



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Remediation - Oak Ridge  
761 Emory Valley Road  
Oak Ridge, Tennessee 37830

March 21, 2022

Mr. Roger Petrie  
Federal Facility Agreement Manager  
Oak Ridge Office of Environmental Management  
U.S. Department of Energy  
Post Office Box 2001  
Oak Ridge, Tennessee 37831

Dear Mr. Petrie

**Department of Energy Oak Ridge Environmental Management Fiscal Year 2024  
Budget Request**

In accordance with the Oak Ridge Reservation (ORR) Federal Facility Agreement (FFA) Section XXXVIII (Funding), the Tennessee Department of Environment and Conservation (TDEC), Division of Remediation Oak Ridge Office (DoR-ORO) has identified the following needs for OREM's FY2024 budget request:

**1. Adequate financial resources for the investigation and remediation of groundwater impacts from a quarter century of radioactive waste burial across the ORR:**

The ORR served as a regional radiological waste disposal site for decades during the last half of the twentieth century. Numerous known groundwater plumes across the ORR have yet to be delineated or remediated. Given the millions of curies of radioactive contaminants which were buried or injected into the ground on the ORR, the more than fifty inches of annual rainfall, the relatively shallow distance to groundwater across the ORR, and the known potential of contaminant migration via karstic, fracture flow in the ORR geology, the budget request must identify the need for significant, dedicated funds to implement CERCLA groundwater investigations and ARAR-compliant corrective actions on the ORR. The cost liability of these groundwater investigations and remediation projects will continue to increase until DOE

initiates and completes protective remedial actions on the ORR. For example, near-term implementation of readily available treatment technologies should be initiated at ETPP for the numerous VOC plumes across the site.

**2. Expediting remediation of contaminant sources within Bear Creek Valley (BCV) to ensure protectiveness of DOE's proposed Environmental Management Disposal Facility (EMDF):**

The FFA parties are planning for additional CERCLA on-site waste disposal in BCV. As part of the CERCLA protectiveness determination and in satisfying ARARs for the discharges of wastewater which would occur as part of operation of this waste disposal facility, the FFA parties are attempting to expedite remedial action(s) within BCV to minimize potential impacts from additional waste disposal in the area. One such corrective action planned for Northwest Tributary 8 (NT-8) is intended to address significant uranium releases from the western edges of the Bear Creek Burial Grounds (BCBGs) while also reducing PCB releases from the same area. Similarly, to satisfy ARAR concerns related to new mercury discharges to Bear Creek, the FFA parties have tentatively agreed to a methylmercury strategy requiring a milestone for a Remedial Site Evaluation for Bear Creek and Bear Creek Valley to investigate potential actions to reduce the level of methylmercury in fish living in the creek. Planning milestones have been established for the NT-8 project prior to FY2024 allowing field work during FY2024 if funding is available. This funding request should ensure appropriate funding is identified to implement the NT-8 action as well as both plan and execute the methylmercury strategy being adopted in the EMDF decision-making process.

**3. Identification and development of potential technologies for effective characterization and remediation of mercury in various media at the Y12 WEMA:**

OREM's current plan to initiate near-term, large-scale D&D projects at the Y12 facility is welcomed by TDEC. As a lesson learned from the D&D projects at the ETPP, an integrated plan is necessary to characterize, demolish, and manage the waste(s) associated with the most contaminated, complex facilities within the Y12 facility in a manner protective of human health and the environment. Key issues associated with safe and compliant waste management include adequate characterization, any necessary treatment, and proper waste disposal. The FFA parties must ensure budget requests include sufficient funding for characterization, remediation, and necessary waste management of known mercury areas at Y12.

**4. Support field D&D activities at ORNL and Y12 to assist workforce transition:**

The FFA parties are working closely to develop D&D planning documents at both ORNL and Y12 in support of remediating dozens of inactive facilities. Appropriate levels of funding should be requested to execute the field work associated with these approved plans to ensure plans do not sit on a shelf. Such work also supports the contractor workforce transition effort within OREM which is important for efficient long-term remediation of hundreds of facilities at the sites.

**5. Targeted treatment of wastewater discharge from the proposed Environmental Management Disposal Facility (EMDF):**

The FFA parties continue working toward establishing protective levels of radioactive wastewater(s) to be discharged into Bear Creek from the planned EMDF. The issue has been debated for several years among the ORR FFA representatives including personnel within the headquarters of both DOE and EPA. Resolution of the issue has consistently been pushed out in the project schedule only to repeatedly arise and create additional delays during the decision-making process. DOE should request funding to design and construct wastewater treatment processes at the EMDF which:

- A. target radioactive constituents of concern consistent with DOE As *Low As Reasonably Achievable* practices to minimize bioaccumulating radioactive contaminants released to downstream resources and fisheries;
- B. utilizes readily available technologies such as those used at the ORNL process waste treatment plant to reduce bioaccumulating radioactive contaminants from entering the downstream water bodies; and
- C. resolves a longstanding issue associated with the EMDF and allows the FFA parties to move forward more efficiently with EMDF decision making, design, and operation.

In accordance with Section XXXVIII, paragraph C of the ORR FFA, if the issues above cannot be resolved prior to DOE-OR's budget request to DOE-HQ, then the issues should be forwarded along with the budget request.

Questions or comments concerning the contents of this letter should be directed to Randy Young at (865) 220-6584.

Sincerely



Randy C. Young,  
FFA Manager

ec: Samantha Urquhart-Foster, EPA  
Shelley Kimel, SSAB  
Leon Shields, SSAB  
Tanya Salamacha, UCOR  
Sid Garland, UCOR  
OREM Mailroom, DOE  
Colby Morgan, TDEC  
Chris Thompson, TDEC

xc: Amy Fitzgerald, ORRCA  
Ron Woody, ORRCA  
Amanda Daugherty, ORRCA

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