not calculated for all chemicals for which toxicity values are available.
7. **Section 3.2, PAOC Q Release Assessment Decision Analysis, Step 6: Can more realistic evaluations of the data be performed, and if so, do they suggest contaminant levels warrant no further investigation or action?, Ecological Evaluation, page 3-5:** Please add the following language to the end of the first sentence: "and therefore is not representative of a terrestrial pathway to ecological receptors."
8. **Section 4.2, PAOC R Release Assessment Decision Analysis, Step 6: Can more realistic evaluations of the data be performed, and if so, do they suggest contaminant levels warrant no further investigation or action?, Human Health Evaluation, page 4-5:** The last paragraph discusses the HI value associated with manganese. There were 2 results for manganese, one which is associated with an HQ of 0.6 and a higher concentration which is associated with a higher HQ that is not presented in this report. Since these results are from duplicates, both are valid, assuming that QA/QC requirements were met. The report focuses on the HQ associated with the lower concentration, which results in a cumulative HI of 1.1, as opposed to an HI of 1.8. It is inappropriate to base the HI value on the lower manganese result. Both results are valid and should be presented, in context with the background concentrations. Please revise the text and Table 4-4.