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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 3, 2014

14-NWP-187

Mr. Doug S. Shoop, Acting Manager
Richland Operations Office
U.S. Department of Energy
PO Box 550, MSIN
Richland, Washington 99352



Dear Mr. Shoop:

Re: Request for Temporary Authorization to add three new Dangerous Waste Management Units to the 325 Hazardous Waste Treatment Units

References: Letter from D.S. Shoop to J.A. Hedges, dated July 9, 2014 *Class 3 Modification and Temporary Authorization Request for the 325 Hazardous Waste Treatment Units (HWTUs) Portion of the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit*, (14-ESQ-0096), and letter from D.S. Shoop to J.A. Hedges dated July 24, 2014, *Submission of 325 Hazardous Waste Treatment Units (HWTUs) Temporary Authorization and Class 3 Permit Modification Request* (14-ESQ-0098)

Washington State Department of Ecology (Ecology) staff reviewed a request for a temporary authorization (TA) to add three new dangerous waste management units (DWMUs) to the 325 Hazardous Waste Treatment Units (HWTUs) (see Reference). We agree that your request satisfies the criteria in Washington Administrative Code (WAC) 173-303-830(4)(e)(ii). Pursuant to WAC 173-303-830(4)(e)(iii)(B)(III) through (IV), Ecology agrees that this TA will enhance the capability to manage waste in larger containers, and provide needed space in order to package drum-quantity wastes for shipment and disposal.

The three units being added are described below:

- 1) The Cask Handling Area (CHA), a portion of Rooms 603 and 604A in the Radiochemical Processing Laboratory (RPL) facility. These two rooms are part of the High Level Radiochemistry Facility (HLRF), the hot cell facility located on the east end of the RPL. The CHA has a heavy duty 30 ton crane to allow heavy drums to be safely lifted.
- 2) The Truck Lock, Room 610 in the RPL. This room is located on the east side of the HLRF. The Truck Lock has easy truck access and offers sufficient space for easy maneuvering and handling of larger containers.



- 3) The 3714 Pad is the concrete foundation slab for the former 3714 Building just northeast of the RPL facility. The pad will be used to store the grouted and sealed boxes created in the CHA and Truck Lock pending shipment to disposal.

Ecology is issuing this TA to allow the utilization of three new DWMUs to prepare two one-gallon paint cans of grouted waste for disposal. This waste is a solidified solution of radium containing levels of barium in excess of the applicable treatment standard. The paint cans must be placed in a specially modified 55-gallon drum with a polyethylene liner. The drum must be shielded due to the radiation level of the mixed waste, so it will be heavy. The encapsulated drum must then be placed in a large box filled with grout in order to meet Low-Level Burial Grounds (LLBG) waste acceptance criteria. The drum will be lifted with the crane in the newly permitted Cask Handling Area (CHA) and placed into the box. The box will then be moved to the second newly permitted area, the Truck Lock. Once at the Truck Lock, a concrete pumping truck will deliver concrete and finish filling the void space in the box. The concrete must be allowed to cure for at least 28 days prior to final acceptance inspection by LLBG representatives. Once acceptance has been documented, the sealed waste box will either be retained at the Truck Lock, or moved to the third newly permitted area, the 3714 Pad, for storage.

These three new DWMUs may also be used for container storage of the waste types and volumes already authorized in the existing 325 HWTUs DWMUs during the 180-day Temporary Authorization period along with the waste box described above. This authorization allows some containers of waste to be stored in the new units for ease of inspection, better aisle spacing, and improved worker safety and mixed waste management.

WAC 173-303-830(4)(e)(ii)(A)(II) authorizes a permittee to request, and Ecology to grant, a TA for any Class 3 modification meeting certain criteria. Many of the changes in the planned modification are not being authorized at this time since:

- They are not needed in order to conduct the activities that are the subject of the TA and/or
- They are not Class 2 or 3 modifications and hence are not eligible for inclusion in a TA.

Ecology is temporarily authorizing only the following modifications necessary to conduct the work being performed pursuant to the TA:

- Use of the three DWMUs described above for treatment and/or storage.
- The process to place containers in boxes and fill them with grout in order to meet Hanford disposal criteria.
- Added treatment and storage capacity of 4 cubic meters to allow the waste processing described above to occur at the 325 HWTUs.

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The TA requested by PNNL involves adding these three new dangerous waste management units to help manage waste in larger containers. The TA does not authorize any new wastes. However, increased volumes of waste will be stored at the 325 HWTUs. Because placement of containerized waste in boxes increases the volume of the waste to the size of the box, the stated capacity of the 325 HWTUs is being significantly increased.

With this TA, you may use the three new DWMUs to provide improved management or treatment of wastes already listed in your permit. This TA does not authorize any new wastes to be treated in any of the DWMUs located within the 325 HWTUs. All waste management operations within the new and established HWTUs must comply with the provisions of the Hanford Facility Dangerous Waste Permit (WA7890008967) and with all applicable Washington Dangerous Waste Regulations (WAC 173-303). This TA will be in effect for 180 days, effective from September 1, 2014 to March 1, 2015.

According to WAC 173-303-830 (4)(e)(ii)(C), the permittee is required to notify all persons on the facility mailing list about this TA request within 7 days of submitting the request to Ecology. This notice was completed by the permittee on July 16, 2014 via listserv notice. The comment period for the proposed Class 3 permit modification began on August 18, 2014 and will end on October 17, 2014.

If you have any questions concerning this TA please contact Rick Bond at fbon461@ecy.wa.gov or (509) 372-7885.

Sincerely,



Suzanne Dahl
Manager, Tank Waste Treatment Section
Nuclear Waste Program

cc:

Tom McDermott, PNSO
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Harold Tilden, PNNL
Stuart Harris, CTUIR
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Russell Jim, YN
Administrative Record (325 HWTUs, T-3-4)
Environmental Portal
Correspondence Control, USDOE-RL