



# Oregon

Kate Brown, Governor



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May 22, 2019

William F. Hamel,  
Assistant Manager for the River and Plateau  
U.S. Department of Energy  
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Dear Mr. Hamel,

We appreciate the opportunity to provide comments on DOE/RL-2018-58 Draft A – *Proposed Plan for Interim Action Remediation of the 200-BP-5 and 200-PO-1 Operable Units*. Management of the uranium and technetium groundwater plumes targeted in the *Proposed Plan* is of great importance to the State of Oregon. We commend DOE's willingness to act to stop plume expansion and protect the Columbia River.

The Proposed Plan lists three alternatives that were evaluated: 1) No action; 2) Pump-and-Treat in B Complex and C and A-AX farms; 3) Same as Alternative 2 but with an additional pump-and treat remedy in the Gable Gap plume area. DOE has indicated its preferred choice is Alternative 2.

Oregon instead recommends that DOE adopt Alternative 3, as it would provide the greatest long-term benefit to groundwater quality, human health, and the environment. The currently stable, stagnant conditions of the Gable Gap plume and lack of a continuing source make it an ideal candidate for remedy. The Gable Gap plume is one of the few groundwater impacts where pump-and-treat could achieve long-term compliance with applicable standards rather than merely act as a plume management strategy. In a culture of completion, which DOE is now actively promoting with its contracting, removing a plume from the map seems like a desirable outcome.

We strongly recommend that treatment of co-contaminants be factored into this remedy. As the pump-and-treat system operates, contaminants other than uranium and technetium will be drawn into the system. While some (Cyanide, nitrate, tritium) are either short-lived or have established treatment lines, iodine 129 is of particular concern. Re-injection of a waste stream which has captured iodine 129 as a co-contaminant could generate a second plume with no existing treatment option.

While there is currently no viable off-the-shelf technology for iodine removal, recent studies by Pacific Northwest National Laboratories (PNNL) and the National Academies of Science have shown that varying treatment methods involving silver as a component were able to remove upwards of 99 percent of iodine. An aggressive research and development program in conjunction with DOE's Office of River Protection and PNNL should be undertaken to add iodine 129 treatment to the menu of available

options. Development of this tool would have a significant benefit to the groundwater quality at the site and would also ensure that removal of this key radionuclide from tank waste can be accomplished.

The transfer of extracted groundwater across the central plateau will require a fairly substantial pipeline network, even as the Waste Treatment Plant starts up and additional soil investigations and removals are planned. While it's probably not necessary to mention, we recommend DOE establish a transfer route which avoids waste sites with planned remediation/demolition activities, and to develop a robust inspection plan on all transfer lines and associated equipment.

Any effort made to prevent contaminated groundwater from reaching the Columbia River is a net plus, provided the remedy does not cause incidental spread of non-target contaminants. DOE should also continue to identify and remove source material to shorten the pump-and-treat mission. Alternative 3 has the potential to completely remediate one plume, capture expanding plumes before they reach the river, and provide data for research and development of new and necessary treatment methodologies.

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: Brian Vance, U.S. Department of Energy  
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