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June 9, 1994



Paul M. Pak
Unit Manager
U.S. Department of Energy
P.O. Box 550, A5-19
Richland, Washington 99352

Re: 200-ZP-1 Operable Unit Groundwater Sampling and Analysis
Plan/Quality Assurance Project Plan (WHC SD-ER-AP-002)
Comments

Dear Mr. Pak:

I have enclosed comments from the U.S. Environmental Protection Agency (EPA), its contractors, and the Washington State Department of Ecology (Ecology) on the Sampling and Analysis Plan for the 200-ZP-1 Operable Unit.

The comments have been transmitted electronically via the HLAN for your convenience. If you have any questions, please call me at (509) 376-8631.

Sincerely,

Dennis A. Faulk
Unit Manager

Enclosure

- cc: Becky Austin, WHC
- Bruce Ford, WHC
- Dib Goswami, Ecology
- Bill Lum, USGS
- Danny Parker, WHC
- Jeff Ross, PRC
- Administrative Record (200-ZP-1 Operable Unit)



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Specific Comments on 200-ZP-1 Sampling and Analysis Plan

1. Comment, page 1-1, section 1.1

This section discusses the different types of monitoring wells and makes a statement that these wells do not represent a static set of wells. This statement is not necessary true. The point of compliance wells should not change over the life of the remedial action and this should be reflected in this section.

2. Comment, page 1-1, section 1.3

Bullet 1 and Bullet 2 refer to the same set of data users. Remedial project managers and unit managers at EPA are the same people. One bullet should be dropped.

3. Comment, page 1-3, table 1.1

Under the general objectives section for treatability test wells add a 4th bullet to indicate that the wells will assist in the scale up design of the IRM.

Under the remedial action assessment wells add a 4th bullet to indicate that information will be used to enhance operations of the remedial system.

4. Comment, page 1-4, table 1-2

This section indicates that samples will be analyzed for general groundwater quality parameters. One of these parameters is identified as "ORP", which should be defined as oxidation reduction potential. In addition, this parameter is not included in table QAPP-1 of the QAPP.

5. Comment, page 1-4, table 1-2 line 42

This section should define what field screening methods will be used to analyze the contaminants of concern. EPA would also like to discuss issues concerning the Level IV analysis.

6. Comment, Table 1-2, page 1-5.

This table, entitled "Required Detection or Measurement Limits", indicates that gas chromatography methods will be used to analyze for the three listed VOCs, and lists only contract-required quantitation limits (CRQL). The number and source of the method to be used for both the field and off-site laboratory analyses should be given. Method detection limits (MDLs) for analyses at both laboratories should be provided that meet the treatability test objectives for each constituent to be analyzed, as presented in Table 2-2. Alternatively, a table in the QAPP that contains this information should be referenced. The need for meeting regulatory limits for each constituent should also be discussed

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in the text. Quality control (QC) samples to be analyzed such as duplicates, blanks, surrogates, etc., should also be discussed.

7. Comment, page 1-5, line 22

The type of tracer to be used should be identified in this section as well as a brief discussion of the tracers properties. Also the rational for doing tracer tests should be provided.

8. Comment, Table 1-3, page 1-6. This table indicates that some analyses will be performed in an on-site laboratory producing level III results. However, on-site laboratory analyses typically produce level II results, and the text should be corrected, unless information is provided in the QAPP that shows the data produced by the on-site laboratory will be at level III quality.

8. Comment, page 1-7, line 4 and lines 21-22

This section lists the CRQL for Carbon Tetrachloride as 10ppb. The Drinking Water Standard for Carbon Tetrachloride is 5 ppb, This section should reflect the DWS of 5ppb.

A clarification is needed by what is meant regarding the statement that sampling for vertical distribution and hydraulic properties in groundwater monitoring during remedial action activities. Is vertical profiling going to be done? Are investigations planned to determine if DNAPLS are present?

9. Comment, Table 1-4, page 1-8. This table indicates that CLP methods will be used to analyze for primary contaminants during plume periphery monitoring. Table 2-6 of the SAP indicates that SW-846 method 8240 (EPA 1990) will be used for this analysis. Text and tables should identify consistent methods to be used. In order to address whether these contaminants exceed MCLs, SW-846 method 8240 should be used. This comment also applies to point-of-compliance monitoring analyses.

10. Comment, Section 2.2.3, page 2-2.

This section indicates that off-site laboratory analyses will use levels III or IV as applicable. This section should specifically describe when levels III or IV are to be used.

11. Comment, Section 2.2.4, page 2-2.

This section describes QC sample collection for off-site laboratory analyses. One duplicate sample will be collected for the baseline, one duplicate will be collected every other month, and two split samples will be collected from two separate monthly sampling events. One duplicate sample should be collected per every twenty samples, or per sampling trip, whichever is more frequent. This section should clearly state the frequency of duplicate and split sample collection. QC samples should also include field trip blank, equipment rinsate blank, and matrix

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spike/matrix spike duplicate (MS/MSD) samples. This section should include all the QC samples to be collected for both on-site and off-site laboratories.

12. Comment, Section 2.3.4, page 2-4.

This section should include collection of MS/MSD samples. This comment also applies to sections 2.4.4 and 2.5.4.

13. Comment, Section 2.4, page 2-4.

The text states that the plume periphery network will provide early warning of concentration trends, and identified 8 wells based on the 10 ug/L carbon tetrachloride isopleth. Since concentration trends are most likely to be observed in wells with carbon tetrachloride concentrations of 100-1000 ug/L, additional wells in this portion of the plume should be considered for monitoring.

14. Comment, page 2-5, section 2.5.2

EPA would like to discuss the statement made in regards to the frequency of sampling the points of compliance wells on a quarterly basis as apposed to semi-annual basis for plume periphery sampling.

15. Comment, Figure 2-1, page 2-16.

This figure should provide a scale, a north direction arrow, and the most recent potentiometric surface. In addition, it would be useful to plot any preliminary capture zone modeling on this figure or a similar one so that it can be shown that a recirculation cell will not be established.

16. Comment, Figure 2-2, page 2-17.

Again, this figure should provide a scale, north direction arrow, and the most recent potentiometric surface. Additional wells should be added to the northeast and the southeast. Westinghouse previously submitted a figure with carbon tetrachloride data showing two wells about 1500 feet north of 299-W11-14 with concentrations of 900 ug/L and 1300 ug/L, respectively. Coverage to the southeast is poor; this same figure showed a well about halfway between the 1000 ug/L isopleth and the 200 West boundary with a concentration of 190 ug/L that should be added to the network. Alternatively, a new well farther to the west should be identified or installed.

17. Comment, Figure 2-3, page 2-18.

A scale and north direction arrow should be added to this figure. In addition, well coverage in the west central portion of the 10 ug/L plume is poor. At least one additional well should be added.

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18. Comment, Section 3.0, page QAPP-3.

The QAPP indicates that field analyses produce level IV data. The SAP states that level I or II data will result from the field methods, thus the QAPP should be corrected.

19. Comment, Section 3.2

This section mentions that a DNAPL investigation is proposed. Detailed information and the rationale concerning this investigation must be presented in this document and detailed discussions must occur between the Tri-Parties before any DNAPL investigation is initiated.

REFERENCE

EPA 1990. Test Methods for Evaluating Solid Wastes. Physical/Chemical Methods. SW-846. U.S. Environmental Protection Agency. December 1990.

6235-5776-16

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