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U S NAVY RESPONSES TO SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL COMMENTS ON FINAL TIER II SAMPLING AND ANALYSIS
PLAN SUPPLEMENTAL INVESTIGATION FOR CHICORA TANK FARM CNC CHARLESTON
SC
7/17/2013
BRAC PMO SOUTHEAST



DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE SOUTHEAST
4130 FABER PLACE DRIVE
SUITE 202
NORTH CHARLESTON, SC 29405

11011
Ser BPMOSE afs/0052
July 17, 2013

MS Meredith Amick
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201-1708

Dear Ms. Amick:

SUBJECT: SAMPLING AND ANALYSIS PLAN SUPPLEMENTAL INVESTIGATION
CHICORA TANK FARM CHARLESTON NAVAL COMPLEX, CHARLESTON,
SOUTH CAROLINA

Enclosed are our response to comments that SCDHEC submitted June 14, 2013 along with two sets of page changes for the hard copies of the subject Sampling and Analysis Plan (SAP). This SAP provides details on the upcoming investigation at the Chicora Tanks Farm. We have also included 2 CDs that have the final version of the SAP.

Should you have any questions, please contact Art Sanford by email at art.sanford.ctr@navy.mil or phone at (843) 743-2135.

Sincerely,

A handwritten signature in black ink, appearing to read "R. David Criswell", is positioned above the typed name.

R. DAVID CRISWELL, P. E.
Deputy Base Closure Manager

Response to Comments
Draft Tier II Sampling and Analysis Plan Chicora Tank Farm
Charleston Naval Complex
SC0 170 022 560

Responses to Comments, dated 14 June 2013, as provided by Meredith Amick:

Comment 1:

Because of the presence of NAPL, please analyze all samples for BTEX, naphthalene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and EDB.

Response 1:

As discussed in Section 10.5 of the Tier II Sampling and Analysis Plan (SAP), an extended analyte list was used during historical assessment and remedial activities at the Site. The analytes, as requested above, are included in the ongoing long-term monitoring program. During historical sampling, naphthalene has been the only constituent of concern, which has been measured above risk based screening levels, (RBSLs) and has served as the driver for cleanup at the Site. Furthermore, naphthalene is detected only in wells in close proximity to light non-aqueous phase liquids (LNAPL). Please see the following documents for supporting data: *Preliminary Contamination Assessment Report* (Kemron, 1992), *Corrective Action Plan* (Advent, 2008), and *February 2013 Long-Term Monitoring Report* (Resolution Consultants, 2013).

The principal study questions identified in Section 11.2 of the Tier II SAP specifically address the extent of LNAPL and increasing naphthalene concentrations. Such goals are consistent with findings of historical decommissioning, assessment, and remediation efforts and scoping discussions in recent BRAC Cleanup Team meetings. As detailed in Section 17.2 of the Tier II SAP, the proposed approach to evaluate the extent of LNAPL is limited to soil borings using laser induced fluorescence (LIF) technology and observations made during gauging and bail-down tests of temporary monitoring wells to be installed at the site. As detailed in Section 17.3, to evaluate increasing naphthalene at MW-2, and a recent spike at MW-33, soil and groundwater samples collected in the vicinity of these wells will be submitted for naphthalene analysis.

The Navy believes that this sampling approach will provide sufficient information necessary to answer the principal study questions and implement the decision rules presented in Worksheet 11 of the Tier II SAP. We respectfully request that the analyte list for this supplemental investigation remain limited to naphthalene, which has historically been the only analyte detected above applicable screening guidelines in groundwater samples collected during long-term monitoring at the Site.

Comment 2:

Worksheet 17-3 states, *"Development water and soil cuttings will be handled as meeting non-hazardous criteria and temporarily staged onsite, prior to offsite disposal."* However, please handle all IDW as described on page 14-5.

Response 2:

Worksheet 17-3 has been revised, as follows: *"Development water and soil cuttings will be temporarily staged onsite, prior to characterization and offsite disposal."*

Responses to Comments, dated 17 June 2013, as provided by Annie Gerry:

Comment 1:

Page WS 14-3 Temporary Monitoring Well Installation/Development - The text reads, *"Within 10 days of installation, temporary monitoring wells will be abandoned in accordance with applicable SCDHEC well standards and SOP-3-15."* Temporary monitoring wells are only allowed to be installed for a maximum of five days. If a variance is needed, please specify in the formal monitoring well request that is submitted to the Department.

Response 1:

Agree. Worksheet 14-3 has been revised, as follows: *"The temporary monitoring wells will be abandoned in accordance with SOP-3-15. While the physical abandonment process will be in accordance with South Carolina Well Standards R.61-71, a variance will be requested in the monitoring well permit application to be submitted for approval by SCDHEC, to allow temporary wells to remain in place for a period of 10 days. This extra time is necessary to allow for equilibration, prior to well gauging and bail-down tests."*

Comment 2:

Figure 17-1 - On the Figure provided, it is noted that no LIF borings are shown west of the monitoring wells, even though the text states that '*LIF borings will be performed until delineated in each direction ...*' In an effort to fully delineate the site and to ensure contamination has not migrated, sufficient number of wells to properly delineate the vertical and horizontal extent of contamination should be performed west of the monitoring wells that are being investigated.

Response 2:

Comment noted. Figure 17-1 depicts two initial LIF borings to be advanced immediately adjacent to wells suspected of containing LNAPL, along with an approximate grid for subsequent LIF borings. Actual locations for LIF borings and subsequent temporary monitoring wells will be based on field observations and measurements. As stated in the SAP, every attempt will be made to delineate LNAPL in each direction, including to the west of monitoring wells MW-33 and MW-34R.