



*Many Voices Working for the Community*

# Oak Ridge Site Specific Advisory Board

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April 15, 2004

Mr. Steve McCracken  
Assistant Manager for Environmental Management  
DOE-Oak Ridge Operations  
P.O. Box 2001, EM-90  
Oak Ridge, TN 37831

Dear Mr. McCracken:

## **Oak Ridge Site Specific Advisory Board Recommendations on Proposed Change to the Remediation Strategy for Trenches 5 and 7 in Melton Valley**

The Oak Ridge Site Specific Advisory Board (ORSSAB) approved the enclosed recommendations at our April 14, 2004, meeting.

We appreciate your consideration of our recommendations and look forward to receiving your written response.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Mosby".

David N. Mosby, Chair

DNM/plo

Enclosure

cc w/enc: Dave Adler, DOE-ORO  
Pat Halsey, DOE-ORO  
Connie Jones, EPA Region 4  
John Owsley, TDEC  
Sandra Waisley, EM-33, DOE-HQ



## Oak Ridge Site Specific Advisory Board Recommendations on Proposed Change to the Remediation Strategy for Trenches 5 and 7 in Melton Valley

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### BACKGROUND

The U.S. Department of Energy (DOE) is proposing a change in the Melton Valley Record of Decision<sup>1</sup> (ROD) that will alter the planned remedial action for Seepage Trenches 5 and 7 in the Melton Valley area of Oak Ridge National Laboratory. From approximately 1960 to 1966, 9.5 million gallons of liquid low-level wastes containing strontium-90, cesium-137, cobalt-60, and other radionuclides were disposed in each of the roughly 15-ft by 15-ft by 300-ft (No. 5) and 200-ft (No. 7) trenches. Today these trenches hold most of the curie content in the Seepage Pits and Trenches Area—approximately 150,000 and 139,000 curies, respectively.

The remedial action for the trenches identified in the ROD is in situ vitrification (ISV). This technology would have immobilized contaminants by melting them into a glasslike substance through heating of graphite electrodes inserted into the trenches. In FY 2003, an ISV pre-design field investigation and a subcontractor procurement were initiated. New information resulting from these two activities prompted DOE to reassess ISV use. Of critical importance were the presence of standing water in the trenches, which greatly increases the risk of a melt expulsion during ISV operations, and much higher than expected costs for the ISV work. The current estimate to complete the action, including the ISV vendor's costs, is \$55 million, compared to the ROD estimate of \$27.3 million.

For these reasons, DOE would now prefer to remediate the trenches by in situ grouting, which the department feels would be similar to ISV in protectiveness but with far less risk and expense. The estimated costs of grouting is approximately \$14 million.

A change to the remediation action for Trenches 5 and 7 may require modification of the Melton Valley ROD. Under the National Contingency Plan, changes to the remedy following the ROD must be evaluated by the lead agency to determine if a modification to the ROD is required. Post-ROD changes fit into one of the three following categories:

- **Nonsignificant or Minor Changes** usually arise during design and construction, when modifications are made to the functional specifications of the remedy to address issues such as performance optimization, new technical information, support agency/community concerns and/or cost minimization (e.g., value engineering process). Such changes may affect things such as the type or cost of materials, equipment, facilities, services, and supplies used to implement the remedy. The change will not have a significant impact on the scope, performance, or cost of the remedy. *These changes do not require a revisiting of the ROD.* No public information is required.

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<sup>1</sup> Record of Decision for Interim Actions for the Melton Valley Watershed at the Oak Ridge National Laboratory, Oak Ridge, Tennessee (DOE/OR/01-1826&D2), September 2000.

- **Significant Changes** generally involve a change to a component of a remedy that does not fundamentally alter the overall cleanup approach. *These changes require preparation of an Explanation of Significant Difference (ESD).* The lead agency also must publish a notice of availability and a brief description of the ESD in a major local newspaper of general circulation. The ESD must be made available to the public by placing it in the Administrative Record file and information repository. A formal public comment period is not required when issuing an ESD.
- **Fundamental Changes** involve an appreciable change or changes in the scope, performance, and/or cost or may be a number of significant changes that together have the effect of a fundamental change. An example of a fundamental change is one that results in a reconsideration of the overall waste management approach selected in the original ROD. *These changes require a formal amendment to the ROD.* The lead agency must follow the same notice and comment requirements for the public as with a ROD.

## DISCUSSION

A presentation to the Oak Ridge Site Specific Advisory Board (ORSSAB) Environmental Management Committee was made by DOE on February 18, 2004. A draft fact sheet on the proposed change was presented to the committee, and the Board's input on the decision was solicited. Based on discussion at the meeting, the Environmental Management Committee prepared the following recommendation.

## RECOMMENDATIONS

ORSSAB recommends that DOE prepare an ESD to document the change in remediation of Trenches 5 and 7 from ISV to in situ grouting. The ESD should address how grouting will be as protective of human health and the environment as ISV, and the ESD should defend statements of costs and schedule referenced in the fact sheet. The ESD should also address the following issues:

- What additional treatability studies will need to be performed?
- Will there be any changes in the quantity of soils processed by using in situ grouting?
- Why was in situ grouting not selected as the preferred remediation strategy in the ROD if it is as protective as and more cost-effective than ISV?

A fact sheet explaining the ESD should be distributed to stakeholders (as recommended for all ESDs<sup>2</sup>). And because of the substantial nature of this change in remedies, we recommend that DOE expand stakeholder involvement in the ESD process by holding a public meeting on the proposed change and implementing a public comment period on the ESD document.

We further recommend that DOE fully consider ORSSAB, U.S. Environmental Protection Agency, and State of Tennessee concerns related to long-term stewardship issues that may be associated with the shift from ISV to in situ grouting.

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<sup>2</sup> "Oak Ridge Site Specific Advisory Board Recommendations on Fact Sheets for Explanations of Significant Difference for CERCLA Records of Decision at the U.S. DOE Oak Ridge Reservation," November 2, 2002, [www.oakridge.doe.gov/em/ssab/recomm.htm](http://www.oakridge.doe.gov/em/ssab/recomm.htm)