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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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February 9, 2016

16-NWP-030

Mr. Ray J. Corey, Assistant Manager for the River and Plateau
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A5-11
Richland, Washington 99352

Re: Department of Ecology's (Ecology) Review of the *Remedial Investigation Report for the 200-BP-5 Groundwater Operable Unit*, DOE/RL-2009-127, Draft A (200-BP-5 RI), and the *Remedial Investigation Report for the 200-PO-1 Groundwater Operable Unit Addendum 1*, DOE/RL-2009-85 ADD1, Draft A (200-PO-1 RI)

Reference: See page 3

Dear Mr. Corey:

Based on the meeting held with the United States Department of Energy – Richland Operations Office (USDOE-RL) on January 20, 2016, Ecology will restart our review of the 200-BP-5 Remedial Investigation Report and the 200-PO-1 Remedial Investigation Report.

The successful completion of our review is contingent on USDOE-RL providing adequate details to Ecology on how the current modeling approach evolved from the *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site*, DOE/EIS-0391F (TC&WM EIS) modeling approach and specifically providing the following items, which USDOE-RL committed to at our meeting:

- Demonstrate and show Ecology that 200-BP-5 RI and the 200-PO-1 RI modeling started with the TC&WM EIS model as transitioned from the TC&WM EIS platform.
- Document the differences and any updates on the hydrogeologic characteristics and parameters from the TC&WM EIS model to the current platform and document the basis for the updates.
- Review the MODFLOW software calibration process with Ecology highlighting any updates with respect to the TC&WM EIS model.
- Provide detailed explanation why the MT3D software cannot be used with the TC&WM EIS groundwater flow-field model. During the TC&WM EIS development, one reason that it was decided not to use MT3D was that it could not provide reliable predictions at the fence line or for a distance of less than about one kilometer. Describe how and why that is not a problem with the current recommended approach.



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- Explain fully why the Blue Dot software cannot be used to address advective-diffusive transport.
- Describe the flow model calibration process and how the model transport predictions are representative over time.

USDOE-RL assured Ecology that the TC&WM EIS models were the basis for the modeling used and any changes were identified, along with their associated Quality Assurance (QA) review and documentation, in the *Model Package Report: Plateau to River Groundwater Transport Model*, Version 7.1, CP-57037, Revision 0. We will review this document and those it references in detail. Ecology's prime concerns with the use of new or revised modeling is if those changes or revisions received acceptable systematic QA, data validation, and calibration equivalent to that given to the TC&WM EIS models.

In addition to a full review of the 200-BP-5 RI and the 200-PO-1 RI, the effort to conduct the review of the QA on these new and any revised models and data, will require a significant input of time from Ecology staff. Therefore, Ecology estimates it will take a minimum of four months to complete our review of the 200-BP-5 RI and the 200-PO-1 RI, QA information, and associated data. Prior to our completing this effort, USDOE-RL is requested to address other overarching issues identified in the meeting to make sure 200-BP-5 RI and the 200-PO-1 RI modeling approach is acceptable to Ecology.

Also, during the January 20 meeting, the United States of Department of Energy – Office of River Protection (USDOE-ORP) clarified that groundwater impacts for Waste Management Area will not be evaluated in the 200-BP-5 RI. We will work with USDOE-ORP to revise documents to that effect and clarify that process.

If you have any questions, please contact me at cheryl.whalen@ecy.wa.gov or (509) 372-7924.

Sincerely,

Cheryl L. Whalen
by John B. Price

Cheryl L. Whalen
Cleanup Section Manger
Nuclear Waste Program

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Reference: Letter 15-NWP-189, dated October 23, 2015, from C. L. Whalen, Ecology, to R. J. Corey, USDOE-RL, "Modeling Requirements for 200-BP-5 and 200-PO-1 Remedial Investigation Reports"

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cc electronic:

Dennis Faulk, EPA
Mary Burandt, USDOE-ORP
Chris Kemp, USDOE-ORP
Mike Cline, USDOE-RL
Jim Hansen, USDOE-RL
Doug Hildebrand, USDOE-RL
John Morse, USDOE-RL
Margaret Clark, CH2
Jane Borghese, CHPRC
Marty Doornbos, CHPRC
Bill Faught, CHPRC
Carolyn Noonan, MSA
Jon Perry, MSA
Rob Piippo, MSA
Michael Turner, MSA
Ken Niles, ODOE
Elis Eberlein, Ecology
Dib Goswami, Ecology
Jane Hedges, Ecology
Jeff Lyon, Ecology
Nina Menard, Ecology
Deborah Singleton, Ecology
Ron Skinnarland, Ecology
Kim Welsch, Ecology
Cheryl Whalen, Ecology
Jerry Yokel, Ecology
Environmental Portal
Hanford Facility Operating Record
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cc: Rod Skeen, CTUIR
Gabriel Bohnee, NPT
Alyssa Buck, Wanapum
Russell Jim, YN
Steve Hudson, HAB
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