

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

February 8, 1996

Commander, Atlantic Division
Naval Facilities Engineering Command
Environmental Quality Division
Code: 1823
Norfolk, Virginia 23511-6287
Attn: Jeff Kidwell

SUBJECT: Review of Draft Work Plan and SAP at Site 1 and Site 10,
Allegany Ballistics Laboratory, Rocket Center, West Virginia

Dear Mr. Kidwell:

The EPA has reviewed the draft Work Plan and Sampling and Analysis Plan (SAP) for Geophysical and Aquifer Testing at Site 1 and Site 10 at the Allegany Ballistics Laboratory (ABL), Rocket Center, West Virginia.

Review comments are divided into major concerns which apply to the document as a whole and specific comments which are linked to a subsection as presented in the planning document.

GENERAL COMMENTS

Groundwater Sampling:

1. Groundwater elevations for all the monitoring wells at Site 1, including those across the river, Site 5, and Site 10 should be measured before the start of testing or new sampling.
2. The SAP states that one of the objectives of the sampling is to determine the extent of contamination at the site. Dissolved metals species should also be analyzed for "treatment purposes" too, since treatment time will be dependent upon the levels of dissolved metal species in groundwater remaining at any given time. It is not clear, however, why only selective wells will be sampled for metals and how they were chosen. Also, it is a good idea to take the opportunity to state that the objectives should include some intent to assure that groundwater contamination does not reach surface receptors, i.e., wetlands, aquatic/benthic or terrestrial habitats.

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3. During the constant rate tests, groundwater samples for VOCs should be taken at the start-up of the test, sometime during the middle of the test, as well as at the conclusion of the test so that an accurate average concentration for treatment purposes is obtained. This data will also provide information regarding concentrations vs time and may alert one to potential problems i.e large increases through time could be due to mobilization of DNAPL or faulty well design.
4. Since a DNAPL investigation of the groundwater was not performed during the RI (only soils were looked at), it is imperative that the areas that exhibit DNAPL characteristics be looked at before purging and pumping by the use of an interface probe, bottom loading bailer, and dye tests. Dye tests should also be used in appropriate wells during pumping tests. If potential DNAPL areas are confirmed, the pumping strategies for remediation may have to be slightly altered.
5. The Work Plan states that 8 residential wells will be sampled and analyzed for organics and inorganics. A map showing the location of these wells is not shown in the Report. Also, the Work Plan does not state how the wells were chosen. Note that it is not clear if the methods used for sampling are appropriate for residential well sampling. Method detection limits were not provided in the SAP. TCL methods typically have higher detection limits for volatile organics which may not be appropriate for sampling residential wells. Volatile organics in residential wells are analyzed using a GC/MS method with low detection limits in the 500 series. Also, only total metals are analyzed for residential wells. Analysis for dissolved metals are applicable to monitoring wells only.

SPECIFIC COMMENTS

1. Section 4, paragraph 4: Please discuss how the sampling will indicate the variability during pumping if only pre- and post-sampling will be undertaken.
2. Task 5 Aquifer Testing, paragraph 1: Describe the test procedure planned to be used to determine the wells with the highest sustainable yield.
3. Task 5 Aquifer Testing, paragraph 3: Identify the surrounding wells that will have transducers installed, all is very inclusive. Please state that the monitoring wells across the river will be included when appropriate for each pumping test.

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4. Task 5 Aquifer Testing: Please add a paragraph that discusses how the water produced during the test will be treated (air stripper) and discharged, what regulations apply, and how any monitoring of the discharge will be implemented.
5. Task 6 Groundwater Sampling, bullet 3: The new well pair near the landfill should also have total metals, COD, and BOD analysis. The new alluvial well to the north should have both total and dissolved metals, hardness, BOD, COD analysis. The new deep well next to 5GW9 should have COD, BOD and hardness analysis. All the wells should report the pH, Eh, and dissolved oxygen.
6. Task 6 Groundwater Sampling, bullet 5: Please identify on a map and in an appendix, the eight residential wells selected for sampling. Please explain why dissolved metals analysis is planned. The Field Sampling Plan (FSP) indicates that the residential wells will also have total metals analysis, please include in this bullet. Also, add a brief discussion concerning the history of sampling these residential wells.
7. Task 9 Data Evaluation: Please indicate that the "standard methods" for aquifer test analysis and interpretation include evaluating results from an anisotropic, fractured aquifer that has a variable structural tilt (vertical at the west of Site 1 and possibly Site 10 while the eastern side of Site 1 may be at 40 degrees). Please identify what methods you plan on using. Typical "standard methods" do not consider these problems, and assume homogenous, isotropic, horizontal aquifers.
8. Section 6, Project Schedule: Change the figure numbers.

SAMPLING AND ANALYSIS PLAN

1. QAPjP - Page 2-1, paragraph 1: Please indicate that there is a new operator, Alliant TechSystems, Inc. and when they took over.
2. FSP - Page 1-1, bullets: See comments 5 and 6 above.
3. FSP - Page 2-1, paragraph 2: The IDW Plan needs to state how the purged well water that is known to be contaminated will be handled.

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4. IDW: Please provide a discussion concerning the treatment of produced water, the operation of the air stripper, and the monitoring plan for the discharge of the treated waters.

If you have any questions concerning any of these comments, please call me (215) 597-2317.

Sincerely,



Bruce W. Beach
Remedial Project Manager

cc: Tom Bass, WV DEP
Wendy Noe, MDE
Greg Mott, CH2M Hill
Lou Williams, NAVSEA
Dave McBride, Alliant