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

MAR 24 2009

Mr. Michael Brom
Director, Environment
PCS Administration (USA), Inc.
Suite 400
1101 Skokie Boulevard
Northbrook, IL 60062

SUBJ: Conditional Approval of "Sampling and Analysis WorkPlan"
PCS Phosphates - White Springs, Florida
Suwannee River & Swift Creek Chemical Complexes
Docket No.: RCRA-04-2008-4014

Dear Mr. Brom:

The U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) have reviewed and hereby approve the submittal "Sampling and Analysis Work Plan, Plant City Phosphate Complex," dated November 17, 2008, contingent upon your addressing of the EPA and the FDEP comments provided in the Enclosure. This document was submitted pursuant to Docket No. RCRA-04-2008-4014 to assess the degree and extent of potential contamination in soil/sediment, surface water, and groundwater at the two PCS Chemical Complexes referenced above.

If you have any questions concerning this matter, please contact Bethany Russell, at (202) 564-4062 or by email at russell.bethany@epa.gov.

Sincerely,

Frank Ney, Chief
South Enforcement and Compliance Section
RCRA/OPA Enforcement and Compliance Branch

cc: Tim Bahr- FDEP
John Coates –FDEP
Jim Dregne- FDEP

Enclosure
EPA and FDEP Comments on Sampling and Analysis Workplan
PCS Suwannee River & Swift Creek Chemical Complexes
Submittal dated November 2008
Docket No. RCRA-04-2008-4014

General Comments

1. Field Sampling Quality Control.
Equipment blank collection is mentioned in Table 1 and Appendix F, Section 3.5. However, the frequency and parameters for other types of quality control samples are not addressed in the Workplan. EPA recommends that Ardaman includes information for additional quality control samples such as material blanks (a sample of each well construction materials such as sand, bentonite, water for the mix, etc.), water system blanks (water used for equipment decontamination in the field), and temperature blanks (or method of temperature verification upon sample receipt by the laboratory). This information is referenced in Section 3.3.3, Sample Handling Variability, of EPA Science and Ecosystem Support Division (SESD) Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R2.

2. In the future, please provide elevation data in NAVD 88 rather than NGVD 29, if it is not too difficult to convert, since along the oceans and gulf coasts, the differences between NAVD 88 and NGVD 29 are very large.

Specific Comments

Section 3.0 Hydrology and Hydrogeology

1. Provide a site-specific potentiometric map for the surficial aquifer using recent data collected during this investigation.
2. Although it appears that at this time there are not an adequate number of Floridan aquifer wells to create a site-specific map of the potentiometric surface of the Floridan aquifer, if PCS has additional site-specific available data that would lend to creating such a map, please provide one.

Section 4.0 Sampling and Analysis Plan

3. General- Page 6, Paragraph 2.
   This paragraph should state that if sample analysis indicates an exceedance of MCLs, secondary drinking water standards, or CTLs, additional sampling and analysis will be performed after obtaining concurrence from EPA.
4. Additional Monitor Wells, Page 7-8
   In this section, the drilling method to be used is unclear, in particular as it relates to the flushing of the bore hole with potable water prior to the installation of the well materials. If the well is drilled using hollow-stem auger methods, no flushing of the well would be possible or appropriate. The proposed flushing might be a means of cleaning filter cake from the walls of a mud rotary borehole, but in typical mud rotary practice this would be likely to collapse the borehole and should not be done in the absence of local experience with the process. More importantly, mud rotary is the leas desirable drilling method for

environmental wells and should not be used in the absence of adequate justification based on unique site conditions. The proposed wells are of moderate depth, therefore it should be possible to install them using hollow stem auger techniques. Using hollow-stem augers, the wells could also be installed at the conclusion of the standard penetration test (SPT) run.

In regard to filter sand, 20/40 filter sand is recommended in USEPA Region 4 guidance (SESDGUID-1010R0, Design and Installation of Monitoring Wells) and ASTM (D5092) guidance for environmental wells in moderately fine material. 20/30 sand should be acceptable unless the screened interval is particularly fine-grained.

In addition, preliminary results from Research by the Nebraska Grout Task Force (National Driller, November 2008, "The Search for the Best Vadose Zone Grout") note consistent failure of cementitious grout seals. While EPA Region 4 has always preferred bentonite grouts, guidance will likely be altered to specify only bentonite grouts. A pumpable bentonite grout is strongly recommended for this application. Note that in Region 4 guidance, a bentonite pellet seas, hydrated for 8 hours, is required when using cementitious grout.

5. Additional Monitor Wells, Pages 7-8, Paragraph 1
   The broad conclusion that the Floridan aquifer is not impacted based on sampling results from only 3 existing monitor wells is unfounded. In addition, there are no deep monitor wells surrounding the area where sinkhole formed in 2007. For this first phase of sampling, EPA is not requesting the installation of additional Floridan wells; however, please be advised that EPA and FDEP will request additional Floridan wells in the future and therefore PCS should begin investigating an appropriate number and locations for these deep monitor wells to provide an adequate impact analysis and a potentiometric surface map.

6. Groundwater Parameters, Page 8, Paragraph 5
   PCS indicates that only new wells will be analyzed for Calcium, Magnesium, Potassium, Chloride, Phosphate, Bicarbonate, and Ra-226. All wells should be analyzed for all proposed groundwater parameters.

7. Sediment and Water Samples, Page 9, Paragraph 6
   Add fluoride, sodium, and sulfate to the parameter list for the surface water samples.

8. Sediment and Water Samples, Page 9, Paragraph 7
   Hazardous waste from any phase of this plan shall be managed properly and shall not be placed in any part of the stack system.

9. Sediment and Water Samples, Page 10, Paragraph 1
   The report should include conclusions for exceedances of MCLs, CTL, and secondary drinking water standards.

10. Table 1
    Please revise the Table and Legend to address the comments above (i.e. remove references to new wells only).

11. Appendix C, PC-4, Paragraph 4
    If unforeseen circumstances arise and an expeditious response is needed, please contact Bethany Russell at the USEPA at (404) 562-8542 or (770) 265-1038.

12. Appendix C, PC-5, 1.2.1
    EPA notification may be made via email to: russell.bethany@epa.gov

13. Appendix E, E-6, c
    Please revise this paragraph to address comment 8, above.