

**NAVY RESPONSES TO EQB COMMENTS DATED AUGUST 18, 2010
ON THE DRAFT WORK PLAN FOR CONTAMINATED SOIL REMOVAL
PICO DEL ESTE RADAR FACILITY
DATED JUNE 25, 2010**

PREQB comments are provided in italics, while the Navy responses to regulatory comments are provided in regular print.

The following comments were generated based on a review of the Draft Sampling and Analysis Plan for Contaminated Soil Removal – Pico del Este Radar Facility, Naval Activity Puerto Rico (NAPR), Ceiba, Puerto Rico, dated June 25, 2010; the Draft Technical Specifications for Contaminated Soil Removal- Pico del Este Radar Facility, NAPR, Ceiba, Puerto Rico, dated June 25, 2010 (Draft TS); and the Draft Work Plan for Contaminated Soil Removal– Pico del Este Radar Facility, NAPR, Ceiba, Puerto Rico, dated June 25, 2010. All of the documents are part of the Design Package and Work Plan for the Contaminated Soil Removal for Pico del Este Radar Facility, NAPR, Ceiba, Puerto Rico, dated June 25, 2010.

FOLLOW-UP COMMENT

The Navy's response to Comment 1c indicates that a laboratory has not been selected (at the time the response was written). Please clarify if a laboratory has been selected, given that the field work is anticipated to start in a few weeks. Please ensure that we receive the information from the laboratory concerning the analytical limits they can achieve so that we can review this information prior finalizing the work plan.

Navy Response to PREQB Follow-up Comment: Test America has been selected as the laboratory. Table 3-2 of the SAP has Test America's analytical limits for PREQB's review.

GENERAL COMMENTS

1. It is unclear why a project-specific Sampling and Analysis Plan (SAP) was not prepared in accordance with the Uniform Federal Policy for Quality Assurance Project Plans (March 2005). Submittal of a SAP in this format will allow the reviewers to ensure that all laboratory and field requirements necessary to achieve data quality objectives for this site will be met. Please note that the current SAP in Appendix C was missing the following elements:

General Navy Response to PREQB General Comment 1: The Work Plan, Technical Specifications, and SAP have been revised, where appropriate, to include those specific items requested. Otherwise, the response addresses the comment directly.

a. Details on sampling methods for each matrix being collected.

Navy Response to PREQB General Comment 1a: Sampling methods for each matrix are presented in SAP Table 3-2. The analytical methods, analyte lists, detection limits, etc. reflect the most recent laboratory procedures. The SAP contains the following tables specifying the sampling and analytical program requirements so that data of sufficient quality for future risk management decisions is collected:

- Table 3-1 Confirmation and Characterization Sampling Summary Sampling and Analysis Plan
- Table 3-2 Method Performance Limits and Contract Required Quantitation Limits (CRQL)
- Table 3-2 Quality Assurance/Quality Control Sampling Summary

Section 3 of the Work Plan has also been revised to reflect sampling techniques and procedures to collect soil and liquid samples for analysis.

b. Data validation requirements.

Navy Response to PREQB General Comment 1b: The data collected during soil removal activities will not be used in conjunction with human health or ecological risk assessment. Therefore, the Navy does not plan to collect additional data (e.g. Matrix Spike/Matrix Spike Duplicate) for data validation. As noted in Table 3-1 of the SAP, duplicates will be collected for laboratory QA/QC requirements. Rinsates will also be collected for analysis. The Work Plan and SAP have been revised to reflect data validation requirements.

PREQB Evaluation of Response: *Data validation is required in order to provide an independent review of the laboratory data and to determine the quality of the analytical data. The process of data validation ensures that the collected data are scientifically defensible, of known quality, and can support project objectives. Data validation is necessary to ensure that only data of known and documented quality are used in making environmental decisions. Please add data validation requirements to the SAP.*

Navy Response: Data validation was added to the SAP Section 3.2. In addition, Table 3-1 was revised to reflect the matrix spike/matrix spike duplicate sample requirement.

c. Quantitation limits that the selected laboratory will be able to achieve.

Navy Response to PREQB General Comment 1c: The quantitation limits presented in SAP Table 3-2 have been reviewed by an analytical laboratory to ensure that they can be met. The quantitation limits are within the range of the lowest achievable by the laboratory for the specified analytical method. This table is provided to the analytical laboratory subcontractor as part of their scope of work so that the laboratory is clearly aware of the analytical requirements of the project. Additionally, only laboratories capable of providing an acceptable Laboratory Quality Manual (LQM) will be selected for this project. The LQM may be provided on request (after selection of the analytical laboratory).

d. Laboratory deliverable requirements.

Navy Response to PREQB General Comment 1d: The laboratory deliverable requirements require the Subcontractor Laboratory to provide a hardcopy of the data as well as an Electronic Data Deliverable (EDD). The electronic format was not specified to meet the Electronic Data Deliverable (EDD) requirements. It may be achieved by using the Staged Electronic Data Deliverable (SEDD) format for electronic deliverables. The data deliverable generated by SEDD is an industry-standard Extensible Markup Language (XML) file.

PREQB Evaluation of Response: *Please ensure that the hardcopy laboratory deliverable is consistent with the CLP format (i.e., inclusive of all raw data).*

Navy Response: Section 3.2 of the SAP was revised. Laboratory deliverables will include all raw data in accordance with Level IV Data Package.

e. Holding time, sample container, and preservative requirements for each matrix and method.

Navy Response to PREQB General Comment 1e: Since all analysis will be on a 24 hour turn around, holding times for all matrices and methods will not be exceeded. Sample containers and preservative

requirements are as follows:

Parameter	Container / Preservative		Preservation	Holding Time
	Soil	Water		
TPH-GRO	Terra Core® 3 x 40 mL vials / 1 methanol, 2 DI water	1 L amber / Unpreserved	Cool to 4° C	28 days
TPH-DRO	8 oz jar / Unpreserved	1 L amber / Unpreserved	Cool to 4° C	28 days
BTEX	Terra Core® 3 x 40 mL vials / 1 methanol, 2 DI water	1 L amber / Unpreserved	Cool to 4° C	7 days
TCLP VOCs	Terra Core® 3 x 40 mL vials / 1 methanol, 2 DI water	1 L amber / Unpreserved	Cool to 4° C	-
TCLP (non-VOCs)	8 oz jar / Unpreserved	1 L amber / Unpreserved	Cool to 4° C	-
IRC	8 oz jar / Unpreserved	2 x 1 L ambers / Unpreserved	Cool to 4° C	-

[Table included in Navy's response]

PREQB Evaluation of Response: Please include the table in the revised SAP, with the following corrections:

- The collection of water samples for GRO should be in two 40-mL VOA vials, not 1 L amber unpreserved bottles.
- The collection of water samples for BTEX should be in two 40-mL VOA vials, not 1 L amber unpreserved bottles.
- The collection of water samples for TCLP VOCs should be in two 40-mL VOA vials, not 1 L amber unpreserved bottles.
- The collection of soil samples for TCLP VOCs should be in a 4 oz jar without headspace or into a 25-gram EnCore sampler, not into methanol or DI water-preserved vials.
- Preservation of water samples for GRO must also include the addition of HCl to a pH <2.
- Preservation of water samples for BTEX must also include the addition of HCl to a pH <2.
- For waters, the holding time for TPH-GRO is 14 days and for soils, the holding time for TPH-GRO is 48 hours to preservation and 14 days to analysis (not 28 days, as listed).
- For waters, the holding time for TPH-DRO is 7 days to extraction followed by 40 days to analysis and for soils, the holding time for TPH-DRO is 14 days to extraction followed by 40 days to analysis (not 28 days, as listed).
- For waters, the holding time for BTEX is 14 days and for soils, the holding time for BTEX is 48 hours to preservation and 14 days to analysis (not 28 days, as listed).
- The holding time for IRC should be listed as soon as possible.
- Please add the holding times for TCLP analyses.

Navy Response: A table was added to the SAP Section 3.2 with the identified corrections.

PREQB Evaluation of Response: The response indicates that the table was added to the SAP with the identified corrections. Please verify the following information provided in the table:

- The holding for TPH-GRO in water should be 14 days to analysis, not 14 days to preservation.
- The holding for BTEX in water should be 14 days to analysis, not 14 days to preservation.
- The bottles for TCLP VOCs were not corrected, as indicated in the PREQB comment (two 40-mL VOC vials).
- The holding times for reactive sulfide and reactive cyanide in soil were not corrected, as indicated in the PREQB comment (as soon as possible).
- The holding times for TCLP (non-VOCs) were not updated, as requested in the PREQB comment. Please note that the holding times for TCLP extractable organics are 14 days to TCLP extraction, followed by 7 days for the analyte extraction, followed by 40 days for analysis.
- The holding times for the TCLP metals are 6 months to TCLP extraction (or 28 days for mercury) and analysis.

Navy Response: The table in SAP Section 3.2 has been corrected.

PREQB Evaluation of Response: Please confirm that the quantitation limits reported on Table 3.2 are Levels of Detection (LODs) or Levels of Quantitation (LOQs), consistent with DoD guidance and that the laboratory will not be reporting to the MDL. The Navy has agreed that data will be reported to the LOD or LOQ and not the MDL.

Please revise the table shown in Section 3.2 as noted below:

- The holding for TPH-GRO in water should be 14 days to analysis, not 14 days to preservation.
- The holding for BTEX in water should be 14 days to analysis, not 14 days to preservation.

- *The bottles for TCLP VOCs were not corrected, as indicated in the PREQB comment (two 40-mL VOC vials).*
- *The holding times for TCLP (non-VOCs) were not updated, as requested in the PREQB comment. Please note that the holding times for TCLP extractable organics are 14 days to TCLP extraction, followed by 7 days for the analyte extraction, followed by 40 days for analysis.*
- *The holding times for the TCLP metals are 6 months to TCLP extraction (or 28 days for mercury) and analysis.*
- *The holding time listed for TCLP VOCs was changed and is now wrong. Please change the hold time to 14 days to extraction and analysis, as previously shown on the table.*

Navy Response: The limits listed on Table 3-2 are LODs. The table in SAP Section 3.2 has been corrected. This now captures all the revisions with respect to the TCLP. Please keep in mind that we changed the quantity of 40ml VOAs from 3 to 2 as PREQB requested. However, a lot of the labs are now requesting the 3 vials be submitted for analysis instead of 2 due to potential breakage, air bubbles, dilutions, etc.

PREQB Evaluation of Response: *In revisiting the table, it appears that the information concerning the TCLP VOC analysis was inadvertently modified. The Container/Preservation column should read “2 x 40-ml VOA vials; no headspace.” This is important because there should be no acid preservation for these samples.*

Navy Response: The table in SAP Section 3.2 has been corrected.

f. Precision, accuracy, and completeness goals.

Navy Response to PREQB General Comment 1f: Accuracy and precision will be assessed through the use of spike (matrix and blank) recoveries. The data must satisfy the QC acceptance criteria given in the analytical methods. Precision will also be determined by the calculated relative percent difference between duplicate analyses. The objectives for completeness are 90 to 95 percent.

PREQB Evaluation of Response: *Please add the information presented in the response to the revised SAP and please note that matrix spikes will not be used to evaluate accuracy and precision, as per the Navy’s response to General Comment 1b.*

Navy Response: The information presented in the response has been added to the SAP Section 3.2. Additionally, a note about the matrix spikes not being used to evaluate accuracy and precision was added to the SAP.

PREQB Evaluation of Response: *As per the Navy’s response to Comment 1b, matrix spikes are now being included in the SAP. Therefore, please add a description of MS/MSDs to Section 3.2 under Quality Assurance/Quality Control Sampling. In addition, please remove the note that matrix spikes are not being used to evaluate accuracy and precision in Section 3.2.*

Navy Response: Section 3.2 of the SAP was revised to reflect changes.

g. Regulatory criteria for backfill and topsoil samples.

Navy Response to PREQB General Comment 1g: The requirements for off-site soil are presented in Technical Specification 31 23 00.00 20 Parts 1.6, 2.1.3, and 2.1.4. Results of analysis will be compared to EQB UST Rule 205 for BTEX and TPH-DRO for soil and liquids. Results for full TCLP analysis will

be compared to regulatory limits identified in 40 CFR 261.24 - Identification & Listing of Hazardous Waste.

h. Laboratory and field audit requirements.

Navy Response to PREQB General Comment 1h: The analytical subcontractor's Laboratory Quality Assurance Plan (LQAP) must describe the external and internal performance evaluation tests and audits required to monitor the capability and performance of the total measurement process. These include system audits as required by Federal and State regulatory agencies to obtain and maintain laboratory certifications, commercial clients with auditing programs, and subscription to commercial auditing agencies. In addition, the LQAP should define the acceptance criteria for the laboratory.

A field audit may be conducted during excavation activities to verify that sampling is being performed according to the SAP. At the appropriate time, the Project Manager will conduct field audits. Discrepancies will be identified, resolved and documented within 24 hours of finding.

PREQB Evaluation of Response: *Please add the field audit requirements to the revised SAP.*

Navy Response: Field audit requirements were added to the SAP Section 3.2.

SPECIFIC COMMENTS

1. *Page 1-1, Section 1.2, Paragraph 1: Please include the words "of rainfall" in the third sentence between the words "inches" and "per".*

Navy Response to PREQB Specific Comment 1: The words "of rainfall" have been added to the text.

2. *Page 1-2, Section 1.4, Paragraph 4: Please clarify the results discussion related to the January 2008 work outside of the fence-line in the Caribbean National Forest. The first sentence in this paragraph indicates that the January 2008 scope of work included the collection of eighteen surface soil samples; however, the discussion later in the paragraph indicates that EQB soil screening criteria were exceeded in both surface and subsurface soils.*

Navy Response to PREQB Specific Comment 2: The results discussion related to the January 2008 surface soil sampling performed outside of the fence-line was edited to clearly describe the results. Subsurface soil samples were not obtained at those eighteen soil boring locations.

SAP Figure 3-1 and work plan Figure 4-1 have been revised to include the following previously omitted data; sampling locations for the 2008 surface soil sample collection event, 2003 surface and subsurface soil collection event, and excavation area associated with sample location PESB09.

3. *Page 1-4, Section 1.5, Bullet 5: Please define the term "clean" as used in the bullet item which references the backfilling of the excavation. Please provide the criteria that the results of the borrow material sampling will be compared to determine if they are suitable for use as back-fill and indicate the frequency with which borrow materials will be sampled to determine adequacy.*

Navy Response to PREQB Specific Comment 3: The reference to "clean" has been removed from the bullet item. The bullet item now states that backfill soil will meet the requirements described in Section 4.7 of the Work Plan and Tables 3-1 and 3-2 of the SAP. Further, backfill sampling frequency is described in the SAP Section 3.1.3 and Technical Specification 01 35 45.00 10 as one sample per borrow source.

PREQB Evaluation of Response: Please revise the sample frequency back to 1 per 500 cubic yards and include that this sample frequency applies per borrow source (i.e., 1 sample per 500 cubic yards per borrow source).

Navy Response: Sample frequency in Section 3.1.3 of the SAP was revised to 1 per 500 cubic yards per borrow source.

4. Page 1-4, Section 1.5, Bullet 10: Please change the “P” in the reference to soil boring location PESB03 to a “B”.

Navy Response to PREQB Specific Comment 4: The “P” in the reference to soil boring location PESB03 has been changed to a “B” so now the reference reads “PESB03” not “PESP03”.

5. Page 1-4, Section 1.5, Bullet 11: Please elaborate as to why there are no proposed excavation activities beneath the concrete pad to the south of Building 3034 and why there are no confirmation soil samples proposed adjacent to the Building 3034, the concrete pad or the fence-line.

Navy Response to PREQB Specific Comment 5: The last bullet in Section 1.5 has been revised to reflect safety concerns associated with undermining the foundations of the concrete pad and Building 3034. Additionally, the last bullet was revised to confirm confirmation samples will be collected adjacent to Building 3034, the concrete pad, and the fence-line.

PREQB Evaluation of Response: Please revise Specification 01 35 45.00 10 to reflect that confirmation soil samples will be collected adjacent to building 3034, the concrete pad and the fence line.

Navy Response: Specification 01 35 45.00 10 was revised to collect confirmation soil samples adjacent to building 3034, the concrete pad, and the fence line.

6. Page 2-5, Section 2.6: In order to ensure all objectives will be achieved, the laboratory should be selected prior to submitting the Work Plan and SAP. Please include the name of the selected laboratory.

Navy Response to PREQB Specific Comment 6: At the present time, a laboratory has not been selected to provide analytical services for this project. The laboratory objectives limits have also been reviewed by an analytical laboratory to ensure that they can be met. The selected analytical laboratory subcontractor will have the analytical objectives as part of their scope of work so that the laboratory is clearly aware of the analytical requirements of the project. Additionally, only laboratories capable of providing an acceptable Laboratory Quality Manual (LQM) will be selected for this project. The LQM may be provided on request (after selection of the analytical laboratory).

7. Page 3-3, Section 2.5: Please provide an indication in this section regarding the decontamination plan for the bucket of the excavator under the circumstance where it will be used to collect confirmation soil samples (when direct access to the excavation is prohibited by the field personnel).

Navy Response to PREQB Specific Comment 7: Section 3.5 of the Work Plan was revised to require the excavator bucket be decontaminated using both dry means and a power washer, water-soap solution prior to collecting each confirmation soil sample. Section 3.3 of the SAP has also been revised to include the decontamination plan for the excavator bucket when used in the collection of confirmation soil samples.

8. *Page 3-3, Section 3.5.3, Paragraph 1: Please insert a decontamination step between rinsing the equipment with methanol and hexane to reflect a rinse with distilled and deionized (ASTM Type II) water and again following the hexane rinse (prior to allowing to air dry).*

Navy Response to PREQB Specific Comment 8: A decontamination step was added between rinsing the equipment with methanol and hexane to reflect a rinse with distilled or deionized (ASTM Type II) water and again following the hexane rinse (prior to the air drying step).

9. *Page 4-1, Section 4.2, Paragraph 1: Figure 4-1 shows very specific areas in which soils will be excavated to various depths. Please indicate whether the surveyors will be tasked with flagging the overall areas of excavation or whether each discrete area will be flagged separately to allow for soil removal to the appropriate depths.*

Navy Response to PREQB Specific Comment 9: Section 4.2 of the Work Plan has been revised to include survey location of each excavation area. Additionally, each area will be flagged separately and labeled with the proposed depth to allow for soil removal to the appropriate depths.

10. *Page 4-1, Section 4.2, Paragraph 1: Please change the directional reference in the last sentence from “western” to “southern and eastern”.*

Navy Response to PREQB Specific Comment 10: The directional reference in the last sentence has been changed from “western” to “southern and eastern”.

11. *Page 4-2, Section 4.2, Paragraph 2: Please clarify the second sentence in this paragraph. The confirmatory soil sampling should be conducted along all edges of the excavation(s).*

Navy Response to PREQB Specific Comment 11: Text has been added to Page 4-2, Section 4.4, Paragraph 2, stating that confirmation samples will be collected along all sidewalls of each excavation

12. *Page 4-1, Section 4.4, Paragraph 1: Please change the “P” in the reference to soil boring location PESB03 to a “B”.*

Navy Response to PREQB Specific Comment 12: The “P” in the reference to soil boring location PESB03 has been changed to a “B”.

13. *Page 4-2, Section 4.4, Paragraph 1: Please re-word the third sentence to say, “There will be no entry permitted into an excavation over 4 feet in depth.”*

Navy Response to PREQB Specific Comment 13: The text now reads “There will be no entry permitted into an excavation over 4 feet in depth”.

14. *Page 4-2, Section 4.5, Paragraph 1: Please provide an acknowledgement in the text that the poly-sheeting used to cover the stockpiles at the end of each day will be secured with hay bales or sandbags to prevent disruption by wind or heavy precipitation.*

Navy Response to PREQB Specific Comment 14: The following text has been added; “At the end of each day, the polyethylene sheeting will be secured with straw bales or sandbags to prevent disruption by wind or heavy precipitation.”

15. *Page 4-3, Section 4.6, Paragraph 1: Please provide an indication as to whether the locations from which confirmation soil samples are collected following excavation and the limits of the excavation*

will be surveyed for final documentation of the removal efforts. It is recommended that this task be added to the work activities.

Navy Response to PREQB Specific Comment 15: Confirmation soil sample locations will be surveyed. Text revised to include; “The excavation limits and soil confirmation sample locations will be surveyed for final documentation.” Confirmation sample survey task has been added to the final project schedule (Appendix F).

16. Page 4-3, Section 4.7, Paragraph 4: *Please define the term “clean” used in the reference of topsoil. Please provide the regulatory criteria that the results of the topsoil sampling will be compared to determine if it is suitable for use as topsoil and indicate the frequency with which topsoil will be sampled to determine adequacy.*

Navy Response to PREQB Specific Comment 16: For clarification purposes, the reference to “clean” has been removed from the paragraph. A reference to the SAP, Tables 3-1 and 3-2 were added to Section 4.7 to clarify sample frequency. The analytical methods and sampling frequency of borrow source were modified in the Technical Specification 31 23 00.00 20 Section 1.6 (Appendix H). To clarify suitability of backfill, a reference to Section 3.1.3 of the SAP was also added to Section 4.7 of the Work Plan.

PREQB Evaluation of Response: *Please refer to PREQB’s Evaluation of Response to PREQB Comment 3.*

Navy Response: Sample frequency in Section 3.1.3 of the SAP and Technical Specification 31 23 00.00 20 Section 1.6 was revised to 1 per 500 cubic yards per borrow source.

17. Page 5-4, Section 5.6, Paragraph 2: *Please indicate that all equipment will be decontaminated prior to arrival at the site as another means of contamination prevention.*

Navy Response to PREQB Specific Comment 17: Text has been added indicating that all equipment will be decontaminated prior to arrival at the site as another means of contamination prevention.

18. Page 6-6, Section 6.5.9: *Site restoration includes the seeding of Bermuda grass within the disturbed areas of the site. The WP states that demobilization will occur after site restoration activities are complete and that the demobilization will include the removal of erosion control measures. The Project Schedule presented in Appendix F indicates that demobilization will occur within three days of the initiation of site restoration (backfill with clean soil and revegetation). The site will not be stabilized by the seeded Bermuda grass within three days. It is imperative that erosion control measures remain in place until the site is completely stabilized with vegetation. Please revise the schedule to indicate that although initial demobilization activities may occur shortly after site restoration, the final demobilization or removal of erosion control measures will not occur until the grass is established (4 to 6 weeks after seeding).*

Navy Response to PREQB Specific Comment 18: The demobilization task in the Project Schedule (Appendix F) was adjusted to 42 days to allow vegetation stabilization. A sentence was added to Section 6.5.7 Restoration to clarify time need to establish the grass at the site.

APPENDIX C, SAMPLING AND ANALYSIS PLAN

1. Page 3-1, Section 3.1.1, Paragraph 2:

a. *The text states that confirmation samples will be collected from the sidewall of each excavation. This is also in accordance with Technical Specification 02 61 13, Part 3.5 in Appendix H. However, as*

per Table 3-1, there are no planned sidewall samples at Areas 3 and 4. Please clarify this discrepancy.

Navy Response to PREQB Appendix C Comment 1a: The areas identified for excavation were originally developed to help calculate in-place soil. To help clarify sidewall sampling requirements, the areas were re-designated (See Appendix A of the Work Plan) and Table 3-1 was revised to reflect sidewalls sampling for each area.

b. Please remove the period between the words “line” and “Concrete”, and amend to make a full sentence.

Navy Response to PREQB Appendix C Comment 1b: The period has been removed between the words “line” and “Concrete” and the sentence has been amended to make a full sentence.

2. Page 3-1, Section 3.1.1, Paragraph 3:

a. The text states that samples will be analyzed on a 48-hour turnaround time from the laboratory. However, Technical Specification 01 35 45.00 10, Part 3.1.1 in Appendix H states that 24 hour turnaround time is required. Please clarify.

Navy Response to PREQB Appendix C Comment 2a: The text of the SAP has been amended to state that samples will be analyzed on a 24-hour turnaround time.

b. Quick turnaround time is being requested of the laboratory to minimize the amount of time the excavations remain open. Please consider using field screening methods for TPH (i.e., Petroflag) and when field screening results indicate concentrations are below 100 mg/kg, this sample would be sent to the laboratory for confirmation. This may minimize the need for further excavation after the laboratory results are received. Please note that Technical Specification 01 35 45.00 10, Part 1.3.3.9 states that field screening will be performed; there were no field screening approaches discussed in the Work Plan or SAP. Please comment if field screening methods were considered or need to be added based on the Technical Specification.

Navy Response to PREQB Appendix C Comment 2b: Based on EQB’s comment, the Navy re-evaluated and decided against using field screening methods during excavation activities for confirmation sample analysis for the following reasons. 1) The limits of contamination have been defined during the site investigation (Baker, 2009). 2) The laboratory analysis will serve as a confirmation that the limits previously defined have been reached. Laboratory results would serve as the final determination of contaminant levels. 3) The 24 hour turnaround time is not excessive and is an acceptable amount of time for excavation to remain open as the site can be secured from the public access by the existing perimeter security fence. Technical Specification 01 35 45.00 10 has been revised by removing reference to field screening.

c. The minimum frequency at which the confirmatory soil samples is proposed for collection is one per 25 feet of sidewall excavation and one from the bottom of the excavation. Please consider amending this to reflect depth targets (e.g., one soil sample per 25 linear feet of excavation sidewall per four feet of depth) and more stringent targets for the collection of soils along the excavation bottoms (e.g., one soil sample per 100 square feet of excavation bottom). This will allow for more thorough confirmation that clean soils remain.

Navy Response to PREQB Appendix C Comment 2c: Section 3.1.1 of the SAP and Technical Specification 02 61 13, Part 3.5 was changed to reflect an excavation bottom sample every 100 square feet. Section 3.1.1 of the SAP and Technical Specification 02 61 13, Part 3.5 has one sample every 25

linear feet of excavation sidewall per five feet of depth which is conservative.

- d. *Please provide the rationale for not collecting confirmatory soil samples from along the fence line, concrete pad or Building 3034. Although these features, for various reasons, present excavation boundaries, it is important to understand the disposition of the soils that will not be excavated as part of this effort.*

Navy Response to PREQB Appendix C Comment 2d: The confirmatory soil samples procedure has been revised to include obtaining samples along the fence line, concrete pad and Building 3034 at a frequency of one per 25 linear feet along the sidewall or a minimum of one per each excavation sidewall from the base of the wall and minimum of one sample per every five vertical feet from the base of the sidewall. The locations of the samples along these sidewalls will be based on field observations and/or visible soil staining from diesel fuel. These additional proposed sidewall samples have been added to Table 3-1.

3. *Page 3-2, Section 3.1.2, Paragraph 1: Technical Specification 01 35 45.00 10, Part 3.1.1 in Appendix H states that waste characterization samples will also be analyzed for the paint filter liquids test as per SW-846 method 9095. However, this analysis is not included in the SAP. Please revise accordingly.*

Navy Response to PREQB Appendix C Comment 3: Section 3.1.2 and Table 3-1 have been revised to include the paint filter liquids test for waste characterization samples. In addition, engineering methods have been added to Table 3.2.

4. *Page 3-2, Section 3.1.3, Paragraph 1: Please consider analysis of back-fill materials for a full suite of analyses to ensure that there are no impacts which will potentially adversely affect the surrounding area.*

Navy Response to PREQB Appendix C Comment 4: Backfill materials will be analyzed in accordance with Technical Specification 31 23 00.00 20 Part 1.6. The Navy believes that the comprehensive suite of analyses presented in Technical Specification 31 23 00.00 20 will ensure that there are no impacts which will potentially adversely affect the surrounding area.

5. *Page 3-3, Section 3.3, Bullet 5: Please refer to the comment for Page 3-3, Section 3.5.3, Paragraph 1 above.*

Navy Response to PREQB Appendix C Comment 5: Rinses with deionized water have been added between the rinses with methanol and hexane and after the rinse with hexane in Page 3-4, Section 3.3.

6. *Page 4-2, Section 4.2, Paragraph 2: Please remove “(surface soil)” from the example sample nomenclature.*

Navy Response to PREQB Appendix C Comment 6: “(Surface soil)” has been removed from the example sample nomenclature.

7. *Page 6-1, Section 6.1, Table 6.1: Please expand the column widths to accommodate the text entries.*

Navy Response to PREQB Appendix C Comment 7: The column widths have been expanded to accommodate the text entries in all tables throughout the Pico del Este soil removal design documents.

8. *Table 3-1: Section 3.1.3 of the SAP and Technical Specification 02 61 13 Part 2.2 in Appendix H state that backfill soil samples will be analyzed for TPH-DRO. However, Technical Specification 31 23 00.00 20 Part 1.6 states that these samples will be analyzed for full TPH using EPA method 418.1 which is now obsolete. Table 3-1 states the samples will be analyzed for full TPH. Please clarify the discrepancy.*

Navy Response to PREQB Appendix C Comment 8: The backfill soil samples will be analyzed for TPH-GRO and TPH-DRO. The Technical Specs have been changed to reflect this. The Technical Specifications and Table 3-2 have been revised to current analysis method 8015C for TPH.

9. *Table 3-2:*

- a. *The quantitation limits (QL) listed for BTEX in water are much too high to be QLs. Please clarify what these numbers represent.*

Navy Response to PREQB Appendix C Comment 9a: The quantitation limit for BTEX in water has been revised in Table 3-2.

- b. *The QL for TPH DRO in soil is 100 mg/kg. However, this value is the objective for “clean” and should therefore not be the QL. The QL needs to be 2-5x below the project objective. This will allow for potential dilutions or corrections due to percent solids that will increase the QL.*

Navy Response to PREQB Appendix C Comment 9b: The QL value for TPH-DRO presented in Table 3-2 has been replaced with 10 mg/kg.

PREQB Evaluation of Response: *The response is acceptable. However, the units shown on Table 3-2 in the revised SAP for TPH-DRO in soil are mg/L instead of mg/kg. Please revise accordingly.*

Navy Response: Table 3-2 was revised.

- c. *The method numbers listed for TPH-DRO, BTEX, and Total TPH are in accordance with the Technical Specifications in Appendix H. However, there are issues with these method numbers.*
- i. *TPH-DRO: 5030/8015B: SW-846 method 5030 is a VOC preparation method for aqueous samples. Please provide the preparation method being used for TPH-DRO analysis of soil samples.*

Navy Response to PREQB Appendix C Comment 9c (i): The specifications have been revised to correct the preparation method 3550B for TPH-DRO analysis of soil samples.

- ii. *BTEX: 5030/8020:*

1. *SW-846 method 5030 is a VOC preparation method for aqueous samples. Please change the preparation method being used for BTEX analysis of soil samples to SW-846 method 5035A.*

Navy Response to PREQB Appendix C Comment 9c (ii): The specifications have been revised to correct the preparation method 5035A for BTEX.

2. *SW-846 method 8020 is obsolete and was removed from SW-846 in 2004. The use of SW-846 method 8260B should be considered for the analysis of BTEX.*

Navy Response to PREQB Appendix C Comment 9c (ii): The specifications have been revised to correct 8260B analysis method for BTEX.

- iii. *Total TPH: 418.1: This method is obsolete and was removed from the Federal Register in 2007. The use of SW-846 method 8015B should be considered for total TPH.*

Navy Response to PREQB Appendix C Comment 9c (iii): The specifications have been revised to current analysis method 8015C for TPH.

- iv. *Ignitability: 1010A: Ignitability of solids should be performed using SW-846 method 1030.*

Navy Response to PREQB Appendix C Comment 9c (iv): The specifications have been revised to include analysis method 1030 for ignitability of solids.

APPENDIX H, TECHNICAL SPECIFICATIONS

1. *Technical Specification 01 35 45.00 10, Page 1, Part 1.3.2: The technical specifications require that the chemical data meet the specified precision, accuracy, representativeness, comparability, completeness, and sensitivity requirements. These requirements were not specified in the SAP. Please update the SAP to include this information.*

Navy Response to PREQB Appendix H Comment 1: See Navy response to General Question 1.

2. *Technical Specification 01 35 45.00 10, Page 2, Part 1.3.3.6: This section states that perimeter air monitoring samples will be analyzed. There was no discussion of this in the Work Plan or SAP. Please clarify if this is being performed and update the SAP and Work Plan accordingly.*

Navy Response to PREQB Appendix H Comment 2: Technical Specification 01 35 45.00 10, Page 2, Part 1.3.3.6, air monitoring samples have been removed from the specifications. No perimeter air monitoring will be performed.

3. *Technical Specification 01 35 45.00 10, Page 3, Parts 1.5.2 and 1.5.3: These sections call for the independent data review of the data as well as electronic tape audits. Please include details on these tasks in the SAP.*

Navy Response to PREQB Appendix H Comment 3: Independent data review is in reference to data validation which is not required, therefore Part 1.5.2 was removed from the Technical Specification 01 35 45.00 10. Electronic tape audits are not required, therefore Part 1.5.3 was removed from Technical Specification 01 35 45.00 10.

PREQB Evaluation of Response: Please see PREQB Evaluation of Response to PREQB General Comment 1b.

Navy Response: Details on data validation are included in the SAP Section 3.2.

4. *Technical Specification 01 35 45.00 10, Page 5, Part 3.1.1: TPH-DRO: 5030/8015B: SW-846 method 5030 is a VOC preparation method for aqueous samples. Please revise the preparation method being used for TPH-DRO analysis of soil samples.*

Navy Response to PREQB Appendix H Comment 4: The technical specifications have been revised to include the current preparation method SW-846 method number 3550B and analysis method number 8015C will be used for TPH-DRO analysis of soil samples.

5. *Technical Specification 01 35 45.00 10, Page 5, Part 3.1.2: TPH-DRO: 5030/8015B: SW-846 method 5030 is a VOC preparation method for aqueous samples. Please revise the preparation method being used for TPH-DRO analysis of soil samples.*

Navy Response to PREQB Appendix H Comment 5: The technical specifications have been revised to include the current preparation method SW-846 method number 3550B and analysis method number 8015C will be used for TPH-DRO analysis of soil samples.

6. *Technical Specification 01 35 45.00 10, Page 5, Part 3.1.3:*
a. *TPH-DRO: 5030/8015B: SW-846 method 5030 is a VOC preparation method for aqueous samples. Please revise the preparation method being used for TPH-DRO analysis of soil samples.*

Navy Response to PREQB Appendix H Comment 6a: The technical specifications have been revised to include the current preparation method SW-846 method number 3550B and analysis method number 8015C will be used for TPH-DRO analysis of soil samples.

- b. *Ignitability: 1010A: Ignitability of solids needs to be performed using SW-846 method 1030.*

Navy Response to PREQB Appendix H Comment 6b: The specifications have been revised to include analysis method 1030 for ignitability of solids.

7. *Technical Specification 02 61 13, Page 4, Part 2.2:*
a. *TPH-DRO: 5030/8015B: SW-846 method 5030 is a VOC preparation method for aqueous samples. Please revise the preparation method being used for TPH-DRO analysis of soil samples.*

Navy Response to PREQB Appendix H Comment 7a: The technical specifications have been revised to include the current preparation method SW-846 method number 3550B and analysis method number 8015C will be used for TPH-DRO analysis of soil samples.

- b. *Ignitability: 1010A: Ignitability of solids needs to be performed using SW-846 method 1030.*

Navy Response to PREQB Appendix H Comment 7b: The specifications have been revised to include analysis method 1030 for ignitability of solids.

- c. *SW-846 method 5030 is a VOC preparation method for aqueous samples. The preparation method being used for BTEX analysis of soil samples needs to be SW-846 method 5035A.*

Navy Response to PREQB Appendix H Comment 7c: The preparation method for BTEX analysis has been replaced with Method 5035A.

- d. *SW-846 method 8020 is obsolete and was removed from SW-846 in 2004. The use of SW-846 method 8260B needs to be considered for the analysis of BTEX.*

Navy Response to PREQB Appendix H Comment 7d: The analysis method for BTEX has been replaced with Method 8260B.

- Technical Specification 31 23 00.00 20, Page 3, Part 1.6:*
e. *Technical Specification 02 61 13, Page 4, Section 2.2 states that backfill samples will be analyzed for TPH-DRO using SW-846 method 8015B. However, this Technical Specification states that backfill samples will be analyzed for TPH using EPA method 418.1. This method is obsolete and was*

removed from the Federal Register in 2007. The use of SW-846 method 8015B needs to be considered for total TPH analysis.

Navy Response to PREQB Appendix H Comment 8a: The technical specifications have been revised to include the current preparation method SW-846 method number 3550B and analysis method number 8015C will be used for TPH-DRO analysis of soil samples.

f. The section states that a composite sample will be created for the analysis of TPH, BTEX, and TCLP analyses. Samples for BTEX and TCLP VOC analyses cannot be composited; these analyses need to be performed on grab samples. Please revise the Specification accordingly.

Navy Response to PREQB Appendix H Comment 8b: The specification and Table 3-1 have been revised to indicate that grab soil samples are required for TPH-GRO, TCLP VOC, and BTEX analyses. The remaining TCLP suite, TPH-DRO, and IRC analysis of off-site borrow soil will be performed on composite samples.