



**STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION**

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

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COUNTY MAYOR'S OFFICE

October 28, 2024

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

Dear Mr. Petrie

TDEC Comment Letter for the Explanation of Significant Differences for the Record of Decision for Phase II Interim Remedial Actions for Contaminated Soils and Scrapyard in Upper East Fork Poplar Creek, Oak Ridge, Tennessee: Addition of Exposure Units 15, 16, and 17 (DOE/OR/01-2979&D1)

The Tennessee Department of Environment and Conservation (TDEC), Division of Remediation-Oak Ridge Office, received the above referenced submittal on August 29, 2024. The document has been reviewed pursuant to the Federal Facility Agreement (FFA) for the Oak Ridge Reservation (ORR).

As discussed among the FFA parties during the past several months, TDEC is concerned with the programmatic implementation of the Phase II Interim Record of Decision (IROD), specifically characterization efforts of the soil and subsurface features. The U.S. Department of Energy's (DOE) current plan for sequencing remediation at the Y-12 site mimics the remediation approach implemented at the East Tennessee Technology Park (ETTP) by completing sitewide demolition activities with limited soil characterization. Full subsurface characterization and remediation, which may be both a risk to industrial workers and a source of contamination to groundwater, are currently planned for a much later date. TDEC has shared with DOE the need to modify that remediation approach within the Upper East Fork Poplar Creek (UEFPC) watershed due to the ongoing mission work taking place at Y-12. If the current sequencing of remediation is not adapted to the Y-12 site with its ongoing mission, there is a real potential for contaminated property to be re-used after a facility is demolished but before contaminated soil under a new facility has been characterized and remediated. Such scenarios would delay remediation of sources of environmental contamination and likely significantly increase remediation costs by requiring duplicate remediation efforts within the same area.

Fortunately, the Phase II IROD states predesign characterization will be conducted to confirm and fully delineate areas of contamination and further states that soils will be characterized and remediated as they become accessible. Furthermore, the Phase II IROD acknowledges a flexible remediation approach must be adapted and close coordination with the National Nuclear Security Administration (NNSA) will be necessary due to active operations at the Y-12 National Security Complex. TDEC has the following interests and requests further tri-party discussion on these topics such that soil remediation within UEFPC is conducted effectively and efficiently on future projects. Limiting the depth of characterization to 2 feet (ft) will not fully delineate areas of contamination which potentially extends 10 ft or more within the UEFPC watershed. DOE asserts that the excavation/penetration permit program (EPPP) will address soils/subsurface features below 2 ft as part of existing land use controls (LUC). As stated in the Phase II IROD and UEFPC Comprehensive Monitoring Plan (CMP), the EPPP will provide notice to the permit requestor on the extent of contamination and will maintain responsibility on contamination handling. Without characterization below 2 ft, the extent of soil contamination will be unknown and subsurface features below 2 ft will not be evaluated. These data are imperative for informing the EPPP, are necessary for construction planning purposes, and are instrumental for managing waste and allowing redevelopment to continue when contamination is encountered.

- As expected with older facilities, the process knowledge about the location of subsurface features and use of the property may be incomplete. Addressing these uncertainties during the characterization phase using passive techniques (e.g., geophysical survey) and performing a more robust soil characterization effort will support remediation and redevelopment of property while reducing risks associated with encountering unexpected conditions.
- During planning for initiation of demolition, milestones for soil characterization and remediation should be established. The Phase II IROD only included costs associated with accessible soils at the time the IROD was signed in 2006. Establishing soil characterization milestones will allow for timely funding requests to secure funding to characterize and remediate soils as they become accessible and prior to the land being redeveloped.
- Prior to redevelopment and consistent with the FFA, the FFA Appendix I-15 screening process should be followed to determine if activities conducted as part of redevelopment (e.g., soil excavation, tank removal) should be conducted under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Utilizing Appendix I-15 allows for any removal activities conducted as part of redevelopment to be documented under CERCLA. This documentation is necessary to inform future final CERCLA soil and groundwater activities.

Addressing these concerns will support Y-12's infrastructure modernization program, environmental remediation efforts, and any other future redevelopment efforts at the site.

General Comments:

The FFA parties should discuss re-evaluating the site expectations determined in the UEFPC IROD and assess what path forward is most conducive to efficient completion of site cleanup that best supports the DOE's mission of National Security. Considering the emerging plans for redevelopment on the site, characterizing to 2 ft using industrial screening levels does not provide sufficient data to determine if an action is necessary to plan for handling contaminated soils during redevelopment or to evaluate the needs to remediate those soils which act as contaminant sources to groundwater contamination.

TDEC understands that resource allocation and baseline cost must be considered when planning soil characterization and remediation actions at the site. However, TDEC maintains that characterizing to depth during initial assessments will support effective baseline planning and more efficient use of resources for future remediation work. TDEC recommends a commitment from DOE to characterize and remediate accessible areas before any new construction commences. Such a commitment would allow DOE to provide an accurate baseline proposal and secure funding for future remediation efforts.

TDEC also shares the following specific comment from the review.

Specific Comment:

1. **Page 7, Description of Significant Difference, third paragraph.** As stated in this Explanation of Significant Difference (ESD), Y-12 is actively undergoing modernization and will be in the foreseeable future. This ESD not only serves to add three additional Exposure Units (EUs) to the scope of the Phase II IROD, but also establishes the depth soil will be characterized and remediated for these three new EUs. As written, this ESD only addresses soil to 2 ft below ground surface (bgs) within EU-16 and EU-17 arguing that aggressive future DOE development will not occur in this area but will only occur in the easternmost area of Y-12. This statement and the ongoing modernization activities, including construction of the Uranium Processing Facility (UPF) in multiple EUs (10, 12, & 17) and the Lithium Processing Facility in EU-5, do not support the claim that more aggressive future DOE development will be limited to the easternmost areas of Y-12 (EU-15). This ESD must include characterization and necessary remediation to 10 ft for all three additional EUs, instead of exclusively EU-15. Furthermore, due to the limited available land and the ongoing modernization program, it would be beneficial to all parties to conduct characterization and remediation for protection of groundwater using Maximum Contaminant Level (MCL)-based remediation levels. Use of MCL-based remediation levels will likely reduce overall costs by preventing remediation of the same areas twice.

Questions or comments concerning the contents of this letter should be directed to Cody Juneau at the above address or by phone at (865) 314-2328.

Sincerely
**Randy
Young**

Randy C. Young
FFA Project Manager
Division of Remediation – Oak Ridge Office

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