



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

May 6, 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

RE: Transmittal of Addendum to the Remedial Design Report/Remedial Action Work Plan for the Decontamination and Decommissioning of Non-Reactor Facilities in Bethel Valley at the Oak Ridge National Laboratory, Oak Ridge, Tennessee: Pre-Demolition and Demolition of Building 3544, Process Waste Treatment Plant, and Adjacent Facilities, Buildings 3518 and 3594 (DOE/OR/01-2428&D2/A13)

The Tennessee Department of Environment and Conservation (TDEC), Division of Remediation-Oak Ridge Office, received the above referenced submittal on February 6, 2024. The document has been reviewed pursuant to the Federal Facility Agreement (FFA) for the Oak Ridge Reservation. The following comments are relevant to that review:

1. **Page 1, 6th paragraph, Section 1. Introduction.** The reference to the Bethel Valley Record of Decision (ROD) should be revised to say that it is an *Interim* ROD. This change should be made throughout the document.
2. **Page 3, 3rd paragraph, Section 2. Project Description.** The scope of the remedial action is not well-defined. The data quality objective (DQO) workshop conducted in May 2023 specifically excluded the below-grade portions of Bldg. 3518, the S-1 sump, and the 3518 Neutralization Basin. As a result, it is not clear what subsurface portions of the 3518 basement, the S-1 sump pit, and the 3518 Neutralization Basin equipment room are included in the pre-demolition/demolition scope of work and what portions are deferred to a future remedial action. The scope of the action should be better defined, and the future remedial actions that will be conducted to remove the remaining subsurface structures should be identified.
3. **Page 4, Table 1, Section 2, Project Description.** The demolition scope includes "Some floors". Explain what this means.

4. **Page 8, 4th paragraph, Section 3.1 Bldg. 3544, PWTP.** Please identify the size of the S-1 sump subsurface pit and include a description of any contents, including any sediment. Clarify if all the contents will be removed (including any sediment) prior to the pit being filled.
5. **Page 11, 2nd paragraph, Section 3.2 Bldg. 3518 Neutralization Facility.** The Bldg. 3518 basement is partially subsurface. Please identify what part of the subsurface is included in the scope of this pre-demolition/demolition action. Also, identify what contents, piping, and loose materials remain in the subsurface and whether those items are included in the scope of the remedial action.
6. **Page 13, 1st paragraph, Section 3.2 Bldg. 3518 Neutralization Facility.** Include a description of the subsurface equipment room, including the size and the contents, piping, and loose materials that remain. Identify what components are in the scope of the pre-demolition/demolition action. Will the pumps and piping be removed prior to filling? Explain the rationale for demolishing the basin and leaving the subsurface equipment room.
7. **Page 15, 1st paragraph, Section 3.4 Contaminants of Concern.** Clarify what is meant by "adjacent environmental samples".
8. **Page 15, 3rd paragraph, Section 3.4 Contaminants of Concern.** Please qualify this statement. Even though no radiological contamination is suspected in Bldg. 3594, waste characterization should be conducted to determine the contaminants of concern (COCs).
9. **Page 16, Section 3.4 Contaminants of Concern, 6th paragraph.** The document identifies that standing water has accumulated in several locations (Bldg. 3544, Bldg. 3518 basement, the 3518 Neutralization Basin, etc.). Is the source of the accumulated water known? If the accumulated water is determined to be groundwater, the COCs for the groundwater may not be the same as those identified for the facilities and equipment. Please ensure the appropriate COCs for the standing water are identified.
10. **Page 17, 1st bullet, Section 4.1 Pre-Demolition.** The R3 DQO should be prepared and presented to the FFA parties before this document is revised and a D2 document is submitted. Review of this document has been very challenging, since there was no clear understanding of the pre-demolition/demolition scope in its entirety. Additionally, the referenced Sampling and Analysis Plan has not been shared with the regulators, further hindering review of the document. It is TDEC's recommendation that the U.S. Department of Energy (DOE) delay submittal of a D2 document until characterization activities have been completed and a data quality assessment has been conducted. This would allow DOE to have a better understanding of the scope of pre-

demolition/demolition work and ensure the document includes specific work plan information for Bldg. 3544 and adjacent facilities.

11. **Page 18, 2nd bullet, Section 4.1 Pre-Demolition.** This bullet is confusing. It says that a DQO workshop for the subsurface structures will be conducted, but then it goes on to say the DQO for pre-demolition/demolition addressed this scope. Please revise. The only DQO presented to date was for the above-grade portions only of Bldgs. 3544, 3518, and 3594.
12. **Page 18, 6th bullet, Section 4.1 Pre-Demolition.** If process equipment and piping are being considered for disposal at the Environmental Management Waste Management Facility (EMWMF), characterization of those components should be identified in the DQO. Please confirm.
13. **Page 19, 2nd sub-bullet, Section 4.1 Pre-Demolition.** If external tanks are being considered for disposal at the EMWMF, characterization of the tanks should be included in the DQO. Please confirm.
14. **Page 19, 1st bullet, 1st sub-bullet, Section 4.1 Pre-Demolition.** TDEC disagrees that characterization of the S-1 sump pit floor is representative of the sediment/filter media. Adequate characterization of the sediment and filter media should be addressed in a DQO workshop.
15. **Page 19, 1st bullet, 2nd sub-bullet, Section 4.1 Pre-Demolition.** Include additional detail about how the pumps and piping in the S-1 sump pit will be removed. Does the piping continue below grade? If so, will it be capped or plugged?
16. **Page 19, 2nd bullet, 2nd sub-bullet, Section 4.1, Pre-Demolition.** TDEC disagrees that characterization of the 3518 basement floor is representative of the sediment/filter media. Adequate characterization of the sediment and filter media should be addressed in a DQO workshop.
17. **Page 20, 1st sub-bullet, Section 4.1 Pre-Demolition.** TDEC disagrees that characterization of the 3518 Neutralization Basin floor is representative of the sediment/filter media. Adequate characterization of the sediment and filter media should be addressed in a DQO workshop.
18. **Page 20, Section 4.1 Pre-Demolition.** Please include a bullet that discusses actions that may be taken if standing wastewater continues to accumulate following pumping. Will controlled-low strength material still be used as fill if standing water remains?

19. Page 23, 2nd to last sentence, Section 4.4 Best Management Practices. The sentence should be changed to say "the diversion of water away from inlets *and surface waters*".

20. Page 28, Table 2, Section 5. Waste Management. Based on this table, it seems that a lot of uncertainty remains regarding the appropriate disposal path for the waste forms. Since specific disposal paths cannot be identified until characterization has been completed, TDEC recommends that DOE schedule submittal of this document to occur after characterization has been completed and disposal paths identified.

21. Page 31, Section 7. Project Schedule. Milestones for the submittal of the Waste Handling Plan and Phased Construction Completion Report should be established in Appendix E of the FFA before approval of this document can be provided.

Review of this document meets the review cycle protocol of 90 days. Questions or comments concerning the contents of this letter should be directed to Angel Perkey at the above address or by phone at (865) 985-6851.

Sincerely

Randy Young

Digitally signed by Randy Young
Date: 2024.05.06 14:26:56 -04'00'

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

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