



# Oregon

Kate Brown, Governor



550 Capitol St. NE

Salem, OR 97301

Phone: 503-378-4040

Toll Free: 1-800-221-8035

FAX: 503-373-7806

[www.oregon.gov/energy](http://www.oregon.gov/energy)

November 25, 2019

U.S. Department of Energy  
Attn: Jennifer Colborn  
P.O. Box 450, H6-60  
Richland, WA 99352

Dear Ms. Colborn,

We appreciate the opportunity to provide comments on the Proposed Plan for the 100-BC area of the River Corridor. As you are aware, Oregon holds protection of the Columbia River paramount, and we have collaborated on the strategy for the 100 Area cleanup for decades. We have consistently held the following cleanup priorities:

- Waste site disposition of Remove, Treat, Dispose (RTD) should be the default cleanup strategy;
- Groundwater impacts which can be actively remedied, should be; and
- Caps and Institutional Controls are tools of last resort and should only be applied when all else fails.

In our March 2017 comment letter on the 100-B/C Remedial Investigation/Feasibility Study (RI/FS) and Draft Proposed Plan we notified the United States Department of Energy (US DOE) that we prefer Alternative 5, as it would be more protective of the Columbia River sooner. We are disappointed that Alternative 2 continues to be presented as the Preferred Alternative. If Alternative 2 is the final selected strategy, we offer these additional comments.

## **Groundwater**

The Proposed Plan selects a Preferred Alternative that relies on the Columbia River to remove the bulk of the mass in the hexavalent chromium plume. We continue to disagree with the selection of this alternative. Hexavalent chromium at the river's edge is well above the aquatic standard and presents a significant risk to organisms that spend some or all of their lives in the river substrate (invertebrates, early life stage salmon, lamprey, sculpin). For decades, pump and treat systems across the site (100-K, 100-D/H) and the country have been effectively mitigating hex chrome plumes in groundwater. A relatively limited extraction well network in the 100-BC Area would significantly reduce the time and magnitude of river hexavalent chromium impacts. While this system would only treat chromium, co-locating the extraction wells within the strontium-90 plume would have an added benefit of allowing more time for radioactive decay of the strontium before that mass reaches the river.

## Soil/Waste Site Disposition

The remedial goal for the 100 areas of the River Corridor allows a residential use scenario. Alternative 2 largely accomplishes this goal through a combination of excavation activities that have been completed, an RTD action for one additional shallow waste site, and broad implementation of land use restrictions and institutional controls overlying deeper contamination areas.

We believe DOE should provide additional rationale for the decision to not remediate two waste sites along the river:

- 100-B-26 – 1904-C Spillway

In the 2006 *Remaining sites verification package for the 100-B-26 spillway*, six exceedances of remedial action goals were reported in soil samples below a rip-rap armor. However, it was determined that “the residual contaminants within the spillway present little risk to human health and the environment compared to the effect remediating the spillway could have on the Columbia River and its shoreline.” (Administrative Record Accession #[DA03768427](#))

We do not believe a “No Action” disposition is appropriate for this river-adjacent waste site without further evaluation. Rip-rap is not a sufficient barrier to prevent direct contact with contaminated soils and will not prevent transport of contaminants to the river. If the soils are left in place, additional evaluation of the degree and extent of uranium above standard may be warranted. It may also be necessary to design and install an engineered barrier with requirements for associated periodic inspection and maintenance actions.

- 100-B-15 – 100BC River Effluent Pipelines

We agree that the effluent pipelines do not pose a significant risk in their current configuration. However, the Europium 152 levels contained in the pipe scale sampled in 1995 (BHI-00538) will be above risk levels for direct exposure for an additional 50-150 years. Simply listing the site as “No Action” and stating that the pipeline is not a risk because it hasn’t moved yet assumes that the pipeline will remain where it is, undisturbed, for the next 50-150 years. If this is the assumption made, we ask that a pipe competency survey be incorporated into 5-year CERCLA reviews moving forward to confirm the continued integrity of the pipe. While the pipeline is not a risk for direct exposure now, the potential exists for exposed sections of the pipe or pipescale to break away in the future and end up on the river bank downstream. Additionally, there is no Waste Site Reclassification Form on the administrative record for this site to document its new “No Action” status.

- Three waste sites (132-B-2 – 116-B Stack; 1607-B5 -- Septic Tank and drain field; 1607-B6 -- Septic Tank and drain field) are not listed in the Proposed Plan. The stack is part of the Manhattan Project National Historic Park, and the two septic systems are associated

with facilities currently in operation. These sites should be incorporated in a revision to the proposed plan or addressed through separate CERCLA actions.

### **Institutional Controls and Deed Restrictions**

We understand the complexity of deep waste site excavation, particularly adjacent to an historically significant structure such as the B Reactor. While we would prefer that DOE RTD all contaminated sites, we accede to the necessity of institutional controls (IC) at certain, deep sites where there is minimal risk to groundwater and human exposure. We hope and trust that these ICs include recording deed restrictions, and that those filings will be issued to Benton County within a reasonable timeframe (i.e. before the end of the Hanford cleanup).

Characterization of the vadose soils at a depth greater than 15 feet was not as comprehensive as was performed for shallow soils. In lieu of characterization, DOE chose to either: 1) assume that results from the bottom of excavations represented “average” concentrations that extended down to the water table; or 2) use surrogate data from a contaminated reference site and assume a similar contamination pattern. Both of these approximations assume that contamination is restricted to the waste site footprint, with minimal horizontal spreading. As a means to minimize the risk of spread of contaminated soils and exposure during future excavation, we suggest that the deed restriction boundary limiting excavation deeper than 15 feet should be area-wide, rather than discrete outlines of specific waste sites. Such a restriction would require that anyone in the area with the intent to excavate deeper than 15 feet request a release to do so and have an approved soil management and characterization plan prior to beginning work. This would ensure that the appropriate level of caution is taken with potentially exposed contamination in the event of future soil disturbance.

DOE has made significant cleanup progress in the 100-BC area and the Proposed Plan documents a great deal of success. However, there will be a persistent risk for many decades, which is an unfortunate aspect of the preferred alternative. We have identified readily surmountable shortcomings in the plan that prevent us from giving our full endorsement of the proposed remediation path. DOE has an opportunity to remedy these issues with practical management measures or by stretching the cleanup effort just a little bit further.

If you have any questions or wish to discuss any of our comments, please contact Tom Sicilia of my staff at 503-378-5584.

Sincerely,



Ken Niles  
Assistant Director for Nuclear Safety

CC: Alex Smith, Washington Department of Ecology  
Dave Einan, U.S. Environmental Protection Agency  
Matt Johnson, Confederated Tribes of the Umatilla Indian Reservation  
Laurene Contreras, Yakama Nation  
Jack Bell, Nez Perce Tribes  
Oregon Hanford Cleanup Board  
Hanford Advisory Board