

Baker

Baker Environmental, Inc.
A Unit of Michael Baker Corporation

December 23, 2002

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U.S. Environmental Protection Agency – Region II
290 Broadway – 22nd Floor
New York, New York 10007-1866

Attn: Mr. Adolph Everett, P.E.
Chief, RCRA Program Branch

Re: Contract N62470-95-D-6007
Navy CLEAN, District III
Contract Task Order (CTO) 0099
U.S. Naval Station Roosevelt Roads (NSRR), Puerto Rico
RCRA/HSWA Permit No. PR2170027203
Final RCRA Facility Investigation Report
SWMU 3

Dear Mr. Everett:

Baker Environmental, Inc. (Baker), on behalf of the Navy, is providing you with two copies of insert pages for the Draft RCRA Facility Investigation Report for SWMU 3. These insert pages make up the Final RCRA Facility Investigation Report for SWMU 3. Directions for incorporating the insert/replacement pages into the Draft RFI for SWMU 3 are attached. Responses to EPA comment letter dated November 19, 2002 on the September 4, 2002 Draft RFI for SWMU 3 are included for your review. This submittal is in accordance with EPA's letter of November 19, 2002.

If you have questions regarding this submittal, please contact Mr. Kevin Cloe, P.E. at (757) 322-4736. Additional distribution has been made as indicated below.

Sincerely,

BAKER ENVIRONMENTAL, INC.

Jan E. Edel Jr. for

Mark E. Kimes, P.E.
Activity Manager

MEK/lp
Attachments

cc: Mr. Kevin R. Cloe, LANTDIV - Code EV23KRC (1 copy)
Ms. Madeline Rivera, NSRR (4 copies)
Mr. Tim Gordon, US EPA Region II (2 copies)
Ms. Kathy Rogovin, Booz Allen & Hamilton (1 copy)
Mr. Carl Soderberg, US EPA Caribbean Office (1 copy)
Mr. Carmelo Vasquez, PR EQB (2 copies)
Mr. John Tomik, CH2M Hill Virginia Beach (1 copy)

ChallengeUs.

**NAVY RESPONSE TO EPA COMMENTS DATED NOVEMBER 19, 2002
DRAFT RFI REPORT FOR SWMU 3
NAVAL STATION ROOSEVELT ROADS
CEIBA, PUERTO RICO**

EPA Comments on Draft RFI Report for SWMU #3

EPA finds the RFI report for SWMU #3 to be largely acceptable. However, EPA request the following modifications/additions be made to the recommendations given in the RFI report, as regards further actions for SWMU #3:

EPA Comment No. 1 on SWMU 3 RFI:

1. As part of the final remedy for SWMU 3, pursuant to the corrective action requirements of the RCRA permit, the Navy shall submit to EPA two copies of all future semiannual groundwater monitoring results implement pursuant to the solid waste requirements (40 CFR Part 258). These shall be submitted to EPA simultaneously with their submission to the Puerto Rico Environmental Quality Board.

Navy Response to EPA Comment No 1 on SWMU 3 RFI:

The Navy will supply two copies of all the future semiannual groundwater monitoring results to the EPA Region II simultaneously with their submission to the Puerto Rico Environmental Quality Board.

EPA Comment No. 2 on SWMU 3 RFI:

2. All future semiannual groundwater monitoring at SWMU #3; in addition to the volatile organic compounds (VOCs) and metal constituents required under 40 CFR Part 258 Appendix I, shall include sampling and analysis for all polycyclic aromatic hydrocarbons (PAHs) previously detected as part of the RFI sampling, and 1,4-dioxane and beta-BHC. Since these semivolatile organic compounds (SVOCs) and pesticides were detected in the groundwater at concentrations exceeding screening levels, the future monitoring of these SVOCs and pesticides is warranted, to ensure that the concentrations and extent of any plumes resulting from those constituents do not increase over time.

Navy Response to EPA Comment No 2 on SWMU 3 RFI:

Previously detected PAHs (Benzo(a)pyrene, Benzo(b)fluoranthene, and Indeno(1,2,3-cd)pyrene), SVOC (1,4-Dioxane), and pesticide (beta-BHC) detected, as part of the RFI sampling will be included for analysis starting with the next round of groundwater sampling. The next round of sampling is scheduled for February 2003 with the report to follow approximately 75 days after completion of the sampling event.

I. GENERAL COMMENTS

BAH General Comment No. 1:

1. *As part of the RFI, groundwater samples were collected from nine monitoring wells surrounding the landfill perimeter. Samples were analyzed for 40 CFR 264, Appendix IX constituents.*

Arsenic, barium, thallium, vanadium, chloroform, polycyclic aromatic hydrocarbons (PAHs), 1,4-dioxane, and beta-BHC were detected above EPA Region 3 drinking water Risk Based Concentrations (RBCs). Only arsenic, thallium, and benzo(a)pyrene exceeded the Maximum Contaminant Level (MCL). These detections are isolated and only marginally exceed screening levels.

Copper, nickel, thallium, and zinc were detected above Marine Surface Water Screening Values (MSWSVs). However, thallium was the only metal to exceed screening levels in the filtered/dissolved samples. The other elevated results in the unfiltered samples appears to correlate with higher turbidity samples and may be indicative of suspended solids rather than contamination. According to EPA's Water Quality Criteria for the Protection of Aquatic Life in Ambient Water (EPA820-B-96-001), it is standard practice to compare dissolved concentrations of contaminants from filtered water samples with ecological screening benchmarks.

The RFI presents a weight-of-evidence approach to justify the exceedences of MSWSVs by detected contaminant concentrations in unfiltered samples. First, average groundwater concentrations were compared to MSWSVs. This comparison indicated MSWSVs were not exceeded. While from a risk assessment perspective, it is generally preferable to use the 95 percent upper confidence limit on the mean, this comparison suggests that the majority of contaminant concentrations are below MSWSVs. In addition, a review of the sampling data from all five groundwater monitoring events indicates that exceedence were rarely detected for the same constituent in the same well over two consecutive monitoring events. Given that the exceedences of MSWSVs are inconsistent both temporally and spatially, it does not appear that concentrations of metals are indicative of a release. In addition, the RFI states that the groundwater is discharging into a marine environment and the MSWSVs do not take dilution effects into consideration. When a dilution factor of 10 is applied to the concentrations of metals detected in groundwater samples, the majority of the exceedences are reduced to levels below the MSWSVs. Therefore, concentrations that exceeded MSWSVs in groundwater samples would most likely not pose a threat to ecological receptors exposed to surface water.

The RFI concludes that additional investigation is not required and recommends that further groundwater monitoring and eventual landfill closure be accomplished under RCRA Subtitle D. Booz Allen concurs with these conclusions and recommendations.

The locations where groundwater screening levels were exceeded are isolated, the drinking water exposure pathway is not complete, and it is unlikely that the levels detected in groundwater would pose a risk to the adjacent surface water due to the size of the surface water bodies and resultant dilution effects. Furthermore, groundwater will continue to be monitored under Subtitle D, so there will be an ongoing mechanism to observe concentrations of these constituents for the foreseeable future.

In order to verify the findings of the RFI and ensure that the nature and extent of the detected contaminants does not increase over time, ongoing monitoring under RCRA Subtitle D should be expanded to include PAHs, 1,4-dioxane, and beta-BHC. These constituents should continue to be monitored until they are not detected for two consecutive sampling rounds.

Navy Response to BAH General Comment No. 1:

Previously detected PAHs (Benzo(a)pyrene, Benzo(b)fluoranthene, and Indeno(1,2,3-cd)pyrene), SVOC (1,4-Dioxane), and pesticide (beta-BHC) as part of the RFI sampling will be included for analysis starting with the next round of groundwater sampling. The next round of sampling is scheduled for February 2003 with the report to follow approximately 75 days after completion of the sampling event. This analysis will be in addition to the Appendix I VOCs and Appendix I total and dissolved metals being conducted under RCRA Subtitle D semi-annual sampling. The additional analysis requested will continue until these constituents are not detected for two consecutive rounds of sampling. The results of each RCRA Subtitle D investigation will be additionally provided to the EPA.

BAH General Comment No. 2:

2. *Sediment samples were collected from 17 locations in the shallow surface water surrounding the landfill. Similar to the groundwater results, the locations where sediment screening levels were exceeded are isolated and the exceedences are minimal. As a result, they do not appear to be indicative of a release from the landfill. Based on the data collected during the RFI, further investigation or interim measures do not appear warranted.*

The report indicates that EPA previously approved the Navy's no further action recommendation for sediment at SWMU 3, based on data collected during the 1996 and 1998 sampling events. A review of the historical documentation supports this statement, but the documentation is lengthy and cumbersome. In order to ensure that this report adequately documents the conclusions of the RFI, this report should be expanded to include a summary of the historical evaluation of the sediment data, including human health and ecological risk assessment data. Specific references to each historical document (i.e., reports and letters) should be included in a manner that allows the reader to trace the history of the issue.

Navy Response to BAH General Comment No. 2:

The Navy will include in Section 5.2 (Sediment) a brief discussion on the human health and ecological risk assessment data along with a table comparing sediment results from both the 1995 and 1997 RCRA Facility Investigations as requested. In addition, references will be added where appropriate in the document to afford the reader the opportunity to trace the history of the site.

II SPECIFIC COMMENTS

BAH Specific Comment No. 1:

Table 5-1 Summary of Organic Detections in Groundwater, SWMU 3, Base Landfill

1. The quantitation limits for some PAHs (i.e., benzo(a)pyrene, benzo(b)fluoranthene, and indeno (1,2,3-cd) pyrene) were substantially higher than the associated screening criteria. As such, some contamination above the screening levels may have been overlooked. Analytical methods for future monitoring should be selected to ensure they provide detection limits (quantitation limits if possible) lower than the associated screening levels.

Navy Response to BAH Specific Comment No.1:

The Navy will utilize a low level PAH analysis with reporting limits at 2 ug/l. It should be noted that this value is at the MCL for benzo(a)pyrene but above the EPA Region III tap water RBC for the majority of the PAHs.