



# AK RIDGE RESERVATION

Environmental Management

May 8, 1998

Mr. Rod Nelson  
Assistant Manager for Environmental Management  
DOE/ORO  
P.O. Box 2001  
Oak Ridge, TN 37831

Dear Mr. Nelson:

At our May 6, 1998 regular monthly Board meeting, the Oak Ridge Reservation Environmental Management Site Specific Advisory Board (ORREMSSAB) reviewed and approved the enclosed "Comments and Recommendations on the Bear Creek Valley Feasibility Study (dated November 1997) and Proposed Plan (dated March 1998).

We look forward to receiving your written response to our comments and recommendations. Thank you for your continued support of the ORREMSSAB.

Sincerely,

William M. Pardue  
Chair

WMP/sb

Enclosure

cc: Marianne Heiskell, DOE  
Margaret Wilson, DOE  
Pat Halsey, DOE  
Karol Hazard, DOE/HQ  
John Hankinson, EPA Region 4  
Earl Leming, TDEC  
Susan Gawarecki, LOC  
ORREMSSAB Members  
EUWG Members



## Comments and Recommendations on the Bear Creek Valley Feasibility Study<sup>1</sup> and Proposed Plan<sup>2</sup>

This document presents the Oak Ridge Reservation Environmental Management Site Specific Advisory Board's (ORREMSSAB) comments and recommendations on the Feasibility Study (FS) and Proposed Plan (PP) for remediation of the Bear Creek Valley (BCV) at the Y-12 Plant. It is based on a detailed review by the Federal Facilities Agreement (FFA) Appendix E Documents Project Team and subsequent discussion with and approval by the ORREMSSAB.

The Board appreciates this opportunity to review and comment on the subject documents

### Summary and Recommendations

The Board finds the PP generally acceptable, with the following reservations:

- The long-term remedial action objective (RAO) should be upgraded to include eventual unrestricted use of Zone 2, as recommended by the End-Use Working Group<sup>3</sup> (EUWG) and approved by the SSAB;
- A two-stage Record of Decision (ROD) is acceptable but a schedule should be established for the second stage;
- Long-term stewardship, including the safeguarding of archival information, needs to be addressed more fully, and;
- We think the preferred alternative should have a title.

### **Discussion**

**The basic objective of the watershed approach to BCV is appropriate and logical.** No compromise to remediation of BCV appears to be inherent in the watershed approach, although compromises can be introduced within that framework by inappropriate RAOs or reliance on remediation alternatives inadequate to achieve the indicated RAO.

**The preferred RAO should be considered upgradeable as applied to Zone 2.** The Board's end-use recommendation for BCV advises eventual cleanup to the level of unrestricted use for Zone 2. Groundwater monitoring as specified in the D2 PP can facilitate a decision to implement such an upgrade when appropriate.

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<sup>1</sup> Feasibility Study for Bear Creek Valley at the Oak Ridge Y-12 Plant, Oak Ridge, Tennessee, Volume I and Volume II, dated November 1997 (DOE/OR/02-1525/D2)

<sup>2</sup> Proposed Plan for Bear Creek Valley at the Oak Ridge Y-12 Plant, Oak Ridge, Tennessee dated March 1998 (DOE/OR/02-1647&D2)

<sup>3</sup> Criteria for EUWG unrestricted land use category are unlimited surface use (unrestricted use of surface water, soils cleaned to a depth of 10 ft., excavation permitted to a depth of 10 ft., and no groundwater use). The ORREMSSAB recognizes these restrictions are not used in standard risk analyses.

**A two-Record-of-Decision (ROD) phased approach is reasonable and acceptable.** The outstanding issues of personnel health and safety, environmental risks, waste retention criteria associated with extensive waste removal decisions have not been addressed adequately in the current PP. In addition, the availability and acceptability of possible disposal sites for removed waste is still under discussion. Accordingly, a second ROD to be submitted at a later date to cover remediation of the Bear Creek Burial Grounds (BCBG) is appropriate. It is understood that the RAOs of the second ROD will be consistent with those of the first ROD.

A schedule should be established for the second-stage ROD. A long delay would not be acceptable and could increase the amount of material that must be removed.

**Passive water treatment, if effective, is more desirable than active water treatment.** Active water treatment, as proposed in Alternatives 3, 7, and 9, places an undesirable burden of water treatment plant operation and maintenance on future generations. Although passive in-situ water treatment is not a fully proven technology, experiments to date have shown short-term effectiveness and promise for long-term effectiveness.

**Alternative 10 is not acceptable.** As this alternative relies mainly on capping and does not involve water treatment, its reduction of human health risk is low compared to Alternatives 3, 5, and 7.

**The remaining alternatives, 5a, b, and c, are preferable.** These alternatives differ mainly in the extent of uranium removal and relocation, which is predominantly in the BCBG area. They all involve passive water treatment in several locations; Alternative 5a relies more heavily on source isolation. The DOE-preferred alternative is to proceed with Alternative 5 remedies in areas other than the BCBG and to address BCBG remediation in a future second ROD. The Board finds this alternative acceptable.

**The long life of uranium and certain other toxic materials present a formidable challenge to the remediation analysis process.** In particular, the issue of long-term storage and safeguard of data and information regarding waste inventories needs to be addressed. Archived information must be both sufficiently complete and interpretable by technical personnel in the distant future when the presently contaminated lands may be owned by other than the Department of Energy. A plan for long-term stewardship should be outlined that describes the information to be retained and the form and place in which it will be retained. The stewardship section of each appropriate FFA document should also indicate how the area being remediated will be described as a property tract and registered in the Register of Deeds office in the pertinent county.

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Certain errors in the text of the PP have been noted:

- There is an inconsistency in column 1, page 12, six lines from column bottom. Delete the words "and 2".
- Page 28 should correctly identify the names of the Oak Ridge Reservation Environmental Management Site Specific Advisory Board and the End Use Working Group.
- Table 6, row 3 (Long-term effectiveness) indicates that a water treatment plant is required for Alternative 5a.