



Oregon

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June 18, 1998

Dennis Faulk
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 99352

Re: Engineering Evaluation/Cost Analysis for the 105-DR and 105-F Reactor Facilities and Ancillary Facilities

Dear Mr. Faulk,

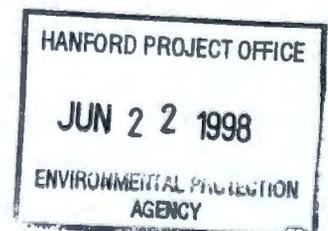
Attached please find the Oregon Office of Energy's comments on the Engineering Evaluation/Cost Analysis for the 105-DR and 105-F Reactor Facilities and Ancillary Facilities. 49223

Should you have any questions, please contact Dirk Dunning at (503)378-3187, or Doug Huston at (503)378-4456.

Sincerely,

Mary Lou Blazek
Administrator
Nuclear Safety Division
Oregon Office of Energy

cc: J.R. Wilkinson, CTUIR
Russell Jim, Yakama Indian Nation
Donna Powaukee, Nez Perce Tribe
Michael Wilson, Washington Department of Ecology



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1. Section 2.2 states facilities have not been fully characterized. Section 2.3 indicates that the characterization which has been done is based on historical, process and material knowledge versus actual surveys. This method of characterization has resulted in project delays and expenditure increases in the past when unexpected materials are found. The Oregon Office of Energy recommends that actual surveys of the affected structures be done to the maximum extent possible.
2. Page 1-2 states that NEPA values will be incorporated "to the extent practicable". Except in so far as the CERCLA process directly conflicts with the NEPA process, the NEPA requirements must be met.
3. Section 4.0 does not identify complete Decontamination and Demolition of the 105-DR and 105-F reactors as an alternative. This alternative should be identified and discussed along with the three plans presented in this section. A full comparison and understanding of the cost, harm and benefit tradeoffs is not otherwise possible.
4. Section 4.2 and Note 5 purport to detail the waste disposal costs for ERDF and other options. The text does not make clear if this is a direct and equal comparison. Typically, DOE does not report all costs associated with ERDF construction, operations, maintenance, closure and mitigation. Specifically, the costs reported might not include those for mitigation of habitat destroyed by ERDF construction and operations; closure and post closure monitoring; long term maintenance; State and Federal oversight; and other miscellaneous costs, such as those associated with harms to borrow, spoils and tailings areas. These all need to be included in the ERDF costs.
5. Section 4.3 defines long term as 75 years. There is no discussion as to the basis for this time frame versus any other period. The basis for this number should be included in this section.
6. Section 4.3 identifies a high risk that the facilities may not reliably protect human health and the environment for the proposed 75 year interim period. It also states that contingency costs were excluded from the cost estimates. These are incompatible approaches. Either the design must ensure protection for the proposed 75 year period, or the cost estimates must include the contingencies necessary to reflect the additional costs that may occur.
7. Even though D&D is to be postponed for up to 75 years, the costs should be estimated and displayed. A full and complete comparison must compare the complete costs through completion of the project. It must also display all of the benefits, harms, risks and

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- intangible costs. The alternatives proposed are dissimilar in their outcomes and will of necessity have different costs, benefits, risks and harms.
8. Section 4.4.1 states the existing shield walls will be used as the exterior of the Safe Shutdown Enclosure. Which shield walls are being referred to in this section? This needs to be clarified. This would not be clear to a member of the public reading this document.
 9. Section 4.4.1, page 4-5, paragraph two, contains a sentence which reads in part, "...below the risk level for radionuclides (as described in Section 2.2.6), and/or are inert materials would be left in place." This sentence as written implies that inert materials above the risk level for radionuclides could be left in place. We recommend that this sentence be re-written. The sentence does not clarify what is meant by "inert" material. Conceivably, "inert" material could include chemically inert activated material such as radioactive lead, steel, graphite or mica which are radioactive above legal limits. The "or" in the sentence would then seem to allow this material to be left in place.
 10. Section 4.4.2 does not discuss whether any upgrades, such as improved seismic qualifications, will be made to the existing structures being used in the construction of the Safe Shutdown Enclosure even though Section 2.2.1 describes the reactor buildings as generally in poor condition. The Oregon Office of Energy recommends that the conditions of those portions of the existing buildings that will be used as part of the Safe Shutdown Enclosure be evaluated and the results of this evaluation discussed in this section. The potential for releases due to seismic events during the 75 year interim storage period should also be included in the list of potential harms of the remedy. The cost to respond to such an incident and it's consequences should also be estimated and reported. Alternative two also needs to include the costs from such events as well as from simple decay and collapse of the structures, along with the increased costs and harms from continued unhindered migration of radioactive and hazardous materials.
 11. Section 4.4.3 discusses groundwater protection standards. No discussion of the potential impacts of the current groundwater/vadose zone integration effort is included. The Oregon Office of Energy recommends that the U.S. Department of Energy consult with the groundwater/vadose zone integration team and determine how these projects will be integrated.
 12. Section 4.4.3, page 4-7 states the criteria for cleanup of subgrade structures. The discussion fails to identify or consider the impacts of residual leaked contaminants below the storage basins. The fuel storage basins were designed to allow leakage of up to several hundred gallons per day from the construction seam between the reactor block and the basin proper. The construction of the basins included an asphaltic membrane

under the basin, but not under the construction seam. The spent fuel was designed to be easy to dissolve and reprocess. The fuel unloading was designed and operated in such a manner that a large proportion of the fuel was severely damaged, exposing bare uranium metal to the water in the basins. Uranium metal, particularly in the form of spent reactor fuel corrodes easily and rapidly in water, releasing radionuclides to the water. We have seen all of these at K-Basins. We also know from monitoring of wells at K-Basins that there is extensive contamination of the soil and groundwater under and adjacent to the Basins. There is ample reason to believe this is true for the other single pass reactors. Any acceptable cleanup must include exhumation and cleanup of these materials to protect groundwater and the Columbia River.

13. Section 5.2 does not list the Hanford Federal Facility Agreement and Consent Order as an applicable or relevant and appropriate requirement. We recommend this requirement be included and discussed in this section.
14. Section 7.0 does not compare the proposed schedule (figure 7-1) to the appropriate Hanford Federal Facility Agreement and Consent Order major and interim milestones. The Oregon Office of Energy recommends this comparison be included in this section.
15. There are several typographical/grammatical errors in this document. They are listed below:
 - Section 2.2.6, page 2-6, second paragraph, first sentence - the sentence should read, "...will be remediated."
 - Section 2.2.6, page 2-6, second paragraph, second sentence - the sentence should read, "...and/or is not cost effective,..."
 - Section 4.4.3, page 4-6, first paragraph, fifth sentence - the sentence should read, "...a minimum of 1.0 meter (3 ft)...."
 - Section 5.2.2, page 5-6, second bullet on that page, second sentence - the sentence should read, "...be pertinent if low-level...."
 - Section 5.2.3, page 5-8, fifth paragraph under Waste Management Standards, second sentence - the sentence should read, "...and disposed of..."
16. The document does not contain any information on the comment process for the EE/CA. We recommend future public comment documents contain information on comment period start and end dates, and names, addresses and phone numbers of contact staff.