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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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April 11, 2003

Mr. Marvin Furman
United State Department of Energy
P.O. Box 550, MSIN: H0-12
Richland, Washington 99352

Dear Mr. Furman:

Re: Washington State Department of Ecology Comments on the Sampling and Analysis Plan for the 200-PO-1 Groundwater Operable Unit (DOE/RL-2003-04)

Enclosed please find comments from the Washington State Department of Ecology on the Sampling and Analysis Plan for the 200-PO-1 Groundwater Operable Unit. If you have any questions, please call Wayne Soper at (509) 736-3049.

Sincerely,

John B. Price

John Price
Environmental Restoration Project Manager
Nuclear Waste Program

WS:lkd
Enclosure
cc w/enc: Todd Martin, HAB
Rick Gay, CTUIR
Pat Sobotta, NPT
Russell Jim, YN
Ken Niles, OOE
Administrative Record: 200-PO-1

WASHINGTON STATE DEPARTMENT OF ECOLOGY
COMMENTS ON THE 200-PO-1 SAMPLING AND ANALYSIS PLAN

1. As with other plans, little attention is paid to the vertical distribution of contaminants. The sampling and analysis plan (SAP) includes plans to sample some deeper wells, including a few in the basalt. However, the plan is predominantly based on tracking the two-dimensional areal extent of plumes, with little vertical profiling to see if this approach results in adequate characterization.

2. For many areas, groundwater flow direction is difficult to determine, thus making it all the more important that the verticality of wells be addressed. Where the head differences are low or data appear off-trend for water levels, verticality surveys should be performed to see if correction to water level measurements in wells is needed.

3. Throughout the plan, the treatment, storage, and disposal facility (TSD) groundwater sampling is described as being under interim-status. The United States Department of Energy (USDOE) has been informed by letter from the Washington State Attorney General's Office that all facilities at the Hanford Site are now final status, and have been since the Hanford Site was granted a Resource Conservation and Recovery Act (RCRA) site-wide permit in 1994. Ecology informed Marvin Furman (USDOE) on January 30, along with Stuart Luttrell (Pacific Northwest National Laboratory) who was also present.

4. Through the Groundwater Strategy and the 200-PO-1 Data Quality Objective, the attempt has been made to eliminate sampling wells multiple times for different programs. This effort is ignored in the SAP. Where possible, the duplication of sampling should be reduced and this effort shown in the SAP.

5. The entire plan is predicated on the same work scope that was used to prepare earlier plans for 200-PO-1. The scope may be changing because of new activities not considered previously, such as leak detection for tank waste retrieval, risk assessments, and monitoring the effectiveness of remedial actions.

6. In several places, the statement is made that the network is determined principally from professional judgment supplemented by geostatistical modeling of unspecified type. Some explanation of what type of geostatistical modeling was used and how and where it was applied should be added to allow reviewers to concur with the network design.

7. There are some reverse/injection wells in this operable unit, and they do not seem to be addressed, or at least included in the list of facilities contributing to contamination of the groundwater in the operable unit.

8. Changes in sampling frequency have been proposed without clearly explained guidelines as to why and where such action is being proposed. While that may be appropriate for the "interior" of a plume, it is not advisable at the edges of a plume to define plume extent.

9. The proposed sampling is strictly for 200-PO-1, although data from RCRA TSD wells will be used. However, in Table 3.1 it should be made clear that the sampling proposed here in TSD wells is only for 200-PO-1, and does not affect the schedule and constituents for sampling these wells for compliance with RCRA TSD requirements. The schedule for RCRA TSD sampling is given in Appendix A.

10. Most of the wells proposed are screened/perforated at the water table; however, some of the older wells are perforated/screened over lengthy intervals which could lead to dilution of the constituents present in a stratum of limited thickness and limited extent of the screened/perforated interval. Pump placement and well development also affect results and should be addressed.

11. It would be useful to know the projected life of certain wells in which the water level is declining; i.e., will these wells exist for 5 or 10 years, or will they have to be replaced, and on what schedule.

12. Please add a section on future planned improvements for the current monitoring system. There are locations that will need wells, either because wells will go dry or because of potential new plumes.

13. The water table map presented (Figure 1.6) should be supplemented with other contours representations, especially in areas where a 4-meter contour interval displays no relief on the water table.

14. Any communication between the unconfined and confined aquifer systems is not addressed and should be.