LETTER REGARDING U S EPA REGION IV COMMENTS ON QUALITY ASSURANCE PROJECT PLAN FOR REMEDIAL INVESTIGATION AT SITE 5 FORMER PAINT SHOP DISPOSAL AREA MCRD PARRIS ISLAND SC

12/4/2009

U S EPA REGION IV

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960

December 4, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4SD-FFB

Naval Air Station, JAX
Navy Facilities Engineering SE
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Attn: Charles Cook
PO Box 30
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And

Commanding General
Marine Corps Recruit Depot
Natural Resources & Environmental Affairs
Attn: Tim Harrington
PO Box 5028
Parris Island, South Carolina 29905-9001

SUBJ: EPA Review of the Quality Assurance Project Plan (QAPP) – Remedial Investigation of Site 5, Former Paint Shop Disposal Area for the Marine Corps Recruit Depot (MCRD), Parris Island, South Carolina (September 2009).

Dear Sirs:

The U.S. Environmental Protection Agency (EPA) has completed its review of the above referenced document in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). The review has been conducted to ensure the legal adequacy as well as effectiveness and efficiency. EPA offers the following comments:

GENERAL COMMENTS:

1. The Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Remedial Investigation of Site 5, Former Paint Shop Disposal Area dated

September 2009 (Draft SAP) indicates that the Site 5 area has been covered to an unknown degree with construction debris and fill. Please provide additional information pertaining to the fill, the source of the fill, etc. and add this information and address the fill wherever appropriate throughout the Draft SAP (CSM, information inputs, historical data, etc.)

2. Due to the confusion as to whether or not the earlier investigation samples were from a soils area which was fill or original grade, and the lack of information regarding the source of the fill material, it is difficult to justify limiting the analyte list at this point in the investigation. The Parris Island Team should discuss this matter and reach consensus on which analytes or analytical groups are to be investigated.

3. The Draft SAP indicates that a decision may be made at some point that an action is necessary, but that action may only be Land Use Controls (LUCs). Please be aware that if this becomes the case, at least a letter style Feasibility Study (FS) will still be needed to explain how the LUCs are fully protective for the area of investigation and to make a comparison to a "No Action" alternative, including costs, as well as proceeding through the Record Of Decision process.

SPECIFIC COMMENTS:

4. SAP Worksheets #3 and 4 – Please correct the EPA RPM's email address here and on any master list you may be using.

5. SAP Worksheet #6 – Please add to the first row, last column, "The Navy will notify the PI Team." On the second row, last column, please add, "Required approvals include the PI Team."

6. SAP Worksheet #9 – Project Scoping Session Participants Sheet (Page 21 of 119), indicates the projected date(s) of sampling is "Spring 2009." Revise the Draft SAP to reflect the new proposed date.

7. SAP Worksheet #9 – Consensus Decisions (Page 21 of 119) – Please note that regulators were not involved in these decisions, and therefore comments have been made pertaining to some of these decisions. The comments can be found throughout the list of comments.

8. The first bulleted item on Page 22 of 119 incorrectly indicates the abbreviation for Hazard Quotient as "HI". The correct abbreviation is for Hazard Quotient is "HQ" and not "HI" as indicated in the text. Revise the Draft SAP to address this issue.

9. SAP Worksheet 10 – Problem Definition, Section 10.2, Site Background, Page 24 of 119 in the Draft SAP discusses the results of the Site Investigation/Confirmatory Sampling (SI/CS) Investigation conducted at Site 5 in October 1999. The seventh paragraph in the worksheet states that the results showed the presence of volatile organic compounds

(VOCs), polycyclic aromatic hydrocarbons (PAHs), pesticides, and a PCB. The text further states that both 4,4,-DDT and 4,4-DDE were detected at concentrations great than United States Environmental Protection Agency (EPA) Region 9 Residential-Use and Industrial –Use Soil Preliminary Remediation Goals (2000) and/or EPA Ecological Screening Values (ESVs). There is no further discussion of pesticides sampling and analysis in the Draft SAP or justification of why pesticides are not being sampled for as part of the remedial investigation. In order to address this potential data gap, please revise the Draft SAP to provide further information and justification of why pesticides are not included in the remedial investigation, or include them in all appropriate areas throughout the document.

10. The figure presented on Page 27 of 119 of the Draft SAP references Area 3 for sediment (secondary medium). However, the Draft SAP indicates there are only two Areas, Area 1 and Area 2 of the proposed investigation. Revise the figure of the Draft SAP to address this issue.

11. The caption under Figure 10-6 on Page 35 of 119 indicates the view is to the northwest. However, according to the compass direction provided in the caption for Figure 10-5, the view is to the Southeast in Figure 10-6. Revise the Draft SAP accordingly.

12. The SAP Worksheet #11 – Project Quality Objectives/Systematic Planning Process Statements, Section 11.1, Identification of Study Goals, Decision Statement #2 (Area 1) on Page 36 of 119 indicates an HI for individual target organs that is greater than 1.0 is defined as an unacceptable human health risk. The Human Health Risk Assessment Protocol in Appendix A on Page A-2 discusses an "HQ" greater than 1.0 indicates adverse non-carcinogenic health effects. Revise the text in the SAP Worksheet #11 to address this issue.

13. The SAP Worksheet #11, Information Inputs, Pages 36 and 37 of 119: Since Light Non-Aqueous Phase Liquid (LNAPL) is a potential at this site, please provide for the measurement of the thickness of the LNAPL if/when encountered. Update other sections of the Draft SAP as appropriate as well.

14. The SAP Worksheet #11, Project Action Limits section, Soil and Groundwater subsections on Page 38 of 119 indicate the Regional Screening Levels were developed by Oak Ridge National Laboratories (ORNL). This statement is repeated in Appendix A, Human Health Risk Assessment Protocol, subsection A.1.1, Toxicity Screen on Pages A-1 and A-2. However, the EPA is the source of the Regional Screening Level (RSL) data for soil and groundwater. Revise the text in this section of the Draft SAP accordingly and in all other instances throughout the document.

15. The SAP Worksheet #11, Section 11.3, Area 1, Page 39: The vertical boundary for groundwater is defined as the depth interval representing the top of the water table and the smear zone in order to target light non-aqueous liquids such as paint thinners. This is appropriate for this purpose. However, recent experience has shown that analyzing samples containing such liquids results in very high concentrations of certain

contaminants, but results well below those levels, yet still above action levels, are masked. For purposes of identifying dissolved contaminants potentially of a plume in nature, please extend the vertical depth boundary below this and allow for a sample somewhat removed from the top of the water table in addition to those already planned.

16. The SAP Worksheet #11, Section 11.3, Area 2, Page 39: The vertical boundary for sediment is defined as 0 to 4". Please change this to investigate the top 6 inches of sediment here and at all other appropriate locations throughout the document.

17. The SAP Worksheet #11, Section 11.4 Analytical Approach, Page 40, third paragraph in the subsection titled Decision Rule #1: Nature and Extent of Contamination (Applies to Areas 1 and 2) on Page 39 of 119, states that for Area 2 the horizontal boundary will be limited to only along the shoreline. While this will likely be the case, and while appropriate for purposes of planning samples, the final decision will have to be made when reviewing the data to determine if the site is sufficiently delineated.

18. The SAP Worksheet #11, Section 11.4 Analytical Approach, Page 40, third paragraph in the subsection titled Decision Rule #2: Human Health Risk Assessment (Applies to Area 1) on Page 40 of 119, states if the cumulative incremental lifetime cancer risk (ILCR) for the reasonable maximum exposure (RME) residential scenario is less than or equal to 1×10^{-4} for residential receptors, no further action (NFA) will be recommended. It should be noted that the appropriate remedial goal option (RGO) and risk range has not been determined by the Project Team for this decision point and NFA. If the cancer risk estimates are within the 1×10^{-4} to 1×10^{-6} cancer risk range, risk management decisions will be made by the Project Team on a case by case basis in determining the appropriate RGO for the NFA determination.

19. The SAP Worksheet #11, Section 11.5 Performance or Acceptance Criteria, Page 42, last paragraph states in applying the VSP, Alpha was set at 25% and Beta at 30%, while the data variability was determined in accordance with Section G.2.6 of Appendix G, which further states that the number of existing samples were insufficient to calculate a standard deviation. Use of the VSP as such and with such limited data is not ideal. A typical Alpha value would be 5%, and a typical Beta value might be more like 10%. The Gray region boundary set at 80% of the PAL is more reasonable. Typically, a first round of samples would include a smattering of the entire area to be investigated, and would in turn be used to establish standard deviations. Frequently, after the first round the investigation area is divided into zones of similar values to keep standard deviations small and therefore sample numbers down, which requires the PRP to make decisions about the size of the zones they are willing to accept together in cases where action levels are exceeded. More recent use of the VSP is with an iterative process whereby the site is narrowed down by this grouping approach, quite often using real time field data from inexpensive test kits, etc. to keep mobilization costs down when the analyte list is small or lends itself to inexpensive methods. Although neither of these approaches was utilized here, the number of samples appears to be sufficient to start with, however, there can be no guarantee additional samples will not be needed after the results have been reviewed.

Acceptance of this VSP approach in the Draft SAP is not to be construed as precedent setting.

20. The SAP Worksheet #11, Section 11.6 Plan Development for Obtaining Data, Page 43, last paragraph before Area 2 presents the logic for the groundwater wells. While the number of wells is sufficient to start with, they are not likely to be sufficient to delineate a plume or LNAPL, if such contamination is observed in the results.

21. Appendices A and B: Since it is so early in the investigation, and information such as that pertaining to the fill material, etc. is still to be provided, and that being information which may change the CSM and other pertinent portions of this Draft SAP, a complete review of the Risk Assessment Protocol and other risk portions of the SAP has not yet been conducted. Additional comments may come later.

22. Appendix A, Section A.2.5, Vapor Intrusion into Buildings, Page A-18: If groundwater is found to be at less than 5 feet below ground surface, groundwater concentrations may not be used to model indoor air concentrations. A provision for soil gas sampling should be included in case the need is indicated by results.

This concludes EPA's comments. If there are any questions, please feel free to contact me at 404-562-9969. EPA looks forward to making progress on this site.

Sincerely,

Lila Llamas

Lila Llamas
Senior RPM
Federal Facilities Branch
Superfund Division

cc: Meredith Amick, SCDHEC
Annie Gerry, SCDHEC
Mark Sladic, TtNus