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LETTER REGARDING U S EPA REGION IV CONDITIONAL APPROVAL OF DRAFT FINAL
REMEDIAL INVESTIGATION REPORT FOR SITES 9, 16, 27 AND 55 MCRD PARRIS ISLAND
SC
7/10/2012
U S EPA REGION IV



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

July 10, 2012

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Naval Air Station, JAX
Navy Facilities Engineering SE
Installation Restoration, SC IPT
Attn: Mr. Charles Cook
PO Box 30
North Ajax Street, Bldg 135
Jacksonville, FL 32212-0030

AND

Commanding General
Marine Corps Recruit Depot
Natural Resources & Environmental Affairs Office
Attn: Ms. Lisa Donohoe
PO Box 5028
Parris Island, SC 29905-9001

Dear Mr. Cook and Ms. Donohoe:

The U.S. Environmental Protection Agency (EPA) has completed its review of the Draft Final Remedial Investigation Report for Sites 9/16/27/55(RI D2), Marine Corps Recruit Depot (MCRD), Parris Island, South Carolina (April 2012). The review resulted in the need for conditions for approval. The conditions for approval are attached.

If the Navy and/or MCRD object to any or all of these conditions the Navy should notify EPA immediately and the document should not be considered approved. The Navy should enter a dispute at that point in time. Otherwise, the document should be considered sufficient for its intended purpose provided the conditions are met. The Navy and MCRD should recognize that although the document may be considered sufficient to move forward, under the regulatory documentation process the RI is not considered final until a Record of Decision is signed.

Please feel free to contact EPA with any questions there may be regarding these conditions for approval.

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I can be reached at 404-562-9969.

Sincerely,



Lila Llamas

Senior RPM

Federal Facilities Branch

Superfund Division

Attachment

cc: Meredith Amick, SCDHEC

Peggy Churchill, TtNus

**EPA CONDITIONS FOR APPROVAL OF THE DRAFT FINAL
REMEDIAL INVESTIGATION REPORT FOR SITES 9, 16, 27, 55
MARINE CORPS RECRUIT DEPOT
PARRIS ISLAND, SOUTH CAROLINA
APRIL 2012**

SPECIFIC CONDITIONS FOR APPROVAL:

The following should be considered as conditions for approval of the Draft Final RI Report.

1. **Response to Comments (RTCs):** All final documents should include a final set of regulatory comments and Navy/MCRD responses to those comments. **Please ensure the document includes a final set of RTCs as should be revised based on these conditions and/or as-is with a copy of this letter attached. Ensure these are included in the administrative record copy of the document.**
2. **Response to EPA General Comment 5 – Motor-T Cross Sections:** The response is unacceptable. **The cross sections are to be submitted prior to drafting the FS, in support of scoping the Draft FS.**
3. **Response to EPA General Comment 6 and Specific Comment 8 – Motor-T Impacts:** The responses are unacceptable. The text fails to explain which wells were not sampled as indicated in the response to number 8. **The missing data should be obtained and/or the Navy/MCRD should identify damaged wells. If wells are damaged and can no longer be utilized, the wells should be replaced. The partnering team should be consulted on placement of the wells. If the wells were simply inaccessible, access should be granted and the data obtained as planned. Presentation of the updated information can be provided in the Draft FS.**
4. **Response to EPA General Comment 8 – Historical Soils Data Isocontours:** The response is insufficient. While the response does address groundwater data it fails to address the main subject of the comment which was soils data. However, in contradiction to what was stated for the groundwater it appears additional historical data has been included for the soils Isocontour maps. **Please verify the soils contour maps in the Draft Final RI contain all relevant historical soils data. If not, revised soil contour maps including all relevant historical soils data should be developed, printed, and provided in support of scoping the draft FS.**
5. **Response to EPA General Comment 9 – Vertical Delineation:** The response is partially acceptable. Cross-sections for the Motor-T construction may only impact Site 27. The main need for vertical delineation is in Site 55. Cross sections depicting vertical distribution of contaminants should be provided for both the Motor-T impact area as well as the Site 55 main contamination area(s). **Submittal of the acceptable cross sections will be considered a condition of this approval and should be submitted in support of the scoping session for scoping the Draft FS.**
6. **Response to EPA General Comment 10 and Specific Comment 22 – LNAPL Risk Assessment:** The revised text indicates potential unacceptable risks from exposure to LNAPL via direct contact or from vapors could not be quantified. Therefore, institutional controls may be necessary to protect against these possible exposures at least until the site is remediated. Remediation results would have to be considered before the need for ICs would be eliminated.

While the text identifies these concerns, the Navy/MCRD should ensure these are captured and addressed in the FS by mentioning them whenever risk summaries are presented and by adding these as “other site risks” on risk summary tables in the FS and other future documents, since these potential risks will not be indicated in typical risk summary tables.

7. **Response to EPA General Comment 14 – Total Risk for Soils:** The response cannot be approved at this time. According to the comment, exposure to total soil should be based on a weighted average since exposure to soil as a result of excavation activities would not be based on distinct layers. However, it appears that the risk assessment did evaluate excavation exposure based on distinct layers. **Please reconcile the response with the methods used in the risk assessment and clarify to EPA.** The response suggests that a weighted average was used; however, the report indicates distinct layers were used. **If it can be demonstrated that adding the surface soil risk and subsurface soil risk is a conservative approach, weighted averages do not need to be evaluated. A resolution to this comment, and change pages if necessary, should be presented in support of the scoping session for the FS. At that point in time a decision will be made as to whether the RI Report should be updated or the changes simply added to the administrative record via a letter, or addressed in the FS, etc.**
8. **Response to EPA General Comment 16 – Eco Risk:** The response is unacceptable. The response indicates that the Draft RI has been revised to include a discussion of ecological risk assessment triggers and whether or not sufficient data exists to determine if an ecological risk assessment is warranted. This information could not be readily located since the response did not indicate where in the document this revision was made. According to the Draft RI, ecological risks were not evaluated in this RI because of the industrial nature of Sites 9, 16, 27, and 55 and the lack of ecological habitat. However, information has not been provided in the RI in the form of a screening-level ecological risk assessment (SLERA) to support this statement, as was agreed to at the partnering meeting. The fact that the site is of an industrial nature does not preclude wildlife from using the site. Mammalian receptors (e.g., rats, mice) and avian wildlife can still use the site albeit to limited areas of exposed soil. In addition, information has not been provided in a SLERA that explains why groundwater would not be expected to impact the downgradient Battalion Pond. **To promote clarity in the administrative record and to substantiate that ecological risks associated with soil and groundwater are not significant, it is recommended that the RI include a SLERA which includes lines of evidence such as lack of habitat as part of step 3a. Change pages should be submitted. In order to minimize change pages let this become Section 7, and the old Section 7 can easily be changed to Section 8.**
9. **EPA Specific Comment 1 – Area of Archeological Concern:** EPA would like to discuss the Navy/MCRD communications with MCRD’s Cultural Resources Office and potential stakeholders outside of MCRD staff and offices.
10. **EPA Specific Comment 16 – Soils Removed during Fiber Optic Vault Installation:** The response is incomplete. It appears only information pertaining to the disposition of liquids were documented, although the documentation is nearly illegible. **The Navy/MCRD should provide a written explanation of the disposition of soils removed during installation of the fiber optic vault and provide specific references to supporting documentation; the supporting documentation should be legible. This may be provided in support of scoping the FS.**
11. **EPA Specific Comment 19 – CSM for LNAPL trapped beneath the Clay Layer:** The response is unacceptable. LNAPL was found to be present 6” thick or so in MW11. This well is

screened across the clay layer. There was no evidence of a floating LNAPL on top of the water table elsewhere, therefore the most likely scenario is the product floated up the well from beneath the clay layer. EPA believes there is insufficient data to rule out the potential for small pockets of LNAPL to be present, although scattered, beneath the clay layer. **The Navy should prepare to address EPA's concern during the FS scoping and negotiation of alternative evaluation and selection.**

12. **EPA Specific Comment 21 – Figure 4-7:** The response is incomplete. While the figure has been updated to include the correct MCLs and Tapwater screening criteria, it appears for Ethylbenzene the MCL value (5 UG/L) and Tapwater value (1.3 UG/L) are incorrectly indicated. **Please correct this Figure and provide a change page for the RI Report.**
13. **EPA Specific Comments 24 and 25 – Definition of soil boundaries:** In order to properly review a document and to properly assess risk, surface soil and subsurface soil depth interval boundaries should be clarified and specific. Data collected should fall clearly within a soil interval boundary or not. **For clarity to the regulators and for the administrative record, please clearly define these boundaries as used in the risk assessment and explain whether or not the data analyzed in the document was properly sorted and applied. The information may be provided in support of scoping the FS and clarified in writing in the Draft FS.**
14. **EPA Specific Comments 26, 36, and 38 – Site Sources of Contamination:** Note - While the response is technically correct, **the Navy/MCRD should prepare to investigate the source of the LNAPL either in support of the FS and/or as part of the Remedial Design.** It seems apparent the source is in the vicinity of the Fiber Optic Vault. Additional investigation may be necessary in the fiber optic vault area to determine if a source can be pinpointed at depth. While LNAPLS can be associated with historical Pesticide Rinse Areas, DOD sites also often dug pits/holes and lined them with gravel for disposal. Prior to proper disposal regulations, users in general often buried drums of waste or leftover products. Since MCRD predates many environmental regulations, as do some of the contaminants of concern (DDT, etc.) any of these are possible scenarios worthy of investigation. (The response to comment 38 talks about site 55 instead of Sites 9 and 16 – see below.)
15. **EPA Specific Comment 28 – Vapor Intrusion:** Note – Although reportedly no additional buildings fall within 100 feet of where groundwater concentrations exceeded vapor intrusion screening criteria or where LNAPL was located, since the guidance prohibits modeling from groundwater when LNAPL is present and since future construction may be proposed in the areas of elevated groundwater concentrations and/or LNAPL, institutional controls will be necessary in these areas to ensure future construction is protected from vapor intrusion. **No response is necessary.**
16. **EPA Specific Comments 30 and 42 – Carcinogenic Risks and Conclusions throughout Section 7:** Upon further review, it appears Section 6.4.3.2 does not acknowledge the cumulative risk for the Industrial Worker at Site 27 exceeding the risk range (2×10^{-4}) for exposure to surface and subsurface soils. This should also precipitate changes in Table 6-26 (PRGs), as well as statements made in Section 7. **Submit change pages for Table 6-26 and Section 7. If Section 6.4.3.2 can be corrected while changing only that page, submit a change page, otherwise, correcting Table 6-26 and Section 7 will be sufficient.**

Furthermore, there is still some confusion on soil interval depths for various exposure scenarios; therefore the proper use of data and exposure point concentrations could not be definitively verified. Consequently, additional clarification may be necessary for drafting the FS. However, given surface and subsurface soils (including the LNAPL smear zone) are to be addressed for protection of groundwater, there is likely sufficient information in the RI Report to proceed to an FS at this point in time to select a remedial alternative. No response is necessary.

17. **EPA Specific Comment 38 – Site Sources of Contamination:** Note - While the response is technically correct, it is talking about the wrong site. **Please clarify in documentation submitted in support of scoping/drafting the FS, what was the original source of contamination at Sites 9 and 16 in order to ensure the original source does not need to be investigated.**