



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

AUG - 6 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Mark E. Davidson
US Navy
BRAC PMO SE
4130 Faber Place Drive, Suite 202
North Charleston, SC 29405

Re: Naval Activity Puerto Rico (NAPR), formerly Naval Station Roosevelt Roads,
EPA I.D. Number PRD2170027203,

- 1) SWMU 60 Draft Phase I RCRA Facility Investigation Report, dated June 18, 2009
- 2) SWMU 68 Final Corrective Measures Study (CMS) Report, dated June 12, 2009
- 3) SWMU 70 Draft Phase I RCRA Facility Investigation Report, dated May 29, 2009
- 4) SWMU 73 Draft Corrective Measures Study Report, extension for submission

Dear Mr. Davidson:

This letter is addressed to you as the Navy's designated project coordinator pursuant to the January 29, 2007 RCRA Administrative Order on Consent ("the Consent Order") between the United States Environmental Protection Agency (EPA) and the U.S. Navy (the Navy).

EPA has completed its review of the above documents. As part of that review, EPA requested our contractor, TechLaw to review those documents. Based upon these reviews, EPA has the following comments:

SWMU 60 Phase I RFI Work Plan (dated June 18, 2009)

EPA concurs with the recommendation given in the Phase I RFI report that a Full RFI be conducted for surface and subsurface soils, sediments, and groundwater. However, EPA has a number of concerns with the scope of the Full RFI as described in Section 7.2 of the Phase I RFI report. These are discussed in the enclosed Technical Review (Enclosure #1) prepared by EPA's consultant, TechLaw Inc. In addition, the Puerto Rico Environmental Quality Board

(PREQB) has a number of comments on the Phase I RFI report, which are discussed in their letter dated July 29, 2009, a copy of which is enclosed with this letter (Enclosure #2). Within 45 days of your receipt of this letter, please submit written responses and/or a revised Phase I RFI Report addressing comments given in both enclosures. Following EPA's and PREQB's review of those responses, if they are determined to be acceptable, EPA will then request that the Navy submit a draft workplan for a Full RFI, which reflects any changes necessary to address EPA's and PREQB's enclosed comments on the Phase I RFI Report.

SWMU 68 Final CMS Report (dated June 12, 2009)

Following our review of the Navy's responses to EPA's April 23, 2009 comments on the draft CMS Final Report, and PREQB's July 7, 2009 letter on the Navy's revisions, EPA has determined that the June 12, 2009 CMS Final Report is complete. PREQB has advised EPA by letter dated July 7, 2009 that they approve the Navy responses to PREQB's prior comments on the draft CMS Final Report and that they approve the revised Final CMS Report.

Please note that EPA's final approval of the proposed final remedy (excavation, and offsite disposal, of approximately 7500 cubic feet of soils to a depth of one foot below ground surface), as described in Section 4.0 of the Report, is subject to completion of required public notice and review, pursuant to Section XXVIII of the Consent Order. In order to prepare for such public review, please submit within 60 days of your receipt of this letter, a draft Statement of Basis supporting the proposed remedy at SWMU 68. A template to be used for this is available at <http://www.epa.gov/osw/hazard/correctiveaction/sbs2/pdfs/sb-temp.pdf>. Examples of completed Statement of Basis are available at <http://www.epa.gov/osw/hazard/correctiveaction/sbs2/>.

SWMU 70 Draft Phase I RFI Report (dated May 26, 2009)

EPA concurs with the recommendation given in the Phase I RFI report that a Full RFI be conducted for surface and subsurface soils, estuarine sediments, and groundwater. However, EPA has a number of concerns with the scope of the Full RFI as described in Section 7.2 of the Phase I RFI report. These are discussed more fully in the enclosed Technical Review (Enclosure #3) prepared by EPA's consultant, TechLaw Inc. In addition, the Puerto Rico Environmental Quality Board (PREQB) had several comments on the Phase I RFI report, which are discussed in their letter dated July 6, 2009, a copy of which is enclosed with this letter (Enclosure #4). Within 45 days of your receipt of this letter, please submit written responses and/or a revised Phase I RFI Report addressing the comments in both enclosures. Following EPA's and PREQB's review of those responses, if they are determined to be acceptable, EPA will then request that the Navy submit a draft workplan for a Full RFI, which reflects any changes necessary to address EPA's and PREQB's enclosed comments on the Phase I RFI Report.

SWMU 73 Draft Corrective Measures Study Report

As requested by your letter of June 11, 2009, EPA hereby approves an extension until September 30, 2009 for submission of the Draft CMS report for SWMU 73.

If you have any questions, please telephone me at (212) 637- 4167.

Sincerely yours,



Timothy R. Gordon
Project Coordinator
Resource Conservation and Special Projects Section
RCRA Programs Branch

Enclosures (4)

cc: Ms. Wilmarie Rivera, P.R. Environmental Quality Board, w/encls.
Mr. Mark Kimes, Baker Environmental, w/encls.
Mr. Mike Smith, TechLaw Inc., w/o encls.
Mr. Anthony Scacifero, TechLaw Inc, w/o encls.
Mr. Felix Lopez, USF&WS, w/o encls.

ENCL #1

**TECHNICAL REVIEW OF THE
DRAFT RCRA FACILITY INVESTIGATION REPORT
SWMU 60 – FORMER LANDFILL AT THE MARINA**

**NAVAL ACTIVITY PUERTO RICO
CEIBA, PUERTO RICO**

DATED JUNE 18, 2009

Submitted to:

**U.S. Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-1866**

Submitted by:

**TechLaw, Inc.
One Penn Plaza, Suite 2509
New York, NY 10119**

EPA Task Order No.

Contract No.

TechLaw TOM

Telephone No.

EPA TOPO

Telephone No.

002

EP-W-07-018

Michael Smith

(678) 765-0815

Timothy Gordon

(212) 637-4167

July 20, 2009

**TECHNICAL REVIEW OF THE
DRAFT RCRA FACILITY INVESTIGATION REPORT
SWMU 60 – FORMER LANDFILL AT THE MARINA**

**NAVAL ACTIVITY PUERTO RICO
CEIBA, PUERTO RICO**

DATED JUNE 18, 2009

Presented below are technical review comments on the *Draft Phase I RCRA Facility Investigation Report, SWMU 60 – Former Landfill at the Marina*, dated June 18, 2009 (Phase I RFI Report) for Naval Activity Puerto Rico (NAPR) in Ceiba, Puerto Rico. The Phase I RFI Report was reviewed for technical adequacy, completeness, and consistency with the *Interim Final RCRA Facility Investigation (RFI) Guidance* (OSWER Directive 9502.00-6D), dated May 1989.

TECHNICAL REVIEW COMMENTS

1. According to the Phase I RFI Report, groundwater flow direction at the site was not determined during the RFI due to uncertainty associated with the linear alignment of the two permanent and one temporary monitoring wells. Section 5.2.2, Hydrogeology, states, “[e]xpected groundwater flow is to the south and southeast towards the Ensenada Honda, although the concrete slips and docks may be causing some mounding of shallow groundwater near the shoreline where these exist.” Future investigations at SWMU 60 should better define the groundwater flow direction(s) at the site, and determine the interaction between shallow groundwater and Ensenada Honda. Data from such an investigation would aid in better defining the contaminant migration pathways. Revise the Phase I RFI Report to include recommendations to better define groundwater flow patterns at SWMU 60 and to determine the interaction between Ensenada Honda and shallow groundwater. Tidal influence should also be addressed.
2. Limited information appears to be available on the history of SWMU 60. According to the Phase I RFI Report, the site was originally identified due to the observation of solid waste and scrap metal piles in a 1958 aerial photograph. However, it is not clear whether buried waste may also exist at the site. In addition, limited sampling has been performed in the solid waste and scrap metal pile areas identified in the 1958 photograph (designated by polygons on the Phase I RFI Report figures), to determine the absence or presence of waste materials or contamination. For example, Figure 4-1, Sample Location Map, shows only one sample location within the southwestern polygon (an area that extends more than 120 feet north to south); three sample locations within the eastern polygon (an area that extends more than 500 feet north to south), and two sample locations within the northwestern polygon (an area which extends more than 300 feet north to south). Revise the Phase I RFI Report to detail whether it is known or suspected that waste materials may have been buried in the landfill areas onsite. If buried waste is

known or suspected, analyses should be proposed (e.g., geophysical survey) to better delineate the disposal areas. Furthermore, revise the Phase I RFI Report to provide additional justification for limiting the sampling within the suspected landfill areas to a few sampling locations within each area (as detailed above). In the alternative, propose a more widespread investigation of these areas to adequately determine the presence or absence of contamination.

3. During the Site Characterization investigation in 1999, benzene was detected in groundwater from monitoring well MW3 at a concentration of 190 micrograms per liter ($\mu\text{g/l}$). This detection was well above the current tap water Regional Screening Level (RSL) of $0.41 \mu\text{g/l}$ and federal maximum contaminant level (MCL) of $5 \mu\text{g/l}$. Monitoring well MW3 is shown on the figure included in Appendix B, Summary of Analytical Results from 1999 Site Characterization, but its location in relation to the most recently collected groundwater samples has not been detailed in the Phase I RFI Report. Additionally, it is unclear whether MW3 still exists and whether it can be re-sampled to confirm or deny the presence of benzene. Revise the Phase I RFI Report to show the location (or former location) of monitoring well MW3, and all other prior wells, in relation to current groundwater sample locations. Additionally, clarify the current status of monitoring well MW3 and the other monitoring wells that were installed during previous investigations.
4. The Phase I RFI Report has not presented a conceptual site model (CSM) for SWMU 60. Specifically, a CSM should discuss contaminant release mechanisms, contaminant migration pathways, and receptors associated with SWMU 60 in order to provide an initial understanding of site contamination, and to help formulate an approach for subsequent investigations. It is recommended that the Phase I RFI Report be revised to present an initial CSM utilizing both text and graphics that incorporate all relevant site data. The CSM should then be utilized to refine data needs for the full-scale RFI. In addition, the CSM should be updated as additional data are collected and analyzed.

ENCL. # 2



COMMONWEALTH OF PUERTO RICO
Office of the Governor
Environmental Quality Board

Land Pollution Control Area

July 29, 2009

Mr. Timothy Gordon
RCRA Programs Branch
U.S. Environmental Protection Agency – Region II
290 Broadway – 22nd Floor
New York, New York 10007-1866

**RE: REVIEW DRAFT PHASE I RCRA FACILITY INVESTIGATION (RFI) REPORT
SWMU 60 – FORMER LANDFILL AT THE MARINA
NAVAL ACTIVITY PUERTO RICO (NAPR)
CEIBA, PR PR2170027203**

Dear Mr. Gordon:

The Hazardous Wastes Permits Division (HWPD) of the Land Pollution Control Area and the Federal Facilities Coordinator has finished the review of the above-mentioned document. The document was received by PREQB on June 19, 2009.

After a thoughtful review several comments are being issue for EPA's and Navy's consideration. In general the documents needs more detail and some clarifications before being considered final.

Enclosed you will find PREQB comments, if you have any additional question please feel free to contact Gloria M. Toro Agrait of my staff at 787-767-8181 extension 3586

Cordially,

María V. Rodríguez Muñoz
Manager
Land Pollution Control Area

cc. Ariel Iglesias Protalatin, CEPD
Wilmarie Rivera, PREQB

Technical Evaluation
Draft Phase I RCRA Facility Investigation Report
SWMU 60 – Former Landfill at Marina
Naval Activity Puerto Rico
EPA I.D. No. PR217002720
Ceiba, Puerto Rico

I. INTRODUCTION

This technical evaluation is of the Draft Phase I RCRA Facility Investigation Report, SWMU 60 – Former Landfill at the Marina, Naval Activity Puerto Rico, Ceiba, Puerto Rico. This report documents the findings of the January 2009 Phase I RFI field work, implemented to investigate the presence of contamination detected during the Environmental Condition of Property (ECP) Phase II Investigation.

II. PAGE-SPECIFIC COMMENTS

1. Page 2-2, Section 2.2, paragraph 3. Please include the dates of operation for the ASTs and associated piping systems for clarity.
2. Page 2-3, Section 2.3.1, paragraph 1. Please clarify which set of ASTs is the source of the petroleum releases. This paragraph discusses the original ASTs that were removed during construction of the Marina and current ASTs located at the same location. The third sentence indicates that a release from the ASTs occurred. However, the text does not state which set of ASTs is the source and when the release occurred. Please provide this information in the text.
3. Page 2-4, Section 2.3.2, Paragraph 6: This paragraph discusses the higher concentrations of PAHs at location 6E-SW/SD01 and also states that the PAHs were not detected at the other location (6E-SW/SD02) sampled in the Phase I/II ECP investigation. Upon review of the results, the reporting limits for the PAHs in sample 6E-SW/SD02 were much higher than the concentrations detected in sample 6E-SW/SD01 and therefore it cannot be definitively stated that PAHs were not detected at similar concentrations in sample 6E-SW/SD02. Please revise the text to address this issue.
4. Page 3-1 to 3-5, Section 3.0. As required by EPA's *Interim Final RCRA Facility Investigation (RFI) Guidance*, OSWER Directive 9502.00-6D, please describe the environmental setting for the SWMU and surrounding areas that may be impacted by this SWMU based on the nature and extent of site-derived contaminants in surface soil, sediment, and surface water of terrestrial, wetland and aquatic habitats. Statements about ecological conditions and the types of habitats in the study area appear scattered amongst other sections of the report but should be consolidated and expanded within Section 3.0 or in a new section dedicated to site ecological characterization. The habitat descriptions should document dominant plant communities, the nature of fish and wildlife populations likely to inhabit or use these habitats, and information on surface water depths and
- 5.

salinity that is sufficient to support the selection and use of ecological screening benchmarks to assess analytical data for media sampled from each habitat type, for which sample locations and results appear Figures 2-4, 4-1, 4-2, 5-1, 5-3, 6-1, 6-3, 6-4, and 6-5.

6. Page 3-1 to 3-5, Section 3.0. As required by EPA's *Interim Final RCRA Facility Investigation (RFI) Guidance*, OSWER Directive 9502.00-6D, please include a discussion of the human receptor groups that may come in contact with SWMU-related contamination. Please provide a conceptual site model that depicts the current understanding of sources, migration pathways and potential receptors.
7. Page 4-2, Section 4.1, paragraph 1. It is stated on page 4-2 that "Surface soil samples were collected after removing any vegetation and topsoil/root zones." Removal of this rooting zone soil seems to undermine the original intent of surface soil sampling for comparison to ecological screening values, as conveyed on page 4-1 of the Final RFI Work Plan, in which the importance of the rooting zone is emphasized by stating that "most heterotrophic activity and soil invertebrates occur on the surface or within the oxidized root zone." Because much of the biological activity of invertebrates and most plant uptake of soil/sediment contaminants occurs within this rooting zone, especially in estuarine wetlands where anoxic sediments may occur a short distance below the rooting zone, the absence of rooting zone soil from the samples is a significant uncertainty to be addressed in any ecological risk considerations. Please address.
8. Page 4-2, Section 4.1, Paragraph 2:
 - a. According to the chains-of-custody in Appendix A, three vials were collected for GRO analysis at each soil sample location. Please clarify in the text of this section the procedure used for the collection of soil samples for GRO analysis.
 - b. Clarify in the text how the samples were frozen in the field, the temperature used for freezing, and how the frozen VOC samples were shipped to the laboratory in a manner to maintain their frozen state.
9. Page 4-3, Section 4.2, Paragraph 1: The text states that 4-1/4 inch inside diameter hollow stem augers (HSAs) were used to install the permanent monitoring wells. However, according to the field log book notes and the boring logs, 3-1/4 inch inside diameter HSAs were used. Please revise the text accordingly.
10. Page 4-5, Section 4.8, Paragraph 1: According to the text, groundwater samples were collected using polyethylene and silicone tubing. According to the Region 2 low-flow groundwater sampling procedure, polyethylene tubing is not allowed when sampling for organic parameters and silicone tubing is not listed as an option at all in the Region 2 procedure. Silicone tubing is known to have sorption and desorption issues for organic compounds which cause a negative bias to the analytical results. Polyethylene tubing can

leach plasticizers into the sampled water, can sorb organic contaminants from the sampled water and later desorb the same contaminants into samples. Please explain why this deviation occurred and qualify the data accordingly.

11. Page 4-7, Section 4.10.3: Please explain why MS/MSD samples were not collected for the sediment matrix. As per Section 3.5 of the December 2007 RFI Work Plan, MS/MSD samples were to be collected for each group of samples of a similar matrix. These analyses are especially critical for the metal analyses where there is no other measure of matrix effects on sample results.
 12. Page 6-1, Section 6.0. The laboratory reported all nondetect results down to the method detection limit (MDL) instead of the reporting limit. Typically, the MDL is a statistically derived value that is not accurately verified by the laboratory analysis. The reporting limits (or quantitation limits) are accurately verified by laboratory analyses of standards at the unadjusted reporting limit. Table 3-2 of the December 2007 Phase I RFI Work Plan and Table 4-3 of this report present the required reporting limits for this program, not the MDLs. It should be noted that reporting limits are typically 3-5 times higher than MDLs prior to adjustment for sample-specific parameters. The reporting limits (not MDLs) should be used for the evaluation of the data when comparing to the human health and ecological risk criteria. Revise Tables 6-1 through 6-6, the tables of sample results presented in Appendix D and the tables of IDW results presented in Appendix A to reflect the reporting of nondetect results down to the reporting limit instead of the MDL. It should be noted that the Site Characterization data from 1999 as well as the Phase I/Phase II data from 2004 presented in Appendix C reported nondetect results down to the reporting limit, not the MDL.
 13. Page 6-1, Section 6.1. Please clarify which type of background concentration was used for screening – the upper limit of the means, as stated in this section, or the upper limit of the means plus 2 standard deviations, as stated in Tables 6-1 to 6-5, Note 1. The RFI Work Plan did not list the specific type of background concentrations that would be used; therefore, please clarify whether the agencies have approved of the use of these specific background values for screening purposes.
 14. Page 6-1, Section 6.1.1. Please clarify if the Maximum Contaminant Levels (MCLs) were used as screening levels for groundwater only if a tapwater RSL was not available. Please clarify the text accordingly.
 15. Page 6-2, Section 6.1.1.2. An MCL Goal (MCLG) is calculated to protect human health. An MCL is established as close to the MCLG as is technically feasible. Although an MCLG is calculated as presented in the second sentence of this paragraph, many MCLs
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are set above the calculated MCLG, so are not necessarily protective of the exposure scenario presented in the second sentence. Please revise the text accordingly.

16. Page 6-2, Section 6.1.2.1 and Table 6-1. This section states that "USEPA ecological soil screening levels (Eco-SSLs) for terrestrial plants and invertebrates were preferentially used as soil screening values." Eco-SSLs for birds and mammals are also available and are often lower than Eco-SSLs for plants and invertebrates. The Final RFI Work Plan proposed to use Eco-SSLs to evaluate surface soil analytical data but did not propose that only the plant and invertebrate subset of Eco-SSLs would be used. The lowest available Eco-SSL was not applied for High Molecular Weight PAHs (HMW PAHs), DDT compounds, and nine inorganics (antimony, beryllium, cadmium, chromium, copper, lead, silver, vanadium and zinc). Data in Appendix D show that one or more surface soil samples exceeded avian and/or mammalian Eco-SSLs for several analytes, which should be but were not identified as COPECs. Please revise the report to provide adequate justification for only using the Eco-SSLs for plants and invertebrates or conduct the screening using the lower of the avian and mammalian EcoSSLs when those are lower than Eco-SSLs for plants and invertebrates.
17. Page 6-2, Section 6.1.2.1 and Table 6-1. As noted above, the lowest of all Eco-SSLs, including avian and mammalian Eco-SSLs, should have been used to screen surface soils. However, the RFI used the higher Dutch Intervention Value of 401 ug/kg for DDE (MHSPE, 2000), rather than apply the mammalian (21 ug/kg) or avian (93 ug/kg) Eco-SSLs for Total DDT and its metabolites (DDD and DDE). Please revise the report to apply the mammalian Eco-SSL for DDT, DDD, and DDE.
18. Page 6-4, Section 6.1.2.2. After explaining the basis for the Long and Morgan (1991) and Long et al. (1995) ER-L and ER-M sediment benchmarks, the last sentence in the first paragraph states that "Only ER-Ls were selected as sediment screening values" but does not state which version was applied. Please revise the text to verify that ER-Ls based on marine-only sediment ecotoxicity data from Long et al. (1995) were used for estuarine/marine sediments. Also, since the possible use of freshwater screening criteria are discussed for groundwater in Section 6.1.2.3, please clarify why no freshwater sediment criteria were discussed in this section.
19. Pages 6-5 to 6-6, Section 6.1.2.3; Table 6-5 and Appendix C. As shown in Tables C-6 and C-9 of Appendix C, the Puerto Rico Water Quality Standards (PRWQS) for the protection of aquatic life were used to evaluate surface water and groundwater analytical data in the Phase II ECP Report. However, the PRWQS were not used in the RFI report. Please explain why the PRWQS were not used and identify any PRWQS that are lower than the national ambient water quality criteria (NAWQC) used in the screening. If any PRWQS are more stringent than the NAWQ, please clarify why the lower criteria were

not applied to site-affected groundwater that could emerge into estuarine or marine habitats.

20. Page 6-6, Section 6.1.2.3. Please clarify the use of freshwater NAWQC when prior discussions of sediment excluded freshwater sediment criteria. Please include a discussion of the salinity regime and whether any freshwater or brackish wetlands occur between contaminant source areas and potential groundwater-receiving habitats of Ensenada Honda and what data were compared to freshwater NAWQC.
21. Pages 6-7 to 6-13, Sections 6.2 to 6.5. Please discuss whether chemicals not detected in a particular medium had elevated detection limits above human health or ecological screening criteria. Chemicals with detection limits above screening criteria should be identified as COPCs unless adequate justification is provided for why these chemicals with detection limits above screening criteria were not selected as COPCs.
22. Page 6-10, Section 6.3, Last Paragraph: The text currently states that selenium does not exceed ecological soil screening values at any location. Please revise the text to state that selenium exceeds the ecological soil screening values in sample 60SB04-01D.
23. Page 6-14, Section 6.6.2, Last Paragraph. The last sentence of this section states that the changes in the results due to the validation process are not expected to significantly compromise the data quality objectives for this SDG. However, based on the validation process, results for almost all VOCs in sample 60GW04 should be rejected due to the reaction of the sample with the hydrochloric acid in the VOA vial. The rejection of most VOC results in this sample may have a significant impact on the achievement of the objectives for this program and should be highlighted in this section.
24. Page 7-1, Section 7.2. This section states that "the Full RFI should include further investigation of PAHs and metals in the surface and subsurface soil, sediment, and groundwater, define the likely source area(s), and determine the potential for unacceptable risks to human health and/or the environment." This recommendation should be amended after the COPEC screening has been revised using the appropriate Eco-SSLs and identifying any additional surface soil, sediment and/or groundwater COPECs for which detection limits of NDs exceed screening benchmarks.
25. Appendix A, Field Log Book Notes
 - a. Page 21 of the January 15, 2009 field notes by Michael Cromley states that field technician went to SWMU 60 to develop a temporary well and the well was not in the correct boring hole. Please clarify what this means and if it is referring to the temporary well at 60SB02.

- b. Page 32 of the January 18, 2009 field notes by Michael Cromley states that at 11:45, all but two 1-liter ambers were filled at the temporary well at 60SB02. Please clarify why all other bottles were filled but these two 1-liter amber bottles. These amber bottles are used to sample organic parameters (either SVOCs or pesticides) and should have been collected prior to the bottles for metals analyses.
- c. Last page of the January 15, 2009 field notes by Darrin Hupe states that the groundwater sample from 60GW04 reacted to the hydrochloric acid in the VOA vials. Based on this statement, this sample should have been recollected for VOCs and GRO without HCl. That fact that a reaction occurred with the acid makes these results invalid due to the potential volatilization that occurred during this reaction. It is noted that there were air bubbles in the field duplicate sample at this location that caused results to be rejected. However, based on the field logbook, all VOC and GRO results should be rejected at this location.

26. Appendix D:

- a. Please revise the data tables to eliminate the reporting of a value with rejected results (e.g., 4.2 R). These results are rejected and are therefore not usable for meeting project objectives. The value reported with the "R" qualifier is misleading and should be eliminated. Only the "R" qualifier should be reported.
- b. As discussed in Page-Specific Comment 11, please revise all data tables to report nondetect results down to the reporting limit instead of the MDL.

27. Appendix E:

- a. The text discusses how the data validation guidelines were modified for blank contamination actions because the lab reported results down to the MDL instead of the reporting limit. The validation modification used causes positive results between the MDL and the reporting limit to be qualified as nondetect at the reported concentration. This is in direct conflict with the Region 2 validation guidelines, which require that positive results between the MDL and reporting limit be qualified as nondetect at the reporting limit when affected by blank contamination. The methodology used in this report causes the blank-qualified nondetect results to have lower reporting limits, which are not technically accurate. Region 2 guidelines for blank qualification must be followed and there is no technical justification to modify these guidelines. This affects VOC, SVOC, and metals sections in all data validation reports as well as associated data tables. Please revise accordingly.
 - b. SDG NAPR44002-1: Based on the field log book notes, all nondetect VOC and GRO results for sample 60GW04 should be rejected and all positive VOC and GRO results in this sample should be qualified as estimated due to the reaction of the sample with HCl. Revise the validation report and associated data tables accordingly.
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- c. SDG NAPR44077-3, page 6: The low recovery of phenol-d5 in sample JAN09-FB02 should not cause qualification of all SVOC results, as was performed. As per the Region 2 data validation guidelines, the low recovery affects the results for the acid compounds only. Please revise the data validation memo and any associated tables accordingly.
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**TECHNICAL REVIEW OF THE
DRAFT PHASE I RCRA FACILITY INVESTIGATION REPORT
SWMU 70 – DISPOSAL AREA NORTHWEST OF LANDFILL
DATED MAY 26, 2009**

The following comments were generated based on review of the *Draft Phase I RCRA Facility Investigation Report: SWMU 70 – Disposal Area Northwest of Landfill* (Draft Phase I RFI Report), Naval Activity Puerto Rico (NAPR), Ceiba, Puerto Rico.

GENERAL COMMENT

1. The Draft Phase I RFI Report recommends a full RCRA Facility Investigation (RFI) focused around Phase I RFI sample locations in the northern portion of the SWMU (70SB01, 70SB02, 70SB04, and 70SB05) and around sample location 70SB07 in the southern portion of the SWMU. Based on a review of the data provided, it is unclear why sample locations 70SB01, 70SB02, 70SB04, 70SB05, and 70SB07 were selected and why other sample locations were not included. While sample location 70SB07 is recommended as a focus area to the south, the origin of elevated contaminant levels in open water sediments remains unclear. As a result, it is strongly recommended that all detected concentrations in estuarine sediments and groundwater be considered in conjunction with open water sediment concentrations to determine if SWMU 70 is a potential source. Background concentrations should not be considered in this analysis. Based on the results, the scope of further investigations in this area should be redefined, including consideration of the need for additional sampling locations. Revise the Draft Phase I RFI Report to address this issue.

SPECIFIC COMMENT

1. **Section 7.1, Conclusions, Page 7-1:** Section 7.1 indicates cobalt concentrations in upgradient media are less than background concentrations and therefore, are not contributing to cobalt concentrations detected in open water sediments. However, the relationship between open water sediment concentrations and upgradient media concentrations has not been adequately addressed in the Draft Phase I RFI Report as upgradient concentrations below background levels have been eliminated from considerations. The relationship should be analyzed without consideration of background concentrations to determine if upgradient contaminants could be migrating to open water sediments. This information is relevant for establishing the nature and extent of contamination at SWMU 70. Once the potential for migration is determined, background concentrations should be considered in determining if detected concentration levels pose a risk or hazard to human health and the environment. Revise Section 7.1 to discuss the relationship between detected cobalt concentrations in open water sediments and upgradient media without consideration of background concentrations.

ENCL. #4



COMMONWEALTH OF PUERTO RICO
OFFICE OF THE GOVERNOR
ENVIRONMENTAL QUALITY BOARD

Land Pollution Control Area

July 6, 2009

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

**RE: REVIEW DRAFT PHASE I RCRA FACILITY INVESTIGATION (RFI)
REPORT SWMU 70 – DISPOSAL AREA NORTHWEST OF LANDFILL
NAVAL ACTIVITY PUERTO RICO (NAPR)
CEIBA, PR PR2170027203**

Dear Mr. Gordon:

The Hazardous Wastes Permits Division has finished the review of the above-mentioned document. This report presents the results of the field investigation conducted in January 2009 following the approved Phase I RCRA Facility Investigation Work Plan for SWMU 70. Its principal objective is to determine whether contaminants are present from past disposal activities at SWMU 70.

This activity was scheduled as a commitment for the Third Quarter at the FY-08 RCRA Work Plan negotiated between the USEPA and EQB. Only one activity was scheduled for this quarter for this site, hence, it is being submitted as additional work.

The following bullets are some minor corrections that should be appointed:

- At page 2-3, the first paragraph stated that the subsurface soil that was obtained from 16E-01 and 16E-02 were collected to a depth of 15 feet bgs and 5 feet bgs, respectively. Then, the next sentence indicated that groundwater at both locations was encountered at 5 feet bgs. Please clarify if there is a typographical error.
- Deviations from the approved work plan were clearly enumerated and justified at the report.
- The first bullet on page 6-6 appears to have a typographical error, please check if there should be a “to” after the NOEL acronym.

Although, EQB concurred with the conclusions and recommendations of the report, the NAVY should address the above-mentioned comments regarding the content of the document before submitting for revision a Full RFI Work Plan for SWMU 70.

Mr. Tim Gordon
SWMU 70
Page 2

If you have any additional comment or question please feel free to contact Gloria M. Toro Agrait of my staff at (787) 767-8181 extension 3586.

Cordially,



María V. Rodríguez Muñoz
Manager
Land Pollution Control Program

cc: Ariel Iglesias Portalatín
Wilmarie Rivera, Federal Facilities Coordinator
