



Department of Energy

Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, Tennessee 37831—
May 20, 2003

Mr. David V. Mosby, Chair
Oak Ridge Site Specific Advisory Board
Post Office Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Mosby:

RECOMMENDATIONS REGARDING REMEDIATION EFFECTIVENESS REPORT GENERAL OUTLINE

Thank you for your letter and recommendations regarding the Remediation Effectiveness Report (RER) outline. We appreciate the effort made by the Oak Ridge Site Specific Advisory Board (ORSSAB) to provide the recommendation. We regret the length of time that it has taken for responding to your comments; however, we wanted to be able to share with you the RER outline that has been developed within the Department of Energy and with the Federal Facility Agreement (FFA) regulators.

As you undoubtedly know, Jason Darby of my staff has also worked closely with members of the ORSSAB Stewardship Committee to develop a comprehensive annotated outline to accurately reflect the information that should be contained in the document. The result of that collaborative effort is enclosed with this letter. This annotated outline was approved at the May 15, 2003, meeting by the FFA Project Managers for inclusion in FFA Appendix I-12.

We believe the RER now addresses your concerns and helps to make the RER a valuable tool for stakeholders to use in tracking the progress of remedial actions on the Oak Ridge Reservation. Thank you for your continued interest in stewardship initiatives on the Reservation and for your input in this important undertaking.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Adler", written over a white background.

David G. Adler, DOE Ex-Officio
Environmental Management Program

Enclosure

cc w/enclosure:
Sandra Waisley, EM-1, FORS
Pat Halsey, EM-91, ORO
Connie Jones, EPA, Region 4
John Owsley, TDEC, OR
LOC



**ANNOTATED OUTLINE
Remediation Effectiveness Report**

**TABLES
FIGURES
ACRONYMS AND ABBREVIATIONS**

EXECUTIVE SUMMARY

This section will provide an overview of the strategy for CERCLA remediation on the Oak Ridge Reservation (ORR) and summarize the effectiveness of CERCLA actions to date. Information summarized will address effectiveness in terms of both engineering remediation goals and stewardship requirements.

1. INTRODUCTION

1.1 Objectives of the Remediation Effectiveness Report

This section will clarify the objectives of the RER:

- Assess the performance of completed CERCLA actions on and surrounding the Oak Ridge Reservation.
- Perform the above using monitoring and stewardship requirements (including operations and maintenance requirements) of the associated decision documents.
- Provide brief updates on new and future decisions and progress of on-going CERCLA remediation field activities.
- Assess the cumulative effectiveness of the remedial and removal actions against watershed-scale goals.
- Every fifth year present the ORR-wide CERCLA Five-Year Review (Attachment 1).

It will also clarify that it is not the objective of the RER to:

- Track adherence to FFA milestones and schedules (as performed in the FFA Annual Report)
- Provide comprehensive updates of project construction information (as provided in Remedial Action Reports and Post-Construction Completion Reports).
- Discuss future decision-making strategies that have not yet been approved and presented in the FFA.
- Present plans for new actions or updates to existing actions that have not yet been approved and presented in the FFA.

1.2 Changes to the Current RER

This section will describe the major changes to the current years' report.

1.3 Implementation of Previous Years' Recommendations

This section will cover all recommendations made in the previous years' RER.

1.4 Organization of the Report

This section will discuss the report layout.

2. CERCLA ACTIONS ON THE OAK RIDGE RESERVATION

2.1 Status of CERCLA Actions on the ORR

This section will provide a full accounting of remediation decisions on the ORR, both completed and on-going.

2.2 ORR CERCLA Remediation Strategy

This section will provide the overall CERCLA remediation strategy for the ORR and will cover:

- historical single project removal and remediation actions,
- remediation projects being performed under the auspices of watershed-scale decisions, and
- acknowledgment of long-term environmental liabilities.

This discussion will provide information consistent with the existing Life Cycle Baseline assumptions through 2015.

2.3 ORR CERCLA Remediation Effectiveness Summary

2.3.1 ORR Conceptual Contaminant Release Model

This section will provide a summary of the impact to the CERCLA remediation process and the RER of watershed-scale RODs and Interim RODs. Discussion will center on the watershed-scale cleanup goals and land use decisions, and identify on maps the compliance monitoring locations for measuring the attainment of the goals.

2.3.2 ORR-wide Remediation Effectiveness Summary

This section will present a semi-quantitative assessment of the effectiveness of the all actions at reducing overall risk on the ORR. The assessment will address risk reduction in two primary manners: 1 – a decrease in exposures due to source removal/footprint reduction, and 2 – a decrease in exposure to contaminants that migrate off-site via key exit pathways.

***** NOTE *****

The contents of all watershed sections will follow the outline presented for Section 3.0

3. MELTON VALLEY WATERSHED

3.1 Watershed Overview

This section will provide a brief site description and an overview of the watershed and remediation strategy.

3.1.1 Melton Valley site description

This section will provide a description of the watershed, including waste source areas, contaminant releases, and the hydrogeologic conceptual model.

3.1.2 Melton Valley remediation strategy

This section will discuss how historical, current and future CERCLA remediation efforts are leading toward final CERCLA remediation in the watershed. It will present the CERCLA remediation goals for the watershed, as agreed to in any existing watershed-scale ROD's.

3.1.3 Melton Valley remediation effectiveness to date

The section will provide a quantitative evaluation of the effectiveness of the actions to date on contaminant reductions at key watershed exit pathway locations, and present a reassessment of the allocation of contaminants throughout the watershed.

3.1.4 Melton Valley Conclusions

***** NOTE *****

The contents of all single action sites will follow the outline presented for Section 3.2

3.2 XXXXX Removal/Remedial Action

3.2.1 Project Description

This section will summarize the CERCLA remediation decision for the site, including the scope of the action, and key milestone dates for the project.

3.2.2 Evaluation of Decision Document Requirements

3.2.2.1 Goals

This section will provide verbatim (to the extent possible) the requirements and goals of the action as spelled out in the signed decision documents.

3.2.2.2 Monitoring and Stewardship Requirements

This section will provide verbatim (to the extent possible) all post-remediation monitoring and stewardship requirements spelled out in the decision documents, including any agreed-to changes in those requirements.

3.2.3 Evaluation of Performance and Stewardship Data

This section will provide a quantitative evaluation of the performance of the actions using monitoring data. In addition, it will present a summary of surveillance and maintenance and other stewardship activities.

3.2.4 Conclusions

This section will present any conclusions that can be drawn from information gathered on the performance of the action. Any recommendations for changes in the monitoring approach for the site will be presented in this section.

***** NOTE *****

The contents of all ongoing single project actions will follow the outline presented for Section 3.3

3.3 ONGOING SINGLE PROJECT ACTIONS IN MELTON VALLEY

3.3.1 XXXXX Action

3.3.1.1 Project Description

This section will summarize the CERCLA remediation decision for the site, including the scope of the action, and key milestone dates for the project.

3.3.1.2 Goals

This section will provide verbatim (to the extent possible) the requirements and goals of the action as spelled out in the signed decision documents.

***** NOTE *****

The contents of all watershed scale action sections will follow the outline presented for Section 3.4

3.4 Watershed-Scale Decision: Melton Valley ROD for Interim Actions

3.4.1 Project Description

This section will summarize the CERCLA remediation decision for the watershed, including the scope of the action, a listing of subprojects, and key milestone dates.

3.4.2 Evaluation of Decision Document Requirements

3.4.2.1 Goals

This section will provide verbatim (to the extent possible) the requirements and goals of the action as spelled out in the signed Record of Decision.

3.4.2.2 Monitoring and Stewardship Requirements

This section will provide verbatim (to the extent possible) all post-remediation monitoring and stewardship requirements spelled out in the decision documents, including any agreed-to changes in those requirements.

3.4.3 Update on Melton Valley ROD Actions

This section will provide an update on activities occurring during the reporting year as well as upcoming activities for each of the subprojects.

3.4.3.1 XXXXX subproject

4. BETHEL VALLEY

5. UPPER EAST FORK POPLAR CREEK

6. BEAR CREEK VALLEY

7. EAST TENNESSEE TECHNOLOGY PARK

8. OTHER SITES (e.g. Chestnut Ridge sites, White Wing Scrap Yard)

9. OFF-SITE ACTIONS (e.g. Lower East Fork Poplar Creek, Lower Watts Bar Reservoir)

10. BIBLIOGRPAHY

11. REFERENCES

APPENDIX A: Inactive Sites with Stewardship Requirements

APPENDIX B: Inactive Sites with No Stewardship Requirements

**APPENDIX C: DOE Oak Ridge Operations Manager Certification of LUCIP
Implementation**

*****NOTE*****

**Other appendices may be added as needed
for supporting data and information.**

Attachment 1

The Oak Ridge RESERVATION Five-Year Review

Every fifth year the Remediation Effectiveness Report (RER) serves an additional role by providing the Oak Ridge Reservation-wide CERCLA Five-Year Review. This review evaluates the protectiveness of all completed CERCLA actions associated with the ORR. This approach was conceptualized and designed with the aid of all FFA stakeholders, including the DOE, EPA, TDEC, and citizen groups overseeing the remediation efforts on the ORR.

Under the authority of CERCLA, the EPA is required to review remedial actions “that result in any hazardous substances, pollutants, or contaminants remaining at the site.... to assure that human health and the environment are being protected by the remedial action being implemented” (CERCLA §121(c)). Upon its review, the EPA may determine that additional action is appropriate. Also under § 301(h)(1)(E), the EPA must report annually to Congress its progress in reducing the number of facilities subject to a Five-Year Review. In the case of the ORR, the DOE is the lead agency and the EPA has a review and concurrence role.

Five-year reviews are required at the ORR sites with final RODs allowing waste to remain in place above levels that allow for unrestricted use. Examples are the Y-12 National Security Complex (Y-12) Abandoned Nitric Acid Pipeline site, and the Lower Watts Bar Reservoir and Clinch River/Poplar Creek Operable Units.

The first reservation wide Five-Year Review was completed in 2001. Each Five-Year review site undergoes review using two primary tools: (a) a quantitative evaluation of post-action monitoring data at sites where monitoring was required to identify the effectiveness of the action in relation to remediation goals, and (b) a site visit and site inspection to document land use controls, system operations, and stewardship activities. Additionally the requirements of the EPA Five-Year review guidance will be addressed as systematically as possible using Table 1, a table that addresses each of the Five-Year Review questions identified by EPA.

As part of the Five-Year Review, DOE will provide a signed statement of protectiveness indicating that the review has identified that actions remain protective of human health and the environment.

Attachment 1

Table 1. Five-Year Review summary^a

Question	Response	Notes
A. Is the remedy functioning as intended by the decision documents?		
Are performance standards being met (or likely to be met?)		
Are there problems with the remedy that could lead to remedy failure or suggest that protectiveness is at risk?		
Are the land use controls (fencing, security guards, etc.) in place and preventing exposure?		
Are additional actions, such as removals, that were deemed necessary to ensure that immediate threats were addressed completed?		
Are operating procedures, as implemented, maintaining the effectiveness of response actions?		
B. Are the assumptions used at the time of remedy selection valid?		
Have there been changes in the standards identified as ARARs in the ROD, newly promulgated standards and/or changes in TBCs that could call into question the protectiveness of the remedy?		
Have there been any changes in land use or expected land use on or near the site?		
Have new human health or ecological exposure pathways or receptors been identified?		
Have new contaminants or contaminant sources been identified?		
Were there any unexpected toxic byproducts of the remedy not addressed by the decision documents?		
Have there been any changes in the physical site conditions?		
Have there been any changes in the toxicity factors for contaminants of concern?		
Were there significant changes in the standardized risk assessment methodologies?		
C. Has any other information come to light that could call into question the protectiveness of the remedy?		
Have ecological risks been adequately addressed at the site and, if not, is there a plan to address them through a future action?		
Is the site located in an area subject to natural disasters?		

^aQuestions designed by DOE/EPA/TDEC based on EPA 2000 draft Five-Year Review guidance.

ARAR = applicable or relevant and appropriate requirement

DOE = U.S. Department of Energy

EPA = U.S. Environmental Protection Agency

ROD = record of decision

TBC = to be considered

TDEC = Tennessee Department of Environment and Conservation