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October 14, 2010

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 N62470-10-D-3000
IQC for A/E Services for Multi-Media
Environmental Compliance Engineering Support
Delivery Order (DO) JM01
U.S. Naval Activity Puerto Rico (NAPR)
EPA I.D. No. PR2170027203
Final Full RCRA Facility Investigation Work Plan 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 and one electronic copy provided on CD of the Final Full RCRA Facility Investigation Work Plan for SWMU 78. This report is being submitted in accordance with EPA comments dated June 16, 2010. The Navy responses to these comments are attached for your review. Additional distribution has been made as indicated below.

If you have questions regarding this submittal, please contact Mr. Mark Davidson at (843) 743-2124.

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)
Ms. Gloria Toro, PREQB (1 hard copy and 1 CD)
Ms. Wilmarie Rivera, PREQB (1 CD)
Ms. Bonnie Capito, NAVFAC Atlantic – Code EV42 (1 hard copy)
Mr. Felix Lopez, US F&WS (1CD)
Mr. Brenda Smith, TechLaw, Inc. (1 CD)

**NAVY RESPONSES TO EPA COMMENT LETTER DATED JUNE 16, 2010
DRAFT FULL RCRA FACILITY INVESTIGATION WORK PLAN
SWMU 78 (POLE YARD) DATED APRIL 29, 2010
OCTOBER 14, 2008**

EPA COMMENTS

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

General Navy Response: The main objective of this Full RFI Work Plan is to delineate contaminants detected in the Phase I RFI and to define the likely source areas of contamination. Therefore, the objectives of the Draft Full RFI in Section 1.3 will be edited to delete the second and fourth bullets. The second bullet states that the Full RFI will further evaluate the potential for human health and ecological risks. The fourth bullet states that during the Full RFI a statistical background analysis will be conducted for inorganic chemicals exceeding one or more of the screening values (human health or ecological) that will be included as part of the human health and ecological risk assessment (ERA) conducted for the Full RFI. Figure 4-1 – Statistical Analysis Process will be deleted and Section 4.6.3 Background Screening Values will be edited since statistical analysis will not be conducted during the Full RFI. Further evaluation of the potential for human health and ecological risks as well as a statistical background analysis for inorganic chemicals exceeding one or more of the human health or ecological screening values will be conducted as part of the Corrective Measures Study (CMS) investigation. All text in subsequent sections referencing conducting a human health/ecological risk assessment or statistical background analysis during this Full RFI will be deleted from the Work Plan. However, Preliminary Conceptual Models are provided for human health and ecological receptors. The human health and ecological screening values that are discussed within the Work Plan will be used as a tool to determine if a release has occurred, and to delineate and define the extent of contamination after the proposed sampling program is completed.

GENERAL COMMENTS

1. The Work Plan is lacking several elements required by EPA Requirements of Quality Assurance Project Plans (QA/R-5), dated March 2001. For example:

- Laboratory specific information (e.g., laboratory specific standard operating procedures, reporting limits, quality control (QC) limits, analytical equipment maintenance, and calibration) has not been provided.*
- Quality control acceptance criteria have not been provided.*
- There is no discussion on how data will be verified or validated.*
- There is no discussion of how precision, accuracy, representativeness, comparability and completeness and sensitivity (PARCCS) measures will be incorporated into a usability report or if an evaluation of significant trends and biases will be included as part of a data quality assessment.*
- Examples of all forms and checklists to be used have not been provided (e.g., chain-of-custody forms, sample labels, audit checklists, data validation checklists).*

- *There is no discussion of corrective action procedures.*

Revise the Work Plan to provide the level of detail as discussed in QA/R-5.

Navy Response: The Navy plans to implement this investigation at NAPR in accordance with the EPA approved Master Project Management Plan (PMP), Master Data Collection Quality Assurance Plan (DCQAP), Data Management Plan (DMP), and Master Health and Safety Plan (HASP) for NAPR (Baker, 1995. Final RCRA Facility Investigation Management Plans, Naval Station Roosevelt Roads, Ceiba, Puerto Rico. September 14, 1995. Coraopolis, Pennsylvania.) The EPA approved the work plan on September 25, 1995. These Master Plans define acceptable data requirements and error levels associated with the field and analytical portions of this investigation. Therefore, to maintain consistency with past Navy work under the Consent Agreement, this work plan has been revised using the Navy’s EPA approved Master Plans for this facility.

In response to previous comments by the EPA on Phase I RFI Work Plans for SWMUs 62 and 71 (see the April 17, 2008 letter from Baker on behalf of the Navy to the EPA); the Navy provided an evaluation of the Master Project Plans (Baker, September 14, 1995) in relation to the QA/R-5 requirements (“EPA Requirements for Quality Assurance Project Plans.” EPA/240/B-01/003. [EPA, March 2001]). Table 1 of the April 17, 2008 letter provides a map between the DCQAP sections, the work plan content and the sections required by QA/R-5 and illustrates that although there are format and minor content differences, the DCQAP is generally consistent with and includes all of the main elements required by QA/R-5. For example, data validation is discussed in Section 10 of the DCQAP; PARCCS measures are discussed in Section 4 of the DCQAP; and forms and checklists are provided in the tables and appendices of the DCQAPP. Some additional examples of forms and checklists that may be found in the DCQAP are shown in the following table:

Item	Location in the DCQAP
System Audit Checklist	Table 12-1
Test Boring Record	Appendix B – SOP F101 – Borehole and Sample Logging
Typical Monitoring Well Construction Details and Test Boring and Well Construction Records	Appendix B – SOP F103 – Monitoring Well Installation
Chain of Custody Form	Appendix B – SOP F302 – Chain of Custody
Sample Label	Appendix B – SOP F302 – Chain of Custody
Data Validation Checklists	Appendix D – Data Validation Methodologies

There are a number of new forms that are primarily associated with groundwater sampling. These include the Well Detail and Sampling Log, the Low Flow Purge Data Sheet and the Daily Meter Calibration Record. Although groundwater is not expected to be encountered at SWMU 78, the contingency for installation and sampling of groundwater monitoring wells is included in the Work Plan. Consequently, the new groundwater sampling and equipment calibration forms will be included as an appendix to the Full RFI Work Plan for SWMU 78.

The analytical methods, analyte lists, detection limits, etc. may have changed to some degree since publication of the DCQAP. Consequently, the Full RFI Work Plans contain the following tables specifying the sampling and analytical program requirements so that data of sufficient quality for future risk management decisions is collected:

- Table 3-1 Summary of Sampling and Analytical Program – Environmental Samples
- Table 3-2 Summary of Sampling and Analytical Program – QA/QC Samples
- Table 3-3 Method Performance Limits

The information provided in these tables has been reviewed against screening levels and have been determined to generally meet these levels. Table 3-3 has been revised to include preparation methods. Ecological screening values are presented on Tables 4-1 and 4-2, In addition, a table with Human Health Screening Values (Table 4-3) and NAPR Background Screening Values (Table 4-4) were added for easy comparison to the analytical method detection limits. These quantitation limits have also been reviewed by the analytical laboratory to ensure that they can be met. In all cases, the quantitation limits are the lowest achievable by the laboratory for the specified analytical method. These tables are then provided to the analytical laboratory subcontractor as part of their scope of work so that the laboratory is clearly aware of the analytical requirements of the project. Additionally, only laboratories capable of providing an acceptable Laboratory Quality Manual (LQM) will be selected for this project. The LQM will be provided to USEPA after selection of the analytical laboratory.

This evaluation (presented in the April 17, 2008 letter), which was approved by EPA on May 13, 2008, indicated that the Phase I RFI Work Plan structure, with reference to the 1995 Master Project Plans and inclusion of project-specific tables summarizing the sampling and analysis program for environmental and QA/QC samples and method performance limits, and other factors as discussed in the April 17, 2008 letter, when taken together provide the information and guidance necessary for the project team to generate good quality data and to use that data for developing risk management based recommendations and decisions. The structure of the Full RFI Work Plans for SWMUs 62, 71 and 78 is identical to the Phase I RFI structure and therefore meets the QA/R-5 QAPP requirements.

2. The data quality objectives (DQOs) presented in the Work Plan is insufficiently detailed. For example, decision rules and boundaries of the study have not been defined. The seven-step DQO process described in EPA's Guidance on Systematic Planning Using the Data Quality Objectives Process (QA/G-4), dated February 2006, should be provided. Revise the Work Plan to provide more detailed DQOs.

Navy Response: Although the seven-step DQO process was not applied rigorously, elements essential to the process (with the exception of a statistically determining the number of samples) have been considered in the development of the sampling design. Because the investigation is designed to determine the extent of impacts that have occurred to soil and groundwater at the site, the sample locations have been selected to reflect the most likely impacted areas based on site history and professional judgment. All samples are grab samples with locations biased towards meeting the project objective of determining the extent of contamination. Detailed sampling rationale, including the number and location of samples from each media, specific rationale for each sample, sampling procedures and associated laboratory analyses is provided in Section 3.1 for soil media and Sections 3.2 and 3.3 for groundwater.

Project decision conditions include comparing analytical data to human health-, ecological-, and background-based screening values. Exceedances of human health and/or ecological screening values and background screening values will result in a recommendation that the site move to a Corrective Measures Study (CMS) with an initial step being preparation of a CMS Work Plan. A HHRA and ERA will be conducted as part of the CMS. Although human health and ecological

risk assessments will not be conducted during the Full RFI, the Full RFI Work Plan was developed with input from our human health and ecological risk assessors to assure that the investigation will provide the data that is needed for future risk management decisions. The human health and ecological risk assessors review the sampling (number, frequency, location and collection methods) and analytical programs (analytical methods, parameter lists, detection limits) and compare applicable screening values to method performance limits to maximize the usability of the resultant data. The decision criteria for this project (comparison of environmental media analytical results to screening criteria), is discussed extensively in Sections 4.6.1, 4.6.2 and 4.6.3 of the Full RFI Work Plan. Additional data quality criteria are provided in Section 4.1.1.2 (data quality levels) and Section 14.3 (data completeness and other criteria) of the approved final DCQAP. Based on the above, no revisions to the text of the Full RFI Work Plan for SWMU 78 are required.

3. It is unclear why samples will not be analyzed for polychlorinated biphenyls (PCBs). Section 1.2 states that constituents associated with transformer dielectric fluid, including total recoverable petroleum hydrocarbons and PCBs were thought likely to be the potential chemicals of concern. Additionally, Section 2.2.3 stated that nine of the 110 transformers contained detectable levels of PCBs ranging from 1.5 mg/kg to 17 mg/kg. Revise the Work Plan to include analysis of PCBs. In the alternative, provide the rationale for excluding this analytical group.

Navy Response: The transformers present on the concrete pad at SWMU 78 were sampled and analyzed for PCBs during an investigation conducted from July 14 through July 16, 2009. The analytical results indicated that nine of the 110 transformers sampled contained detectable levels of PCBs in the oil ranging from 1.5 mg/kg to 17 mg/kg. According to the Toxic Substances Control Act (TSCA) and the PCB regulations found in 40 Code of Federal Regulations (CFR) 761 a *Non-PCB Transformer* is identified as any transformer that contains less than 50 parts per million PCB. Thus, none of the transformers on the concrete pad at SWMU 78 are considered to be PCB transformers since they either had no PCBs detected or PCB levels below the TSCA criteria. In addition, PCBs were not detected during the sampling conducted as part of the Phase I RFI as discussed in the Response to Specific Comment #1.

The text on Page 1-2 at the end of Section 1.2 will be edited to state that PAHs, metals and TPH DRO are likely to be the chemicals of potential concern based on previous investigations. The previous statement that said “constituents associated with transformer dielectric fluid, including total recoverable petroleum hydrocarbons and PCBs were thought likely to be the potential chemicals of concern” will be deleted.

4. The proposed sample locations and analyses do not sufficiently delineate possible contamination at SWMU 78. For example:

- No samples are proposed around sample 78SB01 even though concentrations of Polycyclic Aromatic Hydrocarbons (PAHs), TPH DRO, and certain metals were above action levels in the surface samples and concentrations of Total Petroleum Hydrocarbons Diesel Range Organics (TPH DRO) and certain metals were above action levels in the subsurface samples. Sample 78SB01 is also near the area of suspected release. Revise the Work Plan to include additional surface and subsurface sample locations near 78SB01 for PAH, TPH DRO, and metals analysis. No samples are proposed around sample 78SB05 even though certain metals were above action levels in the surface and subsurface samples. Revise the Work Plan to include additional surface and subsurface sample locations near 78SB05 to be analyzed for metals.*

Navy Response: The Navy disagrees with this comment. Seven sample locations are proposed in the immediate vicinity of sample 78SB01 to further delineate site contamination. Samples

78SB02 through 78SB04 and 78SB06 as well as 78SB07 were collected during the Phase I RFI surrounding Phase I RFI location 78SB01 at a distance of 10 to 15 feet from 78SB01. Full RFI borings 78SB17, 78SB18, 78SB19, 78SB21, 78SB22, 78SB46 and 78SB47 are proposed in the immediate vicinity of the northeast corner of the concrete pad and Phase I sample locations 78SB01 through 78SB04 and 78SB06 (generally within 20 feet of 78SB01, with the exception of 78SB18 and 78SB19) to further delineate the previously detected PAHs, DRO and/or metals. Both surface and subsurface soil samples will be collected from the proposed Full RFI boring locations.

No further sampling is proposed around 78SB05. There were no organic or inorganic constituents that were detected above human health and/or ecological screening criteria and Base background. Because there were no detections above background at location 78SB05 and there are no other visible signs of contamination, the Navy feels that additional samples immediately west of 78SB05 are not necessary for further characterization at the SWMU. Proposed sample 78SB25, from which both surface and subsurface soil samples will be collected and analyzed for Appendix IX low level PAHs and metals, is located approximately 80 feet west-northwest of sample 78SB05.

• It is unclear why metals analysis is not proposed at all locations for all surface and subsurface samples when one or more metals were above one or more action levels for all samples analyzed during Phase I.

Navy Response: Appendix IX metals analysis are proposed for all surface soil and subsurface soil samples to be collected as part of the Full FRI, as shown on Table 3-1

Revise the Work Plan to collect surface and subsurface samples at all sample locations and include analysis of metals for all samples.

Navy Response: Appendix IX metals are proposed for analysis at all surface and subsurface soil samples that are proposed for analysis as part of the Full RFI. The sampling program is designed to address site contamination as identified in the Phase I RFI. The Navy does not feel that all sample locations require further analysis of both surface soil and subsurface soil based on analytical results from the Phase I RFI Report, since many samples from the Phase I RFI did not result in detections that were greater than screening values.

5. There appears to be a discrepancy in the number of groundwater samples proposed between Figure 3-1 and Section 3.1. According to Section 3.1, page 3-3, if groundwater is encountered then up to three permanent monitoring wells will be installed and a groundwater sample will be collected from each well. However, Figure 3-1 shows 17 locations as being proposed for surface, subsurface soil, and groundwater sampling. Revise the Work Plan to clarify the number of groundwater samples to be collected.

Navy Response: It is proposed that up to three groundwater wells will be installed if groundwater is encountered and a groundwater sample will be collected from each well. Figure 3-1 shows 17 possible groundwater sampling locations. Until the soil borings are advanced, it is not know if groundwater will be encountered and if it is from which soil borings. Since any of the 17 proposed sample borings may have a permanent monitoring well installed and groundwater sample collected, all tentative locations are shown on Figure 3-1. The Navy is proposing the installation of only three permanent monitoring wells, even if groundwater is encountered in all 17 soil boring locations. The preferred well placement is one well upgradient of the concrete pad (north) and two wells downgradient of the pad with wells placed in a

triangular configuration to assist in quantifying groundwater flow patterns. The text in Section 3.2 will be edited to further clarify these details of the monitoring well installation and groundwater sampling and analysis program.

6. *Although discussed in Section 4.6 of the Work Plan, human health screening values (i.e., Regional Screening Levels (RSLs), federal drinking water maximum contaminant limits (MCLs)) and background screening values have not been presented in the Work Plan. Only ecological screening levels were presented. Verification that the laboratory reporting limits will be able to meet screening level values cannot be performed without a presentation of all of the screening values to be used. Additionally, ecological screening levels have not been provided for Total Petroleum Hydrocarbons (TPH). Revise the Work Plan to provide all screening criteria to allow for comparison to analytical results.*

Navy Response: The human health screening values (Regional Screening Levels and MCLs) will be provided in the work plan as a new table (i.e., Table 4-3). With regard to ecological screening values for TPH, none are available from the literature. Table 4-1 will be revised to include TPH and show that no screening value/toxicological benchmark is available from the literature.

7. *It is unclear if the background screening values are calculated from results that include areas of contamination. In order to represent true background, on-site concentrations that are statistically elevated (e.g., due to contamination) should be removed from the background calculations. Revise the Work Plan to clarify if contaminated areas are included in the calculation of background screening levels.*

Navy Response: The Navy offers the following points of clarification relative to this comment. As discussed in the Navy's general response to EPA comments, Full RFI analytical data will not be statistically compared to background soil and groundwater data sets (background data sets for surface soil, subsurface soil, and groundwater are presented within the [Revised Final II Summary Report for Environmental Background Concentrations of Inorganic Compounds, Naval Activity Puerto Rico, Ceiba, Puerto Rico](#) [Baker, 2010]). Instead, the Full RFI analytical data will be compared to upper limit of the mean (ULM) background concentrations derived from the background data sets presented within the above referenced document. The data sets presented within the background report ULM background concentrations, as well as the ecological and human health screening values discussed in Sections 4.6.1 and 4.6.2, respectively, will be compared to the Full RFI analytical data to determine if the proposed sampling effort delineated the extent of soil contamination detected during the Phase I RFI. It is noted that the background data sets presented within the Background Report have been approved by the EPA and are not populated with analytical data for samples collected from areas of contamination.

8. *The Work Plan references outdated SW-846 analytical methods (e.g., 6020, 6010B, 8270C, 8015B); newer versions of the methods (6010A, 6010C, 8270D, 8015C) are available. Revise the Work Plan to reference the most updated analytical methods.*

Navy Response: The Work Plan will be revised to reflect updated SW-846 analytical methods on Table 3-3.

9. *The Work Plan does not specify that exceedances of human health and/or ecological risk based screening criteria warrant the need for a Human Health Risk Assessment (HHRA) and/or Ecological Risk Assessment (ERA) if complete exposure pathways exist. Clarify that exceedances of risk-based screening criteria warrant a HHRA and/or ERA. In the alternative, provide the decision criteria that will be used to prompt a HHRA or ERA.*

Navy Response: As discussed in the Navy's general response to USEPA comments, Section 1.3 of the Draft Full RFI Work Plan has been revised to eliminate further evaluation of the potential for human health and ecological risk as a stated objective. The need for a HHRA and ERA was identified by the Phase I RFI, which concluded that impacts to the environment have occurred at SWMU 78 based on the presence of chemical concentrations in soil greater than human health/ecological screening values and background screening values. The proposed sampling program for the Full RFI will attempt to delineate the extent of contamination detected at the SWMU during the Phase I RFI by comparing analytical data to human health-, ecological-, and background-based screening values. Exceedances of human health and/or ecological screening values and background screening values will result in the site moving to a Corrective Measures Study (CMS) and preparation of a CMS Work Plan. A HHRA and ERA will be conducted as part of the CMS. The CMS work plan will present the specific methodology that will be employed for conducting the human health and ecological risk assessments. The first paragraph of Section 4.7 will be revised as follows:

Information from the physical and analytical results (nature and extent of contamination) will be synthesized into conclusions regarding site conditions. Recommendations will be made from these conclusions as to whether a Corrective Measures Study (CMS) is needed or the SWMU can proceed toward corrective action complete. If the conclusions from the Full RFI indicate exceedances of human health and/or ecological screening values and background screening values, then the Full RFI Report will recommend moving the SWMU to a Corrective Measures Study (CMS) with the preparation of a Draft CMS Work Plan. A HHRA and ERA will be conducted as part of the CMS and the CMS Work Plan will present the specific methodology that will be employed for conducting these assessments.

10. Consistent with EPA guidance and following agreements with the Navy, inorganics that exceed human health risk-based screening criteria cannot be eliminated from the quantification of risk and hazard regardless of background concentrations. Specifically, the EPA raised this issue in a comment letter dated January 23, 2009 on the Draft Final Correctives Measure Study for Solid Waste Management Unit (SWMU) 68. The Navy responses to the EPA comment letter, dated June 12, 2009, stated that chemicals detected above risk-based screening criteria will be retained as Chemicals of Potential Concern (COPCs) and assessed under total baseline conditions. The Navy's responses further stated that those chemicals at or below background levels (non-site related) will be discussed as part of the risk characterization and then exit the risk assessment process. This approach is consistent with U.S. Navy Human Health Risk Assessment Guidance (available at [http://www.nmcphc.med.navy.mil/downloads/ep/Chapters 201-12.pdt](http://www.nmcphc.med.navy.mil/downloads/ep/Chapters%201-12.pdt)). Note that this approach appears to be acceptable based EPA's approval letter dated August 6, 2009 on the Final Corrective Measure Study for SWMU 68 (Baker, 2009b).

Ensure that the Work Plan is revised so as to be consistent with these previous agreements to ensure consistency among all HHRAs performed at NAPR SWMUs and compliance with EPA-recommended risk assessment methodologies. HHRAs conducted for NAPR SWMUs should quantify risk and hazard for any and/or all inorganic compounds that exceed residential or industrial health-based screening criteria. Further, the uncertainty analysis, presented as part of the risk characterization, should include a refinement of risk. This refined risk evaluation should present a breakdown of the total risk as site-related risk and background risk. This will provide the basis for exiting such inorganic COPCs from the HHRA process (i.e., show that such inorganic COPCs should exit at the end of Tier 2, Baseline HHRA, and not continue to the Tier 3 process, risk assessment for selection of remedial alternatives).

With respect to ecological risk assessments, the Navy's approach is generally consistent with EPA guidance because inorganic compounds are not excluded based on background in Step 2 (Tier I) of the Navy's ERA process, and Step 3.a (Tier 2) does include a refinement of risk based on statistical background comparisons (much like the refinement of risk conducted as part of the HHRA uncertainty analysis).

Navy Response: The Navy offers the following points of clarification relative to this comment. As discussed in the Navy's general response to USEPA comments, as well as the Navy response to General Comment No. 7, the Full RFI analytical data will not be statistically compared to background analytical data as part of the Full RFI. Instead, Full RFI analytical data will be compared to the background-screening values (i.e., ULM background concentrations) presented within the Revised Final II Summary Report for Environmental Background Concentrations of Inorganic Compounds, Naval Activity Puerto Rico, Ceiba, Puerto Rico [Baker, 2010]), as well as human health and ecological screening values, to define the extent of contamination that was detected by the Phase I RFI. Exceedances of human health and/or ecological screening values and background screening values will result in the site moving to a Corrective Measures Study (CMS) with the preparation of a Draft CMS Work Plan; a HHRA and ERA will be conducted as part of the CMS as detailed in the CMS Work Plan

Inorganic concentrations below background levels will be eliminated from further consideration as site-related contaminants in the Full RFI. However, this does not eliminate them from the quantification of risk in the event an HHRA is warranted. Rather, in HHRA's conducted for NAPR all chemicals detected above risk-based screening criteria, regardless of whether those chemicals are at or below background, are retained as COPCs and evaluated quantitatively as part of the total baseline HHRA. In addition, a refinement of total site (where the term "site" refers to the SWMU under evaluation) risk addressing the contribution of background to risk (i.e., risks from those chemicals at or below background levels [non-site related]) would be included as part of the uncertainty analysis and risk characterization. Those chemicals whose SWMU-specific concentrations and associated risk/hazard are attributable to background would then exit the risk assessment process, which is consistent with *U.S. Navy Human Health Risk Assessment Guidance*.

11. The Work Plan doc does not discuss the potential biota at SWMU 78 that could be exposed to contaminants in soil or groundwater. Revise the Work Plan to specify that biota at or hydrologically downgradient from SWMU 78 will be discussed in the subsequent RFI Report.

Navy Response: The Work Plan will be revised to include two new subsections (Sections 2.1.1 and 2.1.2), which will provide a discussion of the habitats and biota that may occur at SWMU 78 and surrounding areas. As previous investigations have not documented the specific habitats and biota at SWMU 78, the discussion will rely primarily on literature-based information for Puerto Rico and NAPR. As part of the Full RFI field investigation, specific vegetation and biota (if any) observed at SWMU 78 will be documented.

12. The Work Plan does not summarize the approach and methodology to be used in any subsequent HHRA and/or ERA (should they be warranted). For completeness, the Work Plan should, at a minimum:

- *Provide a Conceptual Site Model (CSM) for human and ecological receptors (i.e., show sources, potentially complete exposure pathways; and receptors).*
- *Provide a brief discussion of exposure assumptions.*

- Clarify how COPCs will be identified.
- Summarize standard EPA and/or Navy risk assessment approaches (as appropriate).
- Reference risk assessment guidance documents.

Revise the Work Plan to include more details on how human health and ecological risk and hazards will be quantitatively evaluated, should it be warranted by the analytical data screening.

Navy Response: As discussed in previous Navy responses, the Full RFI will not include a HHRA and ERA. These evaluations will be presented as part of the CMS. Exceedances of human health and/or ecological screening values and background screening values will result in the site moving to a Corrective Measures Study (CMS) with the preparation of a Draft CMS Work Plan. Specific methodology that will be used to conduct the HHRA and ERA will be presented in the CMS Work Plan. As such, the Navy does not believe it is necessary to present this information within the Full RFI work Plan. However, to support the proposed Full RFI sampling program, preliminary conceptual models for human and ecological receptors have been developed and presented within a new subsection to Section 2.0 (i.e., Section 2.3). The preliminary conceptual models outline potential sources of contaminants, transport pathways, exposure media, potential exposure routes, and receptor groups.

13. Maximum Contaminant Levels (MCLs) will be used to screen groundwater data; however, MCLs are not solely risk-based. Groundwater exceedances of risk-based screening criteria warrant a HHRA unless land use controls (LUCs) and/or institutional controls (ICs) are in place at SWMU 78 to prevent consumption of groundwater (e.g., residential development). If a HHRA is warranted again, note that the identification of groundwater COPCs should be selected based on the Tap Water Regional Screening Level (RSL) and not the MCL.

Navy Response: MCLs will be used only as one of the screening tools in the Full RFI. As indicated in Section 4.6.2, USEPA Regional Tap Water SLs and inorganic background levels also will be used for groundwater screening in the Full RFI for SWMU 78. It is acknowledged in Section 4.6.2.2 that MCLs are not solely risk-based. Note that it is not the objective of the Full RFI to evaluate the potential for human health risks. Further evaluation of the potential for human health risks will be conducted as part of a CMS investigation. In HHRA's conducted for NAPR, only risk-based screening criteria are used in the COPC selection process. As such, MCLs are not used to identify groundwater COPCs. No revisions to the text of the Full RFI Work Plan for SWMU 78 are required.

14. The Work Plan indicates that "background screening values" will be used to evaluate analytical results relating to both human and ecological receptors. Note that for the purposes of risk assessment, inorganic compounds above risk-based criteria should not be eliminated on the basis of background, even though statistical comparisons to background may be included to better understand site-related contamination. With respect to the HHRA, all inorganic compounds above risk-based screening levels should be evaluated quantitatively in the HHRA. Then, as part of the uncertainty analysis, the Navy may present a refinement of the total risk and hazard by providing it breakdown of risks attributable to site-related, contamination and risks attributable to background levels. Regarding the ERA, ecological risks are evaluated much the same way (i.e., Step 2 of the Navy ecological risk assessment guidance does not eliminate inorganic compounds based on background but presents the calculation of hazard and the hazard

estimates for all identified COPCs, whereas Step 3a presents a refinement of hazard). Clarify these approaches in the Work Plan.

Navy Response: As discussed in the Navy's general response to EPA comments, Full RFI analytical data will not be statistically compared to the background data sets presented within the [Revised Final II Summary Report for Environmental Background Concentrations of Inorganic Compounds](#) (Baker, 2010). With regard to the use of background concentrations in HHRAs, please see the Navy response to EPA General Comment No. 10.

SPECIFIC COMMENTS

1. *Section 2.2.2, Phase I RFI, Page 2-2: This section does not discuss Phase I PCB results. The third bullet states that PCBs were included as part of the analysis for the Phase I RFI investigation. However, the results of PCB analysis were not discussed in the section. Revise the Work Plan to discuss the PCB results.*

Navy Response: The work plan will be revised to include a summary of the PCB sampling that was conducted in the Phase I RFI Report in Section 2.2.2. The text will state that there were sixteen surface soil samples collected as part of the Phase I RFI, all were analyzed for PCBs and only one PCB (Aroclor-1260) was detected in two of the samples at low concentrations, well below the screening criteria. The text will also state that twenty-nine subsurface soil samples were collected and analyzed for PCBs, there were no detections of PCBs in subsurface soil samples.

2. *Section 3.1, Soil Sampling and Analysis Program, 2nd paragraph, p. 3-1: This paragraph states that the soil samples will be analyzed for PAHs, TPH DRO and metals. PCBs, which were identified in nine of the 110 transformers stored on the concrete curbed pad at Solid Waste Management Unit (SWMU) 78 (see Section 2.2.3, p. 2-3), are excluded. PCBs should not be removed from the Phase II soil analysis program unless the soil data collected under the Phase I RFI show that PCBs are not a problem (note that Section 2.2.2 summarizes the Phase I RFI results, which included PCB analyses, but does not discuss the actual PCB data). Justify in Section 3.1 why PCBs are excluded from the analysis program.*

Navy Response: The transformers that were present on the concrete pad were sampled and analyzed for PCBs in July 2009. The analytical results indicated that nine of the 110 transformers sampled contained detectable levels of PCBs in the oil ranging from 1.5 mg/kg to 17 mg/kg. According to the Toxic Substances Control Act (TSCA) and the PCB regulations found in 40 Code of Federal Regulations (CFR) 761 a *Non-PCB Transformer* is defined as any transformer that contains less than 50 parts per million PCBs. None of the transformers sampled at SWMU 78 contained concentrations above the TSCA criteria. In addition, there were only two samples in which PCBs were detected in the surface or subsurface soil samples during the Phase I RFI (low detections of Aroclor-1260, that were well below any applicable screening criteria). PCBs will not be retained for analysis during the Full RFI since the soil data collected under the Phase I RFI and the transformer sampling showed that PCBs were not a problem.

3. *Section 3.2, Monitoring Well Installation Program, Page 3-4: There is discrepancy between the estimated depth to ground water (80 to 100 feet below ground surface (bgs)) and the proposed depth of these borings (apparently 8 to 12 feet bgs). If perched water is suspected, this should be discussed in the text. Otherwise, if groundwater data is needed, then the three well locations should be selected and drilled to a depth appropriate for encountering groundwater.*

Revise the Work Plan to discuss perched groundwater or to recommend three monitoring well locations that will be completed to a depth appropriate to encounter groundwater. Alternatively, explain why groundwater samples are not necessary.

Navy Response: Groundwater was not encountered in any of the soil borings installed during the Phase I RFI. SWMU 78 is located on a steep slope and Phase I RFI boring logs showed refusal at depths ranging from 6.75 to 12 ft bgs. It is not expected that groundwater will be encountered at this SWMU due to the site topography, however if a perched water bearing zone is encountered a monitoring well will be installed and a groundwater sample will be collected. The Navy cannot at this time determine which three soil borings have the possibility of having groundwater encountered; this will be determined during the field investigation.

4. Section 3.4, Quality Assurance/Quality Control Samples, Page 3-6: This section states the Final RCRA Facility Investigation Management Plans (Management Plans), dated 1995, will be used as guidance for the sampling and analysis plan. However, the Management Plans contain outdated information. For example, the quality control acceptance criteria limits are based on outdated or no longer existing SW-846 methods. Revise the Work Plan to provide updated analytical methods and QC acceptance criteria.

Navy Response: Updated SW-846 analytical methods will be provided in the Work Plan on Table 3-3. The QC acceptance criteria are part of the data validation process which will be performed as part of the Full RFI Investigation. The validator performs the validation in accordance with the most recent SW-846 methods used by the laboratory and the Region II Standard Operating Procedures for the validation of Organic and Inorganic data; this includes updated QC acceptance criteria.

5. Section 3.5.3, Investigation Derived Waste Management, Page 3-8: It is not clear if investigation derived waste (IDW) will be combined from multiple wells into one 55-gallon drums or if each well will have its own drum. It would not be possible to replace the soil cuttings into the boring from which they came if the soil cuttings are combined from multiple borings into one 55-gallon drum. Revise the Work Plan to clarify this information.

Navy Response: The soil cuttings associated with subsurface soil sampling will be placed back into the location where the cuttings were collected immediately after the subsurface soil samples are collected if a monitoring well is not going to be installed at that soil boring. If a monitoring well is going to be installed at a soil boring location, the soil cuttings associated with that soil boring will be stored temporarily in a 55-gallon drum. All the soil cuttings for soil borings that have monitoring wells installed will be placed in the same drum (there will not be one drum for each soil boring) and a composite sample will be collected and submitted for laboratory analysis. The text in Section 3.5.3 will be edited to clarify the IDW procedures.

6. Section 3.5.7, Chain-of-Custody, Page 3-9: This section states that chain-of-custody procedures will be followed. However, these procedures have not been provided in the Work Plan. Revise this section to provide the chain-of-custody procedures to be followed.

Navy Response: The Navy plans to implement this investigation at NAPR in accordance with the EPA approved Master Project Management Plan (PMP), Master Data Collection Quality Assurance Plan (DCQAP), Data Management Plan (DMP), and Master Health and Safety Plan (HASP) for NAPR (Baker, 1995. [Final RCRA Facility Investigation Management Plans, Naval Station Roosevelt Roads, Ceiba, Puerto Rico](#), September 14, 1995. Coraopolis, Pennsylvania.) The EPA approved the Work Plan on September 29, 1995. The procedures for the chain-of-

custody forms are in the PMP; a reference to this document will be added to the chain-of custody text in Section 3.5.7.

7. *Section 4.0, Reporting, Pages 4-1 through 4-7: This section does not indicate that data usability or data assessment report will be included in the final report. Revise this section to include a data usability or data assessment report and describe what will be included in this report.*

Navy Response: All data from the laboratory will be certified by a Puerto Rican Chemist and laboratory data will be validated to ensure data usability. Only usable data will be included in the evaluation and the conclusions and recommendations sections of the report. Data validation reports will be included as an appendix to the Full RFI report and will discuss:

- Overall Evaluation of the Data
- Potential Usability Issues
- Data Completeness
- Technical Holding Times
- Initial and Continuing Calibrations
- Method and QC Blanks
- Laboratory Control Samples
- Matrix Spikes
- Quantitation and Data Qualifications

8. *Section 4.7, Conclusions and Recommendations, Page 4-7: This section states that information from the physical and analytical results will be synthesized into conclusions regarding site conditions. However, this section does not describe how data usability will impact the conclusions and recommendations. Revise the section to address this issue.*

Navy Response: All analytical laboratory data will be validated to ensure data usability. In the data validation narrative, the usability of the data is discussed for each Sample Delivery Group that is received from the laboratory.

9. *Section 4.7, Conclusions and Recommendations, Page 4-7: This section states that data obtained during the field effort will be incorporated into the web based Geographic Information System (GIS) currently residing on the NAPR project team web site. However, it is unclear if the database is compared to the hard copy data to ensure its accuracy. Also, it is unclear if validation qualifiers will be entered into the database to ensure qualifications are considered when using the database (i.e., especially if data are rejected during validation). Revise the Work Plan to discuss how the accuracy of the database is ensured and to clarify if the validation qualifiers are entered in the database.*

Navy Response: The text in Section 4.7 will be revised to clarify that validated data with the validation qualifiers are checked against the hard copies of the validation reports before the database is uploaded to the NAPR website.

10. *Section 6.1, Project Team Responsibilities, Page 6-1: This section does not provide the responsibilities of all the project team members (e.g., laboratory chemist, data validator, etc.). Revise the Section to provide a list of all the members of the project as well as their responsibilities.*

Navy Response: The project team personnel primarily responsible for the project are listed in Section 6.1. The Work Plan was prepared with the understanding that an as yet undetermined third party would be responsible for implementation of the activities; i.e. the analytical laboratory, laboratory chemist and validator. Since these are variable depending on the bidding process, the Navy disagrees with adding this information into the work plan since it is undetermined until the project bidding is completed.

11. Table 3-3, Method Performance Limit: This table contains analytes that have reporting limits (RL) above ecological screening levels, but have not been shaded as indicated in the key (e.g., benzo(a)anthracene, copper, and nickel). Additionally, it is not specified how results below the reporting limit for samples with screening levels below the RL will be qualified. Finally, it is unclear if the laboratory chosen will be able to meet the reporting limits presented in the table. Revise the Work Plan to present the laboratory specific reporting limits, indicate which analytes have screening levels below the reporting limit and clarify how results will be qualified if below the reporting limit.

Navy Response: Table 3-3 will be revised to remove the note that ecological screening numbers that are above reporting limits are shaded. The Navy is aware that some of the reporting limits exceed the ecological groundwater screening levels. The analytical laboratory chosen for analyzing data provide the lowest reporting limits possible. It is noted that the Era, conducted as part of the CMS, will quantify risks for non-detected chemicals. Non-detected chemicals with maximum reporting limits greater than ecological screening values will be identified as ecological chemicals of potential concern (COPCs) in Step 2 of the screening-level ERA (SERA) and undergo additional evaluation in Step 3a of the baseline ecological risk assessment (BERA).

12. Table 4.1, Ecological Soil Screening Values: The notes and the "table references" include more acronyms and references than are actually detailed in Table 4.1. Revisit and simplify this table accordingly.

Navy Response: Table 4-1 will be revised to delete unnecessary acronyms and table references.

13. Table 4.2, Ecological Groundwater Screening Values: Table 4.2 provides ecological "groundwater" screening values, which represent conservative surface water screening benchmarks. The work plan should be revised to clarify how these values will be applied to screen the groundwater analytical data, considering that (a) groundwater at SWMU 78 is expected to be >100 ft deep (see Section 2.1, p. 2-1), and (b) the closest aquatic habitat is the bay (located about 2,000 ft south west of SWMU 78 (see Figure 1-2)). Provide clarifications accordingly.

Navy Response: The Navy offers the following points of clarification relative to this comment. As discussed in the Navy response to EPA General Comment No. 12, a preliminary conceptual model for ecological receptors will be included within the Full RFI Report. Based on the findings of the Phase I RFI, leaching of chemicals from surface soil and/or subsurface soil by infiltrating precipitation and transport with groundwater to Ensenada Honda surface water and sediment is considered a potentially complete, but insignificant transport pathway. As discussed in Section 2.2.2 of the Draft Full RFI Work Plan, groundwater was not encountered at SWMU 78 during the advancement of soil borings conducted as part of the Phase I RFI field investigation. Furthermore, the depth to the water table at this SWMU is estimated to be from 80 to 100 feet based on previous investigations at the adjacent Tow Way Fuel Farm (SWMU 78) (Baker, 2001). With the exception of cobalt and barium, chemicals were not detected in subsurface soil samples collected within the 1.0-foot to 11.0-foot depth interval at concentrations greater than the

ecological-based soil screening value and upper limit of the mean (ULM) background concentrations (cobalt was detected in seven Phase I RFI subsurface soil samples at concentrations greater than the soil screening value and ULM background subsurface soil concentration of 13 mg/kg and 26.9 mg/kg, respectively [27 mg/kg in 78SB03-02, 35 mg/kg in 78SB06-01, 33 mg/kg in 78SB09-01, 30 mg/kg in 78SB09-03, 34 mg/kg in 78SB10-01, 29J mg/kg in 78SB11-03D, and 32 mg/kg in 78SB11-05], while barium was detected in one Phase I RFI subsurface soil sample at a concentration greater than the ecological-based soil screening value and ULM background subsurface soil concentration of 330 mg/kg and 220 mg/kg, respectively [450 mg/kg in 78SB10-02]). These data indicate that vertical migration of chemicals with infiltrating precipitation is minimal and not likely reaching the water table. As such, the preliminary conceptual model depicts this exposure pathway as potentially complete but insignificant.

Groundwater screening values were presented within the Draft Full RFI Work Plan as groundwater samples will be collected if groundwater is encountered during the advancement of boring conducted as part of the Full RFI field investigation.

PREQB COMMENTS DATED JUNE 11, 2010

I. PAGE-SPECIFIC COMMENTS

1. Page 3-1, Section 3.1.

- a. *The last sentence of the first paragraph states "...Groundwater samples (up to three samples) will be collected if a saturated zone is encountered during soil boring advancement..." However, Figure 3-1 shows that a significant number of groundwater samples are proposed. Please clarify.*

Navy Response: See Navy response to USEPA General Comment Number 5.

- b. *Please include a discussion of groundwater flow direction and indicate this information on Figure 3-1.*

Navy Response: Since groundwater was not encountered during the Phase I RFI and monitoring wells were not installed, information is not available to provide a discussion on groundwater flow. If groundwater is encountered during the Full RFI and monitoring wells are installed, a map showing groundwater flow direction will be included in the Full RFI Report.

- c. *Please consider the inclusion of soil borings to the west of 78SB05 to allow for the collection of surface and subsurface soil samples based on the presence of metals at concentrations that exceed one or more of the screening values (as presented in the data tables included as Appendix B).*

Navy Response: The EPA approved Phase I RFI report did not recommend further sampling around 78SB05. The Navy feels that additional samples west of 78SB05 are not necessary for further characterization at the SWMU.

2. **Page 3-3, Section 3.1, Paragraph 3.** *The text states that surface and subsurface soil samples may be analyzed for TPH GRO. However, none of the subsequent sections on sample rationale or the subsequent sample summary table (Table 3-1) shows TPH GRO as a potential analysis. Please clarify if TPH GRO is planned for at any sample locations and update the Work Plan accordingly. This also will affect Tables 3-1 and 3-2.*

Navy Response: TPH GRO is not planned to be sampled in surface and/or subsurface soil as part of this Full RFI. The text on page 3-3 will be edited to delete the reference to analysis of TPH GRO. Tables 3-1 and 3-2 will be edited to delete reference to TPH GRO collection.

3. *Page 3-5, Section 3.3, Paragraph 1.* The text states that groundwater samples will be analyzed for TPH GRO. However, the subsequent sample summary table (Table 3-1) does not show TPH GRO as a potential analysis. Please clarify if TPH GRO is planned for at any sample locations and update the Work Plan accordingly. This also will affect Tables 3-1 and 3-2.

Navy Response: TPH GRO is not planned to be sampled in groundwater as part of this Full RFI. The text in Section 3.3 will be edited to delete the reference to analysis of TPH GRO. Tables 3-1 and 3-2 will be edited to delete reference to TPH GRO collection.

4. *Page 3-6, Section 3.4.1, Paragraph 1.* If it is determined that TPH GRO will not be included as part of the analyte list associated with ground water sampling (if ground water is encountered), please remove the references to submittal of trip blanks from the text and Table 3-2.

Navy Response: TPH GRO will not be included as part of the analyte list. The text in Section 3.4.1 will be edited to reflect that there will be no trip blanks required for this Full RFI and Table 3-2 will be edited to reflect that Trip Blanks and TPH GRO are not going to be analyzed.

5. *Page 3-7, Section 3.4.2 and Table 3-2.* The text states that polyethylene tubing will be used during the collection of groundwater samples. However, as per the Region 2 low flow groundwater sampling SOP included in Appendix C of this Work Plan, Teflon or Teflon-lined polyethylene tubing must be used to collect groundwater samples for organic analyses. Polyethylene tubing would be appropriate for inorganic analyses only. Since organic analyses are planned for at each groundwater monitoring well, please use Teflon or Teflon-lined polyethylene tubing.

Navy Response: The text in Section 3.4.2 on Page 3-7 will be edited to state that the equipment rinsate samples will be collected using Teflon-lined polyethylene tubing during the collection of groundwater. Table 3-2 will be edited to reflect that the equipment rinsate 78ER04 will be collected from Teflon or Teflon-lined polyethylene tubing.

6. *Page 3-8, Section 3.5.3, Paragraph 1.* Please clarify the handling of soil IDW. The work plan indicates that soil cuttings associated with subsurface soil sampling will be stored temporarily in 55-gallon drums and will be placed back in the borings unless contamination is present. Please clarify if there will be a drum dedicated to the soil derived from each boring location to prevent co-mingling of soils from multiple borings.

Navy Response: The soil cuttings associated with subsurface soil sampling will be placed back into the location where the cuttings were collected from immediately after the subsurface soil samples are collected if a monitoring well is not going to be installed at that soil boring. If a monitoring well is going to be installed at a soil boring location, the soil cuttings associated with that soil boring will be stored temporarily in a 55-gallon drum. All the soil cuttings for soil borings that have monitoring wells installed will be placed in the same drum (there will not be one drum for each soil boring) and a composite sample will be collected and submitted for laboratory analysis. The text in Section 3.5.3 will be edited to clarify the IDW procedures.

7. Table 3-3.

- a. *Please include the preparation methods being used for PAHs in soil and groundwater samples*

Navy Response: Table 3-3 will be revised to include the preparation methods for PAHs used in soil and groundwater samples.

- b. *Please include the preparation methods being used for TPH DRO in soil and groundwater samples.*

Navy Response: Table 3-3 will be revised to include the preparation methods used for TPH DRO in soil and groundwater samples.

- c. *Please include the preparation methods being used for metals in soil and groundwater samples.*

Navy Response: Table 3-3 will be revised to include the preparation methods used for metals in soil and groundwater samples.

- d. *The quantitation limits (QLs) listed for metals in aqueous samples appear very high and more appropriate for analysis via 6010C instead of 6020A. Please verify these QLs with the laboratory and/or procure a laboratory that is capable of reporting lower QLs. Most of the listed QLs appear to be high by about one order of magnitude compared to QLs typically reported by method 6020A. It is important to note that many of the aqueous metals QLs exceed the risk screening levels (ecological groundwater screening levels presented in Table 4-2 as well as the May 2010 EPA Regional Screening Levels [RSLs]) and therefore lower QLs are needed in order to achieve project objectives. Specific exceedances of risk screening levels are as follows:*

- i. *Antimony QL (20) > EPA Tap water RSL (1.5)*
- ii. *Arsenic QL (10) > EPA Tap water RSL (0.045)*
- iii. *Cadmium QL (5) > EPA Tap Water RSL (1.8)*
- iv. *Chromium QL (10) > EPA Tap Water RSL (0.043)*
- v. *Cobalt QL (10) > EPA Tap Water RSL (1.1)*
- vi. *Vanadium QL (10) > EPA Tap Water RSL (0.26)*
- vii. *Copper QL (20) > ecological groundwater screening levels (3.73)*
- viii. *Nickel QL (4) > ecological groundwater screening levels (8.28)*
- ix. *Silver QL (10) > ecological groundwater screening levels (0.23)*
- x. *Benzo(a)anthracene QL (0.2) > ecological groundwater screening levels (0.025)*

Navy Response: The Navy conducted a comparison of quantitation limits from different laboratories and found that the quantitation limits for Method 6020A provide lower reporting limits than Method 6010C. The Navy is aware that many of the reporting limits exceed the ecological groundwater screening levels presented in Table 4-2 as well as the May 2010 Regional Screening Levels.

8. Page 4-5, Section 4.6.2.

- a. *Please clarify what concentration will be used for comparison to screening criteria for each chemical.*

Navy Response: Section 4.6.2 will be revised to state that all chemical concentrations detected at least once in the media of interest will be used for comparison to screening criteria.

- b. Please clarify whether a baseline risk assessment will be conducted if chemicals exceed the screening criteria.*

Navy Response: A HHRA and ERA will be conducted as part of the CMS for the SWMU. Please refer to the Navy's general response to EPA comments and the Navy response to EPA General Comment No. 9.

9. Figure 4.1.

- a. Please include an evaluation of outliers in the data sets in Step One. Both the slippage and quantile tests are sensitive to high-end outliers. A single high value can cause the site distribution to seem to be statistically different from the background when in actuality the high value can be indicative of a "hot spot" and not the entire site being different from the background.*
- b. The two-sample test for proportion has a normal approximation assumption that does not make it into the decision making process depicted in the flow chart. Please revise the figure accordingly.*

Navy Response: As discussed in the Navy's general response to EPA comments, as well as the Navy response to EPA General Comment No. 14, Full RFI analytical data will not be statistically compared to the background data sets presented within the Revised Final II Summary Report for Environmental Background Concentrations of Inorganic Compounds (Baker, 2010). However, statistical evaluations will be conducted in Step 3a of the BERA and presented within the CMS report. The Navy agrees that the slippage test and quantile test are sensitive to outliers. However, the Navy does not feel it is necessary to conduct an outlier test prior to their use since (1) little weight is given to these statistical methods and (2) the magnitude of detected concentrations greater than screening values is evaluated as part of the Step 3a process. With regard to the two-sample test of proportions, the figure will be revised for future statistical evaluations (i.e., statistical evaluations conducted in Step 3a of the BERA) to show that this statistical method has a normal approximation assumption.

II. MINOR EDITORIAL COMMENTS

1. Page 2-1, Section 2, Paragraph 1. Please change the word "exists" to "exist" in the first sentence.

Navy Response: The text will be edited on Page 2-1 to change the word "exists" to "exist" in the first sentence.

2. Page 2-3, Section 2.2.2. Please verify the date that USEPA approved the Phase I RFI report (the text states August 11, 2010).

Navy Response: The USEPA approved the Phase I Report on August 11, 2009, the text will be edited to reflect this date.

3. Page 3-1, Section 3.1, Paragraph 3. Please insert the word “and” between the words “collected” and “will” in the third sentence.

Navy Response: The word “and” will be inserted in the second sentence in paragraph 3 on Page 3-1.

4. Page 3-1, Section 3.1, Paragraph 6 (first bullet). Please change “benzo(a)anthracene” to “benzo(a)pyrene”. The data presented in Appendix B do not indicate a benzo(a)anthracene detection in soil sample 78SB03.

Navy Response: On Page 3-1, the first bullet will be edited to state that benzo(a)pyrene and dibenz(a,h)anthracene were detected above Regional SLs.

5. Page 3-2, Section 3.1, Paragraph 1 (continuation of first bullet). As there were two subsurface soil samples collected from the 78SB03 boring, please specify in the text that cobalt was detected above the human health and background screening value in the three to five-foot interval.

Navy Response: The first paragraph in Section 3.1 will be edited to state that cobalt was detected at a concentration above the human health and background screening value in the 3 to 5 feet interval during the Phase I RFI from soil boring 78SB03.

6. Page 3-3, Section 3-1, Paragraph 5. Please add the words “for subsurface soil samples” for clarification at the end of the third sentence in this paragraph.

Navy Response: The text will be edited as requested above.

7. Page 3-4, Section 3.2, Paragraph 1. Please replace the word “for” with “at” in the first sentence.

Navy Response: The text will be edited as requested above.

8. Page 3-8, Section 3.5.3, Paragraph 1. Please insert a space in between the first and second paragraph of this section.

Navy Response: The text will be edited as requested above.

9. Page 4-1, Section 4.2, Paragraph 1. Please change the wording of the second sentence to read, “This section will include a summary.....”.

Navy Response: The text will be edited as requested above.

10. Table 3-3. Please remove the note related to shaded values, as it is not applicable to this table.

Navy Response: The note related to shaded values will be deleted from Table 3-3.

11. Table 4-1. Please change the reference in notes 5 and 6 associated with this table from SWMU 56 to SWMU 78.

Navy Response: The reference in the notes on Table 4-1 will be changed from SWMU 56 to SWMU 78.

12. *General.* Please clarify whether the site is considered to be located off of Gilbert Island Street or Hollandia Street – the text references both and the figures are not clear as to how far Hollandia Street extends.

Navy Response: The site is considered to be located off of Gilbert Island Street as stated in the first sentence of the Site History (Section 1.2) and Figure 1-3. The reference to the site being located off of Hollandia Street in Section 2.1 (current Site Conditions) will be changed to reference Gilbert Island Street.