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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2  
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NEW YORK, NY 10007-1866

APR 17 2000

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Christopher T. Penny  
Project Coordinator  
Installation Restoration Section (South)  
Environmental Program Branch  
Environmental Division,  
Atlantic Division (LANTDIV), Code 182  
Naval Facilities Engineering Command  
1510 Gilbert Street  
Norfolk, VA 23511-2699

Re: Atlantic Fleet Weapons Training Facility - EPA I.D.# PRD980536221

- 1) Western Perimeter Groundwater Baseline Investigation Workplan, dated March 2000
- 2) Description of Current Conditions Report, dated March 2000
- 3) Results of the Hydrogeologic Investigation, Vieques Island, PR, dated November 4, 1999

Dear Mr. Penny:

The United States Environmental Protection Agency (EPA) Region 2 has completed its review of the above three documents transmitted on March 16, 2000 on behalf of the Navy by CH2MHILL, as well as your letter of March 16, 2000 on those documents. The first two documents were required under terms of the RCRA 3008(h) Order on Consent (the Order), effective January 20, 2000. EPA has determined that both those documents are deficient, and must be revised. The report "Results of the Hydrogeologic Investigation, Vieques Island, PR" (the Groundwater Report) was implemented independently by the Navy, and has now been submitted to satisfy part of the requirements of the Section VI.F of the Order. This letter is addressed to you as the Navy's designated Project Coordinator, pursuant to Section IX of the Order.

Results of the Hydrogeologic Investigation, Vieques Island, PR, (the Groundwater Report)

Although this report is generally a thorough and good quality report, EPA has several comments on deficiencies that must be addressed in order for it to be acceptable for satisfying part of the requirements of Section VI.F of the Order. These are:

1. Section 3.0 of the August 1999 Work Plan, which is included as Appendix A of the Groundwater Report, indicates that groundwater will be analyzed for Appendix IX metals; yet those results are not included with the Groundwater Report, and there is no explanation of why the metals analytical results are absent. The Groundwater Report should be revised, or an addendum submitted, to include either the metals analytical results or an explanation of why they are not included. In the event that groundwater was analyzed only for explosive constituents (based on the results in the Groundwater Report), sampling of the groundwater for additional inorganic (metals) and organic hazardous constituents will be required as part of the workplan required pursuant to Section VI.F.1 of the Order, which you have submitted and is discussed later in this letter.
2. Although Section 4.1.3 of the Groundwater Report indicates that Region 2's Functional Guidelines for Data Validation were utilized (and the data in the analytical tables included as Appendix H are annotated with data validation qualifiers) no data validation report is included with the Groundwater Report. To be acceptable for satisfying requirements of the Order, a data validation report must be included for all analytical results. This may be submitted as an addendum to the Groundwater Report.
3. Section 6.0 concludes that "No human health or ecological concerns exist with regard to explosive compounds." EPA cannot evaluate that conclusion without the data validation report for the analytical results included in the Groundwater Report. Also, if such a conclusion were valid, it would have to be qualified to indicate that it applies only for the locale and constituents investigated.

In order for EPA to accept the Groundwater Report as partially satisfying the requirements of Section VI.F of the Order, please submit an acceptable data validation report and other information addressing the above comments. Please be advised that pursuant to Section XVII of the Order (Public Participation), EPA anticipates making the Groundwater Report available for public review and comment.

Western Perimeter Groundwater Baseline Investigation Workplan

The March 2000 "Workplan for Groundwater Baseline Investigation at Navy Facility" (the Groundwater Workplan) is deficient, and does not satisfy the technical requirements of Section VI.F.1 of the Order. As discussed above for the Groundwater Report, pursuant to Section XVII of the Order (Public Participation), EPA anticipates making an acceptably revised Groundwater Workplan available for public review and comment. Some of the deficiencies, which must be addressed in a revised Groundwater Workplan, are as follows:

1. The title page needs to identify the facility by name, as described in the Order, and not "Naval Facility".
2. Figure 1-1 needs to clearly identify/outline the area subject to the terms of the Order, and so label it.
3. Section 1 (Introduction) needs to be revised as follows:
  - a) the November 1999 Report on Initial Hydrogeologic Investigations (the Groundwater Report) must be described as either being submitted either as an Appendix to the Groundwater Workplan, or this Section must clarify that the Groundwater Report was not submitted to EPA until March 16, 2000;
  - b) the Consent Order effective date is January 20, 2000 (not January 7<sup>th</sup>);
  - c) the Introduction must be revised to discuss the relationship of the work proposed in this Groundwater Workplan to the Groundwater Report, and how the proposed work and the Groundwater Report will be integrated into a comprehensive Western Perimeter Groundwater Report;
  - d) the Introduction should also be revised to include a summary of the present status of groundwater characterization, including: 1) results of past investigations; 2) relevant published data; 3) information on the location of public and private groundwater wells, and 4) past and present groundwater usage on Vieques Island.
4. The Groundwater Workplan must include a potentiometric map of the uppermost groundwater bearing zone, based on data from all wells and pizeometers shown on Figure 2-1;
5. Figure 2-1 must be revised to clearly show:
  - a) the boundary of the Navy's property;
  - b) all existing groundwater production wells (both currently used, shut-in, or abandoned) on the Navy's property, as well as all known public and/or private wells on adjoining civilian lands within the limits of the Figure;
  - c) all prior investigation wells and pizeometers;
  - d) groundwater elevation [potentiometric] contours and all other data shown on Figure 4-4 of the Groundwater Report and the date of those groundwater elevations (which is not given on the cited figure in the Groundwater Report);
  - e) the location of the municipal landfill (see 8 below); and

- f) identification of all wells proposed to be sampled pursuant to the workplan.
6. Section 1.2 (Project Objectives) must be revised to include the following:
- a) A complete regulatory citation for Appendix IX (40 CFR § 261 Appendix IX), plus a discussion of the categories of constituents to be analyzed (e.g., volatiles, semi-volatiles, pesticides, etc.), and/or a table listing all constituents to be analyzed;
  - b) A discussion of the geologic formation(s)/aquifer(s) to be sampled, as well as data gaps in the present characterization of groundwater in the western perimeter area.
  - c) A discussion of how the past investigation data (from the Groundwater Report) will be incorporated into the comprehensive draft Final Report required under Section VI.F.4 of the Order.
7. Three of the four wells proposed to be sampled are located on the south side of the groundwater divide shown on Figure 4-4 of the Groundwater Report. Only one well (RCRA-2) would evaluate the presence of Appendix IX constituents in the northern groundwater basin, nearest to the population center of Isabela Segunda. In addition, that well (RCRA-2) is shown on Figure 4-3 of the Groundwater Report to have penetrated all granodiorite, a dense volcanic rock, which does not constitute a good aquifer, unless it contains interconnected, natural occurring, fractures or joints. [It should be noted that no boring log, giving the lithology, for RCRA-2 is present in the Groundwater Report, though a construction diagram is included.] Sampling of only RCRA -2 in the northern groundwater basin, is not acceptable. Two adequately characterize the presence or absence of Appendix IX constituents in the northern groundwater basin, sampling of a minimum of two wells north of the groundwater divide shown on Figure 4-4 of the Groundwater Report for Appendix IX constituents must be included in the revised Groundwater Workplan.
8. Section 2.1 (Groundwater Sampling) must be revised as follows:
- a) Since analytical results for Appendix IX metals were not included with the Groundwater Report, as discussed above, the Groundwater Workplan must include all Appendix IX metals, as well as all other Appendix IX constituents not included in the results submitted with the Groundwater Report;
  - b) Since the Groundwater Report states that it was determined that a municipal landfill is located potentially upgradient of well RCRA-1, the location of that landfill must be shown on a revised Figure 2-1 [as well as the groundwater elevation contours and all other data shown on Figure 4-4 of the Groundwater Report, as was stated above]. Also, the basis for concluding that the landfill may have impacted well RCRA-1 must be discussed in the Groundwater Workplan.

[If groundwater flow is as depicted on Figure 4-4 of the Groundwater Report, the potential for an offsite landfill to impact RCRA-1 is not clear.]

9. Section 2.1.1. (Groundwater Sampling Procedures) consists of a total of four sentences, which is inadequate. The Groundwater Workplan must be revised to contain complete details on how the samples will be obtained and preserved. This must among other things include:
  - a) details of how the wells will be purged and the basis for determining when groundwater flow is sufficiently stabilized to represent ambient groundwater conditions;
  - b) the sequence of sample collection;
  - c) details of the sample containers;
  - d) details of sample collection and preservation procedures;
  - e) details of shipping and chain of custody procedures; and
  - f) description of how purge water will be handled.
10. Section 3 (Laboratory Procedures) consists of a total of two sentences, which is inadequate. The Groundwater Workplan must be revised to contain complete details on:
  - a) a complete list of all analytes and the corresponding analytical methods to be utilized for each;
  - b) identification of allowable holding times for each analyte;
  - c) a complete quality assurance/quality control (QA/QC) program; and
  - d) data validation procedures.
11. The Groundwater Workplan must include boring and completion/construction logs for all wells to be sampled, or a reference to where those may be found.
12. The Groundwater Workplan must include a drilling and completion program for any new wells proposed, if any;
13. The Groundwater Workplan must include a description of what will be included in the comprehensive draft Final Report required under Section VI.F.4 of the Order. Please be advised that, as discussed for the Groundwater Workplan, EPA would anticipate making that comprehensive Final Report available for public review and comment.

14. The Groundwater Workplan must include an implementation and reporting schedule.

#### Description of Current Conditions Report

The March 2000 "Description of Current Conditions Report" (the Report) submitted on the Navy's behalf by CH2MHILL is deficient and not fully acceptable in satisfying the technical requirements of Section VI.B.1 of the Order. The report merely summarizes and cites what is already contained in the RFA (which is a document developed by EPA, not the owner/operator of the facility, i.e., the Navy). The Report must be revised to address all requirements of Section III of Appendix A (Scope of Work for an RFI) of the Order. As discussed previously for the Groundwater Workplan, pursuant to Section XVII of the Order (Public Participation), EPA anticipates making the revised "Description of Current Conditions Report" available for public review and comment. As such it must be a "stand-alone" document. Some of the deficiencies and/or modifications required to the draft "Description of Current Conditions Report" are described below:

1. In addition to the SWMUs and AOCs identified in the RFA for the facility, and/or Section IV, Findings of Fact, of the Order, the Report must identify and describe other areas of past or present solid or hazardous waste management (both prior to November 1980, and subsequently), if any. If no other areas exist, the Report must so state. However, please note that during previous conference calls with Mr. Tim Gordon of my staff, you have indicated that at least one such area exists. If so, it must be identified and fully described in the revised Report. Also, the revised Report must identify and describe any past product and waste spills. If no records or other reports of such past product or waste spills exist, the Report must so state.
2. The Report must either provide an in depth discussion of past waste management practices, types of waste (both solid and hazardous), information on past releases, and past environmental investigations, or, if no such information is available in the Navy's files, document that the facility and the Navy have performed a diligent search of their records for information regarding those topics.
3. The report contains no listing of the cited references. All references cited in the Report must be clearly identified. Also, if the cited "Vargas, 1995" is the RFA, it must be cited as the 1995 updated RFA, not as "Vargas, 1995".
4. Figures 1-1 and 1-2 need to be revised to:
  - a) show the entire facility;
  - b) clearly identify the facility's boundaries; and
  - c) in addition to the above, pursuant to Section III.A of Appendix A of the Order, Figure 1-2 and/or Figures 2-1 and 2-2 must be revised to meet all the requirements of 40 CFR § 270.14(b)(19), except for the requirement of a scale of 2.5

centimeters (1 inch) equally not more than 61.0 meters (200 feet), due to the areal extent of the facility.

5. Figure 1-2 shows a large area labeled "Area Southwest of SWMU #1"; however, there is no discussion in the report of this area or its significance. [As noted above, you have indicated in past telephone discussions with Mr. Tim Gordon of my staff there is area identified as an additional area, not identified in the RFA, where wastes appear to have been managed in the past]. Please clarify.
6. Figure 1-2 shows AOC F (the Rock Quarry) as being located near the shoreline at Cerro Caracas) southwest of SWMU 10/AOC G (sewage treatment lagoons and chlorination building) and SWMU 1 (Camp Garcia Landfill). However, Figure 2-1 shows AOC F (the Rock Quarry) as east of SWMU 10/AOC G (sewage treatment lagoons and chlorination building) and due south of SWMU 1. This discrepancy must be resolved, and corrected figures included with the revised Report.
7. Section 1 (Project Background): The reference to "Master Work Plan that has been prepared for the RFI" must be revised to clarify that the document is not included with the Report, or else, the RFI ["Master Work Plan"] work plan must be submitted simultaneously with the revised Report.
8. Section 1.1 (RFI Background): The effective date of Order is January 20, 2000 (not January 7<sup>th</sup>). The RFA date is October 1988 (not 1888). EPA's authority is Section 3008(h) of RCRA, not 7003.
9. Section 1.3.7 (Groundwater) states that "The Valle de Esperanza aquifer continues to supply water to Camp Garcia and Observation Post (OP) 1." The location of the groundwater production wells used to supply Camp Garcia and Observation Post (OP) 1 must be shown on revised Figures 1-2, and/or 2-1 and 2-2. In addition, please include logs from those production wells in the revised Report, and/or a discussion of the depth(s) of the well(s) and screened interval, etc., as well as information on the volume and usage of the water produced from those wells, and whether they are indeed still utilized as stated.
10. Section 2.1 (SWMU 1 - Camp Garcia Landfill). The results of the cited 1999 aerial photo analysis needs to be included in the revised Report, along with a map showing the inferred area of SWMU 1, based on that aerial photographic analysis, and a discussion of those results.
11. Section 2.2 (SWMU 2). The basis for the statement at the top of page 2-4, regarding off-site sludge disposal from the former fuel tanks at SWMU 2, needs to be documented in the revised Report.
12. Since the revised Report, when approved by EPA, establishes the basis by which the RFI investigation workplan is developed, and as discussed previously, will likely be made

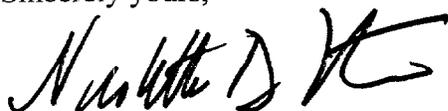
available for public review and comment, EPA requests that it be certified pursuant to requirements given at 40 CFR § 270.11(b) and § 270.11(d).

Within 45 days of your receipt of this letter, please submit a revised "Description of Current Conditions Report" and a revised Western Perimeter Groundwater Investigation Workplan meeting all requirements discussed above. In addition, within 45 days of your receipt of this letter, also submit an acceptable data validation report and other information addressing our above comments on the [November 1999] Groundwater Report.

As discussed during a conference call on April 11, 2000 with yourself and other Navy representatives and contractors and Mr. Tim Gordon, EPA's designated Project Coordinator for this Order, it is EPA's understanding that the Navy plans to submit the RFI workplan required under Section VI.B.2 of the Order within 120 days of the effective date (January 20, 2000) of the Order. Since your submission of an unacceptable "Description of Current Conditions Report" has delayed EPA's approval of that report, EPA requests that the Navy nevertheless submit the RFI workplan by May 19, 2000, i.e., within 120 days of the effective date of the Order. However, if the Navy does not wish to comply with that time frame, please so indicate in writing within 45 days of your receipt of this letter.

Please telephone Mr. Gordon at (212) 637- 4167 if you have questions regarding any of the above.

Sincerely yours,



Nicoletta DiForte, Chief  
Caribbean Section  
RCRA Programs Branch

cc: Captain J. K. Stark, NAVSTA Roosevelt Roads  
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