



## Department of Energy

Oak Ridge Office of Environmental Management  
P.O. Box 2001  
Oak Ridge, Tennessee 37831

July 28, 2014

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

Dear Mr. Hemelright:

### **RESPONSE TO YOUR LETTER DATED MAY 19, 2014, RECOMMENDATION 223: RECOMMENDATION ON ADDITIONAL WASTE DISPOSAL CAPACITY ON THE OAK RIDGE RESERVATION**

Reference: Letter from David Hemelright to Susan Cange, *Recommendation 223: Recommendation on Additional Waste Disposal Capacity on the Oak Ridge Reservation, dated May 19, 2014.*

Thank you for your recommendations on additional waste disposal capacity on the Oak Ridge Reservation (ORR), which encourages the Department of Energy (DOE) to continue planning for an additional on-site disposal facility for low-level waste in an area already used for similar waste disposal. DOE responses to items in the recommendation are given below:

- **Continue with planning for additional on-site disposal capacity for low-level radioactive and chemically hazardous contaminated waste, and continue ongoing efforts to minimize the need for additional on-site capacity.**

The DOE, the Tennessee Department of Environment and Conservation, and the Environmental Protection Agency Region 4 are continuing to meet regularly on issues addressing the planning for future Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) waste disposal, working toward submitting a revised remedial investigation/feasibility study (RI/FS) toward the end of the calendar year. The revised document will include some limited site-specific hydrogeologic characterization data that is currently being acquired for the proposed on-site location.

Efforts continue on minimizing the need for additional on-site capacity, including examining the final cover design for the existing Environmental Management Waste Management Facility (EMWMF) to allow for extended waste disposal capacity in that facility. ORR Subtitle D landfill waste acceptance criteria are being examined for possible modification, which would allow a wider variety of waste to be disposed in those facilities thus providing some relief in terms of needed capacity for a future proposed CERCLA facility. Additionally, the Oak Ridge Office of Environmental Management has established and follows a hierarchy for dispositioning waste generated through cleanup projects to minimize disposition volumes/costs and reduce needed capacity that includes:

- Reuse or recycle of waste or material
- Use of onsite Subtitle D landfills for final disposal
- Use of the EMWMF for disposal
- Use of offsite disposal facilities

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- **Ensure that the proposed new disposal facility will have sufficient capacity to accept all appropriate future generated waste from DOE activities through cleanup of the ORR.**

Planning for a new facility has included consideration of all projected appropriate future remediation waste. On-site disposal alternative planning incorporates an additional 25% capacity as a contingency to provide for uncertainty in volume projections.

- **Ensure the proposed disposal facility is engineered to operate safely and block migration of contaminants into adjacent groundwater, soil, and air.**

Several steps must be completed to ensure a proposed disposal facility will provide the necessary protectiveness. In the RI/FS planning stage, preliminary acceptance criteria for the conceptual facility are determined based on human health risk assessments that look at contaminant migration into adjacent groundwater and soil based on the conceptual design features including engineered features that accommodate site conditions. Regulatory requirements in terms of siting, design, operation, and closure/post-closure are summarized and agreed on by the tri-party members to ensure regulations that address protectiveness, and how it is to be achieved, are followed. These are documented in the RI/FS.

Later in the process, a DOE low-level disposal facility design is required to undergo intensive modeling and rigorous third-party review of that modeling to demonstrate compliance with DOE Order 435.1 prior to receiving full approval to begin operations. This modeling (e.g., a performance assessment, among other requirements) provides an analysis of protection of human health and the environment under various likely and unlikely adverse scenarios to ensure that facility performance objectives aimed at protection of human health and the environment will be met as intended and under extreme conditions.

- **Locate the proposed facility in proximity to existing waste burial grounds, if technically feasible, such that contaminated areas are consolidated on the ORR.**

Location of the currently proposed facility is in proximity to existing operating and legacy waste burial grounds. DOE agrees that locating a proposed disposal facility within proximity to existing waste facilities is prudent in that it consolidates these areas for purposes of long-term stewardship, provides for lower cost in terms of needed infrastructure, and maintains current greenfield land for future unrestricted uses. The technical feasibility of this proposed location will be confirmed through current and planned characterization efforts prior to design of the facility.

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- **Ensure that a trust fund for long-term stewardship is established for any new disposal facility similar to that for EMWWMF.**

The RI/FS incorporates the expense of a trust fund for long-term stewardship of an on-site disposal facility in the life-cycle estimate on the same basis as that for EMWWMF (e.g., \$1 M per year of operation). Continuation of the concept of a trust fund in the planning and eventual implementation of on-site disposal is contingent upon the state accepting such an agreement. Regardless of that decision, DOE will be responsible for long-term stewardship of an on-site facility, either through establishment of a trust fund with the state or independently.

We appreciate the recommendations provided by the Oak Ridge Site Specific Advisory Board regarding additional waste disposal capacity on the ORR. Thank you for your support.

If you have questions or if we can be of any further assistance, please contact me at (865) 576-0742 or Dave Adler at (865) 576-4094

Sincerely,



Susan M. Cange, Acting Manager  
Office of Environmental Management

cc:

David Borak, EM-3.2, FORS  
Fred Butterfield, EM-13, FORS  
Melissa Neilson, EM-13, FORS  
Kristof Czartoryski, TDEC, Oak Ridge  
John Owsley, TDEC, Oak Ridge  
Connie Jones, EPA Region 4  
Terry Frank, Anderson County Mayor  
Mark Watson, Oak Ridge City Manager  
Ron Woody, Roane County Executive  
Dave Adler, EM-90  
Jason Darby, EM-91  
Jay Mullis, EM-90  
Melyssa Noe, EM-92  
Laura Wilkerson, EM-90