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**Response to Comments by  
Regulatory Agencies on the**

**Draft**

**Phase I RCRA Facility Investigation Report**

**Former Atlantic Fleet Weapons Training Facility  
Vieques Island, Puerto Rico**



Prepared for

**Department of the Navy  
NAVFAC ATLANTIC**

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Prepared by

**CH2MHILL**

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**EPA REGION 2 TECHNICAL REVIEW OF THE DRAFT PHASE I RCRA FACILITY INVESTIGATION REPORT AT THE FORMER ATLANTIC FLEET WEAPONS TRAINING FACILITY, VIEQUES ISLAND, PUERTO RICO, BOTH REPORTS DATED JUNE 2004**

**Cover Letter Comments from Mr. Adolph Everett/Chief RCRA Programs Branch and Mr. Tim Gordon/RCRA Programs Branch Caribbean Section**

**RCRA Programs Branch Comment #1**

The title for Section 14 (Assessment of PIs and PAOCs) and Section 14.3 (Summary of Recommendations for the PI and PAOC sites) of the Phase I RFI Report should be changed as it also includes recommendations for the SWMUs and AOCs required to be investigated under the June 2003 approved Phase I RFI Work Plan. Alternatively, a new section on conclusions and recommendations for the SWMUs and AOCs may be added to the Phase I RFI report, and the recommendations for the SWMUs and AOCs given in Section 14.3 should then be moved to that new section.

**Navy Response:**

The suggested change will be made. Section 14 will be edited to include only the PI and PAOC sites. Information concerning the SWMUs and AOCs will be deleted in Section 14 and added to each respective SWMU/AOC section. The Executive Summary will summarize all conclusions and recommendations.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed.

**RCRA Programs Branch Comment # 2**

The "Executive Summary" and Section 14 of the RFI Report, and elsewhere in that report where necessary, should be revised to make clear that having PI and PAOCs sites addressed under the Navy's Munitions Response Program does not necessarily exempt those PI and PAOC sites from the statutory requirements of Section 3008(h) of RCRA and 40 CFR 264.101, and/or CERCLA.

**Navy Response:**

The following text will be add to the Executive Summary, *Section 1.1.1 Objectives of the Investigations*, and Section 14 of the RFI Report : "If observations or other data suggest the presence of contaminated media, these PIs/PAOCs will also be evaluated in accordance with the statutory requirements of Section 3008(h) of RCRA and 40 CFR 264.101, and/or CERCLA." As part of the Expanded Range Assessment/Site Inspection, explosive safety is a high priority and these sites will be prioritized for future MEC investigations. Once the MEC investigations are completed, the sites subsequently will be prioritized for environmental investigations. It will be stated that the MEC and environmental investigations will meet the statutory requirements of Section 3008(h) of RCRA and 40 CFR 264.101, and/or CERCLA.

Table ES-2 in the Executive Summary and text in Section 14 will also be revised to transfer sites PI-21 and PI-22 to the "Inspected for MEC" column due to the potential for the presence of MEC.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed.

**RCRA Programs Branch Comment #3**

Several key documents cited in the Phase I RFI and Groundwater Baseline reports have not been approved by EPA, nor have comments on those documents made by EPA, as well as the Puerto Rico Environmental Quality Board (PREQB) and the U.S. Fish & Wildlife Service (USFWS) ever been fully addressed by the Navy. These key documents include the April 2003 Draft Environmental Baseline Survey Report (EBS) and the April 2003 Final Draft Preliminary Range Assessment Report (PRA). On July 3 and June 21, 2003, respectively EPA had previously commented on the Draft Environmental Baseline Survey Report (EBS) and Draft Preliminary Range Assessment Report (PRA). To date EPA has never received a response to our comments on the EBS and PRA; nor has EPA received revised editions of either document. EPA may not be able to complete its evaluations of the Phase I RFI and Groundwater Baseline reports until the Navy fully responds to our comments on the April 2003 EBS and PRA reports, as both are key documents in evaluating the Phase I RFI and Groundwater Baseline reports.

**Navy Response:**

The April 2003 Final Draft Environmental Baseline Survey Report (EBS) and the April 2003 Final Draft Preliminary Range Assessment Report (PRA) were prepared as internal Navy documents that were associated with the property transfer rather than to meet regulatory requirements. However, the comments from EPA, EQB, and USFWS on the EBS and PRA will be addressed in a comment response letter. In addition, the comment responses will be incorporated into the Draft Expanded Range Assessment Report and the Draft RCRA Facility Investigation Report, which will be submitted to the regulators for review and comment.

**RCRA Programs Branch (Enclosure 1) Comment**

Please also specify an anticipated schedule of when the documents are expected to be submitted to EPA.

**Navy's Second Response:**

The Revised Draft Phase I RFI Report is anticipated be submitted in August 2006, following approval of the Final Background Investigation Report. This anticipated submittal date is based on completion of the Draft Background Investigation Report by the end of 2005, followed by an assumed regulatory agency and RAB review (and associated comment response periods) prior to final approval. The Draft Expanded Range Assessment Phase I Site Inspection Report is anticipated to be submitted to EPA by the end of October 2005. Comment responses will be included with the report submittals.

#### **RCRA Programs Branch Comment # 4**

In the "Executive Summary" and Section 14.3 (Summary of Recommendations for the PI and PAOC sites [as well as for the SWMUs and AOC]) of the RFI Report it is stated that: a) SWMU 1 is recommended for a Full RFI to further characterize the landfill, and b) that eight PI and PAOC sites are recommended for a Phase I RFI and that a work plan for that sampling will be developed at a future, unspecified date. Please be advised that pursuant to Section VI, paragraph B.6 of the January 2000 RCRA Order, the Full RFI work plan is due 90 days from EPA's written notification that such is required. This letter shall constitute that notification for SWMU 1. In addition, pursuant to Section XI, paragraph 2 of the January 2000 RCRA Order, EPA hereby requests the Navy to submit, within 90 days from its receipt of this letter, draft work plans for the eight PI and PAOC sites recommended for Phase I RFIs.

#### **Navy Response:**

As discussed with EPA during the CTC meeting on October 21, 2004, and requested in a letter to EPA dated October 8, 2004, the Draft Phase I RFI Work Plan will be prepared for the eight PI and PAOC sites and will be submitted to EPA and EQB by December 1, 2004. Also, as discussed with EPA, a Full RFI Work Plan for SWMU 1 will be produced after the Background Investigation has been completed.

#### **RCRA Programs Branch Comment # 5**

Pursuant to Section XI, paragraph 1 of the January 2000 RCRA Order, within 75 days of your receipt of this letter, please submit a revised Phase I RFI Report and revised Groundwater Baseline Report to address the above and all of the enclosed comments.

#### **Navy Response:**

The Draft Final Groundwater Baseline Report will be submitted within 75 days of receipt of this letter. However, it was concurred upon during the March 30, 2005 Technical Subcommittee Meeting held at EPA Region II headquarters in New York that because of the time until the east Vieques background investigation is completed and the data compared to the Phase I RFI data (and RFI Report revised), a data summary report will be prepared for the original Phase I RFI sites in order to provide information to the public. It was further noted that that the data summary report will not likely go out for a public comment period because it will be just a data summary (i.e., will not have conclusions or recommendations), but it may be placed in the public repository. It was also agreed that the background data use flowchart will be added to the data summary report.

**EPA REGION 2 TECHNICAL REVIEW OF THE DRAFT PHASE I RCRA FACILITY  
INVESTIGATION FORMER ATLANTIC FLEET WEAPONS TRAINING FACILITY  
VIEQUES ISLAND, PUERTO RICO, DATED JUNE 2004**

**GENERAL COMMENTS**

**RCRA Programs Branch Comment # 1**

In each Conclusions and Recommendations section, it is stated that a work plan for a proposed background investigation of the soils and groundwater has been submitted to the EPA. The data from the background investigations will be compared to chemical concentrations detected at each area of concern to assess whether the constituent concentrations exceeding the screening levels are either site-related or can be attributed to background conditions. When comparing these background concentrations to the chemical constituents EPA's Risk Assessment Guidance for Superfund notes it is important that "...background concentrations may present a significant risk, and, while cleanup may or may not eliminate this risk, the background risk may be an important site characteristic to those exposed." Accordingly, this guidance should be kept in mind when conducting the risk assessment. Revise the text to include an acknowledgment of this guidance. [Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A), Interim Final, Page 5-19, USEPA Office of Emergency and Remedial Response, December 1989.]

**Navy Response:**

During the RFI, the site-specific inorganic constituents data exceeding PRGs will be compared to the range of the inorganic background concentrations and PRGs to assess the nature and extent of inorganic contamination within the soils using the methods identified in the EPA Guidance (EPA 1989, 2002a, 2002b). This comparison will be used to: 1) determine if contamination is present at a site, and 2) delineate the extent of contamination. Any inorganic constituents detected in soils at levels exceeding the range of the background levels will be considered as site-related contamination. An evaluation will then be made to determine if the extent of contaminants detected has been adequately delineated or if additional site characterization is needed.

Once the nature and extent of the contamination has been defined, the risk assessment will be completed for all constituents that exceed the PRGs, including those constituents that are within the range of background concentrations. Background data will not be used to screen out data to select constituents of potential concern (COPCs). Once the risk assessment is completed, any inorganic constituent concentrations contributing to unacceptable risks, or with HI values above acceptable criteria, will be compared to the background data. Based on this comparison, risk management decisions will then be made to assess if any further actions (i.e., additional investigations, additional statistical analyses, remedial actions, institutional controls) are recommended to protect human health or the environment.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

## RCRA Programs Branch Comment # 2

EPA's Risk Assessment Guidance for Superfund notes that "...chemicals with qualifiers attached that indicate known identities but unknown concentrations (e.g., J-qualified data)..." should be included in the list of chemicals of potential concern for a quantitative risk assessment. Bearing this in mind, all chemical contaminants should be re-examined and contaminants with unknown concentrations should be considered a potential concern. Revise the Conclusions and Recommendations subsections in each section to be in accordance with this guidance. [Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A), Interim Final, Page 5-20, USEPA Office of Emergency and Remedial Response, December 1989.]

### Navy Response:

The Conclusions and Recommendations subsections in each section will be revised to state that the chemical concentrations with "J" qualifiers are treated as detected concentrations in the screening evaluation for this RFI report. For sites where risk assessments will be conducted, these data will be treated as detected concentrations in accordance with Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A), Interim Final, Page 5-20, USEPA Office of Emergency and Remedial Response, December 1989.

## RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

## RCRA Programs Branch Comment # 3

Pesticides were detected in excess of screening levels at several locations, including SWMUs 1, 4, 6/7, and 10, AOC G, several PIs and PAOC U. Many of these sections state that the chemicals detected in soils above screening levels have also been detected in the background soils. However, note that EPA's Risk Assessment Guidance for Superfund states:

In general, comparison with naturally occurring levels is applicable only to inorganic chemicals, because the majority of organic chemicals found at Superfund sites are not naturally occurring (even though they may be ubiquitous). The presence of organic chemicals in background samples collected during a site investigation actually may indicate that the sample was collected in an area influenced by site contamination and therefore does not qualify as a true background sample. Such samples should instead be included with other site samples in the risk assessment. Unless a very strong case can be made for the natural occurrence of an organic chemical, do not eliminate it from the quantitative risk assessment for this reason.

Pesticides are not naturally-occurring chemicals. This should be taken into account when conducting any future risk assessment studies. Revise the text to include acknowledgment

that pesticides and other organic chemicals, while perhaps detected in background soils, are not naturally occurring; and that EPA risk assessment guidance will be followed. [Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A), Interim Final, Page 5-19, USEPA Office of Emergency and Remedial Response, December 1989.]

**Navy Response:**

Results from the Phase I RFI indicated that pesticides are widespread throughout the Facility, indicative of facility-wide pesticide application for pest-control, and should be considered as part of the Background Investigation. However, as presented in the Technical Memorandum titled *Background Investigation Work Plan For Eastern Vieques* presented to EPA on October 28, 2004, it is proposed that the Background Investigation will be limited to only those constituents that occur naturally within the soils. As a result, pesticides will be investigated separately on a facility-wide basis to assess pesticides in the surface soils. Any further actions at a particular RFI or RI site (i.e., additional investigations, remedial actions) associated with elevated levels of pesticides will be deferred until the pesticide investigation has been completed. A Work Plan for the facility-wide pesticide investigation will be prepared following regulatory approval of the Background Investigation Work Plan using the following methods identified in the EPA and Navy Guidance (Navy 1999; EPA 2002a, 2002b):

EPA. 2002a. *Role of Background in the CERCLA Cleanup Program*. Office of Solid Waste and Emergency Response and Office of Emergency Remedial Response, OSWER 9285.6-07P. April.

EPA. 2002b. *Guidance for Comparing Background and Chemical Concentrations in Soil at CERCLA Sites*. External Review Draft, EPA 540-R-01-003. September.

Navy. 1999. *Handbook for Statistical Analysis of Environmental Background Data*, Prepared by: SWDIV and EFA West, of Naval Facilities Engineering Command, July.

**RCRA Programs Branch (Enclosure 1) Comment**

Incorporate this additional information into the revised Phase I RFI. Please also specify an anticipated schedule of when a work plan for the proposed pesticides investigation is expected to be submitted to EPA.

**Navy's Second Response:**

Pesticides were originally included in the East Vieques facility wide background investigation because they are often found at sites due to historical pesticide application, not as a result of releases from past solid or hazardous waste management, storage, or disposal activities. Therefore, they were noted as an anthropogenic constituent, which warranted their inclusion in a facility wide investigation. There remains disagreement between EPA and the Navy regarding the appropriateness of including anthropogenic constituents in a background investigation whose data are to be used for site-specific comparisons. For that reason, pesticides were eliminated from the proposed background study, and it was suggested that a background investigation for pesticides would be conducted. However, because disagreement regarding the applicability of anthropogenic constituents to background data sets remains, pesticides will be investigated on a site-specific basis, as warranted, rather than facility wide.

#### **RCRA Programs Branch Comment # 4**

As stated in Section 14.2: Data Assessment of PI and PAOC Sites, several of the PI and PAOC sites listed in Table 14-1 have been identified as Munitions Response Sites (MRSs), and these sites will be further evaluated under the Munitions Response Program (MRP). Please note that there are various environmental issues and requirements associated with munitions and explosives of concern (MEC) [e.g., pre-blown-in-place (BIP) and post-BIP sampling, remediation]. EPA should be kept informed of any activities involving MEC cleanup and presented with any sampling results.

#### **Navy Response:**

Please see response to Comment 2 from the Cover Letter Comments from Mr. Adolph Everett/Chief RCRA Programs Branch and Mr. Tim Gordon/RCRA Programs Branch Caribbean Section.

#### **RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

#### **RCRA Programs Branch Comment # 5**

Most of the PAOC sites are lacking in significant detail and the figures are too small to provide useful information. Provide additional detail and smaller scale figures for each PAOC site with each sample location clearly indicated in relation to significant structures or other features at the site (e.g., stained areas).

#### **Navy Response:**

The PAOC site figures will be revised in the next RFI Report and the Draft PI/PAOC Work Plan to provide more detail on the surrounding site conditions.

#### **RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

#### **RCRA Programs Branch Comment # 6**

Appendix H: Analytical Data Summary includes what appears to be summary data. In addition to the summary tables, provide copies of the original analytical data reports provided by the laboratory. These documents should be provided for review purposes.

#### **Navy Response:**

The original analytical data reports will be provided on a CD and included with the revised Phase I RFI submittal.

### RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

### RCRA Programs Branch Comment # 7

Section 2.2, Task DM - Data Management of the June 2003 Master Work Plan states that in order to detect contaminants with low screening level criteria, special analytical methods would be required. The Master Work Plan also indicates that "full documentation of these analytical methods will be provided with the sample analyses." However, no method documentation has been provided in the draft Phase I RFI. Include this documentation in the report.

#### *Navy Response:*

The analytical methods agreed to with EPA were the RCRA Appendix IX list using SW846 methods. No special analytical methods were utilized during these investigations. In the future, documentation will be provided for any special analytical methods utilized.

### RCRA Programs Branch (Enclosure 1) Comment

On page 2-10 of the June 2003 Final Master Work Plan, it states in Section 2.2, Task DM - Data Management, "For certain chemicals, EPA Region IX has calculated screening level criteria for potential risk to human health and the environment. To detect some of the chemicals at levels as low as the screening level criteria, special analytical methods will be required. Full documentation of these analytical methods will be provided with the sample analyses." Based on the Navy's response to this comment, it could be inferred that none of these chemicals for which there are Region IX-calculated risk-based screening level criteria were screened for during the Phase I RFI activities. Confirm that this is the case by providing a list of the chemicals that would require special analytical methods, based on Region IX criteria.

#### *Navy's Second Response:*

The text of the Master Work Plan states that "to detect some of the chemicals at levels as low as screening criteria, special analytical methods will be required." To date special analytical methods have not been requested for any constituents other than thallium. As concurred during the March 8, 2005 Technical Subcommittee Meeting, thallium analysis using SW-846 Method 7841 will be utilized for the east Vieques Background Investigation to achieve reporting limits below the Region IX PRG.

### RCRA Programs Branch Comment # 8

The Analytical Data Detection Summary tables for the various SWMUs and AOCs indicate a result of ND (not detected) for cyanide, sulfide, and dioxins for many samples which were not analyzed for these parameters. Revise the tables by replacing ND with NA (not analyzed) for the samples which were not analyzed. Add the abbreviation to the footnotes of each table. Revisions of the tables should include the following:

- Table 3-4: Replace ND with NA in the cyanide, sulfide, and dioxin rows for all samples except CGW1SS08, 17, 33, 35, and 48.
- Table 3-5: Replace ND with NA in the cyanide and sulfide rows for samples CGW1MW01, and 05.
- Table 4-1: Replace ND with NA in the cyanide, sulfide, and dioxin rows for all samples except CGW2SS03, 07, 09, and 12.
- Table 6-1: Replace ND with NA in the dioxin rows for all samples except CGW5SS01.
- Table 8-1: Replace ND with NA in the sulfide and dioxin rows for all samples except CGW8SS02.
- Table 9-5: Replace ND with NA in the cyanide, sulfide, and dioxin rows for all samples except CGW10SS06, 07, 10, 11, 13, 15, and 19.
- Table 9-7: Replace ND with NA in the sulfide and dioxin rows for all samples except subsurface sample numbers CGW10SB06, 11, 13, and 19 (reported as samples CGWWTPSB06, 11, 13 and 19 in Table 9-7, refer to Specific Comment 18).
- Table 9-8: Replace ND with NA in the cyanide row for all samples except CGW10MW04 and 05.
- Table 10-1: Replace ND with NA in the dioxin row for all samples except CGW12SS05.
- Table 13-1: Replace ND with NA in the cyanide, sulfide, and dioxin rows for all samples except CGAGSS04.

**Navy Response:**

The requested changes to the listed tables will be made in the revised report.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 9**

a.) Section 2.15, Data Screening Procedure, states that surface soil sample analytical results were compared to the "EPA (2002) Region 9 residential risk-based concentrations preliminary remediation goals (PRGs)...." The text goes on to state that "in some instances when soil screening values were not available from these primary sources, three other references were consulted," including the Canadian protocol for deriving environmental soil quality guidelines (SQGs), Dutch Soil Quality Standards, and U.S. Fish and Wildlife Service (USFWS) soil screening values, and that the lowest screening value from these three sources was selected for screening. The various Surface Soil Analytical Data Detection Summary tables in the following sections of the report include the relevant screening concentrations for comparison to the detected contaminant levels. However, the referenced criteria sources in the table footnotes include only the Region 9 PRGs, the Region 9 Soil Screening Level

(Migration to Groundwater - DAF 20), and toxicological benchmarks from Efroymsen (1997). It is not clear if the Canadian, Dutch, or USFWS screening values were used for any contaminants, and if so for which ones. Indicate in the text and footnotes if any of these additional sources were used. If the additional sources were, not used, remove them from the discussion in Section 2.15.

b.) In addition, for ecological soil screening values that were not available in the above sources, such guidance as the USEPA Region 5 Ecological Soil Screening Levels, or the USEPA Region 9 Toxicity Reference Values for invertebrates, mammals, or birds should be used for comparison to the soil concentrations. Revise the table to include all additionally available soil screening values, and review the data for exceedences as necessary.

**Navy Response:**

- a) The text will be modified such that the referenced screening criteria from Canada or Dutch sources will be deleted from Section 2.15.
- b) Where ecological screening values are not available in the references already identified in the RFI report, alternate values from USEPA Region 5 Ecological Soil Screening Levels and the USEPA Region 9 TRVs will be considered in future reports. These alternate values would be used in the future if determined to be appropriate for the contaminant and ecological receptors of concern at the site.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 10**

- a.) The screening criteria for dioxins are given in the various Analytical Data Detection Summary tables as Preliminary Remediation Goals for Residential Soil (PRG-Rs). However, the only dioxin soil screening value provided in the Region 9 PRG Table 2002 Update guidance document (USEPA, October 2002) is for 2,3,7,8-Tetrachlorinated dibenzo-p-dioxin (TCDD). Therefore, it is assumed that Toxic Equivalence Factors (TEFs) were applied to the 2,3,7,8-TCDD PRG-R to derive screening levels for the other dioxin congeners, although this has not been clearly stated in the report, nor has the technical approach for the use of TEFs been adequately documented. Confirm in the text that this was the derivation method used, and revise the document to provide both a technical basis and presentation of the approach used for applying TEFs in the Phase I RFI.
- b.) In addition, modified soil concentrations for all 2,3,7,8-TCDD congeners (based on TEFs) should be summed to obtain total congener soil concentrations (the total Toxic Equivalence, or TEQ at each sample location (i.e., add 2,3,7,8-TCDD; 1,2,3,7,8-PECDD; 1,2,3,4,7,8-HXCDD; 1,2,3,6,7,8-HXCDD; 1,2,3,7,8,9-HXCDD; 1,2,3,4,6,7,8-HPCDD; and OCDD) in order to provide an estimation of potential cumulative effects for different congener groups. The total values should then be compared to the screening benchmarks for the base value of 2,3,7,8-TCDD (3.9E-6 in the case of Region 9

Residential PRGs for Human Health), as well as comparing individual congener concentrations to screening values. Revise the document to incorporate this information.

Navy Response:

- a) Dioxins were presented as the TCDD equivalent concentrations (TEQs) and compared against TCDD PRG values. The TEQs are estimated by multiplying the reported concentration for a congener with its TEF value, and summing the calculated value for each congener. When a congener was not detected, half the detection limit value was used for the TEQ estimation. The methodology will be described in the revised Phase I RFI report as presented below:

**Toxic Equivalency Factors (TEFs) and Toxic Equivalents (TEQs) Estimation Methodology**

"The toxicity of the dioxin mixtures is assessed by using the relative potency information for each of the congeners as defined by EPA (1989, *Interim Procedures for Estimating Risks Associated with Exposure to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update*. EPA/625/3-89/016, March 1989). The TEF approach compares the relative toxicity of individual congeners to that of 2,3,7,8-TCDD. The TEF of 2,3,7,8-TCDD is one, whereas the TEFs of the other compounds are a fraction of one, reflecting their lower toxic potency. The toxic potency of a mixture of congeners (i.e., the TEQ) is the sum of the products of the TEFs for each congener and its concentration in the mixture. Thus, TEQs represent 2,3,7,8-TCDD toxic equivalents for mixtures of dioxin-like CDDs, CDFs, and/or PCBs.

**Recommended Toxicity Equivalent Factors For Carcinogenic Dioxins/Furans**

Compound	Toxicity Equivalent Factors
<b>Dioxins</b>	
2,3,7,8-Tetrachlorodibenzodioxin	1
2,3,7,8-Pentachlorodibenzodioxin	0.5
2,3,7,8-Hexachlorodibenzodioxin	0.1
2,3,7,8-Heptachlorodibenzodioxin	0.01
Octachlorodibenzodioxin	0.001
Other CDDs	0
<b>Furans</b>	
2,3,7,8- Tetrachlorodibenzofuran	0.1
1,2,3,7,8- Pentachlorodibenzofuran	0.5
2,3,4,7,8- Pentachlorodibenzofuran	0.05
2,3,7,8- Hexachlorodibenzofuran	0.1
2,3,7,8- Heptachlorodibenzofuran	0.01
Octachlorodibenzofuran	0.001
Other CDFs	0
CDD	chlorodibenzo-p-dioxins
CDF	chlorinated dioxin furans

The concentration of each congener is multiplied by the TEF to estimate the 2,3,7,8-TCDD equivalent concentration (TEQ). The congeners that were not detected will be included in the TEQ estimations at half the detection limit values, if at least one of the congeners of the

mixture was detected in a sample. If no congeners were detected, then the estimated TEQ is considered a non-detect."

- b) As stated above in response to comment 10a), the method used for the TEQ calculation is the same as that described in 10b). The method description provided above in the response to comment 10a) will be included in the revised RFI Phase I report in Section 2.15 at the end.

#### **RCRA Programs Branch (Enclosure 1) Comment**

a) Based on EPA's "1989 Update to the Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and - Dibenzofurans (CDDs and CDFs)," the TEF of 1,2,3,7,8-pentachlorodibenzofuran (PeCDF) should be 0.05, and the TEF of 2,3,4,7,8-PeCDF should be 0.5. These TEF values have been reversed in the table above. Revise the table to correct this discrepancy.

The format of the Data Detection Summary Tables in the draft Phase I RFI, while functional for most analytical data, may not be entirely appropriate for the presentation of the dioxin data, which requires application of the TEFs prior to comparison to the environmental quality criteria. Consider creating an additional table(s) specifically for dioxin that can incorporate presentation of the raw analytical data, the TEF for each congener, the TEQs, and the PRG-R for 2,3,7,8-TCDD.

Also, please note that the EPA's draft document "Exposure and Human Health Reassessment of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds," was submitted to the National Academy of Sciences (NAS) in October 2004 for review. This draft document will likely include modifications to the TEF values for 1,2,3,7,8-pentachlorodibenzodioxin (PeCDD) from 0.5 to 1, and octachlorodibenzodioxin (OCDD) and octachlorodibenzofuran (OCDF) from 0.001 to 0.0001. Once this document has been approved, the revised TEFs found in this document will apply to data collected during the AFWTF activities.

- b) The comment has been adequately addressed. No additional response is necessary at this time.

#### **Navy's Second Response:**

**The suggested correction will be made to the PeCDD congener TEF values. The recommended new data summary table for dioxins will be made in the revised Draft Phase I RFI Report. Once EPA's draft document is finalized, the new TEF values for PeCDD, OCDD, and OCDF will be utilized for data evaluations.**

#### **RCRA Programs Branch Comment # 11**

The Data Detection Summary Tables include a screening benchmark column labeled "PRG-R." However, the footnote on many of the summary tables includes a definition for the acronym "PRGSO" (EPA Region 9 Preliminary Remediation Goals [2002] - Residential Soil [R], based on a Hazard Index of 0.1 for non-carcinogens). If PRG-R is the same as PRGSO, modify the column header or the footnote in each table for consistency. If they are different, provide the relevant definition of PRG-R.

*Navy Response:*

The PRGSO criteria are the same as the PRG-R criteria. The revised report will consistently use the PRG-R reference for the criteria throughout the report.

RCRA Programs Branch (Enclosure 1) Comment

Please note that revised Tables 3-4, 4-1, 5-1, 6-1, 7-1, 8-1, 9-5, 10-1, 12-1, and 13-1 in Attachment A - RFI Table Updates continue to use "PRGSO" in the footnotes. Be sure to revise the footnotes for the revised Phase I RFI. Also define the abbreviation "NA" in the footnotes for Tables 3-4, 3-5, 4-1, 6-1, 8-1, 9-5, 9-7, 9-8, 10-1, and 13-1.

*Navy's Second Response:*

The Draft Final Report will consistently use the PRG-R reference for the criteria throughout the report.

The abbreviation "NA" (Not Analyzed) is defined and added to all the above mentioned tables in the revised Draft Phase I RFI Report.

**SPECIFIC COMMENTS**

RCRA Programs Branch Comment # 1

Section 1.2.9.3, Wildlife and Section 1.2.9.4: Federally Listed Species: These two sections identify wildlife and threatened and endangered plant and animal species on Vieques. The text includes no discussion of the various species' potential exposure pathways, their sensitivities to the chemical contaminants of concern (COCs), or any habitat disturbance or loss that could occur due to the presence of contamination or due to remediation activities. While it is understood that a discussion or analysis of these subjects was not required by the Work Plan, these topics should be evaluated during future risk assessment-related site activities and reports. Any future investigation or remediation plans should discuss potential impacts of these contaminants or activities, and take steps to minimize the impacts.

*Navy Response:*

As noted, for sites where contamination is identified, evaluations of ecological exposure pathways, potential toxicity of contaminants, and potential habitat impacts are part of the ecological risk assessment process that will be applied to future site activities and reports. The ecological risk assessment process will be described in future Work Plans for the risk assessment work at the Former AFWTF.

RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

## RCRA Programs Branch Comment # 2

Section 2, Field Investigation Procedures: The fifth sentence of the first paragraph states that work was conducted in 2004 "at SWMUs 2, 4, 5, 8, 10, 12, and AOC G." Based on the contents of the report, work was also conducted at SWMU 1. Revise the text to include SWMU 1.

### Navy Response:

SWMU 1 will be added to the list of sites investigated in January and February 2004. The sentence referred to above in Section 2 will read "... at SWMUs 1, 2, 4, 5, 8, 10, 12, and AOC G."

## RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

## RCRA Programs Branch Comment # 3

Section 2.6, Surface Soil Sampling: This section describes the surface soil sampling method, and indicates that an "EnCore™" sampling device was used. This device is not discussed in the report text, the June 2003 Master Work Plan, or the June 2003 Final Site-Specific Work Plan. Please provide additional detail as to how this device is used, and clarify whether the VOC samples were collected prior to placing the soils in the bowl, or after. All VOC samples should be collected prior to placing the soils in the bowl in order to disturb the soil sample as little as possible.

### Navy Response:

The En Core™ sampler is listed in the Final Master Work Plan, dated June 12, 2003, Master Field Sampling Plan, Table 2-2, VOC sample containers. En Core™ samplers are also described in the SOP of the Master Work Plan under the SOP titled "Soil Sampling for VOCs Using the En Core™ Sampler."

The En Core™ sampler is also listed in the Final Site-Specific Work Plan dated June 12, 2003, in Section 3, Table 3-2, VOC sample containers.

The additional detail provided below regarding the method of collection will be added to the RFI report in Sections 2.6 and 2.7, Surface and Subsurface Soil Sampling. The added text will be "Due to the soil conditions encountered, the procedure used to collect VOC soil samples included: retrieving the soil sample from the 0 to 8-inch depth with a hand auger, pouring the soil into a stainless steel bowl, then pushing the En Core™ sampler into the soil several times to get a composite sample. After the VOC sample was collected, the soil in the bowl was then homogenized with a stainless steel spoon and the remaining non-VOC samples were collected. This method of En Core™ sampling is consistent with EPA Method 5035 and EPA field sampling SOP."

### **RCRA Programs Branch (Enclosure 1) Comment**

This response indicates that the soil was poured into a bowl prior to collecting the VOC sample in the En Corer™ sampler. This procedure is inconsistent with the SOP for "Soil Sampling for VOCs Using the En Corer™ Sampler." The SOP requires that the sample be collected "quickly" to avoid loss of volatile constituents. Transferring the sample to a bowl prior to collection may have allowed VOCs to escape from the sample. In the future, if soil conditions will not allow for use of proper En Core™ procedures, samples should be collected using an alternate sampling method, or by placing the sample directly into a sample container.

#### **Navy's Second Response:**

The sampling procedure is not inconsistent with the SOP; the soil conditions necessitated the use of a hand auger to retrieve soil from the 0-to-8-inch depth. To collect the soil sample with the Encore Sampler or directly into a sample container, as suggested above, both require the soil to be removed from the auger. Once the soil is removed from the auger, the use of the Encore Sampler to collect the sample results in improved VOC retention (by design) over that of other sample collection techniques.

### **RCRA Programs Branch Comment # 4**

Section 2.7, Subsurface Soil Sampling: Clarify the rationale in deciding at what depth to collect the subsurface soil samples (e.g., the sample was collected at the depth corresponding to the highest Flame Ionization Detector reading).

#### **Navy Response:**

Section 2.7 of the RFI will be edited to include a more detailed rationale. An example insert is: "The SWMU 2 original scope was to drill to 15 feet, sample continuously, and collect the soil samples with the three highest OVA headspace readings. However, bedrock was encountered at 4 to 5 feet and there were no OVA headspace detections. The sample was then collected at the location that would have the greatest potential for contamination, which was directly above bedrock."

### **RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

### **RCRA Programs Branch Comment # 5**

Section 2.7, Subsurface Soil Sampling: The second paragraph describes the 2004 sampling activities. It is stated here that at SWMU 2, a soil sample was collected from the "2-ft interval directly above the bedrock." Provide the name and location of this sample.

#### **Navy Response:**

Section 2.7, Subsurface Soil Sampling, states that the soil boring samples were "collected from the 2-ft interval directly above the bedrock" which is a general statement explaining the

rationale of the soil boring sample depth interval. The next sentence explains the depths of the two soil boring samples (CGW2SB01 and CGW2SB02).

As stated in Section 4.2, the names CGW2SB01 and CGW2SB02 are used in conjunction with SB-01 and SB-02. The names (CGW2SB01 and CGW2SB02) are provided in the text, and the locations (SB-01 and SB-02) are shown in Figures 4-3 and 4-4.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment 6**

- a.) Section 2.7, Subsurface Soil Sampling: At SWMU 10, the borings were reportedly advanced until a "black plastic liner" was encountered. Provide further description of the liner (i.e., its use, thickness, condition, etc.).
- b.) Also, provide text to support the rationale behind sampling no deeper than the liner.

**Navy Response:**

- a) The following additional description will be added in Section 2.7 about the black plastic liner:  
  
"The black plastic liner was approximately 2 mils in thickness and appeared to be in good condition. The assumed use of this liner was to prevent percolation of stored effluent into the soils below the liner."
- b) The Draft RFI, Section 2.7 text states that "samples were obtained by boring with a hand auger until a black plastic liner was encountered. Once this was found, a sample was obtained from the liner to approximately 8 inches below the liner (one auger bucket length)." The RFI Site-Specific Work Plan describes the rationale in Section 2.7.3, *Sampling Rationale*, which states that "The subsurface samples will be collected immediately below the liner to determine if the liner has remained intact." This sampling rationale will be added to the Draft Phase I RFI Report.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 7**

Section 3.2.2, 2004 Geophysical Investigation: The last paragraph of this section indicates that the boundary of the former landfill extends farther south, and possibly farther north, than previously estimated. It is stated here that "Additional investigations will be needed to delineate the northern and southern boundaries of SWMU 1....". Provide additional discussion of how and when this is expected to take place.

*Navy Response:*

*Section 3.4, Conclusion and Recommendations*, of the Draft RFI Report discusses the need for further investigation at SWMU 1 based on the results of the geophysical survey. Also, *Section 14.3.6, Sites Recommended for Full RFI*, discusses further investigation at SWMU 1. As discussed with EPA during the CTC meeting on October 21, 2004, and described in a letter to the Navy dated October 8, 2004, this work is expected to take place after the Background Investigation is conducted. The soil samples collected at SWMU 1 have detected elevated inorganic concentrations. To assess whether these constituents are site-related or are associated with background conditions, a background investigation will be completed. The results of the background investigation will be utilized initially to assess the extent, if any, of soil contamination present at SWMU 1, then to evaluate the need for additional soil investigations. The additional soil and geophysical investigations are proposed to be conducted during the Phase II RFI Investigation of SWMU 1.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 8**

Section 3.2.4, 2004 Groundwater Investigation: This section indicates that the monitoring wells at SWMU 1 were installed in such a way as to allow for the detection of any possible floating free phase product. The first paragraph of this section states that the five monitoring wells were installed "at a depth of less than 10 ft below the first encountered groundwater using both 10-ft and 15-ft screens...." For clarity, specify that the bottom of the well screen was installed at a depth less than 10 ft below the groundwater. Also, specify if "groundwater" refers to the water table, potentiometric surface, or the first encountered groundwater.

*Navy Response:*

In *Section 3.2.4, Groundwater Investigation*, first paragraph, the sentence reads: "The monitoring wells were installed at a depth of less than 10 ft below the first encountered groundwater using both 10-ft and 15-ft screens to allow detection of potential floating free phase product, if any, at the groundwater/vadose zone interface."

This sentence will be edited to read: "The monitoring wells were constructed using both 10-ft and 15-ft screens. The bottom of the screens were installed at a depth of less than 10 feet below the first encountered groundwater to allow detection of floating free phase product, if any, at the groundwater/vadose zone interface."

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

### RCRA Programs Branch Comment # 9

Section 3.2.4, 2004 Groundwater Investigation, last paragraph, page 3-5 and Appendix H, Analytical Data Summary, SWMU 1- GW: The last paragraph of this section states that three samples, including CGW1MW02, 03, and 04, were analyzed for cyanides, sulfide, and dioxins. However, cyanide, sulfide, and dioxin results for only CGW1MW02 and 04 are presented in the summary tables in Appendix H. Revise the summary table to include cyanide, sulfide, and dioxin data for groundwater well MW-03 as well, or revise the text to correctly indicate which wells were analyzed for these constituents. In addition, revise Table 3-5, Groundwater Analytical Data Detection Summary for any detected dioxin concentrations at MW-03, as necessary.

#### Navy Response:

**Section 3.2.4, Groundwater Investigation, last paragraph, page 3-5, will be revised to read: "Two samples (CGW1WM02 and 04) were also analyzed for cyanide, sulfide and dioxins."**

### RCRA Programs Branch (Enclosure 1) Comment

The proposed revision is acceptable. However, Table 3-5, Groundwater Analytical Data Detection Summary, also requires revision to indicate that well MW-03 was not analyzed for cyanide, sulfide, or dioxin, rather than indicating Non-Detect (ND) levels.

#### Navy's Second Response:

**Table 3-5 will be revised in the revised Draft RFI Report to include NA for Cyanide and Sulfide in column CGW1MW03. The footnotes will include the abbreviation "NA = not analyzed."**

### RCRA Programs Branch Comment # 10

Section 3.2.4, 2004 Groundwater Investigation; Figure 3-4, Geologic Cross-Section AA', and Figure 3-5, Geologic Cross-Section B-B'. The SWMU 1 wells were reportedly screened across the water table to detect possible floating product. However, based on Figure 3-4: Geologic Cross Section A-A' and Figure 3-5: Geologic Cross Section B-B', the "Groundwater Level Elevation" is located above the screens in all five monitoring wells. This line may represent the potentiometric surface, but this is not clear from the figure. Clarify the figure and revise the figure to be consistent with the text, or discuss this apparent discrepancy.

#### Navy Response:

**Please note that the text says "The monitoring wells were installed at a depth of less than 10 ft below the first encountered groundwater using both 10-ft and 15-ft screens to allow detection of floating free phase product, if any, at the groundwater/vadose zone interface." During the drilling of the monitoring wells, the location of the water table was not evident. The wells were initially screened across the first encountered groundwater. The water levels then slowly recovered to a level above the screens. The legends of Figures 3-4 and 3-5 will be revised to include potentiometric surface next to the first encountered groundwater level for further clarity.**

### RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. It should be noted that because the groundwater levels recovered to a depth shallower than the well screens, the wells cannot serve one of their intended purposes: to detect floating product. However, since there were reportedly no VOCs or SVOCs detected in the samples collected from these wells, floating product is not likely to be an issue.

#### *Navy's Second Response:*

The Navy concurs with the comment that there are no VOC or SVOCs detected and that floating product is not likely to be an issue. However in semi-confined conditions the wells would still detect floating product if present. A sentence will be added to Section 3.2.4, first paragraph, second to last sentence to further clarify "After the screen was installed in the first encountered groundwater, the potentiometric surface stabilized above the top of the screen, due to the semi-confining conditions, at the level that was measured and used for the water level readings."

### RCRA Programs Branch Comment # 11

Section 3.2.4, 2004 Groundwater Investigation; Figure 3-4, Geologic Cross-Section A-A', and Figure 3-5, Geologic Cross-Section B-B': This section states that the saturated zone was encountered above the bedrock in wells MW-1, 4, and 5, and below the bedrock surface in wells MW-2 and MW-3. However, Figure 3-4: Geologic Cross-Section A-A', depicts saturated soils only at wells MW-2 and MW-3, and the "Groundwater Level Elevation" is located above the well screens. Clarify what is meant in the text by the "first encountered groundwater," versus the "initial saturated thickness of groundwater during drilling" and the "groundwater level elevation," as shown on the figures. Revise the figures and/or the text for consistency.

#### *Navy Response:*

The legend in Figure 3-4 will be edited as follows: Initial Saturated Thickness of Groundwater During Drilling will be changed to "First Encountered Groundwater During Drilling." "Potentiometric Surface" will be added after "Groundwater Level Elevation" in the legends of Figures 3-4 and 3-5 for further clarity.

### RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

### RCRA Programs Branch Comment # 12

Section 3.4, Conclusions and Recommendations: The recommendations address the issue of the landfill boundary being farther south than expected by stating that "One additional downgradient well should be installed once the southern boundary of the landfill has been identified." However, as discussed in the text, the northern boundary will require additional delineation as well. Therefore, MW-01 may not represent background conditions at

SWMU 1. One additional upgradient well may be required to the north of the landfill, depending on the results of any further delineation studies. Revise the text to account for this contingency.

**Navy Response:**

In Section 3.4, first paragraph, the last sentence states: "Further investigation will need to be accomplished to determine if monitoring well MW-01 is located north of the fill material." This sentence will be revised to read: "An additional geophysical investigation will need to be accomplished to further delineate the extent of the waste material which will determine if monitoring well MW-01 is located an acceptable distance north of the fill material to continue to be considered as the background well."

**RCRA Programs Branch (Enclosure 1) Comment**

The response to Specific Comment #7 seems to suggest that the determination of whether MW-01 can be considered a background well, and the need for additional soil sampling, will be hinged on the results of the up-coming background comparison. A decision to collect additional soil samples should also take the results of the geophysical survey into account. If the geophysical study suggests that the extent of the landfill has not been determined, additional soil samples may be necessary, even if the background comparison suggests otherwise, as pockets of contamination may not yet have been identified. Revise the text to indicate that the geophysical survey results will be considered in determining whether additional soil samples are needed.

**Navy's Second Response:**

In Section 3.4, first paragraph, the last sentence will be revised in the revised Draft Phase I RFI Report to read: "An additional geophysical investigation will need to be accomplished to further delineate the extent of the waste material, which will help determine if monitoring well MW-01 is located an acceptable distance north of the fill material (upgradient) and can continue to be considered as the background well. The additional geophysical landfill delineation will also help determine if additional soil samples are needed."

**RCRA Programs Branch Comment # 13**

Section 4.2, Field Investigation Results, Table 4-1, Surface Soil Analytical Data Detection Summary; and Appendix H, Analytical Data Summary, SWMU 2 -Surface Soil: Section 4.2 states that "Surface soil samples CGW2SS03, CGW2SS07, and CGW2SS09 were analyzed for additional parameters such as cyanide, sulfide, and dioxins...." However, data for these parameters are presented in Table 4-1 and in Appendix H for sample CGW2SS12 in addition to the three samples listed. Revise the text to include sample CGW2SS12.

**Navy Response:**

Sample CGW2SS12 will be included in the text in Section 4.2, fifth paragraph, as follows: "Surface soil samples CGW2SS03, CGW2SS07, CGW2SS09, and CGW2SS12 were analyzed for additional parameters such as cyanide, sulfide, and dioxins...."

### RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

### RCRA Programs Branch Comment #14

Section 4.2, Field Investigation Results and Figure 4-4, Surface and Subsurface Soil Sample Locations (Fuel Loading Area): It is stated in the second paragraph that the sample locations were "established based on the locations of existing concrete pads and interpretations of the ERI aerial photography...." However, it is not clear how, in particular, the location of the subsurface sample at the fuel loading area (near the fuel pipe supports) was selected. Provide additional detail regarding the site-selection process for the subsurface samples (e.g., location downgradient from the fuel pipe).

#### *Navy Response:*

The third paragraph in Section 4.2 states: "The other four surface soil samples were collected near the two fuel pipe supports in the concrete ramp area (two surface soil samples from each pipe support area), and a single subsurface soil sample was collected from the new soil boring at this location, as shown in Figure 4-4."

This sentence will be edited to read: "The other four surface soil samples were collected near the two fuel pipe supports in the concrete ramp area (two surface soil samples from each pipe support area), and a single subsurface soil sample was collected approximately 30 feet north of a pipe support. This location was determined to be the closest location to the pipe at which the drilling crew could safely execute the required work."

### RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

### RCRA Programs Branch Comment # 15

Section 7.1.1, SWMU 6: This section notes that stained surface soils and no release controls were observed during the 1995 RFA. Show the approximate location of the stained soils on a figure and describe the location in the text. Also indicate whether the June 2000 soil sampling program focused on the stained areas. If the stained areas were not sampled, consider conducting sampling in these areas or provide justification for not sampling the stained areas.

#### *Navy Response:*

Based on available information, the exact location of the staining cannot be determined. The 1995 RFA did not provide an accurate description or photographs of the location of the soil staining. Therefore, the June 2000 soil samples were collected surrounding the existing concrete pad where runoff to soil would most likely occur. During the June 2000 site visit, no

drums or waste materials were present at the site and no soil staining was observed. This information will be added to Section 7 of the Draft RFI Report.

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 16**

Section 9.2, Field Investigations: If the clay and plastic liner in the sewage treatment lagoons was at all visible, provide detail regarding the condition of the visible areas (e.g., any cracks or holes). A liner in poor condition could allow contaminants to migrate into the subsurface. If the liner was not visible, revise the text to include this information.

**Navy Response:**

The text in *Section 9.2.2, 2004 Soils Investigations*, will be revised as shown by the following underlined text: "The depth of the subsurface soil sample was dependent on the depth to liner and varied from one location to another. The black plastic liner was covered with soil within the lagoon areas. It was encountered at all 16 soil boring locations, identified by small pieces brought up in the hand auger cuttings throughout the four lagoon areas. Upon abandonment, the soil borings were capped at the liner depth with a cement grout to maintain liner integrity."

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 17**

Section 9.1, Site Description and 9.2.1, 2000 Soils and WWTP Effluent Investigations: Section 9.1 states that during February 2000 the sewage lagoon system was found to be overgrown and appeared inactive. This system was reportedly abandoned in October 2000, and a new system was built nearby. However, according to Section 9.2.1, a waste water effluent sample was collected in June 2000 during investigation of the old lagoon system. Provide additional information regarding the discharge point and treatment of the sewage throughout 2000, as well as the operational periods of the current, former, and any interim sewage treatment systems.

**Navy Response:**

The following text will be added after the third sentence of Section 9.2.1: "The raw wastewater discharge to the lagoon system originated from the Camp García area. This consisted of a steel pipe approximately 6 inches in diameter that runs into the northeastern most lagoon, approximately 80 ft from the berm as shown on Figure 9-3. An effluent sample was collected from a crack in the rusted pipe within the northeast lagoon. During the February 2000 preliminary field work it was noted that the lagoons were not active."

Based on further site history investigations, the following additional historical information will be added to Section 9.1: "The original sewage treatment lagoons for Camp García went into service in the early 1950s. The facility originally consisted of four unlined lagoons: two of them serving as equalization/treatment lagoons, and the other two providing polishing treatment. Effluent from the final two polishing lagoons was then chlorinated in a chlorine contact chamber and discharged to the sea near Bahia Tapon. In 1974, after the level of activity and associated domestic wastewater generation rate significantly decreased at Camp García, the treatment lagoon system was modified to make it a no-discharge system. These lagoons were being utilized as evaporation lagoons until the new no-discharge lagoon was constructed in September 2000 immediately northwest from the old lagoons. The new lagoon encompasses an area of approximately 40,000 square ft, and was constructed with a clay and plastic liner. The new lagoon was decommissioned when the property transfer occurred in May 2003. During the January 2004 field work effort it was noted that the new lagoon area was abandoned and no sign of the lagoon was present."

#### RCRA Programs Branch (Enclosure 1) Comment

The additional description is helpful, but certain points remain slightly unclear. Please confirm that the following understanding is correct: Based on the draft Phase I RFI and the above response, the original lagoons were found to be "inactive" as of February 2000. However, the lagoons and associated piping remained in place, and it appears that effluent continued to discharge to the lagoons via the receiving water pipeline, since an effluent sample was collected from a crack in the pipeline. Indicate whether the wastewater emanating from the crack in the pipe was discharging to the ground surface or discharging within the lined lagoon area, and describe the rate of discharge: Provide additional information regarding where the sampled effluent originated (e.g., discharge from process/sanitary/storm sewers, or groundwater discharge into a broken pipe). Indicate whether the cracked pipe has since been repaired, or if other measures have been taken to eliminate the discharge.

Also indicate how sewage is currently treated at the camp, since the new lagoon system has been abandoned.

#### Navy's Second Response:

Section 9.1, third paragraph reads "Inspection of the sewage lagoon system during the February 2000 field work revealed that the lagoon system was overgrown with vegetation and did not appear to be active." Section 9.2.1, third sentence reads "Additionally, one sample of the raw wastewater discharge to the lagoon system was collected." This sentence will be edited in the revised Draft Phase I RFI Report to read "Additionally one water sample was collected from a rusted pipe leading to the northeastern most lined basin (presumably the influent pipe to the facility). Water was dripping from a crack in the pipe, but its origin is unknown. During the 2004 investigation, no water was dripping from the rusted pipe."

As stated in the previous Navy Response "The new lagoon was decommissioned when the property transfer occurred in May 2003. Additional wording will be added to the revised Draft Phase I RFI Report that reads "The new lagoon was decommissioned when the property transfer occurred in May 2003 and all sanitary effluent was discontinued from the

Camp Garcia Area at that time. There is presently no known sewage treatment occurring at Camp Garcia."

**RCRA Programs Branch Comment # 18**

Section 9, SWMU 10 - Sewage Treatment Lagoons, Table 9-7, Subsurface Soil Analytical Data Detection Summary: The sample names shown in Table 9-7 are inconsistent with other areas of the report. Table 2-1 indicates that subsurface soil samples in SWMU 2 are named with the prefix "CGW 10SB." Appendix H also lists the 2004 SWMU 10 subsurface samples with the prefix "CGW10SB." However, Table 9-7 uses the prefix CGWWTPSB, which is the naming prefix used in 2000. Revise the sample names in Table 9-7 to be consistent with other sections of the report.

**Navy Response:**

Table 2-1 shows that sample names for SWMU 2 are named CGW2SB, not CGW10SB (the latter of which refers to SWMU 10 samples). The station IDs were named differently in the 2000 sampling effort. For SWMU 10 the prefix CGWWTP (Camp Garcia waste water treatment plant) was used in 2000. The new naming scheme for SWMU 10 became CGW10 (Camp Garcia SWMU 10) after the Master Work Plan, June 12, 2003 was finalized. These naming schemes from the past and the present have been used on the COCs, the laboratory documentation, the data validation, and for the database storage, and therefore need to remain unchanged for historical documentation purposes. However, a footnote will be added to all relevant tables to clarify the name association.

**RCRA Programs Branch (Enclosure 1) Comment**

Please disregard the "SWMU 2" reference in the comment above. This comment should have read "SWMU 10." The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 19**

Section 9, SWMU 10 -Sewage Treatment Lagoons, Table 9-7, Subsurface Soil Analytical Data Detection Summary: Summary data for sampling locations CGWWTPSB05 (CGW10SB05) through CGWWTPSB10 (CGW10SB10) have not been provided, although detections are indicated in the Appendix H tables. Revise the summary table to include these data.

**Navy Response:**

Table 9-7 includes all data presented in Appendix H. Please note that Table 9-7 presents both the 2000 data (CGWWTPSB01 to 04) and the 2004 data (CGW10SB05 to 10).

**RCRA Programs Branch (Enclosure 1) Comment**

Based on the response to this comment, it appears that the first page(s) of Table 9-7 are missing from the reviewer's copy of the document, however the data was reviewed based on the Appendix H tables. The comment has been adequately addressed. No additional response is necessary at this time.

#### **RCRA Programs Branch Comment # 20**

Section 9, SWMU 10 - Sewage Treatment Lagoons: This section does not provide detection summary tables for the raw wastewater discharge sample collected in 2000 (CGWWTPWW001), although the data provided in Appendix H indicates that contaminants were detected. Include a detection summary table that incorporates these data.

#### **Navy Response:**

A detection summary table (new Table 9-9) will be included in Section 9 of the report for sample CGWWTPWW001. The new Table 9-9 is provided in Attachment A.

#### **RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

#### **RCRA Programs Branch Comment # 21**

Section 13.4, Conclusions and Recommendations: Provide detail regarding the condition of the floor inside the building (e.g., any cracks or holes). A floor in poor condition could serve as a migration pathway for contaminants into the subsurface.

#### **Navy Response:**

During a subsequent site visit, it was noted that the floor of the Pump Station and Chlorination building had no cracks. It was observed, however, that a concrete sump structure was built in the southeast corner of the 10-ft-by-10-ft square building. This concrete sump structure allowed water to flow out the Chlorination building into the chlorine contact chambers. These observations will be included in Section 13.1.

#### **RCRA Programs Branch (Enclosure 1) Comment**

Due to the presence of the sump in the Chlorination building, there is a possibility that contamination was released to the subsurface. Provide additional information regarding the condition of the sump. Only surface soil samples have been collected at this AOC to date. It is recommended that subsurface soil and/or groundwater samples be collected from the vicinity of the sump.

Also, please provide additional information, if available regarding how the chlorination system was operated (in terms of contact chambers, conveyances, etc.).

#### **Navy's Second Response:**

The sump was used for treatment of sanitary waste water with chlorine and did not manage hazardous waste or hazardous constituents. Further, constituents identified in the surface soil samples are not likely attributable to past waste water treatment activity (i.e., are likely attributable to background). Therefore the recommendation to compare constituents identified to background levels is appropriate.

### RCRA Programs Branch Comment # 22

Section 14.2, Data Assessment of PI and PAOC Sites: According to this section, samples have been collected at PI 4, PI 5, PI 6, PI 7 (south), PI 8, PI 10, PI 11, PI 21, PI 22, PAOC U, PAOC V, and PAOC X. However, it is unclear when these samples were collected. Revise the text to indicate the dates of sample collection at each PI and PAOC site.

#### Navy Response:

The dates the samples were collected will be added to Section 14.

### RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

### RCRA Programs Branch Comment # 23

Section 14.2.1, PI Sites: It has been suggested by records and interviewees that PI 10 is possibly the site of a former sewage-treatment drying lagoon. Only surface soil samples were collected here, and only metals were detected above the screening criteria. However, this site is a good candidate for groundwater and subsurface sampling, particularly if the area is unlined. If present, VOCs would more likely be encountered in subsurface soils and groundwater than in surface soils. Also, if the area has been inactive for a long period, as suggested, heavy rains could have washed away surficial contamination. Consider conducting groundwater and subsurface sampling in this area and revise the text to indicate that this work will be undertaken in future studies. Alternatively, provide further discussion of the rationale behind collecting only surface soil samples.

#### Navy Response:

The three soil samples were collected from the center of the rectangular areas. There were no detections of non-inorganic constituents in the surface soil samples collected; therefore, the recommended action for this site is to compare the inorganic concentrations to background levels. The EBS states that the rectangular features could be a wastewater treatment plant leach field, sludge-drying lagoons, or tidal lagoons. No further detailed historical information exists for this site. Further information revealed that in the 1962 aerials, dark liquid (possibly water) was visible. In the 1964 aerials the impoundments were still visible, but there was no visible liquid and the impoundments were re-vegetating. In the 1994 aerials, the impoundments were fully re-vegetated.

### RCRA Programs Branch (Enclosure 1) Comment

Comparison of detected levels to background at PI 10 is a viable exercise for the data that have been collected to date. However, as discussed in the comment above, if this area was actually used for a leach field or lagoon in the 1960s, any contamination at this site is more likely to be found in the subsurface or groundwater, as opposed to in the surface soils. It is strongly recommended that subsurface soil and/or groundwater samples be collected from this area during the additional PI/PAOC investigations.

*Navy's Second Response:*

The following additional sampling will be proposed in the Draft Final Phase I RFI Work Plan for the Eight PI/PAOC Sites:

At the center of each of the rectangular areas, continuous soil sampling will be performed from the ground surface to groundwater or bedrock, whichever comes first. The soil column will be screened visually and using a PID for the presence of potential contamination. A subsurface soil sample will be collected at each location based on the following decision process: If non-native material is observed in the soil column, the subsurface soil sample will be collected from the 2-foot interval at the base of this material, just above the native material. If there is no visual evidence of the presence of non-native material, the subsurface soil sample will be collected from the 2-foot interval exhibiting the highest PID reading. If there are no PID readings above ambient air readings, the subsurface sample will be collected from the 2-foot interval just above groundwater or bedrock, whichever comes first.

If any rectangular area is found to be a concrete structure with a concrete base, the subsurface sample will be collected from the 2-foot interval just above the base of the structure. This sample will be used to characterize the material within the structure.

All soil samples will be analyzed for the same parameter list used during the Phase I RFI.

**RCRA Programs Branch Comment # 24**

Section 14.2.1, PI Sites: In the description of PI 11, it is noted that a diesel generator was observed outside the pump house. Indicate the fuel source for the generator, if known (e.g., stored nearby, trucked from remote location). Clarify whether a sample was collected from near the generator to address potential historic spills.

*Navy Response:*

The following sentences will be added as the second and third sentences in the third paragraph of the PI-11 section of Section 14.2.1 "Further information indicated that an AST served as the fuel source for the generator. There is no known information concerning the location of the AST for the generator."

**RCRA Programs Branch (Enclosure 1) Comment**

The comment has been adequately addressed. No additional response is necessary at this time.

**RCRA Programs Branch Comment # 25**

Section 14.2.1, PI Sites: The discussion regarding PI 11 states in the fourth paragraph that "A stained area was observed immediately under the outfall of an open pipe projecting from the side of the pump house." However, it is then stated on Page 14-22 that "No surface staining or stressed vegetation was observed." Revise the text to correct this apparent discrepancy.

*Navy Response:*

The stained soil was observed during the EBS as per the provided reference (NAVFACENGCOM, 2003). In *Section 14.2.1, PI-11*, the first sentence in the second to last paragraph stating "No surface staining or stressed vegetation was observed" will be deleted.

RCRA Programs Branch (Enclosure 1) Comment

The comment has been adequately addressed. No additional response is necessary at this time.

RCRA Programs Branch Comment # 26

Section 14.2.1, PI Sites: Clarify why the PI-12 site was inaccessible. Indicate whether the structures discussed are currently present. If the structures are present, this area may require further inspection.

*Navy Response:*

*Section 14.2.1, PI 12*, will be edited to include: "An effort was made to locate Site PI-12 during the CH2M HILL site reconnaissance in September 2001, and during the EBS in December 2002 through February 2003. Both efforts were unsuccessful due to the dense mesquite shrubs and the distance from access roads (610 meters or 2,000 ft). However, during the EBS helicopter overflight this site was noted as a cleared area. Aerial photographic analysis of Site PI-12 was done by ERI in August 2000 and identified the site as light toned material in a cleared area."

This site exists in the 1936 aerials which predate any Navy activities in this area. The history of this site indicated that it was a private residence and a wind-driven water well, which does not suggest the need for further evaluation.

RCRA Programs Branch (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses. However, EPA is not satisfied that a No Further Action determination is appropriate for this PAOC without any analytical data having been collected at this site. Therefore, in addition to the revised Phase I RFI, please include a sampling program for this PAOC to confirm whether or not releases are present.

*Navy's Second Response:*

The aerial survey that was conducted in August 2000 did not distinguish between areas disturbed as a result of hazardous waste/material handling, storage, or disposal activities and areas unrelated to those activities. Therefore, just because an area was identified in the aerial survey, does not mean that activity at that area resulted in potential release of hazardous waste/material. Following the aerial survey, this area was identified as the location of a former private residence and wind-driven production well, neither of which warrant investigation, nor further evaluation under RCRA or CERCLA.

### RCRA Programs Branch Comment # 27

Section 14.2.1, PI Sites: The description of PI-21 mentions pits containing "discolored liquid (brown, green)" and "pipes protruding from the embankment." Provide additional information regarding the discolored liquid (e.g., depth, color, odor, sheen, size, etc.) and the pipes (e.g., diameter, material of construction, purpose, etc.).

#### Navy Response:

Aerial photography showed the discolored liquid (which could have been water) in photos from 1959 through the mid-1970s, and 1994. No additional information is available.

### RCRA Programs Branch (Enclosure 1) Comment

Considering the lack of information available regarding PI 21, and the historical reports of piping and stained soils, it is strongly recommended that surface soil, subsurface soil, and groundwater samples be collected from this area during the additional PI/PAOC investigations. Therefore, in addition to the revised Phase I RFI, please include a sampling program for this PAOC to confirm whether or not releases are present.

#### Navy's Second Response:

As described in the Draft Phase I RFI Report (page 14-24 through 14-26), surface soil samples were collected from the area of stained soil, where the potential for contamination is likely highest. The data showed that VOCs were detected orders of magnitude below human health and ecological screening criteria. This suggests that any discharge from the pipes did not result in unacceptable levels of constituents in the surrounding soil. However, as the Draft Report recommends, it is proposed that the inorganics concentrations detected be compared to the data collected during the Background Investigation to complete the assessment of potential past releases. If this comparison suggests past discharges from the pipe resulted in elevated (above background) inorganics concentrations in soil, additional sampling may be proposed (if necessary to adequately delineate the extent of contamination and assess potential risks).

### RCRA Programs Branch Comment # 28

Section 14.2.1, PI Sites: An empty drum, "bulging at both ends and...close to rupturing," was reportedly found at PI 22. Provide any additional available information regarding the former contents of this drum. It is also unclear whether one of the three drums found was intact, including contents. Provide any additional information regarding residual materials remaining within any of the drums.

#### Navy Response:

The EBS stated that the three drums were empty in the first paragraph of Section PI 22. The text in the third paragraph will be modified as follows: "One of the three empty drums was labeled as 'DARACEM 19' and had a tear on the side. The other two drums, one of which was partially buried, were not labeled."

### RCRA Programs Branch (Enclosure 1) Comment

DARACEM 19 is a naphthalene sulfonate. Please confirm that naphthalene was included in the sample analysis. Also, please include that information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

#### Navy's Second Response:

A sentence will be added to PI-22, page 14-27 of the revised Draft Phase I RFI Report that states that "DARACEM 19 is a naphthalene sulfonate formaldehyde copolymer (used as a water reducer in cement mixtures). Soil samples were analyzed for SVOCs which included naphthalene. No naphthalene was detected in the samples."

### RCRA Programs Branch Comment # 29

Section 14.2.1, PI Sites: Soil samples were collected at PI 22. However, it is unclear if these samples were all surface soil samples, or if some were collected at depth. It is also not stated exactly where the samples were collected or how the locations were selected, with the exception of PI-22-4. It is not possible to determine from Figure 14-9 where the samples were collected. Revise the text to include the depth of the collected samples, all of the sample locations, and the rationale in selecting these locations.

#### Navy Response:

Additional text provided in the EBS will be added which states: "Four surface soil samples were collected from beneath the drums and in low-lying areas near the automotive parts and storage pad and analyzed for Appendix IX RCRA constituents, and TPH-DRO, and TPH-GRO. All four samples were collected from 0 to 6 inches below ground surface (bls) using stainless steel scoops and trowels."

### RCRA Programs Branch (Enclosure 1) Comment

Based on the text on page 14-27 of Section 14.2.2, PI Sites and Figure 14-9: PI 22 Site Map and Sampling Locations, there was a total of four samples collected at PI 22. Sample PI22-4 was apparently collected about 50 meters east of the other three samples, near a rubber mat. Revise the text in the above response to account for this apparent discrepancy. Please also include that information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

#### Navy's Second Response:

The additional text provided in the EBS, incorporating the suggested revision above, will be added to the revised Draft Phase I RFI Report which states: "Three surface soil samples were collected from beneath the drums and in low-lying areas near the automotive parts and storage pad and one surface soil sample (PI22-4) was collected adjacent to a rubber mat located approximately 150 feet east of the other three samples. All four surface soil samples were analyzed for Appendix IX RCRA constituents, and TPH-DRO, and TPH-GRO and were collected from 0 to 6 inches below ground surface (bls) using stainless steel scoops and trowels."

**RCRA Programs Branch Comment # 30**

Section 14.2.2, PAOC Sites: The sampling rationale for the PAOCs is generally unclear. Provide additional detail regarding how specific locations were selected.

**Navy Response:**

Three PAOC sites had sampling conducted PAOC U, PAOC V, and PAOC X. Additional text will be added as follows:

**PAOC U:** "Four surface soil samples were collected in the vicinity of the building and areas of stained soil. Samples were analyzed for Appendix IX RCRA constituents, TPH-DRO and TPH-GRO."

**PAOC V:** "Two surface soil samples were collected in the storage area. Samples were analyzed for PCBs."

**PAOC X:** "Four surface soil samples were collected in the vicinity of the visible construction debris. Samples were analyzed for Appendix IX RCRA constituents, TPH-DRO, and TPH-GRO."

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

**Navy's Second Response:**

The additional text above will be added to the revised Draft Phase I RFI Report.

**RCRA Programs Branch Comment # 31**

Section 14.2.2, PAOC Sites: The discussions of PAOCs I, M, N, O, Q, R, T, and V indicate that there are, or were, boilers, power plants, fuel farms, fuel facilities, and heat plants located at these areas. Provide additional detail regarding the types and quantities of fuels used and stored in these areas.

**Navy Response:**

After additional searches and interviews, further information is available for following sites:

**PAOC I:** This was a former power plant and mechanics shop. This building (number 401) housed a 50kW diesel generator with a built-in fuel tank of unknown size. There is no historical information suggesting past releases. Light maintenance may have been conducted at the site but could not be verified.

**PAOC M:** This site, and adjacent site PAOC N, were the fuel facility department. PAOC M (Building 4503) was the administration office and PAOC N was the filling station with three ASTs (numbered 4504, 4505, and 4506). The tank installed in 2000 contained 2,000 gallons of diesel and 1,000 gallons of mogas. The history of the three old ASTs is unknown, but they are assumed to contain similar fuels.

PAOCs O, Q, and R: These sites were listed on the demolition list as boiler house and heat plant buildings. However, further investigations reveal that these sites were buildings that potentially housed small hot water boilers for specific sites. No further information exists describing the fuel source at these facilities.

PAOC T: This site was the Grounds Contractors storage shed (Building 305). Tools and machinery were stored in this shed. There is no history of fuels or chemicals being stored onsite. Light maintenance may have been conducted at the site but cannot be verified.

PAOC V was a site that temporarily stored a leaking transformer. There is no fuel source for this site.

#### RCRA Programs Branch (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses. However, EPA is not satisfied that a No Further Action determination is appropriate for all of those PAOCs without any analytical data having been collected at the sites of those PAOCs. Therefore, in addition to the revised Phase I RFI, please include a sampling program for these PAOCs to confirm whether or not releases are present.

#### Navy's Second Response:

The information in the original Navy response will be included in the revised Draft Phase I RFI Report.

It is emphasized here that PIs and PAOCs were not identified based on known or suspected releases of hazardous waste or hazardous constituents. They were identified as a conservative measure to ensure that an appropriate level of consideration and evaluation be given to determine if investigation was warranted. That is, they were identified to ensure sites that warranted investigation were not inadvertently omitted. As stated previously, the aerial photograph analysis identified areas that showed disturbance, not necessarily where hazardous material was stored, managed, or disposed of, or releases took place. Therefore, these sites do not necessarily require investigation. However, their identification ensured that, at a minimum, historical information was reviewed and evaluated to make this determination.

Because of the probable nature of activity at a power plant and former mechanics shop, there is potential for releases of hazardous constituents that warrant investigation. A sampling program PAOC I, appropriate for a release assessment, will be included in the revised Phase I RFI Work Plan for the PI/PAOC sites. However, prior to preparing the revised Phase I RFI Work Plan, as agreed upon by EPA, a meeting will be held among the regulatory agencies and Navy to concur upon the proposed approach in order to expedite the work planning process.

As stated above, PAOC M was the administrative building for the fuel facility department and, thus, doesn't warrant investigation. POAC N, which is the filling station where the fuel tanks were located, is proposed for investigation in the Draft Phase I RFI Work Plan for the Eight PI/PAOC Sites (CH2M HILL, November 2004).

PAOCs O, Q, and R were boilers, and no evidence of hazardous waste, material, petroleum, or munitions storage or disposal was observed during the site inspection. Further, based on

the nature and use of the units, these types of materials (other than petroleum) would not be anticipated to be present. Therefore, no further action is recommended.

POAC T was a storage shed, primarily for tools. There is no history of fuels or chemicals being stored at PAOC T. Therefore, no further action is proposed for this site.

Analytical data have been collected at PAOC V, as provided in the Draft Phase I RFI Report (page 14-35). Soil samples were collected in the former transformer storage area. No PCBs were detected above human health or ecological screening criteria. Therefore, no further action is proposed for PAOC V.

#### **RCRA Programs Branch Comment # 32**

Section 14.2.2, PAOC Sites: PAOC I was reportedly a mechanic's shop, and the structure is still present. The text notes that there was no evidence of petroleum during the 2001 visual site inspection (VSI). However, there was likely petroleum or other fuels stored here while the shop was operational. Spills or other releases may typically be associated with mechanic's shops. Consider sampling in this area, or provide additional justification for why No Further Action is required.

#### **Navy Response:**

Please see Response to Comment 31 above. There have been no indications of releases at this site.

#### **RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses. However, EPA is not satisfied that a No Further Action determination is appropriate for this PAOC without any analytical data having been collected at the site. Therefore, in addition to the revised Phase I RFI, please include a sampling program for this PAOC to confirm whether or not releases are present.

#### **Navy's Second Response:**

Please see response to RCRA Programs Branch comment #31 above. A sampling program will be included for PAOC I in the revised Phase I RFI Work Plan for the PI/PAOC sites, pending discussion and concurrence among regulatory agency and Navy representatives.

#### **RCRA Programs Branch Comment # 33**

Section 14.2.2, PAOC Sites: PAOC M was reportedly a fuel facility. The text notes that there was no evidence of petroleum during the VSI. However, based on the unit description there was likely petroleum or other fuels stored here prior to demolition. Spills or other releases are typically associated with fuel storage areas. Consider sampling in this area, or provide additional justification for why No Further Action is required.

*Navy Response:*

See Response to Comment 31 above. In addition, the EBS 2003 site description states that PAOC M included a former dispatch office and sleeping quarters. There is no known information on the size, contents, or status of the ASTs at PAOC N. As stated in the Executive Summary and Section 14, site PAOC M is recommended for NFA because no contamination source is likely for the site, and PAOC N is recommended for a Phase I RFI.

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses. However, EPA is not satisfied that a No Further Action determination is appropriate for this PAOC without any analytical data having been collected at the site. Therefore, in addition to the revised Phase I RFI, please include a sampling program for this PAOC to confirm whether or not releases are present.

*Navy's Second Response:*

Please see response to RCRA Programs Branch comment #31 above.

**RCRA Programs Branch Comment # 34**

Section 14.2.2, PAOC Sites: A former water treatment facility pump house was located at PAOC P. No evidence of petroleum was observed during the VSI. Provide additional information on the power source for the pump house (e.g., electricity, petroleum) and where any associated fuel was stored.

*Navy Response:*

There is no known information regarding the power source for the water treatment facility pump house. Based on the power source from site PI-6 (photos in Section 14), which is also a pump house, it is assumed that PAOC P was powered by electricity.

**RCRA Programs Branch (Enclosure 1) Comment**

Please indicate whether electricity is wired to this area or a generator was likely used. If a generator was used, another fuel source may have been stored in the area.

*Navy's Second Response:*

The water treatment facility pump house (PAOC P) was located within the Camp Garcia area. The power house (PAOC S) supplied electricity to the Camp Garcia area. The power house was the likely source of power to the water treatment facility pump house.

**RCRA Programs Branch Comment # 35**

Section 14.2.2, PAOC Sites: The text reports that PAOC T was formerly used by a public works grounds contractor for storage. Provide additional information regarding the type of work performed by the contractor, and what was stored in the shed (e.g., power tools, pesticides).

**Navy Response:**

**Please see Response to Comment 31.**

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses. However, EPA is not satisfied that a No Further Action determination is appropriate for this PAOC without any analytical data having been collected at the site. Therefore, in addition to the revised Phase I RFI, please include a sampling program for this PAOC to confirm whether or not releases are present.

**Navy's Second Response:**

**Please see response to RCRA Programs Branch comment #31 above. No further action is proposed because there is no known history of fuel or chemical storage at the storage shed.**

**RCRA Programs Branch Comment # 36**

Section 14.2.2, PAOC Sites: The discussion of PAOC S mentions a "POL pipeline." Define POL here and add the definition to the List of Acronyms.

**Navy Response:**

**POL refers to petroleum, oils, and lubricants, and will be defined in the text in Section 14.2.2 and in the acronym list.**

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses. However, EPA is not satisfied that a No Further Action determination is appropriate for this PAOC without any analytical data having been collected at the site. Therefore, in addition to the revised Phase I RFI, please include a sampling program for this PAOC to confirm whether or not releases are present.

**Navy's Second Response:**

**POL will be defined in the revised Draft Phase I RFI Report as stated in the original response. PAOC S was included in the Draft Phase I RFI Work Plan for Eight PI/PAOC Sites (CH2M HILL, December 2004).**

**RCRA Programs Branch Comment # 37**

Section 14.2.2, PAOC Sites: An area of "pooled, discolored water" was reportedly observed at PAOC W. However, No Further Action has been recommended for this PAOC. Provide additional detail regarding the pool of discolored water (e.g., depth, color, odor, sheen, size, source, etc.) and justify a recommendation of No Further Action.

*Navy Response:*

This site was identified during the EBS by interviews with senior members of the Camp García public works department and other persons familiar with the history of the PAOC W site. This pooled water consisted of discolored water less than 1 ft deep. The members had no knowledge of a known source or release. The following sentence will be added before the last sentence: "The pool was presumed by the EBS Team to be stagnant water and was not sampled."

RCRA Programs Branch (Enclosure 1) Comment

While it is possible that the pool was stagnant water, additional site description could help justify the rationale for not collecting a sample. Please indicate whether the pool is a permanent or intermittent feature (such as runoff collected in a low-lying area). Please include this information in the revised Phase I RFI report, to be submitted to include the information in your Responses. However, EPA is not satisfied that a No Further Action determination is appropriate for this PAOC without any analytical data having been collected at the site. Therefore, in addition to the revised Phase I RFI, please include a sampling program for this PAOC to confirm whether or not releases are present.

*Navy's Second Response:*

CH2M HILL personnel visited site PAOC W on Friday May 13, 2005. The area appears to be located in the vicinity of the metal bridge north of Blue Beach. The area to the north consists of a stagnant body of water that appears to collect water (i.e., precipitation) through drainage from the north. Blue Beach blocked the flow of this water body preventing it from flowing to the ocean. The stagnant water color was brown. Many branches, trees, and organic material were observed in the water. This additional information will be added to the revised Draft Phase I RFI Report. Based on this information, no further action is proposed for PAOC W.

RCRA Programs Branch Comment # 38

Appendix A, Soil Boring Logs: Organic vapor screening results are provided for some soil borings, but not for others. Provide PID data for all the soil borings, if available.

*Navy Response:*

All OVM readings taken are included in Appendix A. The OVM readings were collected at all locations specified in the Phase I RFI Site-Specific Work Plan. In some instances OVM headspace readings were collected when they were not required, such as several surface soil samples in SWMU 1. Also, some soil boring logs were included from previously completed work during the Phase I Environmental Assessment in June 2000. The site-specific work plan for that work (June 2000) did not specify OVM headspace readings to be collected. Also, the Final Master Work Plan, June 12, 2003, Master Field Sampling Plan, *Section 2.6, Surface Soil Sampling*, and *Section 2.8, Subsurface Soil Sampling*, do not require OVM headspace readings.

RCRA Programs Branch (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

Navy's Second Response:

A sentence will be added to Section 2.7, second paragraph, eleventh sentence: "Appendix A includes soil boring logs with FID and OVM headspace readings collected in the field."

RCRA Programs Branch Comment # 39

Appendix H, Analytical Data Summary: The analytical data collected from the Navy was compared against the split samples analyzed by the Tech Law-designated laboratories (Pace Analytical and GPL), and the EPA DESA laboratory. Most of the analytical results were comparable (defined as within two times the detection limit when detected by one laboratory but reported as nondetected by another). The table below provides the instances where a compound was detected above the detection limit by one laboratory, but not by another, as well as the few instances where the split sample results were significantly different (indicated by bold text). This information should be taken into account when comparing data to background concentrations or standards. Include a discussion in the text of how the split sample results will be taken into account.

Sample Name(Navy/Split)	Compound	Navy	Pace / GPL	EPA DESA
CGW1SS33-RO1 / CGW15533-ROI	Perchlorate	100 U $\mu\text{g}/\text{kg}$	140 J $\mu\text{g}/\text{kg}$	NA
CGW1SS35-RO1 / CGW15535-ROI	Perchlorate	104 U $\mu\text{g}/\text{kg}$	140 J $\mu\text{g}/\text{kg}$	NA
<b>CGW2SS07-R01 / CGW2SS07-R01</b>	<b>2-Hexanone</b>	<b>12 U <math>\mu\text{g}/\text{kg}</math></b>	<b>23 J <math>\mu\text{g}/\text{kg}</math></b>	<b>NA</b>
CGW5SS01-R01 / CGW5SS01-ROI	1,2,3,7,8-PECDD	1 U $\text{pg}/\text{g}$	1.658 $\text{ng}/\text{kg}$	NA
CGW8SS02-R01 / CGW8SS02-RO 1	2,3,7,8-TCDD	1 U $\text{pg}/\text{g}$	1.539 $\text{ng}/\text{kg}$	NA
CGW10SS06-ROI / CGW10SS06-ROI	Cyanide	0.16 U $\text{mg}/\text{kg}$	NA	0.18 $\text{mg}/\text{kg}$
<b>CGW10SS07-R01 / CGW10SS07-ROI</b>	<b>2,4-Dinitrotoluene</b>	<b>140 U <math>\mu\text{g}/\text{kg}</math></b>	<b>630 <math>\mu\text{g}/\text{kg}</math></b>	<b>NA</b>
	<b>2,6-Dinitrotoluene</b>	<b>140 U <math>\mu\text{g}/\text{kg}</math></b>	<b>260 <math>\mu\text{g}/\text{kg}</math></b>	<b>NA</b>

NA = Not analyzed

Navy Response:

Currently, the Navy does not have all the information concerning the results of the split samples collected by the EPA. If all split sample data collected by Tech Law-designated laboratories (Pace Analytical and GPL), and the EPA DESA laboratory and all data validation information are sent to the Navy for review, these data can be evaluated for QA/QC procedures used. If the data reviewed are found to be valid and usable, then the most

conservative analytical results (the higher of the sample and its associated split sample) will be utilized in the risk assessment.

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

**Navy's Second Response:**

The following paragraph will be added to the Executive Summary, Investigation Approach in the revised Draft Phase I RFI Report: "Currently, the Navy does not have all the information concerning the results of the split samples collected by the EPA. If all split sample data collected by Tech Law-designated laboratories (Pace Analytical and GPL), and the EPA DESA laboratory and all data validation information are sent to the Navy for review, these data can be evaluated for QA/QC procedures used. If the data reviewed are found to be valid and usable, then the most conservative analytical results (the higher of the sample and its associated split sample) will be utilized in the risk assessment."

The Navy requests that PREQB and EPA submit a QA/QC summary report for the split samples collected during the Phase I RFI. These findings would be beneficial for inclusion in the revised Draft Phase I RFI Report.

**RCRA Programs Branch Comment # 40**

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 3, Calibration, last paragraph: In the last sentence, change the word "calibration" to the phrase "second column confirmation."

**Navy Response:**

The above mentioned edit will be incorporated into the DQE.

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

**Navy's Second Response:**

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 3, Calibration, last paragraph: the last sentence will be edited to read "No data were rejected due to second column confirmation results."

**RCRA Programs Branch Comment # 41**

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 6, Field Duplicate Sample Results, third paragraph: In the third sentence, change "seven soil borings, one surface soil" to "seven surface soils, one soil boring." (See Exhibit 8.)

*Navy Response:*

The text will be edited as stated above.

RCRA Programs Branch (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

*Navy's Second Response:*

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 6, Field Duplicate Sample Results, third paragraph: the third sentence will be edited to read: "The exceptions were limited to seven surface soils, one soil boring, and one water sample."

RCRA Programs Branch Comment # 42

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 7, Laboratory Method Accuracy, second paragraph: The fifth sentence states that the validator rejected those (semivolatile) analytes that were not spiked into the LCS. However, Method 8270C requires that the LCS contain only those eleven analytes present in the matrix spike solution. Those analytes should not have been rejected unless:

1. There was a project-specific requirement that the laboratory should include all 8270C analytes in the LCS solution, or
2. The EPA Region II Checklist, which was used as the guidance document for the data validation by CH2M HILL, requires rejection of analytes which are not spiked into the LCS for Method 8270C.

Revise the text to provide justification for rejection of these results. Also revise the text to include justification for rejection of the other analytes, as this has not been provided in the text.

*Navy Response:*

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 7, Laboratory Method Accuracy, second paragraph, fifth sentence will be revised to read: "The semi-volatile data reveal that 842 records were qualified as rejected data. These records reflect that the spike recoveries were below the laboratory's lower control limit. Use of EPA Region II guidance requires that this data be rejected rather than estimated in associated samples."

A review of the 3<sup>rd</sup> party data validation results as "percent completeness" by method and matrix reveals that all project DQOs and completeness goals were not only met but exceeded. The completeness statistics indicate that the Navy CLEAN BOA-approved laboratory provided excellent analytical services to the project team and our client.

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

**Navy's Second Response:**

The revised sentence as stated above will be added to *Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE)*, Page 7, Laboratory Method Accuracy, second paragraph, fifth sentence.

After the first sentence of the third paragraph of that section, the above mentioned text will be added: "A review of the 3<sup>rd</sup> party data validation results as "percent completeness" by method and matrix reveals that all project DQOs and completeness goals were not only met but exceeded."

**RCRA Programs Branch Comment # 43**

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 8, PARCCs-Completeness: In the second sentence, change "1588/39833" to "38245/39833." Completeness is the number of non-rejects divided by the total number of data points. The percent completeness (96%) is still correct. However, the percent completeness would increase to 98% if non-spiked analytes in the LCS were not rejected.

**Navy Response:**

1588/39833 will be changed to 38245/39833.

**RCRA Programs Branch (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

**Navy's Second Response:**

1588/39833 will be changed to 38245/39833 in the revised Draft Phase I RFI Report.

**ERRATA Comment # 1**

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 3, Calibration, last paragraph: In the fourth sentence, change the word "to" to "two."

**Navy Response:**

The above mentioned edit will be incorporated.

**ERRATA (Enclosure 1) Comment**

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

*Navy's Second Response:*

The above mentioned edit will be incorporated in the revised Draft Phase I RFI Report.

ERRATA Comment # 2

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 5, Potential Field Sampling and Laboratory Contamination, second paragraph on page: Change "DDT" to "DDD" in both sentences. (See Exhibit 5, Page 2 and Exhibit 4, Page 1.)

*Navy Response:*

DDT will be changed to DDD.

ERRATA (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

*Navy's Second Response:*

DDT will be changed to DDD in both sentences in the revised Draft Phase I RFI Report.

ERRATA Comment # 3

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 6, Matrix Spike/Matrix Spike Duplicate Precision and Accuracy, third paragraph: In the last sentence, change the word "date" to "data."

*Navy Response:*

The above mentioned edit will be incorporated.

ERRATA (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

*Navy's Second Response:*

The above mentioned edit will be incorporated in the revised Draft Phase I RFI Report.

ERRATA Comment # 4

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Page 7, Dissolved vs. Total Metals, first paragraph: Please rewrite the last two sentences of this paragraph. Although the dissolved mercury result was a detected result, and the total mercury result was a non-detect, the two mercury results (total and dissolved) were less than the reporting limit of 0.2 µg/L. (See Exhibit 10).

*Navy Response:*

The last two sentences will be edited to read: "A single dissolved mercury result was greater than the associated total mercury result, which was a non-detect. Both mercury results (total and dissolved) were less than the reporting limit of 0.2 µg/L."

ERRATA (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

*Navy's Second Response:*

The above mentioned edits will be incorporated in the revised Draft Phase I RFI Report.

ERRATA Comment # 5

Appendix I, Vieques Former AFWTF Phase I RCRA RFI Data Quality Evaluation (DQE), Exhibit 4 - Data Qualification Changed by Validations: The first three rows on the first page are repeated as the first three rows on all the remaining pages. For clarity, please correct this formatting error.

*Navy Response:*

The above mentioned edits will be incorporated.

ERRATA (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

*Navy's Second Response:*

The above mentioned edits will be incorporated in the revised Draft Phase I RFI Report.

**CERCLA COMMENTS ATLANTIC FLEET WEAPONS TRAINING FACILITY DRAFT RFI  
PHASE I REPORT, VIEQUES, PUERTO RICO**

**GENERAL COMMENTS**

EPA CERCLA Comment # 1

Many of the subsites are recommended for No Further Action (NFA) even though no analytical data exist for these subsites. Subsites in this category include PI 5, PI 12, PI 20, PI 23, PAOC I (identified as the location of a "former power plant and mechanics shop"), PAOC M (identified as the location of a fuel facility), PAOC O (identified as the location of a boiler room in a heat plant building), PAOC P, PAOC Q, PAOC R, PAOC T, and PAOC W. It is difficult to agree with the recommendation for NFA with no empirical data for the site. It is recommended that confirmatory surface and subsurface soil samples be collected from

these areas to reinforce the anecdotal information that no activities occurred in these areas and that no contamination exists.

*Navy Response:*

Interviews with former employees at Camp García, examination of historical aerial photographs, and observations from site inspections did not provide evidence of waste disposal activities or contaminant releases at these sites.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

This response does not adequately address our concerns; it is strongly recommended that samples be collected in order to determine whether or not contaminants in exceedance of screening values are present and associated with unacceptable risk. Since the result of the no further action determination is that any type of exposure or redevelopment may occur at these sites, some amount of empirical data, agreed to by all agencies, should be collected for evaluation to support the anecdotal and qualitative information previously presented.

*Navy's Second Response:*

Please see the response to RCRA Programs Branch Comment #31.

Additionally, the aerial survey that was conducted in August 2000 did not distinguish between areas disturbed as a result of hazardous waste/material handling, storage, or disposal activities and areas unrelated to those activities. Therefore, just because an area was identified in the aerial survey, does not mean that activity there resulted in potential release of hazardous waste/material. Following the aerial survey, PI 12 was identified as the location of a former private residence and wind-driven production well, neither of which warrant investigation, nor further evaluation under RCRA or CERCLA. Similarly, there is no information to suggest that an observation point and quarry (PI 20), an observation point and water production well (PI 23), and surface water drainage from a runway warrant investigation.

PAOC P was a water treatment pump house presumably powered by electricity from the Camp Garcia powerhouse. CH2M HILL personnel visited PAOC W on Friday May 13, 2005. The area appears to be located in the vicinity of the metal bridge north of Blue Beach. The area to the north consists of a stagnant body of water that appears to collect water through drainage (i.e., precipitation) from the north. Blue Beach blocked the flow of this water body preventing it from flowing to the ocean. The stagnant water color was brown. Many branches, trees, and organic material were observed in the water. Based on this information, neither AOC P nor PAOC W warrant investigation.

EPA CERCLA Comment # 2

Many of the subsites are recommended for NFA based on very limited site data, typically surface soil samples from 0 to 6 inches. It is inappropriate to assume that a subsite is fully characterized based on this limited data set. Subsites in this category include PAOC V

(identified as the location of a "storage area of a leaking transformer"). It is recommended that additional surface and subsurface soil samples be collected from these areas to more clearly show that there is no contamination and that these sites are appropriate for NFA.

**Navy Response:**

Site sampling and characterization was performed, surface soil samples were collected initially to assess if contaminants were present. If contamination is detected above PRG or ecological screening criteria, then additional investigation is proposed. The sites that have been recommended for no further action had no constituents detected at concentrations above the aforementioned screening criteria. At PAOC V, two surface soil samples were collected from this small storage area at locations most likely affected by "a leaking transformer." As noted above, neither sample contained constituents at levels exceeding the screening criteria.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

This response does not adequately address our concerns; subsurface soil sampling should be considered to adequately characterize the subsites. While it may be appropriate in some instances for determinations for no further action to be reached after evaluation only of surface soil data, it is premature to make this determination for sites at which historical information or current site conditions indicate a potential release, as is the case for PAOC V, which is where the leaking transformer was stored for some time. Although the paucity of surface soil samples may not indicate contaminant concentrations in excess of appropriate human health risk-based screening concentrations, additional samples - including subsurface soil samples - should be collected to ensure reworking of the surface soils has not occurred, that current site conditions have been adequately and thoroughly characterized, and that the area is in fact an appropriate candidate for no further action.

**Navy Response:**

Sampling at PAOC V was done in a manner consistent with a release assessment. PCBs are relatively immobile; therefore, surface soil sampling is appropriate to assess whether these constituents were released from the former transformers. Further, the samples were collected in the area where past releases were most likely to occur. As stated above, only one PCB was detected, and its concentration was an order of magnitude below the human health screening criterion and three orders of magnitude below the ecological screening criterion. Therefore, it is proposed that no further action is warranted for this site.

**EPA CERCLA Comment # 3**

Many of the subsites are recommended for evaluation under the Munitions Response Program. A more complete description of this evaluation is necessary before this recommendation can be fully considered. For example, is there a chemical or environmental assessment for the MRP program? In addition to any assessment for munitions, a chemical

or environmental assessment should be performed at each of these subsites so that appropriate action may be taken.

*Navy Response:*

Clarification will be made in the Executive Summary, Section 14, and elsewhere in the RFI Report that environmental sites such as some of the PI sites and PAOC sites that are located within potential munition areas will be investigated under the Munitions Response Program initially to prioritize the sites for future munitions response actions. Once the explosive safety issues have been addressed at each of these sites, the need for environmental investigations will be evaluated, based on the type and number of munitions items that are identified. Should environmental investigations be warranted, a work plan(s) will be prepared for regulatory review that describes the proposed investigations in accordance with statutory requirements of Section 3008(h) of RCRA and 40 CFR 264.101, and/or CERCLA, as appropriate.

EPA CERCLA(Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

The comment response states that the Munitions Response Program has effectively been implemented, the need for additional environmental investigation will be evaluated based on the number and type of munitions items that have been identified in each area. What is the process that will be followed to determine if any additional environmental investigation is necessary? What criteria will be considered in this process? The comment response should present a more thorough discussion of how these sites will be evaluated for environmental concerns. It appears that if no munitions are identified than an environmental investigation will not be conducted. This may not be protective. Further, information needs to be provided regarding how the type and number of munitions items identified will impact the environmental investigation to be performed.

*Navy's Second Response:*

The Navy is in the process of developing a prioritization protocol for munitions response actions at the munitions response sites (MRSs) on Vieques. The results of this prioritization protocol will be presented in the Expanded Range Assessment / Phase I Site Inspection Report that is anticipated to be submitted by the end of October 2005. In general, once the munitions that pose an explosive safety risk at a site have been removed, the Navy will discuss with the regulatory agencies the need for and, if necessary, the scope for environmental investigations. In addition, discussions will be held with the regulatory agencies to help prioritize sites requiring environmental investigations.

EPA CERCLA Comment # 4

Many of the subsites are recommended for a comparison to background data. This approach is inconsistent with CERCLA guidance and is also inconsistent with the approach used on subsites in the NASD area. Media-specific contaminant concentrations that exceed risk-based screening values should be evaluated quantitatively in a risk assessment. Then, a

comparison to background values may be performed, and the results of this assessment would be discussed in a risk management decision. Also, please note that current EPA guidance recommends that any comparison to background is done on using appropriate statistical tests to compare data from onsite sampling with data from background sampling. Therefore, a statistically appropriate number of samples should be collected so that the statistical comparison to background can be performed.

**Navy Response:**

For clarification, background data are used in the nature and extent evaluation to help distinguish between site-related and background constituent levels. Background data are not used to screen out data prior to the risk assessments. Risk assessments will be completed on all data that exceed PRGs, including those constituents that are within the range of background concentrations. Background data will not be used to screen out data to select constituents of potential concern (COPCs). Once the risk assessment is completed, any inorganic constituent concentrations contributing to unacceptable risks, or with HI values above acceptable criteria, will be compared to the background data. Based on this comparison, risk management decisions will then be made to assess if any further actions (i.e., additional investigations, additional statistical analyses, remedial actions, institutional controls) are recommended to protect human health or the environment.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response. This response should be incorporated into the revised text of the RFI report.

**Navy's Second Response:**

The Navy Response listed above will be added to the revised Draft Phase I RFI Report Executive Summary at the end of the Section entitled Sites Recommended to be Compared to Background Data. In addition, the data use flow chart concurred upon by the regulatory agencies and Navy will be included in the Phase I RFI Report.

**EPA CERCLA Comment # 5**

The depth of the surface soils is inconsistently presented throughout the text and the tables. For example, Section 2.6 notes that surface soil samples were collected from the surface to 8 inches below land surface. Section 3.2.3 notes that surface soil samples at SWMU 1 - Camp García were collected from a depth of 0 to 6 inches. Section 8.2 notes that surface soils samples at SWMU 8 - Waste Oil Accumulation Area, were collected from a depth of 0 to 5 inches (while the tables indicate that surface soils were collected from the top 6 inches). Please verify the depths of all soils samples, clarify any deviations from the work plan, and revise text and tables accordingly.

*Navy Response:*

Surface soil samples were collected from 0 to 8 inches bls during the January/February field effort to provide sufficient volume of soil samples to be split with EPA and EQB. To obtain enough sample volume for the large quantity of jars, one auger bucket was collected at each location. The auger length is 8 inches. This deviation from the Work Plan will be discussed in Section 2.6, Section 3.2.3, and Section 8.2. Section 3.2.3 will be edited to identify the 0 to 8-inch depth. Section 8.2 will be edited to state that the 0 to 8-inch interval was used.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

The comment response states that the deviation from the work plan will be discussed in the revisions to the RFI report. EPA will review the revised text to determine if the deviation from the work plan is acceptable.

EPA CERCLA Comment # 6

Typically, for ecological risk assessment purposes, soil samples are collected from the top 12 inches and sediment samples are collected from the top six inches. However, as noted in the "Resolution of Technical Disagreements From Concerns Raised on The Discussion of Area of Concern (AOC) I and AOC R (Former Naval Ammunition Support Detachment)," depending upon the receptors of concern, soil sample collection from 0 to 24 inches may be recommended for ecological purposes. The rationale for the varying depths of surface soil sample collection should be presented. Further, the rationale for collecting subsurface samples from a depth of 2 to 4 ft, 3 to 5 ft or 4 to 6 ft should also be included on a site by site basis.

*Navy Response:*

It is understood that based on discussions with EPA, EQB and DOI, the proposed sampling depths for surface soil samples will be determined on a site-specific basis. For the RFI it was agreed between EPA and the Navy that the appropriate surface soil sampling depth was 0 to 6 inches as stated in the Master Work Plan and Site-Specific Work Plan for the Phase I RFI. Regarding the subsurface soil sampling depths, the rationale was provided in the Site-Specific Work Plan for the Phase I RFI, June 12, 2003 (i.e., Section 2.2.3, first paragraph, last two sentences on page 2-5).

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

The Navy has indicated that the, surface, soil sample depth of 0-6" was agreed to in the Master Work Plan and Site-Specific Work Plan for the Phase I RFI. Though the Navy has indicated at various meetings that this depth was agreed upon, it should also be noted that future sampling efforts should include sampling to a depth of 12 inches or even possibly up to 24 inches if it is

determined that receptors of concern (e.g. land crab) are present. It was also discussed that due to the pending finalization of the listing of the Site on the National Priorities List (NPL), areas already sampled may have to be revisited if necessary, as per the CERCLA program.

*Navy's Second Response:*

Comment noted. Additional discussions regarding the selection of appropriate surface soil sampling depths have taken place within the Technical Subcommittee. EPA has developed decision criteria guidelines and distributed it to the Navy. The guidelines provide criteria to be considered when selecting surface soil sampling depths. However, EPA has noted that deviations from these guidelines may be warranted on a site-specific basis.

EPA CERCLA Comment # 7

Region 9 Preliminary Remediation Goals should be screened at a hazard quotient of 0.1 or an excess lifetime cancer risk of  $1 \times 10^{-6}$ . Please revise the text throughout the document to include the cancer endpoint.

*Navy Response:*

The requested change will be made in the revised report.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

EPA agrees with the response.

EPA CERCLA Comment # 8

Any risk-based screening at this stage of an investigation should use risk-based concentrations for hexavalent chromium and methylmercury. These two forms are likely to result in the most health-protective screening process. Once the subsites are being assessed using more site-specific data, then the respective forms of these two metals may be discussed more in detail.

*Navy Response:*

No chromium plating operations are present within the eastside area operations that involve hexavalent chromium sources; thus, hexavalent chromium is not expected in soils in the area. The EPA Region 9 PRG screening criteria, which as been approved for use of the risk assessments by EPA and EQB, assumes a 1:6 ratio of trivalent to hexavalent chromium distribution, which is sufficiently protective of human health. Also, no organic mercurial compounds were used in the east area; therefore, this form of mercury (methyl mercury) is not likely to be present in the area. If the detected mercury is above background levels, it will be identified as a constituent needing further evaluation during the human health and ecological criteria screening. It will not be assumed to be organic mercury just to be conservative without further evidence to support such an assumption.

### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

EPA disagrees with the response. The risk-based screening is a conservative process that is used to limit the number of chemicals that will be quantitatively evaluated. This optional process should be done in a manner that ensures that chemicals are not prematurely discounted from a quantitative assessment of potential risk. Chemicals may be transformed in the environment from one form to another. For example, inorganic mercury may be methylated in certain environments by bacteria and chromium can be converted into hexavalent chromium under specific conditions. Therefore, in order to compare chemical concentrations appropriately at this stage of the investigation, the most conservative form of the chemical should be used in the screening process.

#### Navy's Second Response:

Comment noted. The screening evaluation conducted during this Phase I RFI included screening criteria based on human health protection, and ecological protection. The ecological protection based screening values for chromium and mercury were 38 mg/kg and 0.3 mg/kg, respectively. The human health protection based PRG values for hexavalent chromium and methyl mercury are 30 mg/kg and 0.61 mg/kg, respectively. Thus, even if the EPA proposed more conservative PRG values are used for these chemicals, the site decision outcome may not be different from what it is currently. Future risk evaluations will include this conservative screening process.

### EPA CERCLA Comment # 9

Subsurface soils were not compared to any direct contact criteria, only to leachability criteria. What is the rationale for this, since certain populations such as utility or construction workers, would be reasonably anticipated to have exposure to this medium?

#### Navy Response:

During the Phase I RFI screening, subsurface soils were evaluated only for leachability potential to identify any subsurface contamination that may leach to groundwater and produce unacceptable constituent concentrations. However, during risk assessment, subsurface soils will be evaluated in accordance with applicable guidance.

### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

EPA disagrees with the response. If subsurface soils are initially screening against only leachability potential, and the direct contact screening occurs later in the process and only for those sites that are retained for further investigation, the potential exists for sites with a direct contact concern - and not a leachability potential - to be excluded prematurely from

the evaluation process. The subsurface soils should include a direct contact screen at this stage of the investigations.

**Navy's Second Response:**

**Both direct exposure and leachability screening will be presented in the revised Draft Phase I RFI Report.**

**EPA CERCLA Comment # 10**

Appendix IX metals were analyzed in the various media. However, this list does not include several metals that are included in the Target Analyte List typically used by CERCLA. It is recommended that all additional samples for metals utilize the TAL list.

**Navy Response:**

Existing samples were analyzed for RCRA list of metals as mentioned in the report. With the likely designation of the site as an NPL-listed site, future sampling will incorporate analysis for the CERCLA recommended TAL list of metals.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response.

**EPA CERCLA Comment #11**

The need to collect surface water or sediment samples at or down gradient of the sites evaluated in this report should be considered on a site by site basis. The background sampling investigation should also include sampling of appropriate surface water and sediment locations. EPA is available to assist in the locations of these samples. This information should be included in any ecological risk assessments conducted for these sites.

**Navy Response:**

**The need for collection of background surface water and sediment samples will be evaluated on a site-specific basis. Most of the identified environmental sites, where contamination has been detected, are generally not located near surface water bodies or sediment. As a result, no surface water or sediment samples have been collected to date in eastern Vieques. Should future sampling indicate there may have been a release from the site and that the contamination has migrated through the groundwater or soils to a surface water body, surface water and sediment sample locations will be proposed for regulatory consideration.**

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

# 11 & # 13: A basewide sediment and surface water investigation should be conducted. As noted in comment # 18, surface runoff from the 12 sites addressed in the report generally flows south to the Caribbean Sea and the coastal areas of Vieques contain lagoons and mangrove swamps (Section 1.2.5 Topograph and Surface Water, page 1-7). The response should note that surface runoff pathways will be investigated. See response to comment # 20.

#### Navy's Second Response:

Subsequent to the issuance of these comments, the regulatory agencies and the Navy have concurred that a basewide surface water and sediment study is not warranted. Any background surface water/sediment sampling required will be done on a site-specific basis. If, for a given site, there are no existing or acceptable upgradient surface water/sediment location(s), other locations across the facility will be considered as representative for the site background. NOAA will prepare a database of all existing surface water/sediment samples to assist in selecting "surrogate" background locations, if necessary.

#### EPA CERCLA Comment # 12

It is mentioned that work plans for future work recommended by this RFI were sent to EPA for review. Please indicate when they were sent and when comments are expected from EPA.

#### Navy Response:

It is unclear where in the text this comment applies. In *Section 14.3.3, Sites Recommended for a Phase I RFI*, the last sentence states: "A Work Plan for the Phase I RFI sampling for these eight sites will be developed at a future date." An additional statement in the Report in *Section 14.1, Approach For Assessment of PI and PAOC Sites*, page 14-5, number 9, second sentence reads: "A work plan for a proposed background investigation of chemical concentrations in soil and groundwater at the former AFWTF has been submitted to EPA (CH2M HILL, 2004)." This Draft Final Background Work Plan was dated May 19, 2004. The EPA and PREQB have commented on this document and submitted comments on August 4, 2004.

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

#### **Specific Comments:**

#### EPA CERCLA Comment # 13

Executive Summary, RFI Objectives, page III: The first objective listed is to determine whether or not releases of hazardous constituents have occurred from each SWMU and AOC identified in the Consent Order by sampling appropriate environmental media (soil, groundwater, surface water or sediment) and by comparing the analytical results to

screening criteria protective of human health and environment. However, the data presented in the report only include those for soil and groundwater. No surface water or sediment samples appear to have been collected even though many of the sites are located along drainage areas or in close proximity to the northern or southern coastline. Justification should be given for this inconsistency. In the event that these data are available, they should be included in this report.

*Navy Response:*

Environmental media sampling conducted during the RFI was done in accordance with the regulatory approved Final Site-Specific Work Plan for the Phase I RFI. During the Work Plan preparation and review, it was determined that sediment and surface water samples were not appropriate environmental media for the sites investigated. Most of the identified environmental sites, where contamination has been detected, are generally not located near surface water bodies or sediment. As a result, no surface water or sediment samples have been collected at eastern Vieques. Should future sampling indicate there has been a release from the site and that the contamination may have migrated through the groundwater or soils to a surface water body, surface water and sediment sample locations will be proposed for regulatory consideration.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**EPA CERCLA Comment # 14**

Executive Summary, Investigation Approach, page III: The field investigation included sampling and analysis of 128 surface soil, 41 subsurface soil and 10 groundwater samples. The report contains a separate section for each of the sites investigated. These sections include a description of the site, a summary of the sampling conducted and the results of the chemical analyses for the soil and/or groundwater data. No rationale is given as to why some of the sites had just surface soil samples collected, some had both surface and subsurface soil samples collected and some include surface, subsurface soil and groundwater samples. A rationale for sample collection should be presented in this document.

*Navy Response:*

The approved Site-Specific Work Plan for the Phase I, RFI, June 12, 2003, contains the sampling rationale for all sites discussed in the Draft Phase I RFI Report. The RFI Objectives for the Draft Phase I RFI Report are included on page III of the Executive Summary. A sentence will be added to the "Investigation Approach" section of the Executive Summary and to Section 2 of the report identifying where the sampling rationale is documented.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

It may make sense to include the sampling rationale, previously provided in the Site-Specific Work Plan as an appendix to this document.

#### *Navy's Second Response:*

It is reasonable to rely on readers to refer to work plans, as necessary, for background information, such as detailed rationale, rather than burden reports under review with pre-approved text. Therefore, work plans will not be included as appendices to reports.

### EPA CERCLA Comment # 15

Executive Summary, Sites Recommended to be Compared to Background Data, page V: The process outlined for comparison to background includes a risk assessment when concentrations exceed background. As the Navy is well aware, this is the opposite order from that suggested by EPA guidance and for all other work done to date on Vieques. That is, risk assessment is done when screening levels are exceeded, then a comparison to background is made for those constituents that pose a risk. This work should follow the established procedures that are already in use, not adopt a new, contradictory approach.

#### *Navy Response:*

During the RI or RFI, the site-specific inorganic constituents data exceeding PRGs will be compared to the range of the inorganic background concentrations and PRGs to assess the nature and extent of inorganic contamination within the soils. This comparison will be used to: 1) determine if contamination is present at a site, and 2) delineate the extent of contamination to help assess if additional investigation is warranted. Any inorganic constituents detected in soils at levels exceeding the range of the background levels will be considered as site-related contamination. An evaluation will then be made to determine if the extent of contaminants detected has been adequately delineated or if additional site characterization is needed.

Once the nature and extent of the contamination have been defined, the risk assessment will be completed for all constituents that exceed the PRGs, including those constituents that are within the range of background concentrations. Background data will not be used to screen out data to select constituents of potential concern (COPCs). Once the risk assessment is completed, inorganic constituent concentrations contributing to unacceptable risks, or with HI values above acceptable criteria, will be compared to the background data. Based on this comparison, risk management decisions will then be made to assess if any further actions (i.e., additional investigations, additional statistical analyses, remedial actions, institutional controls) are recommended to protect human health or the environment.

### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

This response is confusing: The first paragraph leads one to believe that if inorganics are within the range of background concentrations, then the site will not be selected for further

study, while the second paragraph indicates that all contaminants in exceedance of PRGs will be included in the risk assessment. The concern here is if data comparison to background is done as the initial screening, then sites may be improperly selected for NFA. Please clarify that the selection of sites for NFA will be based on screening site contaminants against PRGs rather than background concentrations.

*Navy's Second Response:*

Substantial discussion regarding use of background data has taken place among the regulatory agencies and Navy and a data use flow chart has been developed. This flow chart will be included in the revised Draft Phase I RFI Report. Consistent with the regulatory approved flow chart, background data can be used to help determine the nature and extent of inorganics concentrations, thus helping to guide the investigation process, but background data will not be used to screen out constituents prior to a quantitative risk assessment (unless inorganics are the only constituents above screening risk screening criteria).

**EPA CERCLA Comment # 16**

Executive Summary, Sites Recommended for the MRP and to be Inspected for Potential MEC, page VI: For sites in these two, last categories, it seems that a further step will be needed. Those sites where MEC is found should be evaluated for MEC related contamination, once the sites have been cleared of potential explosive hazards. Also, it should be made clear why only a surface survey is needed for the last category of sites. Barring some explanation as to why it is not needed, it would seem that using geophysics to look for MEC would be more appropriate than simply a visual inspection of the surface.

*Navy Response:*

PI sites and PAOC sites that are located within potential munition areas will be investigated under the Munitions Response Program. Under this program the munitions sites will be prioritized for future munitions response actions. The type of munitions actions (such as surface clearance of munitions, geophysical surveys, or subsurface removal of munitions) will depend on the explosive safety hazard and the anticipated land use. Once the explosive safety issues have been addressed at each of these sites, the need for environmental investigations will be evaluated, based upon the type and number of munitions items that are identified. Should environmental investigations be warranted, a work plan(s) will be prepared for regulatory review that describes the proposed investigations in accordance with statutory requirements of Section 3008(h) of RCRA and 40 CFR 264.101, and/or CERCLA, as appropriate.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**EPA CERCLA Comment # 17**

Executive Summary, Table ES-1: As presented, the data indicate that metals were not analyzed in subsurface soils at any subsite. Is this correct? If so, then additional samples should be collected at all subsites for metals.

**Navy Response:**

Metals will be added to Table ES-1 under the Subsurface Soil Section (i.e., SWMU 10) where subsurface soil samples were collected and analyzed for metals.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response and will review the data in the revised tables.

**EPA CERCLA Comment # 18**

Section 1.2.5, Topography and Surface Water, page 1-7: The report notes that the coastal areas of Vieques contain level terrain primarily made up of lagoons and mangrove swamps. It is further noted that the surface runoff from the 12 sites addressed in the report generally flows south to the Caribbean Sea. Many of the sites are located along drainage areas or in close proximity to the shoreline. However, the site-specific sections do not include any discussion regarding surface runoff from the sites or the need for sampling down gradient of a site in the lagoons or mangrove swamp areas where it is expected contaminants would settle out. In order to better delineate the potential extent of contamination, down gradient sediment and surface water samples should have been collected. As noted above, the rationale for sample selection should be presented.

**Navy Response:**

Environmental media sampling conducted during the RFI was done in accordance with the regulatory approved Final Site-Specific Work Plan for the Phase I RFI (June 2003). During the Work Plan preparation and review it was determined that sediment and surface water samples were not appropriate environmental media for the sites investigated. Most of the identified environmental sites, where contamination has been detected, are generally not located near surface water bodies or sediment. As a result, no surface water or sediment samples have been collected at eastern Vieques. Should future sampling indicate there has been a release from the site and the contamination may have migrated through the groundwater or soils to a surface water body, surface water and sediment sample locations will be proposed for regulatory consideration.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

See concerns raised for # 11 & 13. This response does not address our concerns. There is a concern that there are surface drainage features which may provide habitat to aquatic receptors and serve as contaminant transport mechanisms from subsites to the lagoons and mangrove areas along the coastal areas. This is consistent with the response to comment # 20, which notes that "depending on site-specific fate and transport pathways, coastal aquatic habitats could be affected by offsite migration of soil contaminants."

The Navy notes that should future sampling indicate there has been a release from the site and the contamination may have migrated to surface water and sediment, then surface water and sediment sampling will be proposed for regulatory consideration. The Navy needs to provide details on what future sampling efforts are anticipated for these sites (only SWMUI, Camp Garcia Landfill, is proposed for a full RI to further characterize the extent of waste material at the landfill) that would allow for the evaluation of the need to collect surface water and sediment samples.

**Navy's Second Response:**

Details of future sampling efforts, including surface water and sediment where deemed necessary, will be documented in site-specific work plans, which will be based on conclusions and recommendations in site-specific reports, reviewed and approved by the regulatory agencies.

**EPA CERCLA Comment # 19**

Section 1.2.7, Soils, page 1-8: A listing is provided of which sites are underlain by various rock types. Other investigations have indicated that the base map used for these determinations can be incorrect in detail. Site-specific data, where it has been collected, needs to be used to ground truth the reference map.

**Navy Response:**

In general, the geology reference map, as presented in Figure 1-5, is accurate for the sites investigated.

**EPA CERCLA (Enclosure 1) Comment**

The above response states that the geology reference map "is accurate for the sites investigated." Please elaborate on this response by confirming whether the field activities conducted to date have verified the map's accuracy. Please include this information in the revised Phase I RFI report, to be submitted to include the information in your Responses.

**Navy's Second Response:**

All soil samples collected are classified by the Unified Soil Classification System. Rock types are identified and logged during all drilling activities. This investigation does not have the objective of verifying the generalized geology Torres-Gonzalez (1989) USGS map.

**Additional CERCLA Comments from Enclosure 3**

Drill logs from wells along the western perimeter of eastern area do not show volcanics to be present, which contradicts the map. Please go through the exercise of reconciling field information with the geologic map.

**Navy's Second Response:**

See response above. In addition, many of the drill logs for the wells along the western perimeter of the eastern area (e.g. RCRA-1, NW-4, NW-5, P-2, P-3, P-5), which were not a part

of the Phase I RFI, do show indications of volcanics (e.g., all mention olivine, RCRA-3 = pyrite, NW-3 = rock fragments of basalt).

#### EPA CERCLA Comment # 20

Section 1.2.9.3, Wildlife, page 1-10: Though Table 1-1 presents a listing of Federally listed plants and animals on and around Vieques Island, including marine species, the section on wildlife does not include any discussion of aquatic receptors (i.e. that would be expected to found in the lagoons and mangrove swamps [coast] or ephemeral streams). The southern coastline directly south of Camp García, is part of the South Coast Bays Conservation Zone, and is home to two of the world's seven surviving bioluminescent bays and some of the most diverse coral reefs found in the U.S. Caribbean territorial waters. The possibility that these habitats could be impacted from surface runoff from the sites considered in this report should be considered.

#### Navy Response:

Depending on site-specific fate and transport pathways, coastal aquatic habitats could be affected by offsite migration of site contaminants. All onsite and offsite ecological exposure pathways and receptors (terrestrial and aquatic) will be considered as appropriate in future site-specific ecological risk assessments.

The wildlife discussion in Section 1.2.9.3 will be expanded to include a description of aquatic species typically associated with coastal habitats near Vieques. Due to the high diversity of aquatic species in habitats such as coral reefs and mangrove swamps, a general description of species and communities will be added instead of a lengthy tabular listing. Future ecological risk assessments will, however, provide site-specific listings of aquatic (and terrestrial) organisms potentially occurring on or near the site. The following paragraph will be added to the end of Section 1.2.9.3:

**"Coastal aquatic communities can include a large diversity of aquatic plants, fish, and invertebrates. Unique or protected habitats, such as bioluminescent bays and Conservation Zones, also occur along the coastline. Mangrove communities typically include black, red, and white mangroves, and support a diverse community of invertebrates, including snails (e.g., periwinkles, limpets), mussels, tree oysters, crustaceans (e.g., fiddler crabs, blue crabs, barnacles), anemones, jellyfish, and small or juvenile fish species (e.g., French grunts, parrotfish, mangrove snapper). Seagrass beds occur in calm waters and support various small invertebrates (e.g., polychaetes, amphipods, sea urchins, sponges) and fish (e.g., anchovies, silversides, flounder). Coral reefs occur in various sizes and locations and support a highly diverse community of invertebrates (e.g., hard corals, soft corals, sponges, shrimp, crabs, starfish, sea urchins) and fish (angelfish, damselfish, barracuda, snapper, grunts, wrasses)."**

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

The Navy's response indicates that all onsite and offsite ecological exposure pathways and receptors will be considered as appropriate in future site-specific assessments. It is not clear if the future site-specific assessments mean the Navy will re-visit this issue for the sites included in the Phase I RFI Report or whether they will simply take this into consideration for future efforts. This should be clarified.

#### Navy's Second Response:

The Phase I RFI is primarily intended as a "release assessment." That is, its primary objective is to determine if there have been releases to the environment. If it is determined that releases have occurred that warrant additional investigation and risk assessment, onsite and offsite ecological exposure pathways will be considered, as appropriate. As discussed and concurred upon by the regulatory agencies and the Navy, a soil inorganics background investigation will be conducted in part to help in making determinations of potential releases. Concurrent with comparison of the background data to the site-specific data, the determination of the need for additional investigation and risk assessment will be made and proposed accordingly in the revised Draft Phase I RFI Report.

#### EPA CERCLA Comment # 21

Section 2.6, Surface Soil Sampling, page 2-3: Surface soil samples were collected from 0-8 inches, while the work plan indicated they would be from 0 to 6 inches. Please justify this change. In addition, the text states that the top 1 inch was removed prior to sampling. So, in fact the sampling was from 1 to 9 inches.

#### Navy Response:

Surface soil samples were collected from 0 to 8 inches (0 to 0.7 ft) bls during the January/February 2004 field effort to provide a sufficient sample volume to split samples with EPA and EQB. To obtain enough sample volume for the large quantity of jars, one auger bucket was collected at each location. The auger length is 8 inches. This deviation from the Work Plan will be discussed in Section 2.6.

The sample collection interval is from ground surface to 8 inches (0 to 0.7 ft) bls. The top layer of grass or organic mater (approximately 1-inch thick) was scraped away before sampling began as stated in Section 2.6. Areas where leaves, sticks or grass were present were cleared prior to collecting the sample, however, the sample depth remained at 8 inches below land surface since leaves, grass, and twigs are not soil. This information was not included on the surface soil logs at the time of collection.

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

#### EPA CERCLA Comment # 22

Section 2.11, Laboratory Field Sampling Protocol, page 2-6: EPA Region 2 does not use Levels to describe the quality of the data. Please remove this reference.

*Navy Response:*

The levels described in the RFI text are to define categories of data based upon the method and means of analyses. These levels are not intended to be a component of a regulatory structure but as a tool for the proper classification and management of analytical data to ensure the proper execution of the project.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

EPA CERCLA Comment # 23

Section 2.13, Data Validation, page 2-9: The modifications made to the CLP National Functional Guidelines for data validation for this project should be described or referenced here.

*Navy's Second Response:*

The validation of data for Region II is dictated by the SW846 analytical methods used by the laboratories to generate the data and is performed in accordance with EPA Region II Data Validation Standard Operating Procedures. The data validation methods used by the contractor for this project are as follows:

VOA and GRO - USEPA Region II SOP HW-24, Revision 1, June 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B

SVOA and DRO - USEPA Region II SOP No. HW-22, Revision 2, June 2001: Validating Semivolatile Organic Compounds by SW-846 Method 8270C

Metals and wet chemistry - USEPA Region II SOP No. HW-2, Revision 11, January 1992, for Evaluation of Metals Data for the Contract Laboratory Program

Pesticide and PCB - USEPA Region II SOP No. HW-23, Revision 0, April 1995: Validating Pesticide/PCB Compounds by SW-846 Method 8080A and SOP No. HW-23B, Revision 1.0, May 2002

Explosives - USEPA Region II SOP No. HW-16, Revision 1.3, September 1994: Nitroaromatics and Nitroamines by HPLC

Dioxin - USEPA "Region II, Data Validation Standard Operating Procedure for SW-846 Method 8290 Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS)," SOP No. HW-19, Revision 1, October 1994

Herbicides - USEPA Region II SOP, Revision 1.3, November 1994: Chlorinated Herbicides

EPA CERCLA (Enclosure 1) Comment

Please revise Section 2.13 to include this information.

*Navy's Second Response:*

The information above will be added to Section 2.13 of the revised Draft Phase I RFI Report.

#### EPA CERCLA Comment # 24

Section 2-15, Data Screening Procedure, page 2-10: The reasons for using Region 9 screening criteria should be stated in the report.

#### Navy Response:

The use of the EPA Region 9 criteria was agreed to by EPA, EQB and the Navy because Region 9 criteria were considered to be relatively conservative screening criteria, compared to other EPA regional criteria, for identifying potential constituents of concern. In addition to taking into account the risk to human health, the criteria also take into consideration the potential leaching of the COPCs from the soils to the groundwater. Additional rationale for the criteria selected for use will be added to the revised report.

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

#### EPA CERCLA Comment # 25

Section 3.2.2, 2004 Geophysical Investigation, page 3-3: The text argues that the east-west limits of fill have been defined by geophysics. However, Figure 3-3 shows that the ends of the east-west transects are only a short distance from anomalies. To be certain that all fill areas have been identified, geophysical lines should be extended to the east and west, as well as the additional delineation to the north and south.

#### Navy Response:

Considering Figure 3-3, the majority of transects are at least 50 feet beyond the extent of the fill material and most are more than 100 feet. On the figure, the transects are outlined in gray and the interpreted fill delineation, based on the positive geophysical results shown in red, is shown with the brown solid line except where dashed in the north and south.

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

#### Additional CERCLA Comments from Enclosure 3

Given the spacing of anomalies detected with the geophysics, it is unclear if the ends of the transects truly bound the area of concern. Within the interpreted fill boundary, individual anomalies are often at least 50 to 100 feet apart. As a result, the ends of the transects do not, by themselves, provide a clear case that the area has been delineated to the east and west. If there is other evidence which conclusively makes the case, it can be presented, but based on the geophysics, it is not yet possible to determine that the boundaries have been adequately defined.

#### Navy's Second Response:

The Interim Boundary of Restricted Access as shown in Figure 3-3 (gray line) was drawn as the estimated boundary of the landfill based on the 1970 historical aerial photograph (ERI,

2000). No ground scarring, cleared areas, or fill material was identified beyond the gray line in the figure. Geophysical anomalies have been identified on the northern most transect and waste found south of the site, which was verified by the geophysical study. Further investigation will be done in these areas. All other areas (to the east and west) have both the aerial photography and geophysical study to delineate the interpreted fill boundary and are considered complete.

#### EPA CERCLA Comment # 26

Section 3.3.1.2, Pesticides, page 3-6: The text states that various contaminants were either not detected or detected below screening criteria. This phrasing is used in several places in the text. As has been repeatedly stated, this is not an acceptable way to discuss the data as it leaves the reader to go through all of the raw data to determine what compounds are actually present. Please revise the report to include summaries of all detected anthropogenic compounds. Clearly indicate what has been found at the site and what compounds were not detected.

#### Navy Response:

The primary goal of the RFI report is to characterize the nature and extent of contamination. The contamination is defined as those constituents that exceed PRGs, ecological screening criteria and background levels. Once background data are available, the text will be revised to describe the constituents that exceed the PRGs, ecological screening criteria and background levels. To maintain this efficiency, and avoid expanding the text, Table 3-4 is provided that summarizes all detected constituents, as referenced in Section 3.3.1.

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

#### Additional CERCLA Comments from Enclosure 3

EPA maintains its position that the approach is not appropriate and that all detected contaminants should be noted in the text. A clear picture of all detections is needed to both understand the results and to plan any future work if it is needed. Furthermore, with the present approach, the Navy leaves itself open to the impression that it is trying to hide the detections by making the reader look for possible detections in the tables.

#### Navy's Second Response:

The Navy disagrees with the EPA's position and the impression that EPA is suggesting. Further, the Navy purports that providing summary tables of all constituent detections in the main body of the report, while maintaining the primary focus of the text on discussing exceedances of screening criteria, facilitates the readers' comprehension of what was detected at each site while maintaining focus on the ultimate objective of determining the need for further investigation, based on comparison of data to screening criteria. Summary detection tables are included in each site's section.

**EPA CERCLA Comment # 27**

For groundwater data, include a table of the final readings of field-parameters prior to sampling. When presenting dissolved and total concentrations, present and discuss turbidity in the sampled water and any differences in the data sets.

**Navy Response:**

A table will be added to the SWMU 1 and SWMU 10 sections that lists the field parameters that were measured just prior to sampling. In addition, turbidity will be presented in the table and discussed in the text with respect to filtered versus unfiltered samples. The new table is provided in Attachment A.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response.

**EPA CERCLA Comment #28**

No subsurface samples were collected at SWMU 1. It is not possible to adequately characterize the area based on surface soil samples alone. As it has been over 25 years since this was an active disposal area, it is very unlikely that the top 6 inches of soil would adequately represent the area in which contaminants might be distributed. Table ES-2 indicates that the site is recommended for a full investigation, at which time subsurface samples and representative sampling of known waste areas will need to be collected. The Conclusions and Recommendations in Section 3.4 should include mention that the site is recommended for a full investigation.

**Navy Response:**

As stated previously, the work at this site was conducted in accordance with the regulatory approved Work Plan. The surface soil samples were collected and analyzed to assess if the surface of the landfill posed an unacceptable risk to human health. A background investigation will be completed to assess the nature and extent of contamination, if present, at SWMU 1. The number, location and type of additional samples to be collected will be dependent on the comparison of the site data to the background data. As stated in the Executive Summary, Section 3.4 will be edited to include a reference that the site be recommended for a Full RFI. The work plan for the SWMU 1 Full RFI will be submitted following the completion of the Background Investigation.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

Agreement needs to be reached that the SWMU-1 work plan will include subsurface sampling in and around known waste areas. The response does not make it clear that this will be the case and it would be counterproductive to move forward with a work plan without resolving the issue.

#### Navy's Second Response:

Comment noted. The Navy encourages discussion among the agencies during development of work plans that will expedite the document preparation, review, and approval process.

### EPA CERCLA Comment # 29

There are a number of issues which arise in the study of many of the sites. Instead of repeating them this issues are listed here: a) Subsurface samples were usually not collected. As discussed above with regard to SWMU 1, surface soil sampling alone is not sufficient to rule out the possibility of contamination. b) The text needs to discuss the occurrence of all anthropogenic chemicals which were detected at the site and their possible sources. c) The figures are almost always inadequate. They do not show site features or, the relationship of sampling locations to these features. Without better figures, it is not possible to evaluate the work or a forward path for a site. For some sites, no figure is even included.

#### Navy Response:

- a) The approved Final Site-Specific Work Plan for the Phase I RFI was followed during sampling events. The depths and locations of soil samples were specified in this Work Plan and agreed to by all agencies. Specifically, this report summarizes the Phase I activities. SWMU 1 is recommended for a Full RFI based on these results.
- b) The text does discuss the occurrence of all constituents that were detected above PRGs and ecological screening criteria. The data for detected constituents are provided in the site-specific Analytical Data Detection Summary Table. Following the completion of the background investigation, the constituents that exceed both background levels and the screening criteria will be considered as site contaminants. The human health risk assessment will discuss details of any COCs and where they are normally found.
- c) More detailed figures of the sites will be presented in the revised RFI Report and the Work Plan for the PAOC sites.

### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

a) The following comment was offered to the RFI work plan in August of 2003: "While each site is different and a few do include subsurface sampling, the overall investigation strategy for the sites is based on sampling of surface soils from the top 6 inches. The impetus for concern in many of the areas dates to 10, 20 or more years in the past. With active weathering in a tropical climate, it is very possible that contaminants may be present in the

subsurface while being absent from the top 6 inches of soil. As a result, it does not seem appropriate to use only surface soils as a means of evaluating whether a site will be able to move to No Further Action." I do not know the fate of the comment in finalizing the work plan, but the concern was noted and apparently not addressed. From a technical perspective, the comment remains sound.

**Navy's Second Response:**

It is again noted that the investigation was done in accordance with the approved work plan, which stated the study objectives and technical approach. The conclusions drawn and recommendations made were based on those objectives and the results obtained

b) Again, all detections need to be discussed, even when they are below PRGs.

**Navy's Second Response:**

As noted in the response to comment #26, detection summary tables facilitate the readers' comprehension of what was detected at each site. The text of the report refers the readers to these tables, but will remain focused on discussing exceedances of screening criteria.

**EPA CERCLA Comment # 30**

The extent of land filling at SWMU 1 has been investigated using aerial photographs up until 1964. However, the text states that the land filling was active until 1978. If there are images from 1964 to 1980 available, these should also be reviewed.

**Navy Response:**

The 1964 aerial photograph was the latest aerial available at the time the report was produced. Since that time, an aerial photograph from 1970 was found. However, no aerials between 1970 and 1984 have been identified.

**EPA CERCLA (Enclosure 1) Comment**

For the revised Phase I RFI, revise the text to include the findings from the additional photo from 1970.

**Navy's Second Response:**

The 1967 and 1970 aerial photograph findings will be added to Figures 3-1, 3-2, 3-3, 3-4, 3-5, and 3-6 of the revised Draft Phase I RFI Report.

**Additional CERCLA Comments from Enclosure 3**

It is presumed that the additional aerial will be presented and discussed in the revised report.

**Navy's Second Response:**

Confirmed. Please see response above.

**EPA CERCLA Comment # 31**

As has been stated in other reviews for work on Vieques, all detections of anthropogenic compounds should be included on tables and figures. Furthermore, the text needs to discuss these occurrences, their distribution and likely scenarios as to the source of the contamination.

**Navy Response:**

The text discusses the occurrence of all constituents that were detected above PRGs and ecological screening criteria. The data for detected constituents are provided in the site-specific Analytical Data Detection Summary Table. Following the completion of the background investigation, the constituents that exceed both background levels and the screening criteria will be considered as site contaminants. As a result, the contaminants at the site cannot be determined until the background investigation is completed.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

Again, all detections need to be discussed, even when they are below PRGs.

**Navy's Second Response:**

As noted in the response to comment #26, detection summary tables facilitate the readers' comprehension of what was detected at each site. The text of the report refers the readers to these tables, but will remain focused on discussing exceedances of screening criteria.

**EPA CERCLA Comment # 32**

Table 3-4: On Page 1 of this table, please remove the "ND" from the SVOC row for samples CGW-1SS09, -1SS10, -1SS11, and -1SS12. Also, page 3 of this table is missing.

**Navy Response:**

The ND in the Semi-Volatiles title row will be removed. The electronic file on the CD provided with the report had all the pages. The missing pages will be included in the revised report.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response.

**EPA CERCLA Comment # 33**

Table 3-5: The following metals are not included on this table: Arsenic (total and dissolved), Lead (total and dissolved), Tin (total), Beryllium (dissolved), and Cadmium (dissolved). Why are these metals not included in the table?

**Navy Response:**

As stated in the title, Table 3-5 is an Analytical Data Detection Summary Table. Only constituents detected are listed on this table. Arsenic (total and dissolved), Lead (total and dissolved), Tin (total), Beryllium (dissolved), and Cadmium (dissolved) were not detected in the groundwater samples.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response.

**EPA CERCLA Comment # 34**

Figure 3-6: The work plan included two monitoring wells to the south of the area and two wells within the area. Instead, all four of these wells were installed along the southern margin. The result is a much poorer understanding of flow, stratigraphy and possible contaminant distribution. No reason or explanation for this significant change is offered. These missing wells should be installed and sampled.

**Navy Response:**

The Site-Specific Work Plan, Section 2.1.3, Sampling Rationale, page 2-3, third paragraph, states that "four wells will be installed downgradient from former landfill cells." It is unclear as to where in the Work Plan the comment refers. In addition, the five wells listed in the Site-Specific Work Plan were installed.

As stated in Section 3.4 of the Draft RFI Report, the site is recommended for further investigation. One additional well is recommended to be installed once the southern boundary of the landfill has been identified.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

It appears that the change in locations of the wells was made between the draft and final work plans and that the final work plan was not given to CERCLA for review. In moving forward, the additional investigation should include wells within the boundaries of the area.

*Navy's Second Response:*

Given that SWMU 1 is a landfill, it is not appropriate to install monitoring wells within the landfill; rather it is common practice to install monitoring wells upgradient and downgradient to determine if any landfill contaminants that may be present have leached to groundwater and migrated off site.

EPA CERCLA Comment # 35

Figures 3-7 and 3-8: The purpose of figures such as these are to view contaminant concentrations spatially. The data here has been split to be represented on two figures, based on the sample ID number. This was presumably in order to fit the data on the page, but results in a poor presentation. Make a bigger figure or blow up portions of the map and include samples by area, not by sample ID. Alternatively, it is very common to have separate figures for contaminant classes, such as showing only the pesticide results. If data can be contoured, that should also be done to illustrate distribution trends. If contouring is not possible, then that can be included in the discussion as evidence that the concentrations are fairly uniform. It is important to actually discuss the distribution of contaminants in the text.

*Navy Response:*

The sample labels will be re-arranged so that all the samples on the northern half of the site will be included on Figure 3-7 and all the samples on the southern half of the site will be included on Figure 3-8. These revised figures are provided in Attachment B.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

EPA agrees with the response.

EPA CERCLA Comment # 36

SWMU 2: a) The two subsurface soil samples are not adequate to characterize the site. Additional samples are needed right in the area where the tanks were located. b) It is not clear why the location for SB-01 or SB-02 were selected. Please give better figures and explanation as to what is located in these areas. Locations should be targeted to the most likely areas for release. c) Borings in the area of the ASTs should be screened using a PID and visual inspection to the depth of the water table to determine if NAPLs may be present. d) The conclusions section references ground water samples; they were not collected at this site. Please correct. e) Any information on where the pipeline was thought to run should be provided. The text does state that it could not be located. Are there any documents which show where it ran or was presumed to run?

Navy Response:

- a) and b) The boring locations were reviewed and approved by EPA during the development of the Site-Specific Work Plan for the Phase I RFI. The Work Plan was followed as closely as possible during the implementation of the work. See the SWMU 2 Site-Specific Work Plan for sample rationale.
- c) The soil borings were screened with an FID during sampling activities. Surface soil locations were screened with an OVM in the breathing zone and above the hole during sample collection. The Site-Specific Work Plan was followed during sampling activities.
- d) The reference to groundwater will be deleted in the Conclusions and Recommendations, Section 4.4.
- e) Aerials, past reports, interviews, and site reconnaissance have all been investigated. A demolition site map was prepared showing the location of the pipeline; however, there are no site features on this map. No further information was found to indicate the exact field location of the pipeline.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

The lack of subsurface sampling in the area most likely to be contaminated remains as a problem. The area should not move to NFA without this sampling.

Navy's Second Response:

The Phase I and Phase II RFAs recommended no further action for this site. The environmental survey did not find indications of environmental contamination and the IAS did not recommend the site for a confirmation study. In addition, sampling conducted during the Phase I RFI at the locations in the EPA-approved work plan did not suggest the presence of constituents in soil that warranted further study or action.

EPA CERCLA Comment # 37

SWMU 4: a) There was a single subsurface sample collected at this SWMU, while there are at least 3 areas where there are potential releases. Each area should be investigated. As with other sites, the surface soils are not sufficient to determine that no contamination exists. b) The pH of soil needs to be profiled in the vicinity of the acid battery storage area. c) It is not clear if the catch basin was below grade or how oil that collected there was disposed of. Please provide a better description and justify the depth of the nearby subsurface sample in the context of the depth of the basin. d) The conclusions section mentions groundwater sampling -which did not occur at the SWMU. Please correct. e) Please indicate if the sheds have concrete or dirt floors. If the later is the case, samples should be collected from inside the sheds.

Navy Response:

- a) The regulatory approved Site-Specific Work Plan was followed during the SWMU 4 investigation. See the SWMU 4 Site-Specific Work Plan for sample rationale. The soil boring was completed where there was a potential for subsurface releases due to the drainage basin. All the other potential releases were associated with surface spills. As a result, surface soil samples were collected at these locations.
- b) The pH analysis of the soils was not part of the approved Scope of Work for the SWMU 4 investigation.
- c) Section 5.1, Site Description, second paragraph, third sentence will be edited to read: "The unit was located inside Building 303 and was placed over the above grade concrete floor which is flat and continuous throughout the entire building."  
  
The concrete slab that Building 303 is constructed on sits approximately 6 inches above grade. The walls of Building 303 consist of metal sheeting attached to the sides of the concrete slab. The soil boring location was selected adjacent to the hydraulic oil catch basin within a grassy area.
- d) Groundwater will be removed from *Section 5.4, Conclusions and Recommendations*, second paragraph, first sentence.
- e) Text will be added to Section 5.1, fourth paragraph on page 5-2, which states: "According to the 1995 RFA, no batteries or acid were present at the former Corrosive Materials Storage Building, nor were there visible signs of acid leakage on the concrete floor from previous storage of these materials." The Flammable Materials Storage Building has a concrete floor.

EPA CERCLA (Enclosure 1) Comment

Please include the above information in the revised Phase I RFI report, to be submitted to include the information in your Responses. Also include the statement regarding the floor in the Flammable Materials Storage Building (mentioned in part e) in the revised text.

Navy's Second Response:

Responses c, d, and e, along with information on the Flammable Materials Storage Building will be added to the revised Draft Phase I RFI Report.

Additional CERCLA Comments from Enclosure 3

a) and b) This sampling should be conducted before the sites are considered for NFA. e) The comment requested information as to the flooring of the sheds, not the building. If they are not concrete, sampling should be conducted in the sheds.

Navy's Second Response:

As noted in the original response, the investigation was conducted in accordance with the EPA-approved work plan, appropriate to meet the objective of a release assessment. The Navy purports that the conclusions and recommendations are consistent with the findings, based on the objective.

**EPA CERCLA Comment # 38**

Table 5-1: Why are the cells for Antimony and Cadmium empty for certain sample locations, such as CGSWMU4SS008?

**Navy Response:**

The cells will be filled in with the correct information. An updated Table 5-1 is provided in Attachment A.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response.

**EPA CERCLA Comment # 39**

SWMU 5: a) Figure 6-2 does not adequately depict where the batteries were actually stored.  
b) Soil pH should be profiled right in the area where batteries were stored.

**Navy Response:**

- a) Figure 6-1 has been modified to show the corrected location of the spent battery storage location labeled with a colored box with the text "Spent Battery Accumulation Area." Figure 6-2 will be edited to show this location also. Both revised figures are provided in Attachment B.
- b) The task of pH soil profiling was not part of the regulatory approved Scope of Work as stated in the Site-Specific Work Phase I RFI, June 12, 2003.

**EPA CERCLA (Enclosure 1) Comment**

Figure 6-1 was not provided in the reviewer's copy of Attachment B to the response to comments. Please be sure to include the revised Figure in the revised Phase I RFI.

**Navy's Second Response:**

Figure 6-2 will be modified to show the location of the spent battery accumulation area and incorporated into the revised Draft Phase I RFI Report. Figure 6-1 is a photograph of the area and was incorrectly referred to instead of Figure 6-2 in the above response.

**EPA CERCLA Comment # 40**

SWMU 6/7: a) Figure 7-4 does not adequately depict where the two waste storage areas were. The text seems to indicate that both areas entailed storage on the grass, but the sampling which occurred circled the concrete pad. Please show exactly where each area is and the location from which stained soils are thought to have been removed.

Navy Response:

- a) It is unclear as to what figure the comment is referring. The 1988 RFA states that the site was a grassy area and that the site currently consists of a concrete slab with a small chain-link cage area (1995 RFA, EQB). The 1995 RFA did not identify any known releases at the site.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

The comment contained a typo and should have referenced Figure 7-2. The figure and text need to better explain where the two storage areas were located. For SWU-6, Page 7-1 states that waste oil and tires were stored on a grassy area, which is presumably not the concrete pad. For SWMU-7, the text indicates that soils in the storage area were stained, again implying that storage was on soil, not concrete. Please clarify.

Navy's Second Response:

No additional information has been found regarding the exact location of SWMU 6 and SWMU 7. The only information available is that the stained soils were excavated from both sites and presently a concrete pad covers the area.

EPA CERCLA Comment # 41

SWMU10: a) Clarification of subsurface soil sampling depths is needed. In the 2000 sampling, it appears that sampling was from depths of 4-5 feet and were collected above the liner. The 2004 samples are all noted as being collected from 4-6 feet, but collected from below the liner. This seems contradictory. Please clarify and provide an understanding of the depth at which the liner was encountered. b) The text states that the lagoons are overgrown. Please clarify if surface soils appeared to be waste material that had collected in the lagoons, or soils which covered the waste material. Also, indicate if the closure of these lagoons included any backfilling. c) Include a table of the wastewater results at the end of the section rather than only stating that contamination was found. d) As flow from the lagoon area appears to be radial, it is not appropriate to call MW-01 a background well. The flow paths indicate that this well would be impacted by any contamination from the lagoons. e) EPA splits from this SWMU contained low level detections of perchlorate and explosives. This needs to be factored into the future efforts.

Navy Response:

- a) The 2000 scope for sampling was to collect four subsurface samples to 5 ft to determine if the lagoon material would be classified as hazardous waste. Results from TCLP testing indicated it was not a characteristic hazardous waste. The 2004 sampling scope and rationale is stated in the Site-Specific Work Plan, *Section 2.7.3, Sampling Rationale*: "The subsurface soil samples will be collected immediately below the liner to determine if the liner has remained intact." The 2004 subsurface samples were collected from various depths ranging from 0.5 feet bls to 3.6 feet bls as shown in Appendix A.

The following text will be modified in *Section 9.2.2, 2004 Soils Investigations* (new text shown as underlined): "The depth of the subsurface soil sample was dependent on the depth to liner and varied from one location to another. The black plastic liner was covered with soil within the lagoon areas. It was encountered at all sixteen soil boring locations, identified by small pieces brought up in the hand auger cuttings throughout the four lagoon areas. The liner was found in all four lagoons at varying depths from 0.5 feet to 3.6 feet bls. Upon abandonment, the soil borings were capped at the liner depth with a cement grout to maintain liner integrity."

- b) A description of the surface soil samples collected is included in Appendix H. No record of back filling occurring at SWMU 10 was found. The berms are still intact and the liner is still within several feet of the ground surface. Some piping within one of the lagoons is still exposed.
- c) A detection summary table (new Table 9-9) will be included in Section 9 of the report, for sample CGWWTPWW001. The new Table 9-9 is provided in Attachment A.
- d) The location of MW-01 was approved in the Site-Specific Work Plan as the background well location which is the farthest location away from the potential source.
- e) Currently, the Navy does not have information concerning the results of the split samples collected by the EPA. If all split sample data collected by Tech Law-designated laboratories (Pace Analytical and GPL), and the EPA DESA laboratory and all data validation information is sent to the Navy, these data can be evaluated for QA/QC procedures used. If all data reviewed are found to be valid and usable, then the above mentioned information can be incorporated into the RFI Phase I Report.

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

#### Additional CERCLA Comments from Enclosure 3

- a) From the response, it appears that the samples collected in 2000 may have been collected from below the liner, rather than above it. Presuming that the 'lagoon material' is considered to be that above the liner, it is not clear that the TCPL samples were representative.
- d) Selection of MW-1 as a background location was a reasonable guess without any groundwater elevation data. Now that data indicates the well may be impacted by the lagoons, the well should not be considered as background.

#### Navy's Second Response:

- a) The TCLP data were not collected during the RFI, nor are they intended for use in making risk management decisions for the site. The data were presented for historic informational purposes only.
- d) The Navy recommends that another round of water level elevations be obtained from the SWMU 10 monitoring wells. If the flow direction remains the same (radial), then MW-01

may not be an appropriate background well. This recommendation will be added to Section 9.4 of the revised Draft Phase I RFI Report. Please note, however, that background well(s) may or may not be warranted, based on the analytical results (and potential risks posed) by the data representative of the site.

**EPA CERCLA Comment # 42**

Table 10-1: Please revise the table to include the depth of the samples.

**Navy Response:**

The text and tables in Section 10 will be revised to state that all surface soil samples were collected from a depth of 0 to 8 inches bls.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response.

**EPA CERCLA Comment # 43**

AOC A: This section presents the results of the TPH analysis and the BTEX constituents. As shown in Table 11-1, since the results of the BTEX are such a minor component of the total TPH DRO results, a significant portion of the TPH has not been identified. The text should explain what this means. For example, is it likely that the significant portion of the TPH DRO is high molecular weight straight chain hydrocarbons? If so, the relative toxicity of these component compared to BTEX is significantly lower. This information should be discussed so that appropriate recommendations can be made for future action at this subsite.

**Navy Response:**

The suggested change will be made in the revised report. Sections 11.3 and 11.4 will be edited to include an explanation of the TPH-DRO and BTEX results and their relative toxicity versus the detection concentrations.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response and will review the revised text in the next draft.

**Navy's Second Response:**

Subsequent to the original response and subsequent comments, EPA has developed a TPH screening process that may be applicable to the type of TPH discussions alluded to in the original comment above. The Navy and EPA are in the process of reviewing and discussing

this screening process to determine its usefulness for TPH detected at various sites. If the agencies concur that the process is applicable, it will be applied to the discussion of the TPH data in the revised Draft Phase I RFI Report.

**EPA CERCLA Comment # 44**

AOC A: The four samples which exceeded the TPH screening value were those under the excavated piping. This area remains contaminated and has not been sampled for SVOCs, a potential contaminant of concern. This requires additional sampling. The area should also be addressed in a manner consistent with PREQB UST regulations.

**Navy Response:**

The samples collected for AOC A did not have detections for naphthalene, indicative of diesel contamination, or BTEX or MTBE above the screening criteria. The size of this area where the four samples were collected is approximately 20 feet long and 10 feet wide. The size of the impacted area and the site's remote location formed the basis for no further action status. Additional samples for SVOC analysis can be added for this site during the next field event.

**EPA CERCLA (Enclosure 1) Comment**

While the four samples mentioned in the above comment did not have detections for naphthalene, BTEX, or MTBE, they did show exceedences for TPH/Diesel Range Organics (C10-C28). Further sampling should be conducted at AOC A during the next field event, as stated in the response above. Therefore, in addition to the revised Phase I RFI, please include a sampling program for AOC A to confirm whether or not releases are present.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response.

**Navy's Second Response:**

Please see the response to EPA CERCLA comment #43. If the TPH screening process is deemed applicable and useful to the TPH data collected at AOC A, it will be used to evaluate the data. Recommendations for additional sampling, if necessary, will be based, in part, on this screening process.

**EPA CERCLA Comment # 45**

Table 12-1: There is a footnote that reads, "Mean concentration is based on 1/2 the detection limit for non-detects." What is the purpose of this footnote for this table?

**Navy Response:**

This footnote will be removed because it is not applicable to this table.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

EPA agrees with the response.

### EPA CERCLA Comment #46

Sample depths are often not included for the PI sites. Please go through this section and make sure this is clear for all samples.

#### *Navy Response:*

The depth of all surface soil samples for the PI/PAOC sites is described in Section 14.1, number 4 on page 14-5. Sample depths of 0 to 6 inches will be added to each PI/PAOC site where surface soil samples were collected.

### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

Based on previous responses, it appears that the surface soil sample depths were 0-8" rather than 0-6".

#### *Navy's Second Response:*

The 0-8" depth is based on the approximate length of the auger bucket, which is the methodology used to collect the surface soil samples. However, it is reasonable to consider 0-6" and 0-8" as comparable for the intended purpose. References to the surface soil sample interval in the revised Draft Phase I RFI Report will be revised, as applicable, to be approximately 0 to 8" and an explanation added for the depth interval.

### EPA CERCLA Comment # 47

Page 14-3: In the description of historical activities/uses for PAOC X, the term "quebrada" is used. Based on recent discussions on the use of this term, is this an appropriate use of the word?

#### *Navy Response:*

Table 14-1 consists of the Interviews and Demolition Records Regarding Past AFWTF Activities and Descriptions of Sites. The information here was obtained from the Draft Final EBS, 2003. The wording from past interviews or reports is presented as it was communicated.

### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

EPA agrees that information taken from historical records and interviews should be reported as it was originally presented. However, it may be appropriate to add additional language to the text that clarifies the use of this term, based on the many discussions held by the Navy, NOAA, EPA, and other parties.

#### Navy's Second Response:

**The revised Draft Phase I RFI Report will be edited such that all references to the word Quebrada will be changed to the appropriate English interpretation of the stream characterization (i.e., ephemeral stream, intermittent stream, or perennial stream).**

### EPA CERCLA Comment # 48

Page 14-5: Please note that Step 10 is inconsistent with current CERCLA guidance. This approach is inconsistent with CERCLA guidance and is also inconsistent with the approach used on subsites in the NASD area. Media-specific contaminant concentrations that exceed risk-based screening values should be evaluated quantitatively in a risk assessment. Then, a comparison to background values may be performed, and the results of this assessment would be discussed in a risk management decision. Also, please note that current EPA guidance recommends that any comparison to background is done on using appropriate statistical tests to compare data from onsite sampling with data from background sampling. Therefore, a statistically appropriate number of samples should be collected so that the statistical comparison to background can be performed.

#### Navy Response:

**Please refer to Response to Comment 4 of the CERCLA comments, above.**

### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

### Additional CERCLA Comments from Enclosure 3

EPA agrees with the response. This response should be incorporated into the revised text of the RFI report.

#### Navy's Second Response:

**The Navy Response to Comment 4 of the CERCLA comments above will be added to the revised Phase I RFI Executive Summary at the end of the Section entitled Sites Recommended to be Compared to Background Data. In addition, the data use flow chart concurred upon by the regulatory agencies and Navy will be included in the Phase I RFI Report.**

**EPA CERCLA Comment # 49**

PI-5: The description of this area is weak and needs to be augmented. Include a figure that shows the area, the locations of debris and drainage features, and the beach matting. Also, indicate and discuss the possible fill area noted from the aerial photo review. Unless it can be clearly shown that there is no area where contamination could be present, the area should be sampled, not moved to NFA.

**Navy Response:**

As stated in the PI-5 description, the area is a runway with a stormwater drainage ditch paralleling the south side of the runway. A photo of the gravel pile is provided in the report (photo 5 on page 2 of 10 in the photographs section). The beach matting was sampled and was ND for asbestos. There are no suspected past sources or releases to the environment from human activity in this area. As a result, the site has been recommended for no further action.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

It is appropriate to show the site features on a figure, and to clearly show that the area could not be contaminated.

**Navy's Second Response:**

The location of PI-5 is shown on Figures 14-1 and 14-2. A figure will be created which shows the location of beach matting, the runway, the ditch, and the gravel pile. The Figure will be included in the PI-5 Section and incorporated into the revised Draft Phase I RFI Report.

The aerial survey that was conducted in August 2000 did not distinguish areas disturbed as a result of hazardous waste/material handling, storage, or disposal activities and areas unrelated to those activities. Therefore, just because an area was identified in the aerial survey, does not mean that activity there resulted in potential release of hazardous waste/material.

**EPA CERCLA Comment # 50**

PI-6: a) Figure 14-4 is illegible and scaled so that it is impossible to determine the distribution of the features that are discussed, or their relationship to the sampling locations. Please provide a better figure and label each of the site features. b) Wipe samples from the concrete pad which may have had transformers is not an adequate means to investigate the possible presence of PCBs. This should be done via surface and subsurface soil sampling. c) Please indicate the depth of the soil samples. d) The site is recommended for risk assessment and potential NFA, which is not appropriate. PCB sampling should definitely take place. Other sampling may also be suggested once the presentation of the area is improved and it becomes possible to determine the layout of various features.

Navy Response:

- a) The PI and PAOC figures will be revised to provide more detailed information around the sites. Photos 6 through 16 are provided on pages 2 through 5 in the photograph section, starting on page 14-43.
- b) The wipe samples were conducted as a screening procedure. There was no evidence of PCBs from leaking transformers on the concrete pad.
- c) The depth of all surface soil samples for the PI/PAOC sites is described in Section 14.1, number 4 on page 14-5. Sample depths of 0 to 6 inches will be added to each PI/PAOC site where surface soil samples were collected.
- d) Only 4,4'-DDE (p,p'DDE) was detected above the ECO criterion. However, it was far below the PRG-R and SSL20 criteria. Metals and pesticides were detected. This site is recommended for comparison to background data for metals and pesticides.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

This comment needs further review with the amended figure in hand. No technical argument obviating the need for PCB sampling of soils was provided.

Navy's Second Response:

According to the EBS, transformers were potentially located on the concrete pads, and collecting wipe samples of concrete where PCBs potentially were released is a common practice to verify their presence.

EPA CERCLA Comment # 51

Table 14-2: This table uses the term "PRG-R" to reference the Region 9 PRGs for residential soils. However, in other tables in this document, the term "PRGSO" is used to reference the Region 9 PRGs for residential soils. Please verify if these two terms reference the same values or different values.

Navy Response:

The PRGSO criteria are the same as the PRG-R criteria. The revised report will consistently use the PRG-R reference for the criteria throughout.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

EPA agrees with the response.

#### EPA CERCLA Comment # 52

PI-8: This site needs to be further investigated. Subsurface soil samples should be collected and other samples may also be required. With the poor quality of the figure describing this area it is not possible to assess the locations which were sampled.

#### Navy Response:

The PI and PAOC figures will be revised to show more detail surrounding the sites. The four surface soil samples were collected in the vicinity of visibly stained soils and analyzed for appropriate parameters for a maintenance shop including VOCs, SVOCs, TPH-DRO and TPH-GRO, PCBs, explosives, perchlorate, metals, and pesticides. These samples did not have detections from petroleum sources indicative of the suspected past activities of this site. The detections were metals and pesticides only; therefore, the sample analytical data are recommended to be compared to background concentrations to assess if the detectable constituents are associated with site releases or are attributable to background conditions.

#### EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

#### Additional CERCLA Comments from Enclosure 3

Please clarify if the surface soil samples were collected near the stained soils or from the stained soils themselves. Subsurface sampling should be conducted, as noted in the original comment.

#### Navy's Second Response:

Table 5-1 of the EBS states that four soil samples were collected from dark colored/stained soils. The wording on page 14-15 of the draft Phase I RFI report will be edited to read: "Four soil samples were collected from the dark colored or stained soils."

The sampling was conducted to meet the objective of a release assessment, with surface soil samples being collected in the areas of stained soil which are the most likely areas of contamination. The results for the samples (pending comparison to background data) do not suggest the presence of a significant release (with respect to human health and ecological screening criteria). Therefore, subsurface soil sampling is not warranted.

#### EPA CERCLA Comment # 53

PI-21: As this site was noted as a possible artillery firing position, please discuss why it does not need to be treated as having possible MEC. Also, the aerial survey noted a vertical tank at this location. This is noted in the work plan but not in the report. Was the nature of the tank determined and what does reconnaissance of the former tank area show? Lastly, further investigation (or description, if available) of the piping needs to be conducted prior to considering NFA.

#### Navy Response:

The recommendation has been revised for this site and MEC screening will be conducted; however, the use of this site for an artillery firing position has not been verified through the

analysis of historical aerial photographs. The following text will be added to the revised report: "The vertical tank identified in the 1962 aerial and piping mentioned in the Work Plan were not located at this site in 2001. The nature of this tank has never been determined."

**EPA CERCLA (Enclosure 1) Comment**

Considering the lack of information available regarding PI 21, and the historical reports of piping and stained soils, it is recommended that surface soil, subsurface soil, and groundwater samples be collected from this area during the additional PI/PAOC investigations. It is also recommended that the sample locations be based on further evaluation of historical documents (if available) and/or interviews. Otherwise, sample locations should be biased towards site drainage areas or other areas of potential concern, such as the piping area.

**Additional CERCLA Comments from Enclosure 3**

EPA agrees with the response. [Original Navy Response]

**Navy's Second Response:**

As noted in the Phase I RFI Report, samples were collected in the areas of stained soil and no VOCs, SVOCs, PCBs, herbicides, explosives, or TPH were detected above risk screening criteria. Only two pesticides were detected above ecological screening criteria. Several metals were detected above screening criteria. As recommended in the Report, the inorganics data will be compared to the background inorganics data to evaluate whether their presence is attributable to the site or to background. If the inorganics data are comparable to background, then the data do not suggest the need for further evaluation (pending the MEC clearance activities).

**EPA CERCLA Comment # 54**

PI-22: The figure does not afford any interpretation of the data as it is not clear where the samples were collected relative to site features. The drums at this site need to be investigated and removed. Sampling of surface and subsurface soils are needed in the area where the drums are located. Other possible sampling requirements should be assessed based on a figure that shows site features such as debris and excavations. The drums alone make it clear that this is not yet a candidate for NFA. Navy records should be searched to try and interpret the meaning of the drum label "DARACEN 19."

**Navy Response:**

The PI and PAOC figures will be revised to show more detail surrounding the site.

Text will be added which states: "Four surface soil samples were collected from beneath the drums and in low-lying areas near the parts and storage pad, and analyzed for Appendix IX RCRA constituents, TPH-DRO and TPH-GRO. All four samples were collected from 0 to 6 inches below ground surface using stainless steel scoops and trowels." Based on the Phase I data results, only metals were detected in the surface soils. Following the completion of the Background Investigation, the site analytical data will be compared to background data to assess if any constituent concentrations are site-related. Should contamination be identified, the need for additional site investigation will be considered."

Further information indicated that DARACEM 19 was a cement additive. The report will correct "DARACEN 19" to "DARACEM 19."

**EPA CERCLA (Enclosure 1) Comment**

DARACEM 19 is a naphthalene sulfonate. Please confirm that naphthalene was included in the sample analysis.

Also, based on the text on page 14-27 of Section 14.2.2, PI Sites and Figure 14-9: PI 22 Site Map and Sampling Locations, four samples were collected at PI 22. One of these samples, Sample PI22-4, was apparently collected approximately 50 meters east of the other three samples, near a rubber mat. Revise the text in the above response to account for this apparent discrepancy.

**Navy's Second Response:**

A sentence will be added to PI-22, page 14-27 which states that "DARACEM 19 is a naphthalene sulfonate formaldehyde copolymer (used as a water reducer in cement mixtures). Soil samples were analyzed for SVOCs which included naphthalene. No naphthalene was detected in the samples."

Additional text provided in the EBS, incorporating the suggested revision in RCRA Programs Branch #29 comment will be added to the revised Draft Phase I RFI Report which states: "Three surface soil samples were collected from beneath the drums and in low-lying areas near the automotive parts and storage pad and one surface soil sample (PI22-4) was collected adjacent to a rubber mat located approximately 150 feet east of the other three samples. All four surface soil samples were analyzed for Appendix IX RCRA constituents, and TPH-DRO, and TPH-GRO and were collected from 0 to 6 inches below ground surface (bls) using stainless steel scoops and trowels."

**Additional CERCLA Comments from Enclosure 3**

The response indicates that sampling took place under the drums. Please expand on this, so as it indicate exactly what was done. Presumably, the drums were moved but left at the site? Only one drum is noted as empty and another is noted as bulging. Was any attempt made to determine what was in the bulging drum? Please give additional detail.

**Navy's Second Response:**

The EBS text only states the soil samples were collected beneath the drums. No additional information is included.

**EPA CERCLA Comment # 55**

PI-23: It remains unclear what the pit was. Without further information, it needs to be assumed that there could have been contamination. Viewing the area from a distance and a lack of information is not sufficient to justify NFA.

*Navy Response:*

Based on interviews, review of aerial photos, and the flyover, there is no evidence that releases of contaminants occurred at the site. The pit is in a very remote location not known to be the site of any Navy activity. It is most likely a soil borrow pit. Based on this information, the site is recommended for NFA.

EPA CERCLA (Enclosure 1) Comment

Please include this additional information in the revised report.

*Navy's Second Response:*

The response listed above will be added to Section 14, PI-23 description of the revised Draft Phase I RFI Report.

Additional CERCLA Comments from Enclosure 3

The response essentially disagrees with the comment and reasserts that NFA is appropriate. Again, a lack of information is not a reasonable basis on which to conclude that no impact has occurred.

*Navy's Second Response:*

It is important to take into account that the aerial survey that was conducted in August 2000 did not distinguish areas disturbed as a result of hazardous waste/material handling, storage, or disposal activities and areas unrelated to those activities. Historical information indicates that this site was an observation point and water production well (PI 23), neither of which warrant investigation.

EPA CERCLA Comment # 56

PAOC I: Please indicate what sort of mechanic's shop was located here. Depending what sort of activities were conducted, there is the potential for oils, BTEX or solvents to be present.

*Navy Response:*

PAOC I: This was a former power plant and mechanics shop. This building (number 401) housed a 50kW diesel generator with a built-in tank of unknown size. Light maintenance may have been conducted at the site but cannot be verified.

EPA CERCLA (Enclosure 1) Comment

Please include this additional information in the revised report.

*Navy's Second Response:*

The response listed above will be added to Section 14, PAOC-I description of the revised Draft Phase I RFI Report.

Additional CERCLA Comments from Enclosure 3

The response indicates that there was, or perhaps still is, a diesel tank at the site. This represents a potential release point and contaminant. More details need to be provided.

*Navy's Second Response:*

CH2M HILL personnel visited the site on 5/11/2005. No diesel tank was observed outside of Building 401.

EPA CERCLA Comment # 57

PAOC M: The texts note that a 'fuel facility' was present at this site. Please give a more detailed description and justify why it should be assumed that a fuel facility does not have the potential to be contaminated. A map of this and other nearby PAOCs is needed.

*Navy Response:*

After additional searches and interviews, further information was identified for PAOC M. This site, combined with and adjacent site PAOC N, is the fuel facility department. PAOC M (Building 4503) was the administration office. PAOC N was the filling station with three ASTs (numbered 4504, 4505, and 4506). The EBS (2003) site description states that PAOC M also included a former dispatch office and sleeping quarters. No additional information is known on the size, contents, or status of the previous ASTs at PAOC N. A more recent tank contained diesel (2,000 gallons) and mogas (1,000 gallons). As stated in the Executive Summary and Section 14, PAOC M is recommended for NFA because no contamination source is expected for the site (based on historical information), but PAOC N is recommended for the Phase I RFI.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

EPA CERCLA Comment # 58

PAOC O, Q, and R: All three of these PAOCs involve boiler rooms. Please discuss fuel for the boilers and where it was stored. If oil tanks or piping were present they could present a concern.

*Navy Response:*

PAOCs O, Q, and R: These sites were listed on the demolition list as boiler house and heat plant buildings; however, further investigations reveal that these sites were buildings that potentially housed small hot water boilers for specific sites. No further information exists describing the fuel source at these facilities.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

It is presumed that the Navy can determine how it was likely to fuel a boiler. Diesel fuel or heating oil seem likely candidates. If there is no record of decommissioning the facilities, it should be assumed that contamination from the fuel source could be present.

*Navy's Second Response:*

Please see response to RCRA Programs Branch Comment #31.

EPA CERCLA Comment #59

PAOC S: What does POL stand for?

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

*Navy Response:*

Former POL is referring to Former petroleum, oils, and lubricants (POL) pipeline. This will be added to the text in *Section 14.2.2, PAOC S*, and in the acronym list.

EPA CERCLA Comment # 60

PAOC V: No information on the sample locations or depths is given here. Assuming that the two samples were surface samples, some vertical profiling is needed to ensure that there has been no significant release. Provide a map with the layout of the area and sample locations so that the need for additional sampling can be assessed.

*Navy Response:*

The depth of all surface soil samples for the PI/PAOC sites is described in Section 14.1, number 4 on page 14-5, as 0 to 6 inches bls. A more detailed map will be provided showing the surface soil sample locations. Sample depths of 0 to 6 inches will be added to the sample analysis results table for each PI/PAOC site where surface soil samples were collected.

EPA CERCLA (Enclosure 1) Comment

The comment has been adequately addressed.

Additional CERCLA Comments from Enclosure 3

The need for subsurface samples is not addressed.

*Navy's Second Response:*

Sampling was done consistent with a release assessment and analytical data have been provided in the Draft Phase I RFI Report (page 14-35). Soil samples were collected in the former transformer storage area. No PCBs were detected above human health or ecological screening criteria. Therefore, no further action is proposed for PAOC V.

EPA CERCLA Comment # 61

PAOC W: A more detailed description of the area is needed to assess if further action is needed. The text notes discolored water. What color is it and what is presumed to be the cause? Is this thought to be a natural or manmade feature? Is the area around the pool

disturbed? The site should not move to NFA unless there is evidence which explains the presence of the discolored pool. A lack of knowledge about the site should prompt further investigation.

*Navy Response:*

This site was identified during the EBS as a pool of discolored water less than 1 ft deep through interviews with senior members of the Camp García public works department and other persons familiar with the history of the Site. There was no evidence of a contaminant release at this location. The pool of water was presumed to be from runoff of precipitation. There was no disturbed ground surrounding the puddle, so it was believed to be a natural feature. The pool was considered by the EBS team to be stagnant water and therefore was not sampled.

EPA CERCLA (Enclosure 1) Comment

Please include this additional information regarding the stagnant pool in the revised text.

*Navy's Second Response:*

The response stated above will be added to Section 14, PAOC W description in the revised Draft Phase I RFI Report.

Additional CERCLA Comments from Enclosure 3

No mention of how the water was discolored is provided. Is there a pool there presently and if so what color is the water? If there is no better description, then there is no assurance that it was not discolored as a result of contaminant release. As with other areas, a lack of information should not be used to conclude that there is no environmental concern.

*Navy's Second Response:*

CH2M HILL personnel visited site PAOC W on Friday May 13, 2005. The area appears to be located in the vicinity of the metal bridge north of Blue Beach. The area to the north consists of a stagnant body of water that appears to collect water through drainage (i.e., precipitation) from the north. Blue Beach blocked the flow of this water body preventing it from flowing to the ocean. The stagnant water color was brown. Many branches, trees, and organic material was observed in the water. This additional information will be added to the revised Draft Phase I RFI report.

EPA CERCLA Comment # 62

PAOC X: Provide a map showing site features and sample locations. Provide sample depths. As with other sites, surface samples are not sufficient to move to NFA.

*Navy Response:*

PAOC X soil sample locations are presented on Figure 14-11 on page 14-35. The depth of all surface soil samples for the PI/PAOC sites is described in Section 14.1, number 4 on page 14-5, as 0 to 6 inches bls. Sample depths of 0 to 6 inches will be added to the sample analysis results table for each PI/PAOC site where surface soil samples were collected. The surface soil samples were collected near the visible debris at the site. There were no detections with

the exception of metals and pesticides. Following the Background Investigation, the analytical data will be compared to the site analytical data to assess if contamination is present.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

Figure 14-11 does not give enough information about the area to understand where the samples were collected in relationship to site features. Sampling 'near the visible debris' is not an adequate description. Typically, sampling should occur under debris - and subsurface sampling is warranted.

**Navy's Second Response:**

A site map will be created which shows the site features and the sampling locations. This figure will be included in the PAOC X Section of the revised Draft Phase I RFI Report. In addition, as noted in the Phase I RFI Report, samples were collected in the vicinity of debris and no VOCs, SVOCs, PCBs, herbicides, or TPH were detected above risk screening criteria. Three pesticides were detected above human health screening criteria. Several metals were detected above screening criteria. As recommended in the Report, the inorganics data will be compared to the background inorganics data to evaluate whether their presence is attributable to the site or to background. If the inorganics data are comparable to background, then the data do not suggest the need for further evaluation.

**EPA CERCLA Comment # 63**

Section 14.3.1, Sites to be Transferred to the MRP, page 14-39: The authorities under which these sites are likely to move forward need to be clarified. It is anticipated that the East Side of Vieques will be under the CERCLA program in the near future. In claiming that the sites noted in this section will be dealt with under the MRP, is the implication that CERCLA considerations are not applicable? Many of the sites have had only a cursory reconnaissance for environmental concerns. This needs to be resolved and clearly presented.

**Navy Response:**

Clarification will be made in the Executive Summary, Section 14, and elsewhere in the RFI Report that environmental sites such as some of the PI sites and PAOC sites that are located within potential munition areas will be investigated for the presence of munitions and explosives of concern (MEC). Should munitions be identified, future MRP actions will be evaluated based on the explosive safety hazard and the anticipated land use. The need for environmental investigations will be evaluated based on the number and types of MEC items identified and the condition of the items. If environmental investigation(s) are necessary, they will meet the statutory requirements of Section 3008(h) of RCRA and 40 CFR 264.101, and/or CERCLA. The EPA will be kept informed of activities related to the Munitions Response Program (MRP) and associated MC sampling and analyses.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**EPA CERCLA Comment # 64**

Section 14.3.2, Sites to be Inspected for Potential MEC, page 14-39: The suggested plan for these sites appears to consist of only a site walkover. If areas were used far enough in the past, this will not be sufficient to screen for MEC. Use of geophysics should be considered in order to give more definitive results.

**Navy Response:**

The sites will be surveyed for MEC by visual inspection and completing a geophysical survey using a hand-held magnetometer or an electromagnetic instrument. This survey will identify subsurface metallic material that may be indicative of munitions. If MEC is detected, a need for additional investigations will be determined at that time.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**EPA CERCLA Comment # 65**

Section 14.3.4, Sites to be Compared to Background Data, page 14-39: Discussing this category is difficult as many of the sites do not have adequate figures (especially for PI and PAOC sites). However, in each case there appears to be a need for additional sampling. As has been noted, sampling of surface soils in areas which have not seen activity for many years is not adequate to rule out the possibility of contamination. Subsurface sampling needs to be conducted. Other sampling may also be needed and should be based on better figures, and, ideally site inspection by technical staff from regulatory agencies. See site specific comments above for additional notes.

**Navy Response:**

The PI and PAOC figures will be revised to provide more detailed information for each site. Interviews with former employees at Camp García during the EBS, an archive records search, a visual site inspection, and review of historical aerial photos provided no information suggesting contaminant releases at these sites.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**EPA CERCLA Comment # 66**

Section 14.3.5, Sites Recommended for NFA, page 14-40: I concur that the following 4 sites are appropriate for NFA: PI-12, PI-20, PAOC P, and PAOC T. For 7 other sites, it may be possible to move to NFA with better site descriptions and more details. This is true for PI-

23, PAOC I, PAOC M, PAOC O, PAOC Q, PAOC R, and PAOC W. For the remaining sites included in this section, there seems to be a need for additional sampling in order to be sure that no contamination exists at the site. Details are generally provided above, but often this is the result of either no sampling or a lack of subsurface sampling. These sites are AOC A, PI-5, and PAOC V.

*Navy Response:*

The NFA sites were determined to be NFA based on several factors:

- 1 - An archive record search to identify potential contaminant source areas. Because the facilities at Camp García were mostly temporary to support military maneuvers, most of the PI and PAOC sites have minimal site details and very little history available.
- 2 - Visual inspections for evidence of contaminant release.
- 3 - Historical aerial photo analysis to assess if there were disturbed areas that may have been indicative of waste disposal areas.
- 4 - Field sampling and laboratory analysis which is utilized to assess whether contaminants are present at a site.

Since the operations at Camp García were mostly temporary facilities to support military maneuvers, most of the PI and PAOC sites have minimal site details available with very little history. These sites are recommended to be NFA based on the sources of data available.

EPA CERCLA (Enclosure 1) Comment

This is an acceptable approach for an NFA determination. However, it is not clear from the report which of steps were taken at each site. Revise the text to include a list of steps that were taken to obtain information on each site, and the outcome of each of those steps (e.g., historical documents were obtained and reviewed). If a step was not taken, indicate why not. Also, as discussed previously, EPA is not satisfied that a No Further Action determination is appropriate for all of those PAOCs without any analytical data having been collected at the sites of those PAOCs. Therefore, in addition to the revised Phase I RFI, please include a sampling program for these PAOCs to confirm whether or not releases are present.

Additional CERCLA Comments from Enclosure 3

The substance of the comment is not addressed. There remains disagreement as to which sites are ready to move towards NFA.

*Navy's Second Response:*

Although determination of NFA can be based on different factors, depending on the nature of a particular site and historical information, a general approach for the NFA determination will be added to the revised Draft Phase I RFI Report. Justification for no further action has been provided in responses to other comments in this document.

EPA CERCLA Comment # 67

Section 14.3.6, Sites Recommended for a Full RFI, page 14-40: Elimination of COCs based on existing results does not seem appropriate. This is an area of heterogeneous disposal and no

subsurface soil sampling has been conducted. The lack of detections to date is not sufficient to conclude that they could not be present.

**Navy Response:**

The screening conducted as part of this Phase I RFI was to determine if there is any constituent levels that exceed risk-based screening criteria to provide a preliminary assessment of potential risk to human health and the environment. Following the completion of the Background Investigation, the site data will be compared to the background data to assess if contamination is present onsite. If contamination is present, a quantitative risk assessment will be completed. Any constituents that exceed the PRGs, including those within background levels, will be included as part of the risk assessment.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**Additional CERCLA Comments from Enclosure 3**

See Comment # 15. The second and third sentence lead the reader to believe that if site data are comparable to background data than no further work will be conducted because it will be determined that contamination is not present. Please clarify that the selection of sites for NFA will be based on screening site contaminants against PRGs rather than background concentrations.

The comment was intended to guide work plan development for SWMU-1. The text suggests that the analytical suite will be limited based on existing samples. In an area such as this, where disposal was heterogeneous, a full suite of parameters needs to be included.

**Navy's Second Response:**

**Please see response to CERCLA comments 4 and 15.** Substantial discussion regarding use of background data has taken place among the regulatory agencies and Navy and a data use flow chart has been developed. This flow chart will be included in the revised Draft Phase I RFI Report. Consistent with the regulatory approved flow chart, background data can be used to help determine the nature and extent of inorganics concentrations, thus helping to guide the investigation process, but background data will not be used to screen out constituents prior to a quantitative risk assessment (unless inorganics are the only constituents above screening risk screening criteria).

The analytical suite for SWMU 1 will be presented in its Phase II RFI Work Plan, including the rationale.

**EPA CERCLA Comment # 68**

Appendix I, the first step in performing a DQE should be to review the project's Data Quality Objectives (DQOs) and the sampling design. The DQOs provide the context for understanding the purpose of the data collection effort and establish the qualitative and quantitative criteria for assessing the quality of the data set for the intended use. The sampling design provides important information about how to interpret the data. EPA Guidance (provided by EPA QA/G-9, Guidance for Data Quality Assessment available at

<http://www.epa.gov/qualityl/qs-docs/g9-final.pdf>), specifies that the quality of the data should be evaluated based upon its intended use. The DQE should describe the process used to accomplish this.

**Navy Response:**

Qualitative and quantitative criteria are established by the analytical methods and evaluated by Region II data validation guidelines. The measurement of data quality generated is evaluated by examination of precision, accuracy, representativeness, completeness, and comparability within the scope of the specific project objectives.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**EPA CERCLA Comment # 69**

Appendix I, the DQE, as described by these Appendices, did not attempt to quantify the decision error attained by the collected data. In order to be able to draw conclusions from the data, it is necessary to quantify the error and determine whether the sampling design accomplished the required confidence level.

**Navy Response:**

The sampling was not based on statistical design; it was designed to collect samples at locations where contamination would most likely be detected.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**EPA CERCLA Comment #70**

Appendix I, although this DQE does perform a thorough analysis of the quality of the specific data points it does so without addressing the overall trends presented by the results and its relationship with the project goals. Data QA/QC is only one of the aspects of determining whether the data collection and analysis process for this project attained the project goals. Please refer to the EPA QA/G-9 document cited above for guidance.

**Navy Response:**

The data trend plotting and other means to translate analytical data into a statistical model were not among the objectives agreed to with the agencies during the development of the work plan.

**EPA CERCLA (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB COMMENTS ON DRAFT PHASE I RCRA FACILITY INVESTIGATION REPORT  
FORMER ATLANTIC FLEET WEAPONS TRAINING FACILITY (AFWTF), VIEQUES  
ISLAND, PUERTO RICO**

**Section 2**

**PREQB Comment # 1**

Page 2-7, Section 2.11 and Section 2.12 discussed the frequency of the Quality Assurance/Quality Control (QA/QC) samples. The document did not presents the exact number of QA/QC samples collected and/or analyzed during the RFI's Activities.

**Navy Response:**

Appendix I contains the DQE for this field event. It includes the number of QA/QC samples collected and analyzed during the RFI. A sentence will be added to Section 2.11 and Section 2.12 which will refer the reader to Appendix I.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 2**

Page 2-13, Section 2.16 presents summary and conclusions about field duplicates results and laboratory control samples; no information is included within the document that supports the conclusions.

**Navy Response:**

The DQE in Appendix I addresses many of the Conclusions listed in Section 2.16. A reference will be added to this Section, referring the reader to Appendix I.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**Section 3**

**PREQB Comment # 3**

Page 3-7 Section 3.4. It is recommended to perform further geophysical studies at SWMU 1 to clearly delineated the boundaries of the SWMU. After the performed Geophysical Investigation, the southern and northern boundaries could not be delineated. The report recommends, "One additional down-gradient well should be installed once the southern boundary of the landfill has been defined". The utility of the up gradient well should be re evaluated once the northern boundary has been defined too. It should be clearly stated at the conclusions and recommendations that the definition of the northern boundary of SWMU 1 will trigger and evaluation of the usefulness of the up-gradient well.

**Navy Response:**

Section 3.4, first paragraph, last sentence states: "Further investigation will need to be accomplished to determine if monitoring well MW-01 is located north of the fill material." This sentence will be revised to read: "Further geophysical investigation will be conducted to further delineate the northern extent of the waste material, which will be used to determine if monitoring well MW-01 can continue to be considered the background well."

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 4**

Table 3-4 presents the surface soil analytical data detection summary for SWMU 1. At the first line the units of the sample depth should be included. Page 3-3 Section 3.2.3 states that the surface soil samples were collected from a depth of 0 to 6 inches on the other hand the Table 3-4 presents a depth of 0 to 5 without units. These discrepancies must be clarified and the Sample Type described and the significance of the letter N should be defined.

**Navy Response:**

The units of the sample depths will be added to Table 3-4. All surface soil samples were collected from 0 to 8 inches at this site. Page 3-3, Section 3.2.3, and Table 3-4 will be edited to show this.

In Table 3-4, in the row labeled Sample Type, the "N" stands for Normal Sample, as opposed to Field Duplicate, Equipment Blank, or MS/MSD, etc. This designation will be listed in the legend for Table 3-4.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 5**

Table 3-5 presents the groundwater analytical data detection summary for SWMU 1. The Sample Type need to be described, the significance of the letter N should be defined.

**Navy Response:**

See Response to Comment 4 directly above regarding "N." This designation will be listed in the legend for Table 3-5.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 6**

The Final Master Work Plan on Section 2.1.3 specifies, "Institutional controls that preclude intrusive activities will be installed and will negate the need for subsurface soil samples at the site." A description of the implemented institutional controls (if any) implemented on SWMU 1 must be included within the report.

**Navy Response:**

A barbed wire fence was installed at SWMU 1 along roads to prevent public access to the site. Institutional controls such as the barbed wire fence will be added to *Section 3.1, Site Description*, and *Section 3.4, Conclusions and Recommendations*.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**Section 4**

**PREQB Comment # 7**

Page 4-4 Section 4.4 states that "Chemicals detected above screening levels in the soil and groundwater at SWMU 2 have been detected in the background soils and groundwater at the former NASD located in western Vieques." Nevertheless, no groundwater were sampled at SWMU 2 and since a work plan for a proposed background investigation of the soils and groundwater at AFWTF has been submitted to EPA and EQB, the above mentioned sentence should be eliminated from the report due that it is not valid for comparison reasons.

**Navy Response:**

The above referenced sentence will be edited to exclude groundwater. The sentence will read: "Constituents detected above screening levels in the soils at SWMU 2 have been detected in the background soils at the former NASD located in western Vieques. A Background Investigation will be completed to evaluate the range of inorganic constituents within the background soils of eastern Vieques."

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 8**

Table 4-1 presents the surface soil analytical data detection summary for SWMU 2. The Sample Type is not described; the significance of the letter N should be defined. No depth is included at the Table 4-1.

*Navy Response:*

See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 4-1. Also, the depths of each sample will be added to Table 4-1.

PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

**Section 5**

PREQB Comment # 9

Page 5-4 Section 5.4 During the 2004 sampling event only one sample of subsurface soil at a depth of 4 to 6 ft was collected for SWMU 4. The conclusions- and recommendations stated "No analytes were detected at concentrations above the screening criteria in the subsurface soil samples collected from SWMU 4 during the 2004 sampling event". The above-mentioned sentence creates the impression that more than one sample was taken for analysis. This should be corrected to reflect the accurate information. See comment number 7.

*Navy Response:*

A duplicate sample was also collected at soil boring location SB-01. However, the sentence will be revised to read: "No analytes were detected at concentrations above screening criteria in the subsurface soil sample (and associated duplicate sample) collected from SWMU 4 during the 2004 sampling event."

PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

PREQB Comment # 10

Page 5-4 Section 5.4 States that "Chemicals detected above screening levels in the soil and groundwater at SWMU 4 have been detected in the background soils and groundwater at the former NASD located in western Vieques." See comment number 7.

*Navy Response:*

Section 5.4 is Conclusions and Recommendations for SWMU 4. The sentence will be modified to read "Constituents detected above screening levels in the soil and groundwater at SWMU 4 are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."

PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

**PREQB Comment # 11**

Table 5-1 Presents the Surface Soil Analytical Data Detection Summary. The presented depth for the sample is 0 to 0.5 (without units), and Section 5.2.1 indicates that twelve surface soil samples were taken from a depth of 0 to 6 inches. Clarification regarding the depth of the samples should be made. The Sample Type need to be described, the significance of the letter N should be defined.

**Navy Response:**

The sample depth will be edited to state that the sample depth was 0 to 8 inches (0 to 0.7 feet) in Table 5-1 and in Section 5.2.1. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 5-1.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 12**

Table 5-2 Presents the Subsurface Soil Analytical Data Detection Summary. The Sample Type need to be described, the significance of the letter N should be defined.

**Navy Response:**

See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 5-2.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**Section 6**

**PREQB Comment # 13**

Page 6-2, Section 6.4 States that "Chemicals detected above screening levels in the soil and groundwater at SWMU 5 have been detected in the background soils and groundwater at the former NASD located in western Vieques." See comment number 7.

**Navy Response:**

Section 6.4 is Conclusions and Recommendations for SWMU 5. The sentence will be modified to read "Constituents detected above screening levels in the soil and groundwater at SWMU 5 are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 14**

Table 6-1 presents a surface soil analytical data detection summary. According to the Table the depth for the sample was 0 to 5 (without units), and Section 6.2.2 indicates that four surface soil samples were taken from a depth of 0 to 6 inches. Clarification regarding the depth of the samples should be made. Also, the Sample Type need to be described, the significance of the letter N should be defined.

**Navy Response:**

Table 6-1 will be edited to show the depth of the surface samples being 0 to 8 inches (0 to 0.7 feet). Section 6.2.2 will be edited to specify the 0 to 8-inch depth. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 6-1.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**Section 7**

**PREQB Comment # 15**

Page 7-3, Section 7.4 states "Chemicals detected above screening levels in the soil and groundwater at SWMU 6 and SWMU 7 have been detected in the background soils and groundwater at the former NASD located in western Vieques." See comment number 7.

**Navy Response:**

Section 7.4 is Conclusions and Recommendations for SWMU 6 and SWMU 7. The sentence will be modified to read "Constituents detected above screening levels in the soil and groundwater at SWMU 6 and SWMU 7 are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 16**

Table 7-1 presents a surface soil analytical data detection summary. According to the Table the depth for the sample was 0 to 0.5, without units, and Section 7.2 indicates that ten surface soil samples were taken, although no depth is specified within the text, it is assumed that a surface soil sample is from a depth of 0 to 6 inches. Clarification regarding the depth of the samples should be made. Also, the Sample Type need to be described, the significance of the letter N should be defined.

*Navy Response:*

Table 7-1 will be edited to show the depth of the surface samples being 0 to 8 inches (0 to 0.7 ft). Section 7.2 will be edited to specify the 0 to 8-inch depth. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 7-1.

PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

Section 8

PREQB Comment # 17

Page 8-2, Section 8.4 States that "Chemicals detected above screening levels in the soil and groundwater at SWMU 8 have been detected in the background soils and groundwater at the former NASD located in western Vieques." See comment number 7.

*Navy Response:*

Section 8.4 is Conclusions and Recommendations for SWMU 8. The sentence will be modified to read "Constituents detected above screening levels in the soil and groundwater at SWMU 8 are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."

PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

PREQB Comment # 18

Table 8-1 presents a surface soil analytical data detection summary. According to the Table the depth for the sample was 0 to 5, without units, a correction should be made to the table to include the units of the depth. Clarification regarding the depth of the samples should be made. Also, the Sample Type need to be described, the significance of the letter N should be defined.

*Navy Response:*

Table 8-1 will be edited to show the depth of the surface samples being 0 to 8 inches. Section 8.2 will be edited to specify the 0 to 8-inch depth. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 8-1.

PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

## Section 9

### PREQB Comment # 19

Page 9-6, Section 9.4. At the third paragraph, it is stated that the sample collected in June 2000 from an influent pipe of the sewage treatment lagoons had detection of general *chemistry analytes* among others. Clarification should be made regarding what is mean by general chemistry analytes.

#### Navy Response:

The term "general chemistry" was used for the parameters listed in Section 9.3.4, which specifically included cyanide, sulfate, sulfide and nitrogen. Text will be edited to refer to these parameters by name to avoid confusion.

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

### PREQB Comment # 20

Page 9-6, Section 9.4 states that "Chemicals detected above screening levels in the soil and groundwater at SWMU 8 have been detected in the background soils and groundwater at the former NASD located in western Vieques." Since a work plan for a proposed background investigation of the soils and groundwater at AFWTF has been submitted to EPA and EQB, the above mentioned sentence should be eliminated from the report.

#### Navy Response:

Section 9.4 is Conclusions and Recommendations for SWMU 10. The sentence will be modified to read "Constituents detected above screening levels in the soil and groundwater at SWMU 10 are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

### PREQB Comment # 21

Table 9-4 presents a surface soil analytical data detection summary. According to the Table the depth for the sample was 0 to 0.5, without units, a correction should be made to the table to include the units of the depth. Section 9.2.2 indicates that sixteen surface soil samples were taken from the upper 0 to 6 inches. Clarification regarding the depth of the samples should be made. Also, the Sample Type need to be described, the significance of the letter N should be defined. The same applied to Table 9-5.

**Navy Response:**

Table 9-4 will be edited to show the depth of the surface samples being 0 to 6 inches (0 to 0.5 feet).

Table 9-5 will be edited to show the depth of the surface samples being 0 to 8 inches (0 to 0.7 feet). Section 9.2.2 will be edited to specify the 0 to 8-inch depth.

See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 9-4 and 9-5.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 22**

Table 9-6 presents the subsurface - soil analytical data detection summary. According to Section 9.2.2 the surface soil samples were collected from 0 to 6 inches layer and subsurface soil samples were collected immediately below the liner, the depth of the samples was dependent on the depth to liner and varied from one location to another. At the line where the table was supposed to establish the depth of the sample all the samples were taken at a depth of 0 to 5 (no units). Clarification regarding the depth of the samples should be made. Also, the Sample Type need to be described, the significance of the letter N should be defined. The same applied to Table 9-7.

**Navy Response:**

The correct depths will be added to Table 9-6. The new Table 9-6 is provided in Attachment A. Clarification will be added to Section 9.2.2 on the depths of the surface and subsurface samples. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 9-6 and 9-7.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 23**

Table 9-8 presents the groundwater analytical data detection summary for SWMU 1. The Sample Type need to be described, the significance of the letter N should be defined.

**Navy Response:**

See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 9-8.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

## Section 10

### PREQB Comment # 24

Page 10-3, Section 10.4 states that "Chemicals detected above screening levels in the soil and groundwater at SWMU 12 have been detected in the background soils and groundwater at the former NASD located in western Vieques." See comment number 7.

#### Navy Response:

Section 10.4 is Conclusions and Recommendations for SWMU 12. The sentence will be modified to read: "Constituents detected above screening levels in the soil and groundwater at SWMU 12 are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

### PREQB Comment #25

Table 10-1 presents the Surface Soil Analytical Data Detection Summary. No depth for the samples is presented. Clarification regarding the depth of the samples should be made. The Sample Type need to be described, the significance of the letter N should be defined.

#### Navy Response:

Table 10-1 will be edited to show the depth of the surface samples being 0 to 8 inches (0 to 0.7 feet). Section 10.2 will be edited to specify the 0 to 8-inch depth. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 10-1.

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

## Section 11

### PREQB Comment # 26

The third paragraph of page 11-2 at Section 11.3 states, "In only one of the soil samples, collected along the pipeline, was TPH detected at levels above the PREQB screening criterion of 100 mg/kg. According to Table 11-1 the four samples taken along the pipeline detected levels of TPH above the PREQB screening criterion. The information should be revised and corrected or clarified.

#### Navy Response:

The sentence will be edited to read: "TPH was detected at levels above the PREQB screening criterion of 100 mg/kg in four soil samples collected along the pipeline."

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 27**

Sample type and sample depth at the Table 11-1 should be revised and clarified.

**Navy Response:**

Sample depths are discussed in Section 11.2, second paragraph on page 11-2. Sample Type "N" is listed in the legend of Table 11-1.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**Section 12**

**PREQB Comment # 28**

Page 12-2, Section 12.4 states that "Chemicals detected above screening levels in the soils AOC F in 2000 have been detected in the background soils at the former NASD located in western Vieques." See comment number 20.

**Navy Response:**

**In Section 12.4, Conclusions and Recommendations for AOC F, the sentence will be modified to read: "Constituents detected above screening levels in the soil and groundwater at AOC F are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."**

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 29**

Table 12-1 presents a surface soil analytical data detection summary. According to the Table the depth for the sample was 0 to 0.5, without units, a correction should be made to the table to include the units of the depth. Section 12.2 indicates that five surface soil samples were collected, it is inferred that the sample is taken from 0 to 6 inches. Clarification regarding the depth of the samples should be made. If the samples were taken using an En Core™ sampling device the proper annotation should be made. En Core™ samples are usually taken when the sample is going to be analyzed for VOCs and SVOCs, samples to be analyzed for metals and other parameters could not be taken using it. Also, the Sample Type need to be described, the significance of the letter N should be defined.

**Navy Response:**

Table 12-1 will be edited to show the depth of the surface samples being 0 to 6 inches (0 to 0.5 feet). Section 12.2 will be edited to define the surface soil sample depth of 0 to 6 inches. Information as to how the AOC F 2000 soil samples were collected will be included in Section 12.2. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 12-1.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**Section 13**

**PREQB Comment # 30**

Page 13-3, Section 13.4 states that "Chemicals detected above screening levels in the soils AOC G have been detected in the background soils at the former NASD located in western Vieques." See comment number 20.

**Navy Response:**

In Section 13.4, *Conclusions and Recommendations for AOC G*, the sentence will be modified to read, "Constituents detected above screening levels in the soil and groundwater at AOC G are commonly detected in background soils and groundwater. A Background Investigation will be completed to determine background levels in soils for eastern Vieques."

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 31**

The Section 13.2 specified that five surface soil samples (0 to 6 inches) were taken at AOC G. Table 13-1 presents the surface soil analytical data detection summary, the depth of the sample included is 0 to 0.5 inches, if the samples were taken using an En Core™ sample it must be clarified (see comment number 29). Sample type and sample depth at the Table 13-1 should be revised and clarified.

**Navy Response:**

Table 13-1 will be edited to show the depth of the surface samples being 0 to 8 inches (0 to 0.7 feet). Section 13.2 will be edited to specify the 0 to 8-inch depth. Section 2.6 Surface Soil Sampling, pages 2-3 and 2-4 includes methodology of how surface soil samples were collected. See Response to Comment 4 regarding "N." This designation will be listed in the legend for Table 13-1.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

## Section 14

### PREQB Comment # 32

On page 14-9, the Photo 10 is used as evidence that one of the larger tanks at PI-6 was used as a water tank. The label reads, "WARNING - Once this tank has been used for the storage of petroleum products it shall never be used for the storage of water." This label did not indicate that the tank was used for water storage. The evidences found at PI-6 for deducting the former uses of the tanks should be revised and better documented.

#### Navy Response:

The sentence will be edited as follows: "An upside down label on one of the larger tanks read: 'WARNING - Once this tank has been used for the storage of petroleum products, it shall never be used for the storage of water.' (Photo 10). This label along with the lack of any petroleum labels found on the tank suggest that this tank was used as a water tank."

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

### PREQB Comment # 33

The depth of the three samples taken at PI-6 should be specified at the report.

#### Navy Response:

The sample depth for all the PI and PAOC sites (0 to 6 inches or 0 to 0.5 ft) is specified in Section 14.1, Number 4 on page 14-5.

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

### PREQB Comment # 34

For PI-6, the report concludes that chemicals above screening levels have been detected in the soils. It is proposed that once the background data have been obtained it will be compare to analytical data from PI-6. If the chemicals exceed background and screening levels an ecological and human risk assessment will be completed and if the assessment shows the risks to be acceptable, the site will be recommended for No Further Action (NFA). The action to be taken in case that the risk assessment shows no acceptable risk must be included at the report too. The same applies to PI-8, PI-10, PI-21, PI-22 and PAOC X.

#### Navy Response:

A sentence will be added as the final sentence of Sections PI-8, PI-10, PI-21, PI-22 and PAOC X that states: "If the risk assessment shows the potential risk to be unacceptable, the site will be further investigated under the RI process."

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 35**

At page 14-17 for PI-10, it is reported, "Dark colored soils were observed on portions of the enclosed areas. Evidence of limited solid waste disposal was also observed in the immediate vicinity". Then, at page 14-18 it was concluded that "...based on the lack of stained surface soils..." among others, no evidence of human activity was found. A clarification regarding this apparent contradiction should be made.

**Navy Response:**

The EBS observations included from interviews and records stated: "Dark colored soils were observed on portions of the enclosed areas. Evidence of limited solid waste disposal was also observed in the immediate vicinity." No evidence of human activity or release to the environment was observed during the CH2M HILL 2001 site inspection, based on the lack of stained surface soils.

**PREQB (Enclosure 1) Comment**

Please include this additional information in the revised report.

**Navy's Second Response:**

The sentence on Page 14-17/18 of the Phase I RFI report which will be modified to read: "Interviews and site visits during the EBS found that dark colored soils were observed on portions of the enclosed areas and evidence of limited solid waste disposal was observed in the immediate vicinity."

**PREQB Comment # 36**

Visual inspection at the PIs and PAOCs shows no vegetation stress; nevertheless, no vegetation was sampled during the site investigation. It should be of concern the potential of bioaccumulation of some of the chemicals in plants, and the vegetation must be considered an exposure pathway at the ecological and human risk assessment.

**Navy Response:**

This point will be considered in future work (Work Plan development) at the PI/PAOC sites.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 37**

At page 14-20, the third paragraph stated, "A stained area was observed immediately under the outfall of an open pipe projecting from the side of the pump house (Photo 29)

(NAVFACEN000M, 2003)." At the same time, page 14-22 the second paragraph stated, "No surface staining or stressed vegetation was observed." Both statements were referring to PI-11; apparently there is a discrepancy that needs to be clarified.

*Navy Response:*

The first statement on page 14-20 was taken from interviews and records compiled in the EBS report as referenced in NAVFACENGCOM 2003. The sentence on page 14-22 will be deleted.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 38**

The presented description of the visual inspection of PI-12 is not enough to justify a no further action recommendation for the site. More detail on how the helicopter over flight observation was performed must be included. Information like if the observations were made at simple sight or any visual aid was utilized during the investigation would be helpful.

*Navy Response:*

This site was identified as a wind-driven water production well prior to the 1970s and a private residence prior to the 1940s, neither of which are regulated activities. There were no documented activities at this site after the 1970s. Binoculars were used during the helicopter fly over and no potential source areas were identified. Based on this information, NFA is recommended. This site is observed in the 1936 aerials, which predate Navy activities on this portion of Vieques.

**PREQB (Enclosure 1) Comment**

Please include this additional information in the revised report.

*Navy's Second Response:*

PI-12 description will be modified in the revised Draft Phase I RFI Report to read: "Results of the aerial photography study showed that from the mid-1970s through 1994, light-toned material was observed in a cleared area. Interviews indicated that PI-12 was used as a wind-driven water production well prior to 1970s, and as a private residence prior to 1940s. This site is observed in the 1936 aerials, which predate Navy activities on this portion of Vieques. There were no documented activities at this site after the 1970s. This site was not observed from the ground because of inaccessibility, but observed during a helicopter overflight in which binoculars were used and no potential source areas were identified. Based on this information, NFA is recommended for PI-12."

**PREQB Comment # 39**

The report does not proposed further actions to investigate the possible content of the drums founded at PI-22.

*Navy Response:*

Only metals were detected in the soil samples collected at PI-22. These results will be compared to the results of the background investigation.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 40**

The Figures 14-3, 14-4, 14-5, 14-6, 14-7, 14-8, 14-9, 14-10 and, 14-11, were meant to show the location of the sampling points but they resulted dark and offer little information about the sampling locations.

*Navy Response:*

The PI and PAOC figures will be revised to provide more detailed information for each site.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 41**

At Section 14.3.2, a list of the sites to be inspected for potential munitions and explosives of concern is presented here. PI-13, PI-14, PI-18, PI-19, PAOC EE and, PAOC FF were recommended to "be inspected by a trained munitions expert to determine if any potential munitions are present on the surface at these sites during subsequent Phase I RFI for PIs and PAOCs or during the upcoming Background Investigation." Meanwhile, at Sections 14.2.1 and 14.2.2, the sites PI-13, PI-14, PI-18, PI-19, PAOC EE and, PAOC FF are presented to "be further investigate during the Full RFI for potential munitions and explosives of concern." Please clarify if the further investigations are going to be performed during the Full RFI, during the subsequent Phase I RFI (for which a Work Plan for eight recommended sites will be developed) or during the Background Investigation.

*Navy Response:*

The sites recommended for Phase II RFI will be investigated by developing a work plan for the Full RFI. Section 14.3.2 will be edited to indicate consistently the future investigation plans for these sites.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 42**

In general, the Work Plan for the RFI was followed during the sampling activities. The report does not discussed changes to the work plan previously approved during field

activities. The document was reviewed against the previously submitted work plans. Concrete comments regarding the conclusions and recommendations were not complete and are subject to the results obtained from a background investigation.

**Navy Response:**

Comment noted. The sampling and analysis protocols proposed in the work plan were followed. The deviation from the original plan included split sampling with EPA and EQB, as documented in Section 2. The Phase I RFI is not intended to be used to close any sites; rather a risk assessment will be conducted at all the sites where sampling has been conducted. Once the background sampling results are available, they will be used to compare to constituents of potential concern identified in the risk assessment. Thus, no conclusions or recommendations were made for sites where sampling has been conducted.

**PREOB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREOB Comment # 43**

Revise the legend of the tables, it appears that the indication that represents the exceeds one or more of the screening criteria: PRG, ECO, SSL20 is not complete, for example, at Table 14-7 the symbol appear shaded and in the previous tables did not.

**Navy Response:**

Tables in Section 14 will be made consistent with Tables in Sections 3 through 13. These updated tables in Section 14 are presented in Attachment A.

**PREOB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREOB Comment # 44**

Section 14.3 included further action recommendations for all the sites investigated under the RFI. It must be included as another section or a Summary of Recommendations instead of being included as part of Section 14, which is dedicated to the Photo Identified Sites and Potential Areas of Concern.

**Navy Response:**

Section 14 will be edited to include only the PI and PAOC sites. Information concerning the SWMUs and AOCs will be deleted from Section 14 and added to each respective SWMU/AOC section. The Executive Summary will also summarize all conclusions and recommendations.

**PREOB (Enclosure 1) Comment**

The comment has been adequately addressed.

**PREQB Comment # 45**

It is suggested that the pages 1-6 (Section 1.2.3), 3-6 (Section 3.3.1.1), 14-9 (last sentence) and the acronym POL at page 14-32 should be defined.

**Navy Response:**

It is unclear what needs to be defined on pages 1-6 (Section 1.2.3), 3-6 (Section 3.3.1.1), 14-9 (last sentence).

Former POL is referring to Former petroleum, oils, and lubricants (POL) pipeline. This will be added to the text in Section 14.2.2, PAOC S, and in the acronym list.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

**COMMONWEALTH OF PUERTO RICO OFFICE OF THE GOVERNOR  
ENVIRONMENTAL QUALITY BOARD**

**Review of Response to Comments by EPA Region 2 and the Puerto Rico Environmental Quality Board on the Draft Phase I RCRA Facility Investigation (RFI) Report Former Atlantic Fleet Weapons Training Facility (AFWTF) Vieques Island, Puerto Rico**

The revised document has the intention to address the comments generated as a result of the revision of the Draft Phase I RFI Report. The document included responses to comments generated by EPA Region 2, EPA CERCLA, and PREQB. The review was concentrated on the comments made by PREQB. In general the responses were adequate but few additional clarifications need to be made.

**PREQB Comment (Enclosure 7)**

The responses to comments 10, 13, 15, 17 and 24 regarding SWMU's 5, 6 & 7, 8 and 12 respectively were partially adequate. At the mentioned SWMU's no groundwater samples were ever taken as part of the RFI. The proposed editions are fine but they should be also edited to exclude groundwater.

**Navy Response:**

All references to groundwater in the Conclusions and Recommendations of Sections 5.4, 6.4, 7.4, 8.4, and 10.4 for SWMUs 4, 5, 6/7, 8, and 12 respectively will be deleted in the revised Phase I RFI report.

**PREQB Comment (Enclosure 7)**

Comments 35 and 38 were adequately addressed, nevertheless, the explanation given should be included at the revised Phase I RFI Report. Additional, at comment 45 a typographical error was send unnoticed. The comment should read "The acronym POL at page 14-32 should be defined and added to the acronyms list". The references to pages 1-6, 3-6 and 14-9 were with the purpose of recommending revision for typographical errors. No matter the incurred typo the comment was adequately answered.

**Navy's Second Response:**

The explanations will be included in the revised Draft Phase I RFI Report as stated in the Navy responses to Comments 35 and 38.

Former POL is referring to Former petroleum, oils, and lubricants (POL) pipeline. This will be added to the text in Section 14.2.2, PAOC S, and in the acronym list.

**QA/QC COMMENTS**  
**DRAFT PHASE I RCRA FACILITY INVESTIGATION REPORT**  
**FORMER ATLANTIC FLEET WEAPONS TRAINING FACILITY, VIEQUES, PUERTO**  
**RICO**

**Findings:**

**General Comments**

**PREQB Comment # 1**

The Phase I RFI, presented the analytical data at the Appendix H and the Data Quality Evaluation at the Appendix I, but the raw data and QA/QC data were not included as part of the report. For this reason, our evaluation was limited to the following:

- oversee transcription errors
- methods compliance
- parameters
- number of samples with their respective depths
- units of measurements
- conversion factors
- compliance with the Work Plan
- concordance with the information presented at the report (Phase I RFI) and the Appendix H

**Navy Response:**

**Raw laboratory data will be included on a CD during the next Phase I RFI submittal.**

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

- During the 2004 sampling activities, the SWMU 6 and SWMU 7 and the AOC A and AOC F were not sampled. They were assessed using data of past investigations.
- A licensed chemist, with the authorization to practice the profession in Puerto Rico did not certify the sampling results presented at the report.

**Navy Response:**

**There is no Federal requirement that a Puerto Rico-licensed Chemist certify the sampling results under the RCRA or CERCLA program. A laboratory certification page is provided with the data package signed by the designated QA/QC Officer for the State and Federally certified laboratory, and the 3<sup>rd</sup> party data validation firm provides a Senior Chemist/Scientist certification for the validated data package.**

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

- At the AOC A, four (4) samples detected concentration levels above the screening criterion of 100 mg/kg. However, no discussion or further action was recommended.

## Work Plan Compliance

### PREQB Comment # 2

For the SWMU 2, the Work Plan indicated (page 2-5) that the soil borings will be installed at 15 ft bls. However, at the Phase I RFI Report at page 4-2, the company established that the soil borings were installed at 5 ft bls in the Above fuel Storage Tanks (AST) and at 4.5 ft bls in the fuel pipe support area.

### Navy Response:

**"The SWMU 2 original scope was to drill to 15 ft, sample continuously, and collect the soil samples with the three highest OVA headspace readings. However, bedrock was encountered at 4 to 5 ft and there were no OVA headspace detections. The sample was then collected at the location that would have the most likely potential for contamination which was directly above bedrock."**

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

## Chain of Custody

### PREQB Comment # 3

- In general, some Chain of Custody's were cross out with a black marker and the information was unreadable. A general QA/QC practice indicates that when information is cross out it is suppose that the information be legible and it is necessary include the date and the initials of the person that perform the changes.

### Navy Response:

**The COCs were generated in the office and sent down during the sampling event. Samples listed on the COCs that were not going to be shipped that day were crossed out on the COCs. In the future, COC edits will be made each day by computer to accurately represent the sample shipments of each day.**

### PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

## Appendix H Results

### PREQB Comment # 4

(The QA/QC reviewed some of the 2004 data for compare the information presented at the Phase I RFI versus the data presented at the Appendix H. Were reviewed method and parameters compliance and transcription of the results.)

- For the SWMU 1, the Phase I RFI established that the groundwater wells CGW1WM02, 03, and 04, were sampled for cyanides, sulfide and dioxins. At the Appendix H, only appears evidence of the sampling of the groundwater wells CGWIWM02 and 03 for the cyanide and sulfide parameters. Also, evidence of the results of the dioxin parameters were not included.

**Navy Response:**

Only two groundwater samples, from MW-2 and MW-4, were analyzed for cyanide, sulfide and dioxins from SWMU 1. Section 3.2.4, *Groundwater Investigation*, page 3-5, first paragraph will be edited to state this.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

- At the Phase I RFI (SWMU 1), the Table 3-5 presented the dissolved metals results. These sampling results were not included at the Appendix H.

**Navy Response:**

The sample results for total metals and dissolved metals are included in Appendix H. The footnote and the bottom of the page lists the analyses.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

- In the Phase I RFI (SWMU 12) the Table 10.1, reported the detection of the semi-volatile compound Di-n-butyl phthalate in the soil samples CGW 12SS02-RO1 and CGW 12SS04R01. However, the Appendix H does not show evidence of the detection of this compound.

**Navy Response:**

A page of SVOC data is missing in Appendix H. This will be added in the next RFI Report submittal.

**PREQB (Enclosure 1) Comment**

The comment has been adequately addressed.

- At the Phase I RFI (AOC G), the Table 13-1 reported the compound 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin with a concentration of 0.00000 mg/Kg at the sample

CGAGSS04-R-01. However, at the Appendix H this compound was reported at a concentration of 3.6 pg/g. Verify the unit conversion.

*Navy Response:*

Table 13-1 is incorrect. The correct value for 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin is  $3.6 \times 10^{-6}$  mg/kg. Table 13-1 will be edited to show this change.

PREQB (Enclosure 1) Comment

The comment has been adequately addressed.

**COMMENTS/RECOMMENDATIONS:**

As mentioned before, the raw data and QA/QC data was not available for review. The Quality Assurance Officer (QAO) performed a limited evaluation using the General Data Evaluation Review according with the provided information. Nevertheless, the analytical data was validated and qualified by an independent third party firm. A summary of the evaluation was provided at Appendix I of the Phase I RFI.

Technically, it is recommended use the data according with the qualification of it. However, one aspect that must be considerate is that, there is no evidence that the data report was certified by a license chemist, it is a regulation requirement and is not acceptable at QA/QC matters.

*Navy Response:*

The requirement to have a Puerto Rican chemist sign all lab data was not included in the site specific Phase I RFI Work Plan (June 12, 2003) and therefore was not accomplished for this data. Future Work Plans will include this requirement.

**COMMONWEALTH OF PUERTO RICO OFFICE OF THE GOVERNOR  
ENVIRONMENTAL QUALITY BOARD**

**Re: Responses to Comments by EPA Region 2 and the Puerto Rico Environmental Quality Board Review of the QA/QC Responses**

**Draft Phase I RCRA Facility Investigation Report Atlantic Fleet Weapons Training Facility, Vieques**

The Land Pollution Control Area (LPCA) from the Puerto Rico Environmental Quality Board (PREQB) evaluated the Former Atlantic Fleet Weapons Training Facility (AFWTF) QA/QC responses to the EPA comment letter regarding the, "Draft Phase I RCRA Facility Investigation Report". After the evaluation, it was found that most of the comments were clarified, only three (3) responses included in the following, were not adequately addressed:

**PREOB (Enclosure 8) Comment**

- EQB raised the concern that a licensed chemist with the authorization to practice the profession in Puerto Rico did not certify the sampling results. At the response, the company argued that there is no Federal requirement that a Puerto Rico-licensed chemist certify the sampling results under the RCRA or CERCLA program.

Even though it is not a requirement under the RCRA or CERCLA program, under the Puerto Rico Law # 97 from June 4, 1983; know as "Ley para Reglamentar la Profesion de Quimicos en Puerto Rico", it is a requirement. Also, the Regulation for the Control of Hazardous Solid Waste (# 2863) from March 5, 1983, establishes at the Rule 204B (Test Methods) that, "...All chemical analysis shall be certified by a chemical engineer or chemist licensed in Puerto Rico ". Since, we are working under an Enforcement Agreement, it is our understanding that it is applicable.

**Navy Response:**

**The requirement to have a Puerto Rican chemist sign all lab data was not included in the site specific Phase I RFI Work Plan (June 12, 2003) and therefore was not accomplished for this data. Future Work Plans will include this requirement.**

**PREOB (Enclosure 8) Comment**

- For the SWMU #1, the company indicated that only the groundwater wells MW-2 and MW-4 were analyzed for cyanide, sulfide and dioxins. At the Appendix H evidence was found of the laboratory analysis for the sulfide and cyanide parameters. However, no evidence was found of the analysis for the dioxin parameters. The company has to include at the Appendix H revision the Dioxins results from the wells MW-2 and MW-4.

**Navy Response:**

**Reference to comment 4. It appears that some of the copies sent out were missing the double sided page which included Dioxin/Dissolved metals groundwater results. When the revised Phase I RFI is sent out, this page will be included in all copies and will show that the analyses were conducted.**

**PREOB (Enclosure 8) Comment**

- The company indicated that the dissolved metals results from the SWMU #1 (presented at Table 3-5) were included in Appendix H. At least, at the copy received at the EQB, evidence of these results was not found. Please, include it at the revision.

**Navy Response:**

**Reference to comment 4. It appears that some of the copies sent out were missing the double sided page which included Dioxin/Dissolved metals groundwater results. When the revised Phase I RFI is sent out, this page will be included in all copies and will show that the analyses were conducted.**