Oregon
Kate Brown, Governor

OREGON DEPARTMENT OF ENERGY

550 Capitol St. NE
Salem, OR 97301-3737
Phone: (503) 378-4040
Toll Free: 1-800-221-8035
FAX: (503) 373-7806
www.Oregon.gov/ENERGY

March 31, 2017

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

Dear Mr. Buel:

We appreciate this early opportunity to review and comment on the *Remedial Investigation/Feasibility Study and Proposed Plan for the 100-BC-1, BC-2 and BC-5 Operable Units, DOE/RL-2010-96 and DOE/RL-2016-43, Draft A*. We do have a few observations to share.

Oregon would like to reiterate its strong support for the previous decision to remove large concentrations of hexavalent chromium through the two "big digs" that took place near C Reactor. Proactively removing that mass of chromium – rather than wait for it to dribble into the groundwater and the Columbia River – certainly lessened the need for protracted and widespread groundwater treatment in the area.

However, the results of the 100-B/C Remedial Investigation demonstrate that the clean-up work is not yet done.

We are concerned that DOE's Preferred Alternative (Alternative 2), does virtually nothing to remediate the remaining contaminants in the 100-BC-1 and 100-BC-2 Source OUs and the 100-BC-5 Groundwater OU. Instead, DOE will rely mostly on institutional controls and monitored natural attenuation.

Even though institutional controls will be necessary to allow the strontium time to decay, we believe it is important to reduce the overall mass of other contamination, particularly in the groundwater.

An additional complication that doesn't seem to get much consideration within these documents is having the B Reactor museum located in this part of the 100 Area. Twenty years ago, only a few visionaries thought that B Reactor might be preserved. Most thought it would be cocooned like all the other reactors. Now, it's not only within a National Monument, it is also part of a National Park. Who knows what additional changes and surprises will occur within the proximity of B Reactor in the decades to come. Thousands of members of the public are expected to visit the B Reactor. Perhaps more than any other 100 Area, DOE needs to make more proactive cleanup decisions as far as remaining shallow waste sources, to ensure that the visitors to the park are not put at risk.

In addition to our concerns about DOE's selection of Alternative 2, we have some concerns and questions about how DOE's comparative evaluation of the remedial activities makes Alternative 2 look more favorable than many of the other choices. We don't agree with some of the rationale used in making these evaluations.

Short-Term Effectiveness:

The most effective method to promote short-term effectiveness is to remove as much of the contamination as soon as possible. The definition used here for short-term effectiveness is complicated by including exposure concerns for the workers and nearby communities.

We disagree with ranking Alternative 2 three out of four stars for short-term effectiveness. Under this alternative, it will take considerably longer than any other alternative to reach cleanup levels. And we disagree with the notion that active remediation should be ranked lower than MNA and ICs because it poses a potential increased risk to workers, the community, and the environment. Hanford is full of risks, and as we've seen repeatedly – even with incredibly complex and hazardous waste sites – Hanford's workers have been able to do the work with minimal exposures and often with minimal environmental impact.

When the Consortium for Risk Evaluation and Stakeholder Participation (CRESP) was assessing risks at Hanford, they asserted that for some waste sites, the risk of cleanup – to workers and the environment – was often greater than the risk of doing nothing. We rejected that perspective then and disagree with it now.

Implementability

We disagree with ranking Alternative 2 as the highest in "Implementability." All of the proposed actions that are being considered within the 100-B/C Area have been successfully implemented elsewhere on site. This includes deep RTD, pump-and-treat, and chromium source treatment. The time it takes to conduct a remedy – especially when it ultimately will be more protective than other alternatives – should not be a consideration in implementability. If there were new, uncertain technologies that were being considered, we agree that could lead to a low score in implementability. To rank a choice highest because it involves the least amount of action seems completely at odds with the spirit of evaluating environmental remediation alternatives.

Cost

The cost estimates for several of the alternatives do not seem reasonable. As an example, Alternative #6 includes all of the elements of Alternative #4 – plus the addition of Hexavalent Chromium Source Treatment. Yet Alternative #4 is projected to cost $60 million more than Alternative #6 (in estimated present value). The chromium source treatment should certainly result in a shorter period in which the pump-and-treat system would need to be operating, yet that should not result in such a significant cost difference.

We also question as well the cost estimates for Alternative 3, especially in comparison with Alternative 2. The differences in activities between the two alternatives is for Alternative 3 to use the existing pump-and-treat system in the K Area to remove chromium from groundwater in the 100-B/C Area. Yet the estimated O & M cost and periodic cost go from $34 million in Alternative 2 to $176 million in Alternative 3. The pump-and-treat will make use of an existing pump-and-treat treat system and add only an estimated 10 extraction and injection wells and conveyance piping. Additional costs of $142 million for this work seem excessive.

Oregon's Preferred Alternative

Oregon prefers Alternative 5 as an effective way to help ensure protection of the groundwater, and thus, the Columbia River.

We do not discount the need for aggressive RTD at any or all of the waste sites that have been identified as candidates for this remedial action. We encourage DOE to reassess the need for additional RTD in light of the use of B Reactor as a museum and the expectation that the wider geographic area may become a popular recreation site for thousands of people.

Finally, we do want to see further clarification of the contention that 53,900 pCi/L of strontium is acceptable for fish and aquatic organisms in the Columbia River. These reports do not contain information to validate such a seemingly high exposure limit.

We appreciate DOE's Hanford cleanup efforts, and look forward to continuing discussion of Hanford issues in the coming months. If you have questions or wish to discuss any of our comments, please contact Dale Engstrom of my staff at 503-378-5584.

Sincerely,

Ken Niles
Assistant Director

cc: Dennis Faulk, U.S. Environmental Protection Agency
Alex Smith, Washington Department of Ecology
Rod Skeen, Confederated Tribes of the Umatilla Indian Reservation
Russell Jim, Yakama Nation
Gabe Bohnee, Nez Perce Tribe
Oregon Hanford Cleanup Board