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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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March 24, 1994

Ms. Pam Innis
U. S. Environmental Protection Agency
712 Swift Blvd, Suite 5
Richland, WA 99352

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Dear Pam:

The attached Washington State Department of Ecology comments on the Environmental Restoration Disposal Facility (ERDF) Conceptual Design Report are being provided to you for your consideration and inclusion in EPA's formal response to the U. S. Department of Energy.

If you have any questions or would like to discuss the comments further, please call me at 736-3048. Thank you.

Sincerely,

Norman T. Hepner
Nuclear Waste Program

NH:mf

cc: Bryan Foley, USDOE

COMMENTS ON ERDF CONCEPTUAL DESIGN REPORT

GENERAL COMMENTS:

1. Several draft studies were referenced in the CDR; these studies are not currently released for public or regulator review. The reference to these studies to support the conclusions within the CDR should be deleted unless the reports are released prior to public comment. Instead, a statement supporting the conclusion should be made in lieu referencing the report. Concurrent review of these technical reports would aid the regulators in their review of the CDR.

2. Under the CAMU rule, remediation waste is specifically defined. We are currently studying and evaluating types of remediation waste allowed to be disposed of in ERDF. Based on our review, the disposing of ERDF site facilities at the end of their useful life and sludge from treating decontamination wastewater and leachate will be determined. If appropriate, and the waste can be defined as remediation waste, they will likely be allowed to be disposed of within the ERDF.

3. Backhaul of excavated soil to the remediation sites is not well defined. Presently, the ERDF CAMU makes clean soil available for backhaul, but does not provide further services. Requiring all operable units to gather resources and manage backhaul of soil from the ERDF to the operable unit may not be cost efficient or wise. Since the stockpiles reside in ERDF and the resources can be made available, ERDF should provide backhaul loading, railcar transport, and offloading at a convenient transfer location.

4. Soil stockpiles are envisioned to be placed on closed portions of the trench in the future. Placing soil on the closed portions of the trench may damage the interim cover. Constructing the Hanford Barrier prior to closing the facility will obstruct the drainage facility circling the trench and may impact the access road.

SPECIFIC COMMENTS:

5. Comment: Section 4.0, page 5, para 5, sent 2

   It is stated that facilities to load containers with clean excavated soil for backhaul is proposed.

   Recommendation: Elaborate that these facilities will include dedicated containers, loading equipment, and railroad access. Backhaul operations will be

performed by ERDF personnel with offloading of the backhaul at a convenient transfer location. At this transfer point, the responsibility of backhaul transport to the remediation site is the responsibility of the operable unit.

6. Comment: Section 4.1.3, page 6, para 2

As stated, areas that will not be repeatedly disturbed will be revegetated.

Recommendation: Add that areas that are likely to be repeatedly disturbed will be managed to prevent erosion.

7. Comment: Section 5.1.2.1, page 14, para 4

Contaminated stormwater is to be collected, stored, sampled, and treated if necessary. Expeditious handling of the 25 year - 24 hour storm event is required to collect additional runoff from later storm events.

Recommendation: Since first flush storm runoff will likely contain greater quantities of pollutants and the tanks may not provide adequate detention time and treatment for the contaminants present, a diversion structure to bypass the filled tanks may be a good management practice to handle storms of greater magnitude.

8. Comment: Section 5.1.2.1, page 14, para 5

This paragraph addresses radioactive contamination only. Chemical contamination is also a potential concern.

Recommendation: The paragraph should address chemical contaminants potentially released to the environment from fuel and chemical dispensing facilities, parking lots, maintenance activities, etc. Drawing ES-296-03 should be changed appropriately.

9. Comment: Section 5.3.5, page 40, para 1

When discussing sanitary wastewater, there is no mention of sanitary wastewater generated from personnel decontamination or from dedicated facilities.

Recommendation: Personnel decontamination wastewater should be treated prior to disposal. A system is needed to convey and treat or store and sample this potentially contaminated wastewater. If other potentially contaminated wastewaters are generated within the dedicated maintenance facilities, this wastewater will also require treatment.

10. Section 5.3.6, page 40, para 1, sent 2

When discussing the use of raw water for decontamination make-up, batch plant, and other non-potable water uses, the treatment or conditioning of this water is not mentioned.

Recommendation: Does this water require corrosion inhibitors or other conditioning to prolong the life of the mechanical components in the decontamination bays, wastewater plant, etc? If needed, a system should be included for those units requiring conditioned water.

11. Comment: Section 5.4.3.1, page 45, para 3, sent 4

The document states that stockpiles of soil will be established over the closed portions of the trench. How will this be accomplished without damaging the interim cover (asphalt or HDPE)? Or, are portions of the trench to be closed with placement of modified Hanford barrier while trench is still active? Need clarification.

Recommendation: Stockpiling should continue at the shown location if portions of trench are not covered with modified Hanford Barrier. Backhaul of material and placement of soil for Hanford Barrier will provide the additional required space needed to store excavated soil in the existing location.

12. Comment: Section 5.4.3.3, page 47, para 2, sent 4

Tank 3 is ineffective as a spare for cleaning Tanks 1 and 2 if valving is not provided to bypass Tank 2.

Recommendation: Provide additional valving so tank combinations of Tank 1 and 2, 2 and 3, or 1 and 3 can be used to store leachate. These combinations will ensure cleaning of any tank can take place.

13. Comment: Section 5.4.3.3, page 47, para 3

Pumping leachate from the storage tanks caused by a 25 year storm event over 60 days may not provide needed capacity if secondary storms of lesser magnitude are experienced within this 60 day timeframe. The extra tank does provide excess storage capacity and may provide the needed storage capacity to supplement the low pumping and treatment rates.

Recommendation: Determine the magnitude of storms experienced within 60 days following the 25 year storm event and the typical wettest 60 day period. The pumping system or storage capacity should be sized to accommodate anticipated volumes.

14. Comment: Section 5.4.3.4, page 47, para 1, sent 4

The Trench Operations Sequence Engineering Study is referenced in the text, however this document is not listed as a reference on page 2. Is this document draft or final?

Recommendation: Change text appropriately. If draft document, delete reference to document and change last sentence to, "A more detailed description of the proposed waste placement sequence is being developed." If final, add reference to page 2 list.

15. Comment: Section 5.4.3.6, page 48, para 1, sent 4

It is stated that the daily operational cover will control vectors and minimize infiltration. The daily operational cover does not provide vector control or minimize infiltration for that portion of the trench which is not covered with soil.

Recommendation: Delete sentence referencing vector control. Replace this sentence by stating that exposed waste on the trench face will be sprayed with a fixative in lieu of daily cover. This will save landfill space. Based on the waste expected, vector control will not be necessary.

16. Comment: Section 5.4.3.6 and 5.4.3.7, page 48

The use of the term "low permeability layer" is confusing. In the last sentence of section 5.4.3.6, the daily operational cover includes a low permeability layer in completed portions of the trench prior to installation of interim cover. Then in the second sentence of Section 5.4.3.7, the low-permeability layer is defined as a layer of asphalt.

Recommendation: Differentiate between the low permeability layers by changing the low permeability soil layer to the daily operational cover with greater silt content to limit infiltration. The low-permeability layer remains as the asphalt layer within the interim cover.

17. Comment: Section 5.5.11, page 53, para 4

It is mentioned that a specified dust suppressant material may be used. There is no further mention of this specified dust suppressant.

Recommendation: Please provide additional information on the specified dust suppressant or add sentence which states that, "Currently, dust suppressants are being studied to determine the best suited for ERDF soils." Followed by existing text, "If the specified dust suppressant material has a viscosity . . . ." (If a draft document exists, please provide to Ecology for review).

18. Comment: Section 5.5.23, page 55, para 1

It is stated that containers will be provided as part of the ER project and generally specifies and describes them. To ensure facility testing and personnel training before active operations, some containers will be required. Additional containers will be necessary to meet cycle times and prevent delaying ER site remediation or requiring excessive resources at individual operable units.

Recommendation: Provide a minimum number of containers to test facility operations and train operating personnel. The number of containers provided should be adequate to fulfill cycle time requirements without delaying operable unit tractor/trailers or railcars from returning to the site.

19. Comment: Section 7.3.2, page 67, para 1, sent 2

Disposal of ERDF site facilities at the end of their useful life may or may not be allowed in the ERDF CAMU.

Recommendation: Change text appropriately.

20. Comment: Section 7.5.2.2.6, page 72, para 3, sent 5

The Source Inventory Development Engineering Study is referenced. This document is in draft form and has not been reviewed.

Recommendation: Delete reference and change sentence to, "Wastes that will be handled through bulk operations will be controlled and will not have any adverse effects on worker health or safety."

21. Deficiency: Section 7.5.2.2.14, page 75, para 1

It is stated that a rail siding will be installed but that no other equipment for backhaul operations is to be provided. How are backhaul operations to be performed? Who is the responsible entity?

Recommendation: The ERDF facility should be equipped and staffed to provide for backhaul operations. All equipment (railcars and loaders) should be provided. Offloading of backhaul may be provided by the operable unit.

22. Comment: Section 7.8.1, page 78, para 1

Is the strategy to acquire permits to be included as part of CDR or is it to be provided in a different document?

Recommendation: Clarify or add text.

23. Comment: App. D, Detail page 13

The railroad yard switcher engine is rated for 100 cars at 100 tons each. This is oversized based on Appendix E, Outline Specification, Section 14760, page E-21.

Recommendation: Review engine size needs and change specification or cost estimate accordingly.

24. Comment: App. E, page E-17 thru E-23

The equipping of vehicles with HEPA filters needs to be reviewed. HEPA filters should be placed on vehicles that will encounter contaminated fugitive dust emissions.

Recommendation: Review vehicle HEPA filter requirements. Recommend that Section 14355, 14368, and 14770 incorporate HEPA filter in the specification. Section 14370, 14700, 14710, 14720, 14730, 14780, 14800, and 14820 should delete HEPA filter in their specifications. The above recommendation is based on whether the vehicle operates within a contaminated area. Operations and Safety & Health personnel should review vehicle uses to ensure each is properly equipped.

25. Comment: App. E, page E-26, Section 15500.B.1

The dedicated shop air supply system has a return air system specified. The return air system could circulate contaminated air throughout the dedicated maintenance facilities.

Recommendation: If a return air system is used within the dedicated shop supply air handling system, it should be equipped with a HEPA filter system to remove contaminants. A return air system in this environment should be further evaluated for its applicability. Exhaust fan for this system should also be equipped with HEPA filter system or the stack exhaust located away from the air intakes of other uncontaminated facilities.

26. Comment: App. G, page ES-296-02 and ES-296-04

All major facilities are not identified, e.g., wastewater treatment and stormwater storage. Also, new facilities not previously mentioned in CDR are presented, e.g., waste soil and gravel stockpiles.

Recommendation: This drawing is effective at displaying layout of all facilities. Topography should be lightened to make more readable. The waste soil and gravel stockpiles should be discussed in the CDR. Waste soil has the connotation of a storage site to unload contaminated soil. What is it? What need is their for the large gravel stockpile?

27. Comment: App. G, page ES-296-07

As shown, the ten cell trench terminates with an endslope of 1.5H:1V and a future trench expansion area is shown. The diagram does not clearly show an evolving trench.

Recommendation: The diagram should be altered by removing the endslope and continuing the trench in lighter print.

28. Comment: App. G, page Es-296-08

The cross section of the area fill shows that material placed above the upper interim cover will obstruct the drainage facilities and may impact the access road. Previously, stockpiling of soil on the closed portions of the trench was discussed. Based on this cross section, any cover placed above the upper interim cover to protect it or by building the Hanford barrier would impact these drainage and road facilities.

Recommendation: A discussion of soil stockpiling and options available need to be reviewed.

29. Comment: App. G, page ES-296-10 & ES-296-11

Future expansion areas are shown on this diagram. It is unclear what these areas are.

Recommendation: Clarify future expansion areas and need.

30. Comment: App. G, page ES-296-14

The tractor/trailer flow path is confusing.

Recommendation: Drawing ES-296-12 from the 100% DRAFT CDR includes additional schematic that clarifies confusion. Please modify.

31. Comment: App. G, page ES-296-17

It is stated that brine from reverse osmosis will be transferred to a 2000 gallon tanker and placed in a trench. The brine will have to be solid waste and will not be accepted if liquid. It has not been determined if the resulting brine will be classified as remediation waste.

Recommendation: Drawing should be clarified and a facility to dewater the brine included as stated in Section 5.3.7. A tanker is not the appropriate vessel to transfer and dispose of solids (dewatered brine) in the ERDF. Show that dewatered brine may be accepted at the ERDF.

ADMINISTRATIVE COMMENTS:

32. Section 5.3.7, page 43, para 4, sent 1

It is stated that the reverse osmosis process will be used. Throughout the rest of the text and engineering drawings, reverse osmosis is only to be used if necessary. This sentence should be changed.

33. Section 5.4.3.5, page 48, para 1, sent 3

Text states that the first four cells will be lined. This sentence suggests that the next six will not be. Clarify text by stating that the other six will be lined later prior to accepting waste.

34. Section 5.5.1, page 50, para 3, sent 2

In discussing the benefits of adding fly ash to grout, reduced strength is mentioned as a benefit. Should state "increased" strength.

35. Section 7.5.1.9, page 69, para 1

Definition of "Interim Cover" does not match that given on page 74, section 7.5.2.2.11.

36. Section 7.7, page 77, para 2: Delete statement on NEPA. Change start of construction date to 1994 and rewrite sentence to, "All environmental compliance requirements are scheduled to be in place prior to start of construction in 1994."