M00263.AR.000683
MCRD PARRIS ISLAND
5090.3a

LETTER REGARDING U S EPA REGION IV COMMENTS ON GROUNDWATER SAMPLING WORK PLAN FOR LONG TERM GROUNDWATER MONITORING AT AVIATION GAS PIPELINE SITE AND SITE 3 CAUSEWAY LANDFILL MCRD PARRIS ISLAND SC
1/16/2009
U S EPA REGION IV

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, S.W.
ATLANTA, GEORGIA 30303

January 16, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4SF-FFB

Naval Air Station, JAX
Navy Facilities Engineering SE
Installation Restoration, SC IPT
Attn: 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
Attn: Tim Harrington
PO Box 5028
Parris Island, SC 29905-9001

SUBJ: Groundwater Sampling Work Plan Revision 0, Long Term Ground Water Monitoring at the Aviation Gas Pipeline Site and SWMU 3 (Causeway Landfill) dated November 2008.

Dear Sirs:

The U.S. Environmental Protection Agency (EPA) has completed its review of the above referenced document and offers the following comments:

GENERAL COMMENTS:

1. The Ground Water Sampling Work Plan, Revision 0, Long Term Ground Water Monitoring at the Aviation Gas Pipeline Site and SWMU 3 (Causeway Landfill) dated November 2008 (Work Plan) addresses two locations. EPA suggests separating out the Site 3 and AvGas Pipeline portions of this work plan into two documents. Site 3 is listed as an FFA site, but the AvGas Pipeline, per se, is not. EPA's review will focus on the Site 3 portion of the plan in accordance with the Federal Facilities Agreement for MCRD, Parris Island, SC.

2. It is unclear what requirements this document is intended to meet. Since the Site 3 Final ROD is not yet completed, it is assumed this work plan is to meet the requirements of the Site 3 IROD. EPA's review will be based on the Site 3 IROD requirements: 4 wells will be sampled annually and samples analyzed for TCL organics and TAL inorganics. Ensure that all Site 3 related details in the Work Plan (especially sampling and analysis) meet these requirements.

3. Any reports generated from implementation of this work plan should be issued separately for these two sites. The Site 3 reports should be sent to EPA as well as SCDHEC.

SPECIFIC COMMENTS:

4. Section 1.1, Objectives, on Page 1-1 indicates this project includes long-term groundwater monitoring "in accordance with existing plans". However, the Work Plan does not specify which existing plans are to be followed and/or met. Either the specific plans will need to be referenced in the Work Plan and submitted for review in order for this Work Plan to obtain final approval, or this Work Plan needs to be specific in the requirements being met, and how they are to be met, including all requirements of the Site 3 IROD.

5. The Site 3 IROD allows for a re-evaluation of monitoring frequency. However, Section 1.1, Objectives, does not declare this as an objective of this Work Plan. Therefore, this review is assuming the requirements of the Site 3 IROD as originally assigned. If a re-evaluation of the monitoring frequency is to be an objective of this Work Plan, then it should be listed here and supporting data (5 years of monitoring) should be submitted, analyzed and recommendations made. If this is to be the case, EPA would likely have additional comments at that time. For purposes of the rest of this review, EPA is assuming no request to re-evaluate the monitoring frequency is being made at this time.

6. Section 1.2, 4th bullet, should state the report(s) will be sent to EPA as well.

7. Section 4.4 States the fieldwork will be conducted under one mobilization over an approximate one-week period. However, the Site 3 IROD requires annual monitoring. Please state that the fieldwork will be conducted annually in accordance with the Site 3 IROD, until a change in frequency has been otherwise approved by EPA and SCDHEC.

8. Please add a Section 4.5 which briefly identifies the Ground Water analysis to be performed and reference Table 3.

9. The description provided in Section 5.1.1, Sampling Pump, of the proposed groundwater purging and sampling method utilizing a bladder pump is generally acceptable with respect to the United States Environmental Protection Agency (EPA) Region 4 Science and Ecosystem Support Division (SESD) Operating Procedures for Pump Operations (SESDPROC-203-R1) and Groundwater Sampling (SESDPROC-301-R1). However, as

indicated in the SESD groundwater sampling protocol Sections 3 and 4, the pump of choice for sampling groundwater within the limit of suction is the variable speed peristaltic pump. Shallow water table levels are typical at Marine Corps Recruit Depot (MCRD) Parris Island with shallow groundwater generally encountered within 5-10 feet of the ground surface. As such, the peristaltic pump has been widely used at other MCRD Parris Island cleanup sites. It is recommended that for wells requiring relatively low purge volumes, the peristaltic pump be utilized in lieu of the in-well bladder pump for groundwater purging and sampling. The peristaltic pump will have the least tendency to stress the well by minimizing turbidity and thereby providing higher groundwater quality results.

10. The fifth bulleted item in Section 5.1.2, Other Sampling Equipment, and Section 5.1.4.4, Monitor Indicator Field Parameters, indicates a flow-through cell will be utilized to measure all the listed field groundwater quality parameters except for turbidity. The Work Plan does not discuss further what method will be utilized to determine the turbidity levels in the field. Revise the Work Plan to address this issue.

11. Section 5.1.4.3, Purge Well, indicates at the top of Page 5-3 that the final purge volume must be greater than the bladder volume plus the extraction tubing volume. The EPA Region 4 SESD protocol for groundwater well purging indicates that a minimum of three well volumes should be purged prior to stabilization of field indicator parameters and groundwater sampling. Revise the Work Plan to indicate a minimum of three well volumes will be removed prior to sampling.

12. Section 5.1.4.4, Monitor Indicator Field Parameters, indicates purging is considered complete and groundwater sampling will begin once stabilization (i.e., 3 consecutive readings) of field indicator parameters has occurred. However, as indicated in the previous comment, the EPA Region 4 SESD protocol for groundwater well purging indicates that a minimum of three well volumes should be purged prior to stabilization of field indicator parameters and groundwater sampling. Revise the Work Plan to indicate a minimum of three well volumes will be removed prior to sampling.

13. The text in Section 5.1.4.5, Collect Water Samples, indicates that the order of constituent sampling is Target Compound List (TCL) volatile organic compounds (VOCs) and TCL semi-volatile organic compounds (SVOCs) analysis first. This approach is not consistent with the EPA Region 4 SESD groundwater sampling protocol (SESDPROC-301-R1). The Protocol, Section 4.6.2, Order of Sampling with Respect to Analytes, recommends in order to minimize turbidity, the preferred order of sampling is metals first followed by other inorganic analytes, extractable organic compounds and VOCs. Revise the Work Plan to indicate the order of constituent sampling consistent with EPA Region 4 sampling protocols.

14. Please add a Section 5.5 and briefly identify the analytical procedures to be used and reference Table 3. Be sure you meet the requirements of the Site 3 IROD.

15. The last bulleted item in Section 6.1.1, Parris Island MCRD Environmental Data Quality Objectives, indicates sample results will be compared to cleanup levels specified by the South Carolina Department of Health and Environmental Control (SCDHEC) or EPA to determine if an action level has been exceeded. The text in Section 6.6, Data Evaluation, indicates the samples results will be evaluated with respect to SCDHEC and EPA screening values. There is an assumed contradiction here. The Work Plan does not discuss in adequate detail the site specific cleanup goals or remedial action goals for groundwater. As such, it is not clear how it will be determined that remedial action objectives for groundwater have been achieved and when groundwater monitoring can be reduced or discontinued. For clarity in the public record, the cleanup goals and groundwater remedial action objectives consistent with the requirements of the relevant decision documents prepared for SWMU 3 (Causeway Landfill) need to be clearly presented in the Work Plan. In addition, please add to the bullet that annual results will be tracked and reported annually with updated trend charts each year.

Please revise the Work Plan in accordance with these comments, as well as those received from the State, then resubmit the document for review and approval **prior** to proceeding to the field. Once the Work plan has been approved, EPA reminds the Navy/MCRD that **EPA and the State should be notified at least 2 weeks in advance of any field mobilization involving sampling** so that sufficient oversight can be conducted if desired.

If the Navy/MCRD would like to discuss these comments please feel free to call me at (404) 562-9969.

Sincerely,

Lila Llamas
Senior RPM
Federal Facilities Branch
Superfund Division

cc: Meredith Amick, SCDHEC
Sommer Barker, SCDHEC
Mark Sladic, TtNus