



Department of Energy

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

May 8, 2001

Mr. Luther Gibson, Chair
Oak Ridge Site Specific Advisory Board
Post Office Box 2001, EM-90
Oak Ridge, Tennessee 37831

Dear Mr. Gibson:

RESPONSE TO COMMENTS ON THE PROPOSED PLAN FOR INTERIM SOURCE CONTROL ACTIONS FOR CONTAMINATED SOILS, SEDIMENTS, AND GROUNDWATER (OUTFALL 51) WHICH CONTRIBUTE MERCURY AND PCB-CONTAMINATION TO SURFACE WATER IN THE UPPER EAST FORK POPLAR CREEK CHARACTERIZATION AREA, OAK RIDGE, TENNESSEE (DOE/OR/01-1839&D2)

Thank you for your comments on the Proposed Plan for interim actions in the Upper East Fork Poplar Creek Characterization Area. Those comments are being considered during the drafting of the Record of Decision (ROD) for the proposed remedial action. Specific responses will be included in the Responsiveness Summary, which will be published as part of the ROD. Upon the submittal of the D1 ROD to the Regulators on June 30, 2001, copies of the Responsiveness Summary will be made available at the Information Resource Center.

We greatly appreciate your interest in this project and your taking the time to draft such complete and detailed comments. Please call Pat Halsey of my staff at 576-4025 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Rodney R. Nelson".

Rodney R. Nelson
Assistant Manager for
Environmental Management

cc:

Connie Jones, EPA4
John Owsley, TDEC/DOE-O
Mildred Ferre, EM-912, ORO

PART 3. RESPONSIVENESS SUMMARY

Comments received on the Proposed Plan have been consolidated to enhance readability of this section. Comments include those received in writing and those questions and comments received at the public meeting held on February 22, 2001. Although the Proposed Plan will not be revised, comments on the Proposed Plan have been incorporated into this ROD and will be incorporated into future Proposed Plans as appropriate.

GENERAL

Comment: In accordance with the resolution, the City endorses the DOE's preferred alternative, designated *Alternative 3a* in the Proposed Plan, and hereby transmits the comments prepared by the City's Environmental Quality Advisory Board (EQAB) as the official comments of the City of Oak Ridge.

DOE Response: DOE appreciates the comment. Please see responses to specific comments below.

Comment: The Citizens Advisory Panel (Oak Ridge Reservation Local Oversight Committee) endorses the Preferred Alternative (Alternative 3a: Source Control) with consideration of the enclosed general and specific comments.

DOE Response: DOE appreciates the comment. Please see responses to specific comments below.

Comment: EQAB found several technical and editorial errors in this short document that made it unnecessarily difficult to read and understand. We hope that there will be greater attention to quality control in future documents of this nature.

DOE Response: DOE appreciates the comment and regrets that EQAB had difficulty in reviewing the document. Please see responses to specific comments below.

Comment: The title of this Proposed Plan is long and should be simplified to make future references to this Proposed Plan and expected Record of Decision (ROD) more straightforward. The CAP concurs with the proposal by the Tennessee Department of Environment and Conservation DOE Oversight Division in a letter to Myrna Redfield dated January 5, 2001, to simplify the title to "*Proposed Plan (Record of Decision) for Phase One Interim Source Control Actions for the Upper East Fork Poplar Creek Characterization Area.*" The proliferation of abstract titles should be abandoned.

DOE Response: Comment appreciated and noted. DOE will take it under advisement.

Comment: The Oak Ridge Site Specific Advisory Board (SSAB) is on record as supporting the watershed approach to remediation (Final Report of the Oak Ridge Reservation End Use Working Group, July 1998, Stakeholder Reports on Stewardship July 1998 and December 1999). We believe that a comprehensive watershed approach to remediation planning is more effective than the usual unit-by-unit approach. Previous UEFPC documents (e.g., the RI Report and the FS) presented a holistic approach to UEFPC remediation. However, regulatory review and approval of the UEFPC Feasibility Study is incomplete. Nevertheless, the public has been presented with an addendum to the unapproved document. Thus, it appears that with publication of the D3 UEFPC Proposed Plan, DOE, EPA Region 4, and the Tennessee Department of Environment and Conservation (TDEC) are renegeing on their commitment to a watershed strategy for the Oak Ridge Reservation.

The SSAB is requesting from each of the three parties an explanation of this decision. Specifically:

- Is this change from the watershed approach a conscious decision?
- If so, why wasn't the public notified and involved?
- If the decision just evolved (i.e., without formal documentation), we question if this is an appropriate way to run a CERCLA regulated remediation program.

We ask that DOE, EPA Region 4, and TDEC provide their specific reasons for not taking the watershed approach to UEFPC.

In addition, we are requesting a public meeting with DOE, EPA Region 4, and TDEC to discuss and resolve these issues with regard to the watershed approach for UEFPC and the East Tennessee Technology Park. Furthermore, we expect the transcript of the meeting and a summary of the meeting to be included in the CERCLA Administrative Record.

DOE Response: The remediation of the UEFPC CA will be conducted in stages, using a phased approach. Separate decision documents will be prepared for each stage. While this decision is limited to interim actions for surface water, it does evaluate surface water over the entire watershed. This issue was discussed in detail at the May SSAB meeting with representatives from DOE, EPA, and TDEC.

MERCURY TREATMENT PROCESSES

Comment: More justification is needed for development and selection of a mercury treatment technology that involves capturing mercury from a vent stream, either in the case of proposed water treatment or treatment of sediments to meet EMWMF WAC.

DOE Response: The selection of the representative mercury treatment processes presented in the Proposed Plan is documented in the UEFPC FS and FS Addendum. Additional rationale and justification for their selection is provided in these documents. Additional studies are currently under way to better define these processes.

Comment: The Proposed Plan lacks sufficient information on how the proposed water treatment scheme was developed and the extent to which it has been demonstrated.

DOE Response: Additional information on the proposed Building 9201-2 WTS is provided in the UEFPC FS Addendum. The process is based upon the preliminary results of studies performed at Y-12 and the Savannah River Site. Additional water characterization and process verification studies are currently under way as part of the design process.

Comment: Some modeling is claimed to have been performed that demonstrates that mercury levels in air emissions from the air stripper will be below a risk-based hazard index of 1 for the remediation workers. Air emissions from CERCLA projects fail to receive sufficiently rigorous evaluation to address all concerns that may be raised by personnel in proximity to remediation efforts. A case could be made that air emissions from CERCLA waste treatment could have more potential impact to these individuals than a hypothetical "no action" alternative. Additional effort is needed to communicate current information about the status of remediation projects, particularly the schedule for execution of fieldwork and types of operations underway. Based on concerns raised, the regulators involved in the CERCLA decisions may need to give additional consideration to performance standards similar to maximum achievable control technology for

permanent facilities and to emissions sampling or monitoring beyond which meets minimum regulatory requirements but is reasonable and feasible.

DOE Response: Additional information on the emissions modeling/risk assessment is presented in the UEFPC FS Addendum. The modeling evaluated potential emission risks to workers conservatively positioned at the emissions point. Although an air emissions permit is not required for CERCLA actions, emissions from CERCLA actions are required to meet the substantive requirements of applicable regulations.

Comment: Water from Outfall 51 contains "mercury readily oxidizable to elemental mercury." Since mercury has no negative oxidation states, please change the next sentence to read, "water from Outfall 51 contains mercury readily reducible to elemental mercury."

DOE Response: Appropriate text has been modified in the section entitled "Building 9201-2 Water Treatment System" of this ROD.

Comment: The text states that spent activated carbon will be disposed of in the EMWMF. EQAB recommends that the mercury be removed from the activated carbon and recovered for reuse. Please modify this portion of the proposal.

DOE Response: Comment noted. Based on experience at Y-12, carbon regeneration has not proven to be cost effective. Spent carbon from the CMTS and EEMTS is currently disposed in the Y-12 Industrial Landfill. However, the cost effectiveness of carbon regeneration will be re-evaluated during predesign studies.

Comment: Please add waste disposal to this figure (Building 9201-5 Water Treatment System). It would be helpful to compare to CMTS and EEMTS.

DOE Response: Figure 2.18 (in this ROD) has been modified.

FIGURES AND TABLES

Comment: Please show West End Mercury Area (WEMA), Outfalls 51 and 200, and Station 17 on Figure 1.

DOE Response: The locations of the WEMA, Outfall 51, Outfall 200, and Station 17 have been identified on Fig. 2.2 of this ROD.

Comment: Please add applicable standards to Table 1 for all listed contaminants.

DOE Response: Table 1 of the Proposed Plan (Table 2.1 in this ROD) provides summary statistics for contaminants across the UEFPC CA, including those contaminants and media beyond the scope of the proposed action. Applicable standards are identified for each contaminant and medium as part of the RAOs (see section entitled "Remedial Action Objective" in this ROD) and identification of ARARs in Appendix B.

Comment: Figure 2 uses µg/l as a measurement of mercury but the descriptive paragraph uses ppt. This can be confusing to readers. Please standardize the units.

DOE Response: Appropriate text has been modified to present the same units of measure as figures presented in this ROD.

Comment: Table 1 and Figure 4 use the units mg/l as a measurement for solvents but the text just below uses µg/l. Please be consistent in the use of units.

DOE Response: Appropriate text has been modified to present the same units of measure as figures presented in this ROD.

Comment: Use the same units in Figure 4 as in Table 1, mg/kg. The red bar, which is used as an inclusive indicator, should be colored black. Can you indicate where the high mercury concentration is?

DOE Response: Figure 2.6, "Mercury use areas and mercury soil concentrations in Y-12," in this ROD has been modified per comments.

Comment: Except as noted in the CAP's specific comments, the maps in this proposed plan generally meet basic requirements. Because these documents are often copied in black and white, maps and other graphics that depend on color for distinguishing key information should be reproducible by use of patterning or shading of the colored areas. Although color copies of this proposed plan were available to the public, some reviewers received black and white copies, which obliterated the information on some of the maps. It is not possible to properly differentiate the various areas without the color.

DOE Response: Comment noted. DOE is taking the comment under advisement.

IMPACT OF STORM EVENTS

Comment: All alternatives would meet CERCLA "... to protect ... except during storm events..."

DOE Response: As indicated, the interim goal of 200 ppt may be exceeded during UEFPC storm events in excess of 15 mgd.

Comment: "All alternatives are consistent with the LEFPC remedial action. Mercury releases are not anticipated to be sufficient to recontaminate floodplain soils and cause exceedance of the 400 ppm soil remediation level established in the LEFPC ROD."

Please add a few words to explain why mercury releases during storm events would not recontaminate LEFPC floodplain soils.

Will there be monitoring/sampling of LEFPC water and sediments following storm events or periodically to assure the public that there are no exceedances of the 400 ppm soil remediation level? Please address this issue briefly.

DOE Response: The interim actions selected in this ROD are designed to limit releases of mercury during baseflow and stormflow conditions; therefore, recontamination of floodplain soil is not anticipated. LEFPC water and sediment deposits are monitored and reported in the ORR RER as part of the LEFPC ROD.

WASTE TREATMENT AND DISPOSAL

Comment: Please add a few words about "off-site treatment." Where are you sending the sediments? Where will the treated material be disposed?

DOE Response: Off-site treatment and disposal of contaminated sediments (and soils) that fail to meet the EMWMF WAC are identified as an option in the selected remedy. At this time, a location for appropriate treatment and disposal has not been selected. As described under short-term studies (see subsection entitled "Short-term studies"), a treatability study is currently being performed to identify

alternatives for treatment to meet the EMWMF WAC and to better define the volume of sediment and soil that may require treatment. Once the study is completed, the type of treatment and disposal location will be re-evaluated.

Comment: Please briefly describe on-site treatment. Does this mean a new treatment facility or the use of an existing facility or modification of an existing facility?

DOE Response: As described under short-term studies (see subsection entitled "Short-term studies"), a treatability study is currently being performed to identify alternatives for treatment to meet the EMWMF WAC and to better define the volume of sediment and soil that may require treatment. Results from this study will be used to evaluate on-site and off-site treatment alternatives in a focused feasibility study and the ROD will be modified if needed.

Comment: "It is assumed that off-site treatment processes will include thermal desorption (mercury removal) and stabilization/solidification (heavy metals)." Please do not make assumptions but instead require a performance standard to remove and recover the maximum achievable quantities possible to minimize hazardous landfill disposal.

DOE Response: The assumption of treatment processes was needed to prepare a cost estimate for alternative evaluation. As noted above, treatability studies are being performed to identify other cost effective alternatives for treatment and to better define volume estimates. Once the evaluations are complete, consideration will be given to the use of performance specifications for contracting.

Comment: Please locate where the sediments will be dewatered.

DOE Response: Sediments removed from UEFPC and Lake Reality will be dewatered in the vicinity of the action and then transported for treatment and disposal.

STEWARDSHIP COMMITMENT

Comment: The proposed plan does not meet requirements in the ORR LUCAP, and it ignores the SSAB recommendations on Stewardship Requirements in CERCLA Documents submitted to DOE on July 6, 2000, and also found in the Stakeholder Reports on Stewardship. While the OR EM Program has made great strides with regard to public involvement in EM activities, we believe it must increase its commitment to stewardship for those areas on the ORR that will remain contaminated.

DOE Response: DOE believes that this document meets the requirements of the ORR LUCAP. DOE understands the SSAB recommendations for stewardship requirements in CERCLA documents and is currently preparing a response to those recommendations on a reservation-wide basis as requested in the SSAB March 20, 2001, letter. DOE is committed to stewardship and is currently preparing an ORR stewardship management plan with SSAB participation.

Comment: We recommend that the Commitment to Stewardship section of this document and all other proposed plans and RODs include the following statement:

Radioactive and hazardous contaminants will remain in the UEFPC CA following the remedial actions described in the proposed plan and subsequent ROD. These residuals will require monitoring, maintenance of containment structures and other land use controls, and restriction of access for _____ years, in order to protect the public's health and the environment. The implementation and funding of these activities is acknowledged to be the

responsibility of the federal government, through its designated contractors or agents, until the hazards and risk are negligible. The federal government will provide for public involvement in the oversight of stewardship and land use control activities by supporting a citizens group and by ensuring public input to all CERCLA documents and subsequent reviews of contaminated areas until the site is suitable for unrestricted use.

DOE Response: A slightly modified version of the recommended statement has been added to "Statement and Basis" section of this ROD.

NEPA VALUES

Comment: This section (NEPA Values) should make it clear that DOE relies on the CERCLA process for review of remedial actions and that NEPA values (i.e., cumulative effects, off-site, ecological and socioeconomic impacts) are to be considered in CERCLA actions to the extent practicable. Furthermore, in all cases, NEPA and NEPA/CERCLA guidance and regulations stress that the efforts and analyses are to focus on significant environmental issues and alternatives and that discussion of impacts must be in proportion to their significance. Thus, we recommend that you delete Table 5 on page 30 from the proposed plan because all of the items in the impacts column are "minor, none, limited, or negligible." Inclusion of Table 5 contributes to the confusion and lack of understanding of the DOE NEPA/CERCLA Integration Policy and DOE Order 451.1A. Please see attached overview of NEPA/CERCLA integration prepared for the ORSSAB.

DOE Response: A DOE Secretarial Policy on NEPA was issued in June 1994. The policy directed that the CERCLA process would be followed for CERCLA actions and that NEPA values would be incorporated into the appropriate CERCLA documentation. A section titled "NEPA Values" is now being incorporated into appropriate CERCLA decision documents. The use of a table is a means to document that individual NEPA values have been considered in accordance with the Secretarial Policy.

MISCELLANEOUS

Comment: Please add a brief discussion of future land use (probably in the "Scope of the Proposed Remedial Action") to clarify up front that although the baseline risk assessment was based on residential, industrial, and recreational use, anticipated future use of the Y-12 Plant and the Upper East Fork Poplar Creek CA is industrial (see page 14). Please reference and add the End Use Working Group recommendation to the document as an appendix.

DOE Response: Reference and discussion of future land use/end use working group is provided in the following sections of this ROD: "Highlights of Community Participation," "Scope and Role of the Action," and "Current and Potential Future Land and Resource Uses. Discussion of BRA scenarios is provided in the section entitled "Summary of Site Risks."

Comment: Please give references to the "Consent Order" and the interim goals established by the FFA parties for surface water quality.

DOE Response: Reference to the Consent Order and interim goal is presented in the following sections of this ROD: "Statement of Basis and Purpose," "Scope and Role of the Action," and "Remedial Action Objective."

Comment: Include a brief summary (Remedial Action Objectives) of the issues in the appeal of the NPDES permit for Y-12.

DOE Response: Text added to this ROD ("Remedial Action Objective") to explain that the primary issues were the responsibilities for the NPDES and CERCLA program and the interim attainment goal for mercury.

Comment: Please change "would" to "will"(in summary of remedial alternatives)

DOE Response: The "Summary of Remedial Alternatives" section in this ROD has been modified.

Comment: Please make it clear why the Y-12 Plant is not likely to have "recreational human surface water users."

DOE Response: Existing controls to ensure security of the Y-12 National Security Complex and limit access are anticipated to continue into the future. However, the goal of protecting recreational surface water users is established for Station 17 (and downstream), the point at which UEFFPC leaves the Y-12 boundary, and is referenced as a protection goal in Table 2.21 of this ROD.

Comment: Monitoring: Change "would" to "will." Please provide the frequency of monitoring and where the data will be located.

DOE Response: Text modified and table added to the "Monitoring Activities" section of this ROD. Data will be stored in the OREIS database and reported in the ORR RER.

Comment: Please include an indication of when you expect to initiate the remedial action (e.g., fall 2001, spring 2002).

DOE Response: Figure 2.26 provides an estimated schedule for initiation of remedial action.

Comment: Excavation of Bldg. 81-10 Area: All of a sudden, on page 25, we hear about the Building 81-10 Area. We suggest you introduce it as a mercury source in the mercury-contaminated area section on page 8.

DOE Response: Text regarding the Bldg. 81-10 area is included in the subsection entitled "Areas of Concern" in this ROD.

Comment: Please describe (in the Long-Term Effectiveness and Permanence section on page 27) the LUCs and O&M that are required.

DOE Response: LUCs are described in the section entitled "Land Use Controls" of this ROD. O&M activities are described in the section entitled "Maintenance Activities and Environmental Monitoring" of this ROD.

Comment: In addition, there must be mention of the 5-year review, the annual RER, the availability and location of data/reports/CERCLA and post-ROD documents.

DOE Response: Reference to the CERCLA 5-year review and RER is provided in the section entitled "Statement and Basis of Purpose" of this ROD. Documentation is maintained at the Information Resource Center in Oak Ridge.

Comment: The acronym mgd is understood to be millions of gallons per day but is not defined anywhere in the text. Please add to the acronym section.

DOE Response: mgd has been added to the acronym list in this ROD.

Comment: In Contaminants of concern (Summary of Site Risks), add these elements to either the list of acronyms or titles and abbreviations

DOE Response: Elements are spelled out in this ROD.

Comment: This proposed plan does not follow the *Annotated Outlines for Documents required by the Federal Facility Agreement and CERCLA for the Oak Ridge Reservation Sites, January 1993*. The CAP has not yet received the new versions of the Annotated Outlines, which provide the tools and quantitative measure for ORR CERCLA documents. It is very difficult to evaluate the current series of documents, including this one, when there is no prescribed format. The CAP Environmental Management Committee obtained a copy of the D1 version of the proposed Annotated Outlines (DOE/OR/01-1077&D1, Rev.2) dated December 2000, and although this proposed plan is in general conformance to the new proposed plan outline, it is not complete. The CAP requests the right to comment on the revised Annotated Outlines when they are released to the public.

DOE Response: The Annotated Outlines have been revised and have been made available to the public. The Annotated Outlines may be accessed at <http://www.bechteljacobs.com/info/forms/forms.htm>. DOE would welcome review of the outlines by the public.

Comment: This reference list should include the *Record of Decision for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act of 1980 Waste, Oak Ridge, Tennessee* because of its prior mention on page 14 by its "familiar" name or Environmental Management Waste Management Facility (EMWMF) (CERCLA approved facility). The CAP has documented 18 unofficial or familiar names for this waste cell. The official name designated in the ROD should be used of this facility whenever it is referenced, not the familiar name because this leads to confusion and an inability to search for information in the DOE databases. This is another example of how excessively long document titles may lead to inaccuracies or confusion.

DOE Response: Comment noted. DOE will take it under advisement.

Comment: The documentation trail for decisions reached between the parties of the FFA on decision documents is incomplete in the Administrative Record File for this proposed plan (as well as others). At the Public Meeting for the UEFPC Proposed Plan, a CAP member raised this issue again.

DOE Response: Prior to the signature of the ROD, the Administrative Record will be reviewed to ensure inclusion of all appropriate records.

Comment: This (Y-12 Modernization) is an area where you need a lot of coordination. If it looks like Modernization is going to have to deal with some site wide soils issues, you might want to have an approved interim removal action in place, so when the funding comes through for modernization you are ready to go.

DOE Response: DOE is closely coordinating remediation and modernization plans. Monthly meetings are conducted to ensure coordination and cooperation.