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Oregon

Theodore R. Kulongoski, Governor



OREGON
DEPARTMENT OF
ENERGY

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Re: Oregon comments on the "Proposed Plan For An Amendment To The K Basins Interim Remedial Action Record Of Decision," DOE/RL-2004-48, Rev. 1, 1/2004.

Dear Mr. Gadbois and Mr. Pak:

We appreciate the opportunity to review the proposed plan and apologize that we missed the comment deadline by a day. We trust that our comments will still receive full consideration. Oregon previously reviewed and submitted comments in July 2004 on the "Proposed Changes to K-Basin Sludge and K-Basin Cleanup Milestones" (M-34 and M-16). We refer you to those comments as several are pertinent to this proposed ROD amendment.

In general, we are struck by the lack of specifics and clarity contained in this proposed ROD amendment. There is insufficient information and analysis provided for us to fully evaluate the proposal. In addition, there are apparently a number of underlying assumptions being made that are not stated in this document that could potentially have severe implications if they are proven incorrect.

The proposed amendment says that the sludge will now be treated – but gives no specifics about the type of treatment that will be used (other than a range of potential treatment technologies), or where or when this treatment will be done. A reader can infer that the proposed treatment may occur in T Plant, which raises some additional questions and concerns as well. The seismic rating of T Plant – particularly the roof panels – may necessitate facility upgrades to meet current nuclear safety standards before this work can be done there. These upgrades may be costly and may argue for using a different or new facility.

The proposed amendment says that the sludge will be treated and packaged into a waste form that is ready for final disposal. However, the amendment fails to identify the disposal site.

The Tri-Parties seem to presume that the sludge is transuranic and will meet waste acceptance criteria for disposal at the Waste Isolation Pilot Plant (WIPP) in New Mexico. We are concerned that if this assumption is wrong, it could result in the waste being orphaned and relegated to indefinite storage at Hanford.

We agree that the sludge appears best suited for treatment as transuranic waste and for disposal at WIPP. However, a case can be made that because the source of much of the sludge is corroded spent fuel, that the waste is ineligible to go to WIPP and must instead go to the national high-level waste repository. In addition, we are concerned that in recent months, the State of New Mexico has actively resisted the prospect of new waste streams going to WIPP.

We request that the final ROD amendment clearly explain how the treated sludge will meet WIPP waste acceptance criteria – if indeed that is the intended destination. If the intent is to send the sludge somewhere else, then that should clearly be explained.

We have concerns as well about whether the basins themselves and whether all of the debris waste is appropriate for disposal in the Environmental Restoration Disposal Facility (ERDF). The basins and debris contain a large inventory of radioactive cesium and technetium. We are concerned that: 1) high levels of technetium in the concrete may effectively consume ERDF's curie capacity for waste; 2) that some waste may be above the ERDF waste acceptance criteria for transuranic-contaminated waste; and 3) high levels of cesium in the surface layer of the basin may constitute Greater than Category 3 or Greater than Class C waste – both of which are prohibited from disposal in ERDF. Additionally, the curie content of this waste may effectively consume ERDF's available curie capacity for similar waste.

We understand that DOE has proposed that the technetium be considered "encapsulated" by the basin concrete, thereby allowing more technetium into ERDF. We strongly disagree. Technetium (like many anions) is highly mobile and moves relatively freely through concrete unless it is converted to a reduced state. The basin concrete lacks any ability to slow the release of technetium. No credit should be assumed or allowed for "encapsulation" of the technetium in evaluating ERDF's capacity for this waste.

As far as the transuranic elements in the sludge, the proposal to grout the debris does not assure that plutonium in the sediment or on surfaces will be contained in the grout. Waste which is contaminated at levels between the ERDF waste acceptance criteria limits and the WIPP limit may become orphan waste. Accordingly, assessing the transuranic contamination level by averaging the volume of the grout with the waste should not be allowed, and planning should be done to prevent the generation of orphan wastes.

For the cesium contaminated basin structures, DOE should consider using extensive hydrolazing to remove the contaminated basin surfaces and route this waste to the vitrification plant for disposal in the high-level waste glass.

Finally, both basins were designed to leak at the major construction joints. The K-East basin was never lined and extensively leaked large volumes of highly contaminated water containing cesium, strontium, tritium, plutonium, americium, uranium and other nuclides. Following removal of the basins, it is essential that the contaminated soil under the basin seams be removed and properly disposed.

If you have any questions about our comments, please call me at 503-378-4906, or Dirk Dunning of my staff at 503-378-3187.

Sincerely,



Ken Niles
Assistant Director

CC: Mike Wilson, Washington Department of Ecology
David Grover, Defense Nuclear Facilities Safety Board, Hanford Office
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