



Department of Energy

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

July 24, 2017

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, *RECOMMENDATION 235: RECOMMENDATIONS ON GROUNDWATER INVESTIGATIONS AT THE U.S. DEPARTMENT OF ENERGY OAK RIDGE RESERVATION*, DATED MAY 12, 2017

I would like to express my appreciation for the interest the Oak Ridge Site Specific Advisory Board (ORSSAB) has taken in the groundwater program on the Oak Ridge Reservation.

Provided below are responses to recommendations provided in your recent letter on this subject. Please note that the language in bold is taken from your letter.

1. ***ORSSAB recommends diligent and continued efforts to monitor for potential offsite migration and to implement appropriate actions to mitigate or prevent offsite migration in areas such as Melton Valley and White Oak Creek if the need should arise. The Board requests additional surveillance monitoring to establish a monitoring framework in Bethel Valley and annual reports of results to the Board.***

The U.S. Department of Energy (DOE) monitors an extensive network of groundwater wells in Bethel and Melton Valleys annually to ensure that onsite and offsite groundwater conditions are sufficiently evaluated. By valley, the monitoring activities are as follows:

- Bethel Valley: Sampling - 48 total wells (127 monitoring events annually)
Water Levels - 49 total wells (628 monitoring events annually)
- Melton Valley: Sampling - 100 total wells (218 monitoring events annually)
Water Levels - 72 total wells (2,168 monitoring events annually)
- Melton Valley Offsite: Sampling - 23 total wells (41 monitoring events annually)
Water Levels - 16 total wells (832 monitoring events annually)
- In addition, DOE co-sampled with the Tennessee Department of Environment and Conservation (TDEC) approximately 35 residential wells this year with the potential to sample an additional 35 wells.

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As part of the offsite Groundwater Remedial Site Evaluation, DOE has recommended additional monitoring be conducted offsite over the next few years. DOE, the U.S. Environmental Protection Agency (EPA), and TDEC are still reviewing the data to determine the appropriate number of wells to sample.

All sampling results will continue to be reported annually in the Remediation Effectiveness Report. DOE would be happy to include updates on the results of sampling in the briefings provided to the ORSSAB during monthly meetings.

2. *The Groundwater Strategy document was completed in 2014. At that time only five actions were given priority although 35 plumes were noted as high risk. We recommend that DOE should continue to prioritize based on the highest risk to lowest risk. In addition, with the upcoming completion of the offsite groundwater investigation, ORSSAB urges DOE to include a five-year review of strategy (in 2019) to revisit the ranking of plumes to ensure that highest-risk plumes are addressed expeditiously and to adjust priorities and budgets based on changes in conditions (such as increased risk to the environment or public health).*

DOE is conducting a groundwater investigation at the East Tennessee Technology Park (ETTP) that will support the final site-wide Record of Decision (ROD) at ETTP. The ROD at ETTP will address 11 of the plumes identified in the groundwater strategy.

DOE agrees that periodic reevaluation of monitoring data should be conducted to ensure protection of public health and environment. The primary focus of this effort will be to ensure that no significant offsite exposures occur, and that groundwater resource damages are understood and appropriately addressed. The timing of groundwater actions will be prioritized according to actual risks.

3. *ORSSAB recommends placing a high priority on site-specific modeling in the Melton Valley area to include installation of additional monitoring wells (if needed) and implementation of treatability and/or pilot-scale options as funding allows. To that end, ORSSAB supports and encourages DOE to move forward with the Melton Valley/Bethel Valley Exit Pathways Study to gather data on groundwater behavior in the valleys. DOE should formulate and initiate a strategy to cooperate with the Tennessee Valley Authority, to commence, continue, and/or enhance sharing of relevant groundwater data and information with the Tennessee Valley Authority.*

DOE, EPA, and TDEC recently agreed on moving forward with the Melton Valley/Bethel Valley Exit Pathway (MVBVEP) Study as the next groundwater project. The objective of the MVBVEP project is to address data gaps and uncertainty for high-ranking plumes that have the potential for offsite migration. Additional onsite sampling and groundwater modeling efforts to 600 feet depth below ground surface will be used to determine potential flow paths and data gaps.

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DOE and Tennessee Valley Authority officials have met on multiple occasions to share information gained from our respective groundwater projects. Close coordination with Tennessee Valley Authority will continue.

4. ***ORSSAB recommends that DOE should fully fund and schedule preliminary planning, study, and technology demonstrations so that full-scale final cleanup efforts can begin no later than 2025; as an example, move forward with the 7000 Area Trichloroethylene Plume Remediation Project. In order to achieve this, the board recommends considering refocusing available money from plus-ups, surpluses, etc., toward the groundwater effort. The board requests that DOE provide updates to the board as strategies are developed to allow for comment.***

It is important to note that the Oak Ridge Office of Environmental Management Program has multiple priorities competing for limited budget appropriations, and that groundwater projects are not necessarily the highest funding priority. Given remaining priorities associated with above ground hazard mitigation efforts, and other priorities associated with surface water restoration, it is unlikely that full scale cleanup efforts for groundwater can begin by 2025. The Oak Ridge Office of Environmental Management remains committed to the current practice of updating the Board on annual budget allocations, and discussing associated program priorities.

DOE, EPA, and TDEC recently agreed to move forward with scoping activity for additional groundwater characterization activities in Bethel Valley, with the objective of producing a Remedial Investigation Work Plan by 2020. This plan will address Bethel Valley groundwater plume(s) characterization data gaps including ecological and exit pathway issues. This work will support alternative development for the Bethel Valley Groundwater ROD, and characterization work needed to implement in-situ bioremediation of the 7000 Area volatile organic compound plume at Oak Ridge National Laboratory.

5. ***ORSSAB recommends that DOE maintain communications with offsite groundwater users, especially in Melton Valley and Bethel Valley, as necessary to remain cognizant of planned usage that may pose an unacceptable risk.***

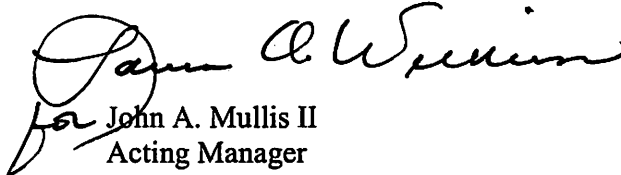
DOE currently has over 100 active licenses with residents. Some of these licenses allowed DOE to sample wells as part of the Offsite Groundwater Remedial Site Evaluation. The other licenses were put in place to connect private residence to public water supplied by the Watts Bar Utility District. Since water connection began nearly seven years ago, DOE has continued to approach residence to renew licenses and offer connections to owners who previously declined the offer.

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DOE utilizes multiple methods to reach homeowners (i.e., mail, phone, door-to-door visits, door knob hangers, etc.) Also, DOE has been co-sampling residential wells with TDEC over the past several years. Approximately 35 wells have been sampled over the past year, DOE and TDEC oversight remains cognizant of water usage in the area.

Thank you again for your continued interest in this important component of the Oak Ridge Reservation Environmental Management Program. If you have any questions or if we can be of further assistance, please contact Melyssa Noe at 241-3315 or me at 576-0742.

Sincerely,


John A. Mullis II
Acting Manager

cc:

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