



Department of Energy

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

December 21, 2016

Ms. Belinda Price, Chair
Oak Ridge Site Specific Advisory Board
Post Office Box 2001
Oak Ridge, Tennessee 37831

Dear Ms. Price:

RESPONSE TO YOUR LETTER DATED OCTOBER 13, 2016, REGARDING RECOMMENDATIONS ON THE PROPOSED ENVIRONMENTAL MANAGEMENT DISPOSAL FACILITY AT THE OAK RIDGE RESERVATION

Reference: Letter from Belinda Price to Susan Cange, *Recommendation 233: Recommendations on the Proposed Environmental Management Disposal Facility at the U.S. DOE Oak Ridge Reservation*, dated October 13, 2016

I would like to express my appreciation for the interest the Oak Ridge Site Specific Advisory Board has taken in the proposed Environmental Management Disposal Facility (EMDF). The U.S. Department of Energy (DOE) response to the recommendations are given below.

- **Continue with planning for additional onsite disposal capacity for low-level radioactive and chemically hazardous contaminated waste.**

DOE, the Tennessee Department of Environment and Conservation (TDEC), and the U.S. Environmental Protection Agency (EPA) Region 4 are continuing to meet regularly on issues addressing the planning for future Comprehensive Environmental Response, Compensation, and Liability Act waste disposal. They are also working towards finalizing a revised Remedial Investigation/Feasibility Study (RI/FS) and issuance of a Proposed Plan toward the middle of Calendar Year 2017.

- **Continue efforts to minimize the need for additional onsite capacity by using Lessons Learned and operational and disposal efficiencies from the operation of the Environmental Management Waste Management Facility (EMWMF). This should consider all volume reduction possibilities.**

Efforts continue on minimizing the need for additional onsite capacity. DOE is working with the State of Tennessee on modification of the waste acceptance criteria for the Oak Ridge Reservation (ORR) industrial landfills to 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 Comprehensive Environmental Response, Compensation, and Liability Act facility.

**RESPONSE TO YOUR LETTER DATED OCTOBER 13, 2016, REGARDING
RECOMMENDATIONS ON THE PROPOSED ENVIRONMENTAL MANAGEMENT
DISPOSAL FACILITY AT THE OAK RIDGE RESERVATION**

Additionally, the Oak Ridge Office of Environmental Management (OREM) has established and follows a hierarchy for dispositioning waste generated through cleanup projects to minimize disposition volumes/costs and reduce needed capacity, including the following activities:

- Reuse or recycle of waste or material
 - Use of onsite Subtitle D landfills for final disposition
 - Use of EMWMF for disposal
 - Use of offsite disposal facilities
- **Consider using contaminated soils authorized for disposal at the EMDF as fill instead of clean fill, which decreases disposal capacity for contaminated materials.**

Contaminated soils authorized for disposal at the EMWMF are used as fill, when available. DOE will factor sequencing into execution planning to the extent possible to enable the use of contaminated soils for disposal with the waste generated by demolition activities in order to minimize the amount of clean fill needed over the life of EMDF. However, the amount of contaminated soils forecast represents only about one-third of the fill expected to be needed at the facility.

- **Consider methods for expanding EMWMF capacity as a way to assure the smallest possible footprint for the new disposal facility.**

OREM is currently working to increase the capacity of the EMWMF through a redesign of the final cap that would allow for additional waste disposal capacity. The new disposal facility will be constructed in phases and capacity, up to the authorized capacity, will be added on an as-needed basis.

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

Planning of the EMDF has incorporated numerous studies from current documentation of representative waste lots from expected process buildings to estimate waste to be disposed onsite and waste that will be shipped offsite. In addition, planning for the EMDF incorporates a 25 percent capacity contingency to provide for uncertainties in waste lots and total building debris which may alter volume projections.

**RESPONSE TO YOUR LETTER DATED OCTOBER 13, 2016, REGARDING
RECOMMENDATIONS ON THE PROPOSED ENVIRONMENTAL MANAGEMENT
DISPOSAL FACILITY AT THE OAK RIDGE RESERVATION**

- **Ensure that the proposed facility is engineered to operate safely and migration of contaminants into adjacent groundwater, soil, and air do not exceed environmental regulatory limits.**

Several steps must be completed to ensure a proposed disposal facility will provide the necessary protectiveness. Waste acceptance criteria for the EMDF will be determined based on human health risk assessments that look at contaminant migration into the adjacent environmental media. This is based on the design features, including engineered features, which accommodate site conditions.

Regulatory requirements in terms of siting, design, operation, and closure/post-closure are summarized and agreed to by DOE, TDEC, and EPA Region 4 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. This will ensure that the facility performance objectives aimed at protection of human health and the environment will be met, as intended, and agreed to by the tri-parties under extreme conditions.

- **Locate the facility in proximity to existing waste burial grounds, if technically feasible, such that contaminated areas are consolidated on the ORR. Sites in Zone 2 and 3 at the Y-12 National Security Complex are acceptable as options because they fit this criteria and are favorable in terms of transporting waste. The Board does not support greenfield intrusion (e.g., Zone 1).**

OREM understands and recognizes the Board's concern with greenfield intrusion. DOE agrees that locating a proposed disposal facility in Zone 2 or Zone 3 within proximity to existing waste facilities is prudent. The RI/FS will no longer contain a preferred site, and the proposed alternative for public comment will be included in the Proposed Plan.

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

The RI/FS incorporates the expense of a trust fund for long-term stewardship of an onsite disposal facility in the lifecycle estimate on the same basis as that for EMWMF (e.g., \$1 million

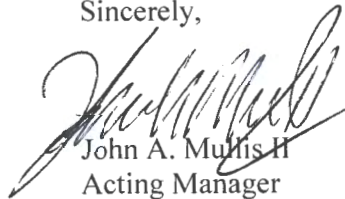
**RESPONSE TO YOUR LETTER DATED OCTOBER 13, 2016, REGARDING
RECOMMENDATIONS ON THE PROPOSED ENVIRONMENTAL MANAGEMENT
DISPOSAL FACILITY AT THE OAK RIDGE RESERVATION**

per year of operation). Continuation of the concept of a trust fund in the planning and eventual implementation for onsite disposal is contingent upon the State accepting such an agreement. Regardless of that decision, DOE will be responsible for long-term stewardship of an onsite facility, either through establishment of a trust fund with the State or independently.

Thank you for your recent recommendations. We will submit your recommendations to the Assistant Secretary for Environmental Management.

If you have any questions or if we can be of further assistance, please contact Melyssa Noe at (865) 241-3315 or me at (865) 576-0742.

Sincerely,



John A. Mullis II
Acting Manager

Enclosure:
Referenced Letter

cc w/enclosure:

Terry Frank, Anderson County Mayor
Jeff Crane, EPA Region 4
Connie Jones, EPA Region 4
Mark Watson, Oak Ridge City Manager
Ron Woody, Roane County Executive
Kristof Czartoryski, TDEC, Oak Ridge
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