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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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March 10, 1994

Mr. Paul Beaver
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, WA 99352

Dear Mr. Beaver:

Re: Comments on the Pilot-Scale Treatability Test Plan for the 200-BP-5 Operable Unit (DOE/RL-93-98, Draft A)

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The Washington State Department of Ecology, as the support agency, has completed the review of the Pilot-Scale Treatability Test Plan for the 200-BP-5 Operable Unit.

Our review comments enclosed, indicate that the document is vague in its scope and needs to be written with well defined objectives and performance to be achieved. Since this is the first document for the 200-BP-5 Operable Unit, the relationships of this treatability test to the overall cleanup strategy of the unit should clearly be established. Furthermore, additional technical information is necessary to fulfill the scope of this study.

If you have any questions or concerns, please contact me at (509) 736-3015.

Sincerely,

Dib Goswami, Unit Manager
Nuclear Waste Program

DG:sl
Enclosure

cc: Administrative Record (200-BP-5 Operable Unit)



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**COMMENTS ON THE PILOT SCALE TREATABILITY TEST PLAN FOR THE
200-BP-5 OPERABLE UNIT**

GENERAL COMMENT:

The document is vague in its scope and incorporated many unrelated tasks (eg. various vaguely defined LFI activities), and lacks proper connections to other follow-up/concurrent activities to be carried out in the operable unit. The document should deal with treatability studies only, as per the title. The relationships between this treatability test and the overall clean up strategy of the operable unit should be clearly defined. Therefore, the entire document needs to be organized properly with well defined objectives and performance to be achieved.

SPECIFIC COMMENTS:

1. Line 4, page 1-2

The word "tentatively" should be removed from the text. In the recent Tri-Party Agreement, "pump and treat" was considered to be the only alternative method for remediation to begin.

2. Lines 30-43, page 1-2

It is not clear how the IRM proposed plan would be prepared immediately after the treatability test. The plumes associated with 216-BY Cribs need to be investigated and defined before full scale implementation of the proposed plan/interim ROD.

3. 4th bullet, page 1-3

The text should reflect the recent TPA date.

4. Lines 42-43, page 1-3

The pilot scale treatability study as the principle activity to support the interim ROD is not a correct statement. If the treatability study does not achieve the desired goal, we will be looking at other methods. The text needs to be modified to reflect this flexibility.

5. Lines 25-29, page 1-4

According to the test, only limited lab tests will be carried out for the selection of ion exchange resins. We believe adequate testing should be done to see its performance on the variety of co-contaminants present at the sites.

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6. Lines 46-48, page 1-5

None of the figures show any fence line. It is recommended that fence line should be marked in each figure.

7. Lines 1-4, page 1-6

The rationale for the extended plume geometries should be provided. Is it based on the volume of waste discharged or something else?

8. Lines 28-34, page 1-6

The text shows "average" as a range of numbers. The "average" means a specific number, not a range. The text must be modified in that context.

9. line 33-34, page 1-7

The reason for suspected higher concentration of cyanide and technetium-99 should be provided.

10. Lines 43-44, page 1-7

How we are going to use the success of the test to define aquifer geometries, constituent mass distribution, etc. without any LFIs? The text needs clarification on how these data will be gathered during the test or after the test before full scale remediation.

11. Lines 52-53, page 1-7 thru lines 1-8, page 1-8

Provide proper geologic cross section when you define thickness, stratigraphy etc.

12. Lines 18-45, page 1-9 and lines 20-46 page 1-10

Many of the geochemical characteristics contradict the conclusions made. For example, according to the text, most of the Cs-137 should be in soil at pH 3, but the groundwater has the range of pH 6.4 -9.0. Under this circumstance, we expect almost all the Cs-137 in the groundwater, but this is not the case. Similarly, the geochemical characteristics of the other elements such as plutonium and strontium needs to defined clearly, and conclusions must be based on their chemical behavior. The text needs further clarification and more information.

13. Provide geologic cross sections across the BY Cribs similar to figures 1-7 and 1-8.

14. Lines 51-53, page 2-2 thru lines 1-5, page 2-3

The activities described in the text are part of LFIs that needs to be carried out at some phase and should be described separately. It should not be included in the treatability test plan.

15. Lines 27-29, page 2-3

The text should not mix gradient with groundwater divide. These are two separate subjects. Modify the text accordingly.

16. Lines 18-42, page 2-4

Most of the activities and the objectives defined in the text are not directly related to the success of the treatability test but linked with the various LFIs that need to be carried out. How and when these LFIs will be carried out before full implementation of remedial action is not clear. But these LFIs are not a part of the treatability test.

17. Line 4, page 2-7

Which form of CO-60/Cyanide complex that is amenable to ion exchange should be clarified.

18. Lines 15-33, page 2-7

How are you going to handle the waste resulting from the removal of suspended solids?

19. Section 4.2.1 - 4.2.3, page 4-4 thru 4-5

Throughout the text a "predetermined level of the indicator parameters" was considered for the termination of the test. The text should explain this level. Also, the performance goals should not be set using indicators such as gross alpha and gross beta. They should be set on specific radionuclides in order to measure any risk to both human health and the environment.

20. Section 4.3

The treatment should include any planned bench scale tests.

CORRESPONDENCE DISTRIBUTION COVERSHEET

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Subject: COMMENTS ON THE PILOT-SCALE TREATABILITY TEST PLAN FOR THE 200-BP-5
OPERABLE UNIT (DOE/RL-03-98. DRAFT A)

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