

February 25, 2000

Mr. Miguel A. Maldonado Negrón  
Chief, CORE & RPM Divisions  
Environmental Quality Board  
National Bank Plaza  
431 Ponce de Leon Avenue  
Hato Rey, PR 00917

**Subject:** Draft No Further Response Action Planned – Decision Document, Sites 1, 2, and 3, Naval Ammunition Support Department, Vieques Island, U. S. Naval Station Roosevelt Roads

Dear Mr. Maldonado:

This letter has been prepared to provide responses to the Environmental Quality Board's comments on the above-referenced Draft No Further Response Action Planned document, which were contained in the Board's letter dated December 31, 1996 (copy attached) to Ms. Madeline Rivera, Director, Environmental Engineering Division at U. S. Naval Station Roosevelt Roads.

The comments and responses are presented below.

1. *Comment (Page 1 [1<sup>st</sup> page 1], Paragraphs 1 and 2): Editorial comments.*

Response: Concur

2. *Comment (Page 1 [2<sup>nd</sup> page 1], Paragraph 2): Editorial comments.*

Response: Concur

3. *Comment (Page 1 [2<sup>nd</sup> page 1], Paragraph 3, 2nd sentence): Add the word "Military" at the beginning of the sentence.*

Response: Concur

4. *Comment (Page 1 [2<sup>nd</sup> page 1], Paragraph 3, 1<sup>st</sup> sentence): Confusing – Is it 30,800 total acres or 53,400 total acres, of which 22,600 acres are located on Vieques Island? Please specify.*

Response: This sentence will be revised to indicate that the Navy owns a total of 22,600 acres on the Island of Vieques, including approximately 8,000 acres on the western tip of the island that is occupied by the Naval Ammunition Support Department (NASD), where Sites 1, 2, and 3 are located.

5. *Comment (Page 1 [2<sup>nd</sup> page 1], Paragraph 4, 1<sup>st</sup> sentence): Please be more specific. What is the distance between Site 1 and the probable point of entry (PPE) in the quebrada? What is the name of the quebrada? What is the distance between the PPE and the mouth of the quebrada in the sea?*

Response: This sentence will be expanded to provide the following information:

- The distance between Site 1 and the PPE in the quebrada is approximately 50 feet.
  - The quebrada is unnamed.
  - The distance between the PPE and the mouth of the quebrada is approximately 2,500 feet. A more accurate estimate of this estimate will be developed in an expanded Preliminary Assessment/Site Investigation to be completed by August 2000.
6. *Comment (Page 2, Paragraph 2, 2<sup>nd</sup> sentence): Is this road the same as Route 70 (Dirt road shown in Figure 3)? If so, change the text so it could be in accordance with the maps.*

Response: North Shore Road is the same as Route 200. The text and Figure 3 will be modified so that the designations of the road will be consistent.

7. *Comment (Page 2, Paragraph 2, 3<sup>rd</sup> sentence): Is this bridge (Laguna Kiani Bridge) the same as the metal bridge shown in Figure 3? See our request above.*

Response: The Laguna Kiani Bridge is the same bridge designated as the metal bridge shown in Figure 3. Figure 3 will be modified to identify the bridge as the Laguna Kiani Bridge.

8. *Comment (Page 2, Paragraph 3, 1<sup>st</sup> sentence): A map of this site (Site 3) and its surroundings is not provided. Please do so.*

A map of Site 3 will be provided.

9. *Comment (Page 2, Paragraph 4): Please indicate if there are any threatened or endangered species or sensitive environments protected by the Puerto Rico Department of Natural Resources nearby (i.e., Laguna El Pobre, Laguna Kiani, mangrove swamp, etc.).*

Response: An expanded PA/SI, which will include an ecological risk assessment, will be performed by August 2000. The assessment will address the presence of any threatened or endangered species or sensitive environments protected by the Puerto Rico Department of Natural Resources nearby.

10. *Comment (Page 2, Paragraph 5): What about onsite workers or military personnel? What is the distance to the nearest resident?*

Response: An expanded PA/SI, which will include a human health risk assessment, will be performed by August 2000. The assessment will address the presence of onsite

workers and military personnel relative to Site 3, as well as the distance to the nearest resident.

11. *Comment (Page 2, Paragraph 7): Please indicate their location (six groundwater supply wells on NASD) on a map. Was this information (presence of six water supply wells on NASD) taken into consideration for the PRE score and the HRS packages.*

Response: A map will be provided showing the location of the six water supply wells on NASD, providing the information is available. The six water supply wells on NASD were not considered in the HRS ranking because the wells have been closed.

12. *Comment (Page 3, Paragraph 1): It is not clear or specified if these six wells (six water supply wells on NASD) are still in use or on standby status. Please specify.*

Response: The six supply wells have been closed.

13. *Comment (Page 3, Paragraph 3, last sentence): Editorial comment.*

Response: Concur

14. *Comment (Page 4, Paragraph 1, 1<sup>st</sup> sentence): Should it (drones) read drums? State what a drone is.*

The text will be expanded to explain that a drone is a remote controlled aircraft that is used for target practice in military training exercises.

15. *Comment (Page 4, Paragraph 1, last sentence): This sentence is only a speculation. Please provide documentation that will support this claim.*

Response: The text will be expanded to include documentation regarding the reactions between mixed-amine fuel (MAF) and inhibited red fuming nitric acid (IRFNA) resulting in inert byproducts.

16. *Comment (Page 4, Paragraphs 3-5): Please provide a copy of all these previous investigations. Please provide a copy of these results (results of EPA's Hazard Ranking System).*

Response: A copy of the Initial Assessment Study (Naval Energy and Environmental Support Activity, September 1984), Confirmation Study (Environmental Science and Engineering, April 1988), and Preliminary Assessment/Site Investigation (Baker Environmental, Inc., October 1992), including the results of EPA's Hazard Ranking System, will be provided to the Puerto Rico Environmental Quality Board.

17. *Comment (Page 5, last paragraph): Please wait until the Puerto Rico Environmental Quality Board (PREQB) indicates that this document (NFRAP Decision Document) is complete and agrees with the NFRAP decisions before doing so (Issuance of public notice in local newspapers).*

Response: Concur

18. *Comment (Page 6, Paragraphs 1 and 3): Editorial comments.*

Response: Concur

19. *Comment (Page 7, Paragraph 3): Considering the site history, explain why the samples not tested for total metals (i.e., organic)?*

Response: An expanded PA/SI will be performed that will include additional soil sampling at Site 1 for the CERCLA Target Analyte List (TAL), which will include total metals. The expanded PA/SI will be completed by August 2000.

20. *Comment (Page 7, Paragraph 5): Action level of 2 mg/kg in soil was exceeded. Please explain why (no additional soil and sediment sampling was performed at Site 1 during the second round of the Confirmation Study)?*

Response: An expanded PA/SI will be performed that will include additional soil sampling at Site 1 for the TAL (including total chromium). The total chromium concentrations in the soil will be re-assessed during the expanded PA/SI, which will be completed by August 2000.

21. *Comment (Page 8, Paragraphs 2 and 3): The results (sediment and soil sampling results for total chromium and lead) are high enough to warrant a Toxicity Characteristic Leaching Procedure (TCLP). Please explain the rationale for not performing it to the samples taken. See Table 1 of 40 CFR Part 261.24 (enclosed). According to this Table, an extract of only 5 mg/L for both chromium and lead is enough to equal the Maximum Regulatory Level.*

Response: The regulatory intent of the TCLP is to determine if a solid waste is a characteristic hazardous waste, whereby if a solid waste is determined to be a TCLP characteristic hazardous waste, it must be managed in accordance with the hazardous waste management regulations contained in 40 CFR Parts 264/265. The toxicity characteristic regulations (40 CFR Part 261.24) do not apply to the assessment of potential environmental contamination and the potential human health and ecological risks posed by environmental contamination.

An expanded PA/SI of Site 3 will be performed to re-assess potential chromium and lead contamination at the site, and the expanded PA/SI will also include a human health and ecological risk assessment. If the results of the expanded PA/SI indicate that the contaminant concentrations do not exceed applicable criteria, and/or do not pose a significant risk to human health or the environment, the site will be recommended for NFRAP.

In the event that significant contaminant concentrations are detected in the soil and/or sediment at Site 3 during the expanded PA/SI, and excavation and removal of these materials are determined to be the approved remedial action, then TCLP testing of these materials will be performed to determine the proper disposal method for these materials.

22. *Comment (Page 8, Paragraph 3, 3<sup>rd</sup> sentence): Speculation. Please refer to comments on page 4.*

Response: The text will be expanded to provide documentation concerning the chemical reactions of the fuel components disposed at Site 3, which would result in the release of the contaminants in a gaseous state to the atmosphere or formation of inert byproducts.

23. *Comment (Page 9, Paragraphs 4 and 5): Why were groundwater samples taken from monitoring wells installed during the Confirmation Study instead of the six (6) potable water wells inside the NASD mentioned on pages 2 and 3? Please explain the rationale for doing so if, according to the HRS, only targets or receptors should be considered?*

*Please specify which (metals are commonly found in paint).*

Response: The six water supply wells at NASD have been closed. The groundwater monitoring wells were installed and sampled to assess potential groundwater contamination, which may migrate to nearby surface waters as potential receptors.

Metals commonly found in paint include lead and chromium.

24. *Comment Page 9, last paragraph): Are these surface water areas (lagoons surrounding Site 1) used for swimming?*

Response: No, the lagoons surrounding Site 1 are not used for swimming.

25. *Comment (Page 11, Paragraph 2, last sentence): Please explain why no ecological assessment of risks has been conducted at Sites 1, 2, and 3, if twenty-one species are on, or proposed for inclusion on, the federal list of endangered and threatened species list in the NASD area.*

Response: An expanded PA/SI, including an ecological risk assessment of the sites on NASD, will be performed by August 2000.

26. *Comment (Page 11, Section titled "Data Analysis and Risk Assessment): Please provide copies of all the sampling analytical results and validation reports (e.g., all lab results with data qualifiers, CLP lab used, and the name of the chemist validating the results)*

Response: This information will be provided.

27. *Comment (Page 11, Paragraph 1, 1<sup>st</sup> bullet): Since Puerto Rico and its territories are within EPA's Region II, only guidances from this Region should be used or referenced. Please explain why a guidance from Region II was not used instead?*

Response: EPA Region II does not provide any guidance or risk based criteria for evaluating potentially contaminated sites, and EPA Region II has delegated regulatory authority for the NASD sites to PREQB. An expanded PA/SI will be performed and we propose that the sampling data be evaluated relative to EPA Region III and IV risk based criteria for soil and groundwater. The expanded PA/SI will be completed by August 2000.

28. *Comment (Page 11, Paragraph 4): Which metals (concentrations detected at the NASD sites were compared with concentrations found in more than 400 soil samples collected on Vieques Island by the U. S. Geological Survey (USGS) between 1970 and 1991 (Marsh 1992)?*

*Please provide a copy of the reference of Marsh 1992.*

Response: Chromium and lead were the metals that were detected in the soil at Sites 1 and 2, and the detected concentrations for these metals were compared to the concentrations detected in background samples collected by the USGS.

A copy of the Marsh 1992 reference will be provided to PREQB.

29. *Comment (Page 12, Paragraphs 2 and 4): See comment on previous page (page 11 - regarding the use of EPA Region III guidance when Puerto Rico and its territories are in EPA Region II).*

Response: EPA Region II does not provide any guidance or risk based criteria for evaluating potentially contaminated sites, and EPA Region II has delegated regulatory authority for the NASD sites to PREQB. An expanded PA/SI will be performed and we propose that the sampling data be evaluated relative to EPA Region III and IV risk based criteria for soil and groundwater. The expanded PA/SI will be completed by August 2000.

30. *Comment (Page 13, Paragraph 2): Speculation. Please refer to comments on pages 4 and 8.*

Response: The text will be expanded to provide documentation concerning the chemical reactions of the fuel components disposed at Site 3, which would result in the release of the contaminants in a gaseous state to the atmosphere or formation of inert byproducts.

In addition, an expanded PA/SI will be performed at Site 3 to assess potential contamination and the expanded PA/SI will be completed by August 2000. The sampling results will allow a definitive evaluation of potential contamination at Site 3.

31. *Comment (Page 12, Paragraph 4): Why were the background samples not taken from existing or newly installed wells on Vieques? Please provide the depth at which the (background) samples at Puerto Rico and Vieques were taken. Were the samples filtered or unfiltered?*

Response: Background groundwater samples were not collected from wells on Vieques during the Confirmation Study. The U.S. EPA sampled three PRASA operated wells on September 27 and 28, 1999. The three wells are typically used during emergency situations (e.g. hurricanes) when there are interruptions in the normal water supply from the pipeline that runs from the mainland to Vieques. PRASA informed EPA on December 3, 1999 that these wells are permanently closed. Two private wells located on the north and south coast of Vieques were also tested. Additional background wells have been installed along the western perimeter of Camp Garcia. Data from all of these wells will be available as background for future investigations. Well depth and sampling information (filtered/unfiltered) will be provided.

An expanded PA/SI of the sites on NASD will be performed and the background well sampling data on Vieques mentioned above will be used in the evaluation of groundwater sampling data collected from the NASD sites during the expanded PA/SI, which will be completed by August 2000.

32. *Comment (Page 14, Paragraph 2, 4<sup>th</sup> sentence): Please use another word (other than slightly) since total chromium concentration is 5 times above MCL and 2 ½ times above background. The word "slightly" is definitely misleading.*

Response: This discussion will be replaced with a discussion of new groundwater sampling data to be collected in an expanded PA/SI, to be completed by August 2000. We propose that the new groundwater sampling data be evaluated relative to EPA Regions III and IV risk based criteria for soil and groundwater (in the absence of EPA Region II criteria).

33. *Comment (Page 14, Paragraph 2, last sentence): Please explain this claim that "Concentrations of all four metals were within the same order of magnitude as the background concentrations."*

Response: This paragraph will be replaced with a discussion of new groundwater sampling data to be collected as part of an expanded PA/SI, to be completed by August 2000. We propose that the new groundwater sampling data be evaluated relative to EPA Regions III and IV risk based criteria for groundwater (in the absence of EPA Region II criteria).

34. *Comment (Page 16, Paragraph 1): Speculation. Please refer to comments on pages 4, 8, and 13.*

Response: The text will be expanded to provide documentation concerning the chemical reactions of the fuel components disposed at Site 3, which would result in the release of the contaminants in a gaseous state to the atmosphere or formation of inert byproducts.

In addition, an expanded PA/SI will be performed at Site 3 to assess potential contamination and the expanded PA/SI will be completed by August 2000. The sampling results will allow a definitive evaluation of potential contamination at Site 3.

35. *Comment (Page 16, Paragraph 2): In order to make this claim, a TCLP must be performed. Refer to comments on page 8.*

Response: The regulatory intent of the TCLP is to determine if a solid waste is a characteristic hazardous waste, whereby if a solid waste is determined to be a TCLP characteristic hazardous waste, it must be managed in accordance with the hazardous waste management regulations contained in 40 CFR Parts 264/265. The toxicity characteristic regulations (40 CFR Part 261.24) do not apply to the assessment of potential environmental contamination and the potential human health and ecological risks posed by environmental contamination.

An expanded PA/SI of the NASD sites will be performed to re-assess potential contamination at the sites, and the expanded PA/SI will also include a human health and ecological risk assessment. If the results of the expanded PA/SI indicate that the contaminant concentrations do not exceed applicable criteria, and/or do not pose a significant risk to human health or the environment, the site will be recommended for NFRAP.

In the event that significant contaminant concentrations are detected in the soil and/or sediment at the sites during the expanded PA/SI, and excavation and removal of these materials are determined to be the approved remedial action, then TCLP testing of these materials will be performed to determine the proper disposal method for these materials.

36. *Comment (Page 16, Paragraph 2, 3<sup>rd</sup> sentence): What about trespassers (as mentioned under "Receptors" on page 10)? Are children not a concern?*

Response: An expanded PA/SI, which will include a human health risk assessment, will be performed for the NASD sites. The expanded PA/SI will be completed by August 2000, and the human health risk assessment will address all reasonable potential exposures that may occur at the sites.

We hope that you find that these responses adequately address your comments. We recognize, however, that many of our responses refer to the planned expanded PA/SI as a future means to provide additional information to more adequately address your comments. We will work diligently to ensure that the expanded PA/SI will achieve this goal.

To this end, we will be submitting the Workplan for the Expanded PA/SI in mid March 2000 for your review and approval. We would greatly appreciate your expedited review of the Workplan so that we can initiate and complete the Expanded PA/SI as quickly as possible. We are committed to work on a fast-track basis with the goal of reaching resolution of all of the sites on NASD so that the facility can be turned over to the Commonwealth of Puerto Rico by December 31, 2000 (in keeping with deadline agreed to between President Clinton and Governor Rosello).

Mr. Miguel A. Maldonado Negrón  
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August 22, 2000

If you have any questions regarding these responses, please contact me.

Sincerely,

LANTDIV

Chris Penny  
Naval Technical Representative