

May 17 DOE meeting regarding EMDF – Comments from Virginia Dale

My name is Virginia Dale. My family roots in Tn go back to 1798. I've lived in Oak Ridge more than 3 decades. I have a PhD in environmental sciences and my comments come from my perspective as a citizen, scientist, and most importantly a grandmother who wants all of our children to live in a safe environment.

It is absolutely necessary that the contaminated legacy buildings on the ORR be cleaned up. My concern is that the clean up occurs in a proper and timely fashion.

I am a co-principal investigator on a project supported by the National Science Foundation to identify best practices for stakeholder engagement in environmental decision making. Since our team has learned that appropriate engagement results in better decision making, I evaluated how well those 6 best practices apply to DOE's decisions regarding the EMDF.

1. The full diversity of interested stakeholders be identified and engaged. DOE-C
 - a. I know of no effort to specifically engage either the people who live in west OR nor those in Lenoir City, who are closest to Bear Creek and the streams into which it flows and who are most likely to access and even fish in the contaminated waters. Many of those people are Hispanic and primarily speak Spanish; yet none of the posted signs are in Spanish.
 - b. I was so glad to see the Fact Sheets in Spanish
 - c. However, EPA has make a specific effort to reach out to the community in Scarboro, which has been discriminated against in the past, but that community is not at high risk with the proposed landfill.
2. The values of the ecosystem should be identified for all stakeholders. DOE- F
 - a. I am not aware of any effort to document who uses the contaminated waters of Bear Creek or Poplar Creek into which it flows, or how they use it.
 - b. The use of an established forest for the site does not consider its value as a habitat for many organisms even though the ORR has diversity on a per area basis that is similar to the Smokies.
 - i. The proposed new landfill site is in an area of the ORR that the OREM End Use Working Group designated to be kept uncontaminated, while other areas were stipulated to be permanently sacrificed to contamination.
 - ii. This site has shallow and upwelling groundwater (hydrology unsuitable for waste disposal), is in a watershed that has been relatively unaffected by past federal nuclear activities, and supports mature forest and wetlands.
3. Listening deeply takes time and attention. DOE -F
 - a. Careful listen requires answering all questions, making sure the nuances are understood, and using communication tools appropriate for the audience.
 - b. Questions asked 4 years ago have still not been answered.
4. Trust should be established, which requires upfront transparency as to timeframe, process, and results as well as the costs and benefits of potential outcomes. DOE-F
 - a. The video "20 years of success" is misleading because
 - i. The site filled up too fast
 - ii. Spills occurred
 1. The landfill has had a series of overflow events that basically dumped untreated effluent into Bear Creek."

2. That overflow water averaged more than double allowed concentration of uranium in drinking water.
- b. Although DOE has been asked, they have not provided
 - i. Costs of off-site transport vs onsite storage – nor the number of employees and type of jobs engaged in each alternative. I expect that offsite transport would require more analysts to document the material while the on-site option would require more truck drivers.
 - ii. Waste acceptance criteria have never been provided (the Fact Sheet on WAC says what will not be included – not what will be or what the criteria are for acceptance). The Waste Acceptance Compliance Plan is still in development.
- c. While a field demonstration has been proposed, it seems that some aspect of this demo could have been started in the time since 2018 when questions were formally asked.
- d. DOE's "Site Groundwater Characterization" fact sheet figure on page 2 is highly misleading, for it does not show the waste (of 75') to scale with the rest of the layers (which total 26').
5. Being flexible requires that as new information becomes available that changes are made in the analysis and process. **DOE -F**
 - a. Even with record rainfall in the intervening 4 years since the last review, no new analyses have been provided that assess how the landfill will operate under increased rain.
6. Accountability by all parties is necessary. This means that all question or concerns be addressed in a timely fashion. **DOE- F**
 - a. Data, models and their assumptions should be made available.
 - b. Questions should be answered – yet queries raised 4 years ago have never been addressed.

Overall DOE get a D- in effective engagement of the community. While effective stakeholder engagement is a time-consuming and ongoing process, the total time and effort involved is reduced with early communication and clear engagement. Furthermore, better decisions are made if good practices for engagement in decision making are followed.

So I ask DOE once again, please provide information on

- The basis for choosing the site
- The Waste acceptance criteria details
- All models and their assumptions
- Model projections of landfill conditions under increased rain
- Costs of off-site vs on-site long-term storage of toxic wastes

Finally (and most importantly, I ask that a plan for complete clean up of the ORR be provided (as required by law) instead of providing information piece by piece. Only by taking a holistic look at hazardous waste disposal can the public have confidence that DOE will fulfill its obligation to clean up the Oak Ridge Reservation.

Thank you!