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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

AUG - 8 2001

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Christopher Penny
Navy Technical Representative
Installation Restoration Section (South)
Environmental Program Branch
Environmental Division,
Atlantic Division (LANTDIV), Code 182
Naval Facilities Engineering Command
1510 Gilbert Street
Norfolk, VA 23511-2699

Re: Naval Station Roosevelt Roads - Additional Data Collection Work Plan for SWMUs #7 and 8 (Tow Way Fuel Farm), EPA I.D. Number PRD2170027203

Dear Mr. Penny:

The United States Environmental Protection Agency (EPA) Region 2 has completed its review of the Additional Data Collection Work plan for SWMUs #7 and 8 (Tow Way Fuel Farm), submitted on the Navy's behalf by Baker Environmental Inc's letter of July 6, 2001. The work plan was submitted pursuant to corrective action requirements of the 1994 RCRA Final Permit for Naval Station Roosevelt Roads.

EPA requested our contractor, Booz Allen and Hamilton (BAH) to review the work plan. BAH's comments are given in the enclosed Technical Review dated July 30, 2001.

The most significant comment concerns that absence of any proposal for, or discussion of an Ecological Risk Assessment, or additional data requirements for conducting an ERA. The "Where Do We Go From Here" document submitted as part of the minutes for the May 23, 2001 EPA/Navy conference call indicated that "The work plan will explain how the Ecological Risk Assessment will be conducted." Rather than delaying implementation of the additional data gathering proposed in the work plan, EPA requests that within 45 days of your receipt of this letter, the Navy submit a proposal for implementing an Ecological Risk Assessment (ERA) of the contaminant impacts from SWMU #7/8 (Tow Way Fuel Farm), including a proposal for any additional data collection needed to implement such an ERA.

Subject to the Navy complying with the above regarding an ERA proposal, and subject to the Navy, in implementing the July 6, 2001 Additional Data Collection Work plan, complying with

the requirements given in the enclosed Technical Review, EPA approves the Additional Data Collection Work plan for SWMUs #7 and 8 (Tow Way Fuel Farm). As per the schedule given in Figure 5-1 of the Work plan, the data collection is scheduled to be completed by November 2, 2001. If a slippage in that schedule should occur, please promptly advise me in writing of the revised data collection schedule.

If you have any questions; please contact me at (212) 637- 4167.

Sincerely yours,

Timothy R. Gordon,
Remedial Project Manager
Caribbean Section
RCRA Programs Branch

Enclosure

cc: Ms. Madeline Rivera, Public Works Department, Naval Station Roosevelt Roads, w encl.
Ms. Aissa Colon, P.R. Environmental Quality Board, w encl.
Ms. Kathy Rogovin, Booz Allen & Hamilton, w/o encl.
Mr. Mark Kimes, Baker Environmental, w encl.
Mr. John Tomik, CH2MHill, w encl.

TECHNICAL REVIEW

JULY 6, 2001 DRAFT FINAL WORK PLAN FOR ADDITIONAL DATA COLLECTION AT TOW WAY FUEL FARM

NAVAL STATION ROOSEVELT ROADS
CEIBA, PUERTO RICO

REPA2-0203-028
JULY 30, 2001

I GENERAL COMMENTS

1. The review of the July 6, 2001 Draft Final Work Plan for Additional Data Collection (Work Plan) at the Tow Way Fuel Farm (TWFF) for Naval Station Roosevelt Roads (NSRR) focused on evaluating the appropriateness of the proposed sampling and analysis program as well as determining the adequacy of the proposed locations for the installation of additional monitoring wells. With the exception of the issues identified in the following specific comments, the sampling and analysis program, including the new wells planned for installation that are proposed in the Work Plan, appears to address previously identified data gaps. However, there is the potential that an analysis of the data collected during the planned investigation activities or analysis resulting from the ongoing modeling effort may identify additional data gaps that require further investigation. Thus, additional investigations may be warranted in the future.

2. NSRR's June 25, 2001 document entitled Where Do We Go From Here, which was submitted with the May 23, 2001 Revised TWFF Conceptual Groundwater Model conference call meeting minutes, indicates that the Work Plan will explain how the ecological risk assessment will be conducted. However, no discussion of the ecological risk assessment is included in the Work Plan. The Work Plan should be revised to provide the details of the planned ecological risk assessment or provisions should be made for a supplemental submission that provides the details the ecological risk assessment planned for the site.

II SPECIFIC COMMENTS

Section 3.1 Groundwater Sampling and Analysis Program, page 4.

1. The Work Plan (pg. 5) indicates that samples for dissolved lead will be obtained from all monitoring wells south of Forrestal Drive. For the purposes of risk assessment, EPA generally requires an analysis of groundwater samples for total metals. Consequently, total lead should be included for groundwater analysis in the Work Plan. Additionally, the Work Plan does not clearly indicate if the analyses planned for other metals include total metals. If other metals are going to be used for the assessment of risk, then an analysis for total should also be included n the parameter list. NSRR should revise the Work Plan accordingly.

2. The Work Plan (pg. 5) indicates that additional sampling and analysis of four monitor wells will be conducted near Zone 4 to assist in determining the natural attenuation parameters associated with the trichloroethylene (TCE) plume. Table 3-2, which identifies the additional sampling and analysis parameters for these four monitoring wells, includes all the natural attenuation parameters recommended for monitoring in the area of the TCE plume in the April 27, 2001 Conceptual Model Development document (Section 5.3), with the exception of chloride. The Conceptual Model Development document indicated that chloride should be measured in the area of the plume and compared to the chloride in areas outside the plume. Thus, chloride should be added to the parameters specified in Table 3-2, unless adequate justification can be provided for eliminating chloride as a parameter. NSRR should revise the Work Plan accordingly.

3. The Work Plan (pg. 5) indicates that a groundwater sample will be collected and analyzed even if phase separated hydrocarbon (PSH) is encountered in the well, as sampling groundwater in wells with PSH assists in determining the partitioning of PSH to groundwater. The Work Plan (pg. 6) also indicates that groundwater samples will be collected using EPA Region 2 low flow sampling technique. EPA Region 2 low flow sampling technique however, may not provide optimal samples for determining the amount of hydrocarbon dissolved in the groundwater immediately adjacent to the PSH layer, and the Work Plan does not identify special procedures for collecting groundwater samples from wells containing PSH. Consideration should be given to modifying the EPA procedure so as to minimize the entrainment of PSH while lowering the sampling equipment through the PSH layer and to minimize the potential of inadvertently sampling the PSH layer. Lowering the sampling equipment through a temporary, small-diameter casing placed across the PSH layer may help isolate the equipment and prevent entrainment of PSH into the underlying groundwater. Modification of the low flow sampling protocol may also be necessary to ensure placement of the pump intake at a sufficient distance below the PSH layer and to ensure that the layer is not drawn down to the pump intake during purging and sampling. NSRR should provide specific details on how groundwater sampling with be performed in the presence of PSH.

Section 3.4 PSH Fingerprinting, page 12.

4. The Work Plan (pg. 12) indicates that representative samples of PSH will be collected from Zones 1, 2, and 3 for fingerprinting analysis. In addition, the Work Plan indicates that the sample will be analyzed for dynamic viscosity. However, the Work Plan does not indicate that the PSH samples will be analyzed for density and Henry's Law constants. These additional analyses were recommended in NSRR's April 27, 2001 Conceptual Model Development document (Section 5.2). In addition, NSRR's June 25, 2001 document entitled Where Do We Go From Here, also indicates that light non-aqueous phase liquid (LNAPL) densities would be measured. The analysis of PSH samples for density and Henry's Law constants should be included in the Work Plan.

   The April 27, 2001 Conceptual Model Development document (Section 3.2.3) similarly indicated that because of the potentially high salinity of groundwater in some areas of the TWFF, groundwater densities should be obtained in the upcoming field event. In combination with the LNAPL density data, this additional data would be used to help more accurately correct water table elevations measured in monitoring wells containing PSH. The Work Plan does not appear to include the measurement of groundwater density. This measurement should be added to the Work Plan.

Table 3-1. Groundwater Laboratory Analytical Methods

5. Table 3-1 identifies the proposed parameters and constituents for groundwater analysis. In NSRR's June 25, 2001 document entitled Where Do We Go From Here, NSRR indicates that Mn^{+2} will be included as a parameter for monitored natural attenuation (MNA). However, this parameter was not included in Table 3-1. Unless NSRR can provide adequate justification for eliminating MN^{+2} for analysis in the Work Plan, this parameter should be included in the general MNA parameter list, and Table 3-1 should be revised accordingly.