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June 12, 2009

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 Programs Branch

Re: Contract N62470-07-D-0502
IQC for A/E Services for Multi-Media
Environmental Compliance Engineering Support
Delivery Order (DO) 0002
U.S. Naval Activity Puerto Rico (NAPR)
EPA I.D. No. PR2170027203
Final Phase I RCRA Facility Investigation Report for SWMU 78

Dear Mr. Everett:

Michael Baker Jr., Inc. (Baker), on behalf of the Navy, is pleased to provide you with one hard copy of the replacement pages for the Draft Phase I RCRA Facility Investigation Report for SWMU 78, Naval Activity Puerto Rico, for your review and approval. These replacement pages make up the Final Phase I RCRA Facility Investigation Report for SWMU 78. Directions for inserting the replacement pages into the Draft Phase I RCRA Facility Investigation Report for SWMU 78 are provided for your use. Also included with the copy of the replacement pages is one electronic copy provided on CD of the Final Phase I RCRA Facility Investigation Report for SWMU 78, Naval Activity Puerto Rico.

This document is being submitted in accordance with EPA comments dated April 23, 2009 and PREQB comments dated April 30, 2009. The Navy responses to these comments are attached for your review.

If you have questions regarding this submittal, please contact Mr. Mark Davidson at (843) 743-2124. Additional distribution has been made as indicated below.

Sincerely,
MICHAEL BAKER JR., INC.

A handwritten signature in black ink that reads "Mark E. Kimes".

Mark E. Kimes, P.E.
Activity Coordinator

MEK/lp
Attachments

cc: Ms. Debra Evans-Ripley, BRAC PMO SE (letter only)
Mr. David Criswell, BRAC PMO SE (letter only)
Mr. Mark E. Davidson, BRAC PMO SE (1 hard copy and 1 CD)
Mr. Pedro Ruiz, NAPR (1 CD)
Mr. Tim Gordon, US EPA Region II (1 hard copy and 1 CD)
Mr. Carl Soderberg, US EPA Caribbean Office (1 hard copy and 1 CD)
Mr. Felix Lopez, US F&WS (1CD)
Mr. Michael Smith, TechLaw, Inc. (1 CD)
Ms. Willmarie Rivera, PREQB (1CD)
Ms. Gloria Toro, PREQB (1 hard copy and 1 CD)

**NAVY RESPONSES TO EPA COMMENTS DATED APRIL 23, 2009 AND PREQB COMMENTS
DATED APRIL 30, 2009**

**EPA AND PREQB COMMENTS ON THE DRAFT PHASE I RCRA FACILITY
INVESTIGATION REPORT FOR SWMU 78 (POLE YARD) DATED FEBRUARY 26, 2009**

EPA COMMENTS DATED APRIL 23 2009

(EPA comments are provided in italics, while the Navy responses are provided in regular print)

EPA GENERAL COMMENTS

- 1. Section 7.2, Recommendations, recommends that the full RFI investigation be focused around sample locations 78SB11, 78SB03, and 78SB06 in addition to the area of the storage trailers and the lower southern boundary of the Solid Waste Management Unit (SWMU). Based on a review of the data provided, it is unclear why sample locations 78SB11, 78SB03, and 78SB06 were selected and why other sample locations were not included. These data indicate that hazardous constituents were also detected above Regional Screening Levels (RSLs) in other soil borings. For example, detected concentrations of benzo(a)pyrene, diesel range organics, and zinc at soil boring 78SB01 exceeded at least two of the screening criteria. Please provide a rationale for focusing the full RFI on the three sample locations identified in this section, including a discussion of why these locations were selected and why others were not selected.*

Navy Response to EPA General Comment No. 1: The Navy acknowledges that additional sample locations will require further evaluation during the Full RFI in order to properly characterize and delineate soil contamination in the vicinity of the raised concrete curbed pad (i.e., 78SB04, 78SB08, 78SB09, and 78SB10). The text in Section 7.2 will be revised to include the identification of these four sample locations. It is noted that sample locations identified for additional evaluation in the Full RFI are not selected solely on whether screening criteria were exceeded. The spatial distribution of the exceedances also is taken into consideration. In the case of 78SB01, this sample location is surrounded by other Phase 1 RFI soil sample locations (i.e., 78SB02, 78SB03, 78SB04, 78SB06, and 78SB07). Therefore, additional delineation of contamination detected at this sample location is not necessary during the Full RFI.

- 2. According to Section 4.1, Surface and Subsurface Soil Sampling, field observations and photoionization detector (PID) readings did not indicate the presence of specific zones of contamination; in addition, the presence of groundwater was not apparent. As a result, the rationale behind the sampling depth selections in the subsurface borings is unclear. Please include a discussion of the rationale employed to determine the sampling depth selections.*

Navy Response to EPA General Comment No. 2: The rationale behind sample collection was focused on the potential vertical migration of surface contaminants (all potential releases at the SWMU were to surface soil). Therefore, random sample collection was performed from 1.0 to 3.0, 3.0 to 5.0, or 5.0 to 7.0 feet below ground surface. One deeper sample was collected within the weathered bedrock at location 78SB11 from 9.0 to 11.0 feet below ground surface. The presence of weathered rock and Geoprobe® refusal at four locations eliminated some of the deeper sampling options.

- 3. According to Section 6.3, Subsurface Soil, and Table 6-1, Summary of Sampling and Analytical Program – Environmental Samples, lead analytical results were qualified as “rejected” in eight (8) of 18 samples (i.e., 56% completeness for lead). As a result, it is unclear whether the percent*

completeness goal for lead has been met. Please clarify if the percent completeness for lead complies with the data quality objectives established for this project. In addition, the rejected concentration of lead in sample 78SB03-00 exceeds the selected ecological soil screening value. Due to the number of lead rejections and the potential exceedance of the ecological soil screening value, it is suggested that lead be retained as a chemical of concern in the full RFI.

Navy Response to EPA General Comment No. 3: The EPA-approved Final Data Collection Quality Assurance Plan (DCQAP) states that, “*For completeness, it is expected that methodology proposed for chemical characterization of the samples will meet QC acceptance criteria for at least 95% of all sample data.*” Therefore, the percent completeness objectives for lead in surface soil and subsurface soil were not met. It is noted that Section 7.2 of the Draft Phase I RFI Report recommends further evaluation of all Appendix IX metals (including lead) in SWMU 78 surface and subsurface soil during the Full RFI. However, the decision to retain lead for additional evaluation beyond the full RFI will be based on the acceptable (i.e., non-rejected) Phase I RFI and Full RFI analytical data.

EPA SPECIFIC COMMENTS

1. **Section 7.1, Conclusions, Page 7-1:** *According to Section 7.1, “[a]rsenic exceeded both SLs and background in only two samples (78SB11-05 and 78SB12-02).” This statement appears to be inaccurate. According to Table 6-2, Summary of Detected Laboratory Results – Subsurface Soil, the concentration of arsenic detected in sample 78SB14-02 exceeded the RSLs for residential and industrial soil and the NAPR base-wide background concentration. For completeness and transparency in the interpretation of the collected data, please revise Section 7.1 to address this discrepancy and comment on the significance of all known exceedances of arsenic and their significance with respect to the conclusions reached in the Phase I RFI investigation.*

Navy Response to EPA Specific Comment No. 1: Section 7.1 will be revised to indicate that arsenic was detected in three subsurface soil samples at concentrations exceeding the Regional Residential Screening Level (SL), Regional Industrial SL, and the NAPR base-wide background concentration (i.e., 78SB11-05, 78SB12-02, and 78SB14-02). It is noted that Section 7.2 of the Draft Phase I RFI Report recommends additional evaluation of all Appendix IX metals (including arsenic) in SWMU 78 subsurface soil during the Full RFI. Furthermore, the specific locations where arsenic was detected above the Regional Residential SL, Regional Industrial SL, and NAPR base-wide background concentration are recommended for additional evaluation during the full RFI (i.e., delineation of potential contamination within adjacent/downgradient soils). Therefore, the omission of subsurface soil sample 78SB14-02 from the text in Section 7.1 had no impact on the conclusions summarized in Section 7.2 of the Draft Phase I RFI Report.

2. **Table 6-2, Summary of Detected Laboratory Results – Subsurface Soil:** *Based on review of Table 6-2, it appears that three constituents were detected at concentrations exceeding one or more of the screening levels presented in the table; however these three constituents were not identified as such. For example, it appears that the concentrations of cobalt, copper, and vanadium detected in soil sample 78SB03-01D exceeded their respective ecological soil screening values, but they were not identified as exceedances. Please review and revise Table 6-2 in its entirety to ensure that all exceedances are properly identified.*

Navy Response to EPA Specific Comment No. 3: Table 6-2 will be revised to show that cobalt, copper, and vanadium concentrations detected in subsurface soil sample 78SB03-01D exceed their respective ecological soil screening levels (i.e., concentration values will be shaded). All other exceedances are properly identified within the Table. As noted in the table, only subsurface soil samples collected from the 1.0 to 3.0-foot depth interval were compared to ecological soil screening values.

PREQB COMMENTS DATED MAY 30 2009

(PREQB comments are provided in italics, while the Navy responses are provided in regular print)

- 1) *At page 2-2, the first paragraph indicates that Baker and Navy personnel visited the area of the suspected release on June 15 and 19, respectively. Although it is inferred this sentence should be corrected to include the year that the visits were performed.*

The second paragraph of the same page at the last sentence referred to Photograph A-1 in Appendix A to see the “small area (approximately 10 feet by 3 feet) of the stained soil and stressed vegetation was observed at the discharge of the drainage valve” at SWMU78. The photograph that shows the mentioned conditions is identified as A-5 instead of A-1. Please revise and correct.

Navy Response to PREQB Comment No. 1: Section 2.2 will be revised to include the year of the site visits (i.e., 2007). Section 2.2 also will be revised to provide the correct identification for the photograph showing the stained soil and stressed vegetation at SWMU 78 (i.e., Photograph A-5).

- 2) *According to Section 3.4 the Final Phase I RCRA Facility Investigation Work Plan approved by EPA on May 13, 2008, QA/QC samples will be obtained during the investigations. The samples will include Field Blanks, among others. The work plan also specifies that field blank samples consist of the source water used in equipment decontamination procedures. At a minimum, one field blank for each source of water must be collected and analyzed for the same parameters as the related samples. The RFI Report informed at Section 4.6.4 that only one field blank sample (FB01) was collected and adequately explains the reason for it. The field blank was analyzed for the appropriate parameters. Nevertheless, the sample was not taken during the sampling events. According to the summary of the laboratory results the field sample was collected on May 2, 2008. PREQB’s interpretation of the procedures was that the field blanks were going to be collected during the same conditions that the investigation samples would be collected, hence, on the same date. Please provide more detailed information regarding the sample identification and preparation. For example, it is not clear how a Field Blank, collected on May 2, 2008 could be related to samples taken on May 29 – 31, 2008. Furthermore, according to the RCRA Sampling Procedures Handbook (USEPA 1996) a field blank is similar to the trip blank except that it is prepared in the field with laboratory grade distilled water and is prepared exactly as all other samples in the field. The same comment apply for sample number QATB01 that is a trip blank. For future activities the frequency of the QA/QC samples should be clearly noted along with how the quality samples will be taken and share for concurrent site activities.*

Navy Response to PREQB Comment No. 2: Field blank FB01 was collected at the beginning of a multi-site field investigation (i.e., SWMUs 56, 61, 62, 69, 71, 74, and 78). The field blank was collected using the same batch of laboratory-grade deionized water that was used to collect equipment rinsate blanks specific to each SWMU. Since FB01 was not collected at SWMU 78 during the sampling event, it is acknowledged that the results of FB01 only address laboratory sources of contamination and not the ambient conditions encountered in the field. For future multi-site field investigations at NAPR, field blanks will be collected at each SWMU at the time samples are being collected. Additionally, it should be noted that trip blank QATB01 also was also collected on May 2, 2008 and accompanied the sample shipment containing FB01. As such QATB01 is not associated with any environmental samples collected at SWMU 78.

- 3) *The chain of custody that includes QATB01 and FB01 was not found at the report. Equipment Rinsate sample ER24 was not include at any of the chain of custodies presented at the report.*

Navy Response to PREQB Comment No. 3: Chain-of-Custody forms listing QATB01, FB01, and ER24 will be added to Appendix A.

4) *The report did not mention management of investigation-derived waste (IDW). The approved RFI Work Plan below other field activities, the procedures for the management of IDW. The report should include information regarding IDW, if any were generated.*

Navy Response to RREQB Comment No. 4: In order to minimize the generation of liquid IDW from decontamination, disposable sampling equipment was used for soil sampling to the extent practicable. Water from decontamination of the drill rig before and after entering the site was containerized. The soil cuttings from the subsurface soil sampling were placed back into the boring from which they came (no contamination was encountered). As much as possible, soils last out of the hole were returned first, thereby, approximating original stratigraphy.

One IDW sample was collected during the field investigation at SWMU 78. Specifically, one composite aqueous sample was collected from drums containing decontamination fluid (from the drill rig). The water IDW sample was collected on June 5, 2008 and analyzed for Appendix IX VOCs, total Appendix IX metals, ignitability, reactive sulfide, reactive cyanide, and pH. Section 4.3 will be expanded to include the information presented above. In addition, Appendix A will be revised to include the IDW analytical data for the composite aqueous sample collected from the containerized drill rig decontamination water.