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Oregon

Theodore R. Kulongoski, Governor

OREGON DEPARTMENT OF ENERGY

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July 22, 2010

Paula Call
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, A7-75
Richland, WA 99352

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Dear Ms. Call:

Oregon appreciates the opportunity to review the *Proposed Plan for Amendment of the 100-NR-1/NR-2 Interim Action Record of Decision, DOE/RL-2009-54* (Proposed Plan). Oregon agrees with the basic approach in the Proposed Plan, but has some concerns. 0088645

Oregon agrees with the Tri-Parties that Alternative Four, the preferred alternative, provides the best balance of long-term protectiveness and short-term risk and should result in greatly reducing the amount of strontium reaching the Columbia River. This alternative works because strontium in groundwater is intercepted, removed from the groundwater flux and relatively immobilized within the apatite permeable reactive barrier crystal structure. Oregon expects the preferred alternative to be an important component of the final remedy.

However, as the radioactive decay for strontium 90 will not eliminate this threat for about 300 years (assuming ten half lives of radioactive decay), this proposed action will necessitate careful monitoring, active restriction of allowed land uses, and periodic evaluation for 300 years into the future. The fact that this action leaves a persistent body of radioactive contamination so close to the river requires a prolonged level of attentiveness.

While it is not readily apparent in this document, the original placement of strontium-intercepting apatite occurred only in the upper half of the unconfined aquifer. This was predicated on the well data that showed that strontium is only found in high concentrations in the upper part of the aquifer. We (and others) are not convinced this is true. The simple hydraulics of the area with rising and falling river stage drives water into the higher areas of soil, driving contamination deeper, and washing it back out of the soil at all levels. The emplacement of the barrier will likely alter and complicate the hydraulics and will likely divert water containing strontium around and under the barrier to some degree.

Since the technology enabling DOE to emplace apatite in groundwater is proven, we believe it is a reasonable, conservative action to construct the barrier completely to the bottom of the aquifer to assure that all possible strontium flux pathways to the river are intercepted.

While strontium – as the recognized contaminant of concern – is well addressed in the Proposed Plan, other contaminants at the 100-N area are not. Chromium, nitrate and a number of other toxic heavy metals which are also found in levels exceeding groundwater and river ecological standards are not mentioned. There is no plan in this interim approach to remediate these contaminants. Oregon therefore recommends that more investigation and remediation occurs before the final record of decision is finalized for this Operable Unit.

Oregon shares the goal of protective and cost effective cleanup of Hanford, and welcomes the opportunity to help craft this important plan with our comments. Please contact Dale Engstrom, of my staff (503-378-5584), with any questions or comments.

Sincerely,

Ken Niles
Nuclear Safety Division Administrator

Cc: Dennis Faulk, U.S. Environmental Protection Agency
Jane Hedges, Washington Department of Ecology
Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation
Russell Jim, Yakama Indian Nation
Gabe Bohnee, Nez Perce Tribe