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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Remediation - Oak Ridge
761 Emory Valley Road
Oak Ridge, Tennessee 37830

December 11, 2018

Mr. John Michael Japp
DOE FFA Project Manager
Oak Ridge Office of Environmental Management
U.S. Department of Energy
Post Office Box 2001
Oak Ridge, TN 37831

Dear Mr. Japp

TDEC Comment Letter
Waste Handling Plan for the Demolition of the Beta 4 Complex Located at the Y-12 National Security Complex, Oak Ridge TN
DOE/OR/01-2766&D2
November 2018

The Tennessee Department of Environment and Conservation (TDEC) Division of Remediation (DoR) has reviewed the Beta 4 Waste Handling Plan (WHP) cited above in accordance with the Federal Facility Agreement (FFA) for the Oak Ridge Reservation (ORR). TDEC cannot approve this WHP for the reasons explained in TDEC's comment letter on the D1 document (August 1, 2018) and elaborated further below.

Mercury was not a priority during Waste Acceptance Criteria (WAC) development for Environmental Management Waste Management Facility (EMWMF) because the State had not yet listed Bear Creek as mercury-impaired at the time of EMWMF ROD execution. Since that time and pursuant to Section 303(d) of the federal Clean Water Act, the State added Bear Creek to the 2016 list of impaired waterbodies. The State listed Bear Creek, in part, because mercury levels in fish do not meet requirements for the stream's recreational use designation. In the absence of site-specific, risk-based mercury WAC, TDEC is concerned disposal of mercury-bearing waste will cause additional mercury loading to the stream. Even if testing indicates that mercury-contaminated materials are not hazardous by characteristic, the State is concerned about the total volume of materials and associated mercury mass. Disposal of the proposed 50,000 cubic yards of Beta 4 waste (along with many future mercury contaminated facilities) in Bear Creek Valley could add significant mass to the EMWMF and cause potentially unacceptable future discharges to Bear Creek. As stated in TDEC's August 1, 2018 letter, the State is unable to

approve this WHP until an agreement is reached among the FFA parties regarding the strategy for disposal of mercury-contaminated waste in Bear Creek Valley. DOE has not resolved this general comment.

As noted in DOE's *Strategic Plan for Mercury Remediation at the Y-12 National Security Complex, Oak Ridge, Tennessee* (September, 2017; DOE/OR/01-2605&D2/R1), mercury contamination at Y-12 is the greatest known environmental risk on the ORR. Furthermore, Bear Creek does not currently meet the remedial goals established in the Phase 1 Bear Creek Valley ROD. The absence of risk-based mercury WAC designed to protect Bear Creek highlights the critical need for a thorough evaluation of potential loading to Bear Creek and the need for treatment of landfill wastewater from mercury disposal in Bear Creek Valley. Mercury has already accumulated in Bear Creek fish to levels that are unsafe for human consumption. The FFA parties must agree on a protective discharge limit for mercury through resolution of the ongoing dispute on the *Focused Feasibility Study [FFS] for Water Management for the Disposal of CERCLA Waste on the Oak Ridge Reservation, Oak Ridge, Tennessee* (DOE/OR/01-2664&D2).

This WHP details the planned demolition of the Beta 4 Complex and disposal of more than 50,000 cubic yards of waste in the EMWMF. In the D1 comment letter, the State of Tennessee approved Appendix C and Appendix D of this document, the Sampling and Analysis Plan and the Quality Assurance Plan respectively, which allowed DOE to move forward with the characterization of the Beta 4 Complex. The State recognizes the need to minimize delays in decommissioning the WEMA. Therefore, TDEC continues to support the path forward developed with the agreement of all three FFA parties during the September 11, 2018 UEFPC Project Team meeting. The path forward involved DOE submitting a D2 WHP for ancillary Beta 4 facilities (not contaminated with mercury) to facilitate work on these buildings in the near future. Then, the parties would re-scope the subject WHP after the characterization effort is complete and the FFA parties reach agreement on the path forward for mercury-contaminated waste management in Bear Creek Valley. However, DOE issued this D2 document without further discussion at the project team level, resolution of comments, or following the path forward selected by the FFA parties.

As noted above, proposed in previous letters, and agreed to in project level discussions, the State requests that DOE begin characterization of the mercury-contaminated buildings and provide the results prior to a future submittal of the subject WHP. This information can then be used with decisions reached through the current formal dispute resolution for BCV wastewater management and enable the FFA parties to make a more informed decision regarding potential mercury threats to Bear Creek. It is important to note as well, the FFA parties have agreed that WEMA demolition and disposal of Beta 4, Alpha 4, and Alpha 5 will not commence until the Outfall 200 Mercury Treatment Facility is operational. The intent of that agreement was to minimize the potential release of more mercury contamination into East Fork Poplar Creek. Though the construction completion milestone is 2024, DOE just awarded a contract for the construction of the treatment facility which calls for completion within a 4-year period.

Questions or comments concerning the contents of this letter should be directed to Curt Myers at the above address or by phone at (865)220-6565.

Sincerely

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