



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

Approved May 12, 2021 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting virtually via Zoom on Wednesday, May 12, 2021 at 6 p.m. Copies of referenced meeting materials are attached to these minutes. A video of the presentation portion of the meeting was made and is available on the board's YouTube site at www.youtube.com/user/ORSSAB/videos.

Members Present

Leon Baker
Shell Lohmann, Chair
Harriett McCurdy
Georgette Samaras

Michael Sharpe
Leon Shields, Vice Chair
Fred Swindler
John Tapp

Tom Tuck
Zach Wilkins

Members Absent

Andrea Browning
Richard Burroughs
Chris Hampel
Amy Jones
Noah Keebler

Greg Malone
Marite Perez
Bonnie Shoemaker,
Secretary
Robert Whitaker

Dennis Wilson
Rudy Weigel

¹Third consecutive absence

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Dave Adler, ORSSAB Deputy Federal Designated Officer, DOE-OREM
Melyssa Noe, ORSSAB Alternate Deputy Designated Federal Officer (DDFO), OREM
Brian Henry, Y-12 Portfolio Federal Project Director, OREM
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)
Connie Jones, U.S. Environmental Protection Agency (EPA)

Others Present

Shelley Kimel, ORSSAB Support Office
Sara McManamy-Johnson, ORSSAB Support Office
Roger Petrie, OREM
Dennis Mayton, OREM
Ben Williams, OREM

Susan DePaoli, OREM Contractor
Carl Froede, EPA
Sidney Jones, EPA
Heather Lutz, TDEC
Suzanne Sawusch, TDEC
Chris Thompson, TDEC
Pat Flood, TDEC
Sonya Johnson, UCOR
Kent Fortenberry, UCOR
Conner Ingram, UCOR
Scott Anderson, UCOR
Donovan Robinson, DOE-HQ

Seven members of the public were present.

Liaison Comments

Mr. Adler – Mr. Adler said OREM is nearing completion of the Biology Complex project at Y-12 National Security Complex (Y-12), which will clear land space for Y-12 to use for future mission. At Oak Ridge National Laboratory (ORNL), OREM has completed the Tritium Target Preparation Facility and the removal of a structure that was part of the radioisotope development lab, a significant milestone. Additionally, there was a groundbreaking for the West End Protection Area Reduction Project (WEPAR) at Y-12. He said this project relocates the security fencing and security systems so much of OREM’s work will be outside the security fence instead of inside, which will significantly increase the efficiency of OREM’s work. He said that project is slated for completion in 2025. Next, he said ensuring adequate waste disposal capacity is one of the key things that enables successful cleanup. He added that ORSSAB has already submitted a recommendation, and although OREM is not specifically requesting another recommendation, the board is welcome to submit another. He then recapped key points from the last ORSSAB recommendation regarding waste disposal – promoted security funding for the completion of the project; ensuring good public engagement throughout the project; and ensuring the facility built had all the capacity needed to accommodate all the waste OREM expected to generate. He said he wanted to emphasize that the most-hazardous material would not go into the proposed facility, but a facility is needed to handle the less-hazardous material.

Ms. Jones – None.

Mr. Czartoryski – None.

Presentation

Ms. Lohmann introduced Brian Henry, presenter for the evening’s topic, Ongoing Efforts to Assure Waste Disposal Capacity for the Oak Ridge Reservation (ORR).

Mr. Henry gave members an overview of current and planned disposal capacity and how they correlate with the planned cleanup projects at ORNL and Y-12. He said DOE operates several engineered landfills for safe and compliant disposal of ORR remediation, demolition, and sanitary waste. Those facilities are permitted by TDEC. DOE also has a low-level radioactive waste disposal facility called the Environmental Management Waste Management Facility (EMWMF) that operates under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). He added, however, that as OREM moves its cleanup focus to ORNL and Y-12, additional disposal capacity is needed to have the same success at those facilities as OREM had at the East Tennessee Technology Park (ETTP). He said each disposal facility has established waste acceptance criteria to determine whether waste is acceptable for disposal.

He then went into additional detail on Oak Ridge's three distinct sites – ETTP, ORNL, and Y-12 – and the disposal capacities that would be needed for those sites. He discussed the successful cleanup at ETTP and the importance of adequate waste capacity in the cleanup at that site. He said that OREM has moved to doing work at Y-12 and ORNL, where there are over 300 buildings to be demolished between the two sites. DOE maintains a list of high-risk facilities, and of the 254 facilities on that list, 66 are in Oak Ridge. The hazards vary among physical, chemical, and nuclear, depending on the missions that took place in those facilities.

Mr. Henry added that the pace of cleanup – and pace of waste generated – is highly dependent on the budget OREM receives each year. He said Oak Ridge has been fortunate to receive favorable funding over the last four years, which has enabled OREM to move from ETTP to cleanup at Y-12 and ORNL.

Mr. Henry then said it was important to note that all of DOE's operating landfills are within the Oak Ridge Reservation and are located within DOE-controlled areas. An advantage to that is there are roads located within the reservation called haul roads that allow DOE to truck the wastes to the facilities and keep them out of the private sector. He next showed members a map that depicts both operational and closed facilities on the reservation.

Mr. Henry said that management of various wastes from cleanup operations requires multiple pathways – recycle/reuse, disposal at onsite sanitary landfills, disposal at onsite CERCLA facilities, and disposal at offsite facilities. He said this holds true for cleanup operations throughout the DOE complex. He said that when you look at the waste by hazard, the vast majority – 99.8 percent – is shipped offsite. After cleaning out the facilities, there is a lot of building materials, soils, and concrete and that has much lower contamination levels but represents the larger volume that is disposed of onsite.

He said waste disposal decisions follow a waste hierarchy and gave a brief overview of that decision process.

Next, Mr. Henry gave members an overview of EMWMF, the remaining capacity of which will be used to support completion of ETTP cleanup. He said the 28-acre disposal facility opened in 2002. Lined disposal cells receive low-level radiological and chemical waste from CERCLA cleanup of ORR and associated sites. He added that OREM worked with regulators to increase the facility's capacity by redesigning the final cap, which increased capacity from 2.2 million cubic yards to 2.3 million cubic yards. He said that's important because it allows OREM to operate the facility for longer and bridge the gap between when EMWMF is full and when the proposed EMDF could become available. He said EMWMF is currently about 80 percent full and is projected to be full in the late 2020s, although that is highly dependent on future cleanup funding budgets.

Mr. Henry said OREM is doing work at Y-12 and ORNL, which is where the focus will be for the near-term. He said that the majority of the time spent and the majority of the cost is associated with cleaning out a building so that it can be demolished. For the large buildings at Y-12, it will take a number of years to do the characterization and to clean out those buildings to get them ready for demolition, which is where the majority of the waste will be generated, so there is some time. However, EMDF will need to be ready to move right into demolition. He said that as OREM emphasizes the waste hierarchy, they are also trying to maximize the amount of waste that goes into the permitted landfills. To that end, OREM plans to do some buildouts of the permitted capacity at its sanitary landfills.

He told members the proposed site of the proposed Environmental Management Disposal Facility is at Central Bear Creek Valley and its projected capacity is similar to EMWMF at 2.2 million cubic yards. He said OREM expects to issue the first draft Record of Decision (ROD) to regulators for review by early July 2021. Regulators will generate comments on that draft, and OREM will work with regulators to resolve those comments before issuing the second draft. He said that ideally, OREM would like to have two years of overlap with EMWMF open and the Environmental Management Disposal Facility (EMDF) available because some of the waste is heavy and

needs to be on the lower levels of the cell.

Regarding the proposed location of the EMDF at Central Bear Creek Valley, Mr. Henry said there were several sites considered, and the Central Bear Creek Valley site was the preferred location after discussions among DOE and regulators. He next gave an overview of process DOE used to present the Proposed Plan to the public in Fall 2018 and some of the responses DOE received. Those comments and DOE's responses to those comments will be included with the first draft ROD submitted. He added that the Proposed Plan identified seven of the State's main concerns that are in the process of being resolved, and he discussed the status of each item's resolution.

He next described the three major paths DOE must complete in parallel to build a new disposal facility. First, under DOE Order 435.1, OREM received a Preliminary Disposal Authorization Statement (DAS) and will develop remaining documents for eventual Operational DAS. Parallel to that, OREM is working through the CERCLA regulatory process, which includes submitting the first draft ROD for EMDF before July 2021 milestone for Federal Facilities Agreement (FFA) review, working with FFA parties to resolve issues and approve a ROD, and developing CERCLA documents for design and operations. Under DOE Order 413.3B, OREM will develop the final design and complete associated documentation and approvals to support construction.

After the presentation, board members asked the following questions:

- Mr. Wilkins asked if EMDF is scheduled to be completed by 2025.
 - Mr. Henry said the 2026 timeframe is currently the earliest it could be completed.
- Mr. Tapp asked for information about a letter/email submitted by Mr. Sidney Jones.
 - Mr. Adler said the letter raised some questions about the information that was available on the contents of the cell and the information that was used to determine percentages shipped offsite. He said that while it's not uncommon for people to have differences of opinion of what a given dataset says, OREM is confident in its interpretation of what percentages of offsite disposal necessary according to radiological activity and volume. He said the wastes are very thoroughly analyzed for radioactivity and chemical hazards. The sampling plans used to drive this characterization activity must first be approved by both the State and EPA – it's not just DOE deciding.
- Ms. McCurdy asked for clarification about what a geomembrane is comprised of.
 - Mr. Henry said a geomembrane is like a plastic geotextile membrane on the order of about 60-80 millimeters thick. He said if you think about a sheet of plastic you could buy at a hardware store, a geomembrane is about ten times thicker than that type of material.
- Mr. Baker asked whether the 66 Oak Ridge buildings listed on DOE's excess contaminated facilities could increase or decrease depending on funding.
 - Mr. Henry said those 66 buildings are on DOE's list of excess contaminated facilities, but there are more facilities at Y-12 and ORNL that are part of the long-term cleanup efforts. What adequate funding does is allow OREM to get that cleanup done sooner. If the budgets go down, the areas will still be cleaned up, it will just take longer. He said OREM would like to finish Y-12 and ORNL cleanup in the late 2040s. He said that timeframe might stretch out a little bit if the budgets are lower.

Questions from the Public

- Mr. Thomas Fraser asked what are the contaminated buildings at ORNL and what are the contaminants involved there. He also asked what factors were considered for location of the proposed landfill.
 - Mr. Henry said there were several factors considered, including geological, hydrological, land use, and a number of others.
 - Regarding the facilities at ORNL, Mr. Adler said the buildings scheduled for cleanup at ORNL include legacy facilities from the 1940s through 1970s. He said Oak Ridge played a key role in the development of experimental nuclear reactor designs, as well as in the development of isotope technologies, so the facilities to be addressed at the site are old, de-fueled reactors and a collection of old buildings that were involved with the isolation and extraction of isotopes. He said the typical approach to the job is to remove the areas that have the higher levels of contamination, and the proposed landfill would deal with what remains after.

- Mr. Doug Colclasure asked if the materials from the gas-cooled reactor that was never operational be recycled and to what extent can the landfill be avoided by the recycling of steel in other things.
 - Mr. Henry said that DOE generally has moratorium of recycling materials if they were inside a radiological area, so if that facility has materials that were never inside of a radiological area and can be screened to be clean, then they are available to be recycled.
 - Mr. Adler added that OREM does place an emphasis on recycling wherever possible. Many of OREM's jobs involve recycling metals in particular, but there are constraints on what can be recycled because there are very strict requirements to not recycle any metal that may have become contaminated. He said if the material is eligible for recycling, then it will be recycled.

- Mr. Thomas Fraser asked about how the structure makeup and components of the proposed landfill will ensure contents remain contained and whether there were any changes from the design of EMWMF.
 - Mr. Henry said Resource Conservation and Recovery Act (RCRA) Subtitle C landfills have very prescriptive and defined criteria for liner systems, so EMWMF and EMDF both follow that. He said that there is generally a 10-foot-thick geologic buffer at the bottom of a landfill to separate the waste from the groundwater. Above that, there will be about a 3-foot-thick clay liner, and then a leachate collection system and a leak-detection system – both including geomembranes between the layers. These combined layers and membranes total about 15 feet between the waste and the groundwater. He said both landfills have this same setup.

- Mr. Doug Colclasure said there are a number of water table wells associated with the proposed EMDF site and asked whether any of the test wells flow unaided during heavy rains as have occurred over the past five years.
 - Mr. Henry said they do not. He said several wells have been put in as part of the characterization effort and they're used to estimate the current groundwater levels. Where the proposed site is located, there is a large knoll area at the northern portion of the site,

- as well as a depressed saddle to the north where land is lower than the bottom of the waste would be. There are two tributaries to the east and the west where the land is lower than the waste would be, and to the south the land slopes down as you go toward the creek. He said that how far below the surface the groundwater is depends on the season and the proximity to the drainage tributaries. As you get closer to the drainage tributaries, the groundwater levels are closer to the surface and near surface at certain times of the year. As you get to the knolls, the groundwater is deeper. He said OREM has about 2 years of data on those wells that were used as part of OREM's discussions with regulators.
- Mr. Thomas Fraser asked what the worst-case scenario for the local environment and where is the offsite waste transported to.
 - Mr. Henry said DOE facilities have a very rigorous process that involves defense depths and analysis to make sure the facility is designed to not have a negative impact to the environment or the public. In addition to the process within DOE, the CERCLA process and working with EPA and TDEC is also there to ensure that the facility is safe and does not have impact. He said CERCLA also includes monitoring so after facilities are built, there are monitoring wells to make sure that there's not an issue in or around those facilities, and if there are, that corrective actions can be taken such that there is no significant negative impact to the public or the environment. Regarding offsite waste, Mr. Henry said typically there are waste disposal facilities in Nevada, Utah, and Texas.
 - Mr. Adler added that the worst-case scenario is limited by the type of waste that goes into the facility, and this facility would be accepting building demolition material. He said a worst-case scenario would not give significant negative scenarios.
 - Ms. Virginia Dale asked for additional information about the process for determining the waste acceptance criteria.
 - Mr. Henry said there are several different types of waste acceptance criteria, such as analytical waste acceptance criteria, which comes from modeling, and such as administrative waste acceptance criteria. He added some information about waste acceptance criteria that goes into the ROD and there is also a primary CERCLA document that follows the ROD that goes into further details on how waste acceptance criteria is implemented.
 - Mr. Adler added that there will be a future public forum for discussing waste acceptance criteria, although the exact timing of that has not been determined yet.

Public Comment

- Mr. Doug Colclasure submitted a comment in advance (see attached Public Comment #1)
- Ms. Virginia Dale submitted a comment in advance (see attached Public Comment #2)

Board Business/Motions

1. Ms. Lohmann asked for a motion to approve the meeting agenda.

- a. **5.12.21.1 Motion to approve the agenda**
Motion made by Mr. Baker and seconded by Mr. Shields. Motion passed unanimously.
- 2. Mr. Shields asked for a motion to approve minutes from the February 12, 2020 meeting.
 - a. **5.12.21.2 Motion to approve February 12, 2020 meeting minutes**
Motion made by Mr. Tapp and seconded by Mr. Baker. Motion passed unanimously.
- 3. Mr. Shields asked for a motion to approve minutes from the March 10, 2021 meeting.
 - a. **5.12.21.3 Motion to approve March 10, 2021 meeting minutes**
Motion made by Mr. Tapp and seconded by Mr. Baker. Motion passed unanimously.
- 4. Mr. Tapp gave a brief overview of the Recommendation on OREM's FY 2023 Budget Priorities (see attached) and asked for a motion to approve.
 - a. **5.12.21.4 Motion to approve Recommendation on OREM's FY 2023 Budget Priorities**
Motion made by Mr. Shields and seconded by Mr. Baker. Motion passed unanimously.
- 5. Ms. Lohmann gave members background information about charges requested of the board by headquarters. The first of the charges is to develop a best-practice white paper that DOE can use to augment existing practices and expectations for future outreach activities. The second charge is to identify SSAB 10-year expectations and guiding principles that can be used as a complex-wide framework for DOE's EM interaction with stakeholders and communities. She said each of these charges have been assigned a sub-committee to develop an end-state product to go to the national SSAB. Ms. Lohmann said she will be working on the second charge, and she offered anyone on the board the opportunity to participate in either charge.

Responses to Recommendations & Alternate DDFO Report

Ms. Noe said there are no open recommendations. Regarding the new member package, she said a draft package was submitted to headquarters, and it has passed a preliminary review and is ready for formal resubmission after it is signed off on by either Laura Wilkerson or Jay Mullis.

Committee Reports

Executive – Ms. Lohmann said the Executive Committee would continue to meet via Zoom for the foreseeable future. She said the committee met the week before and discussed the work plan and the upcoming Chairs Meeting, including the charges the board had been tasked with during the previous Chairs meeting.

EM & Stewardship – Mr. Tapp asked if issue groups will still try to meet before the EM & Stewardship Committee meetings.

Ms. Kimel said if issue group members decide they would like to try to meet before the EM & Stewardship Committee meetings, staff could arrange Zoom usage to do so.

Additions to the Agenda & Open Discussion

Ms. Lohmann reminded members that issue group signups are open, and she invited interested members to contact staff if they are interested in participating in a specific topic's issue group.

Action Items

Open

None

Closed

None

The meeting adjourned at 7:25 p.m.

I certify that these minutes are an accurate account of the May 12, 2021, meeting of the Oak Ridge Site Specific Advisory Board.



Michelle Lohmann,
Chair



Bonnie Shoemaker, Secretary

June 9, 2021

Oak Ridge Site Specific Advisory Board

ML/sm

From: dougcolcl@aol.com
To: [ORSSAB](#)
Subject: [EXTERNAL] Re: ORSSAB Meetings April 28, May 5 & May 12
Date: Thursday, April 29, 2021 11:07:34 AM
Attachments: [EMDF_Proposed_Plan_8_30_18.pdf](#)
[Proposed_EMDF_08_01_2019_SEL_C_Letter_to_John_Michael_Japp_US_Dep't_of_Energy.pdf](#)
[Proposed_EMDF_SEL_C_Letter_12_10_2018_John_Japp.pdf](#)
[image001.png](#)

Hi Ms Kimel:

Yes I received the Meeting announcements, and will plan to attend the two meetings in May. I had last minute conflict for meeting yesterday and was unable to link in.

Some question/observations (see following) if you can make the Board aware in advance--

Has there been a hard RFQ cost/quote requested for the off site disposal option from potential contractors such as Energy Solutions? I am aware that the EM has done some economic analysis (see response below from Jay Mullis) but to what extent has the estimate been substantiated by a quote ?

Has the ORSSA Board addressed the legal and environmental facts communicated by the Southern Environmental Law Center -- see attached ?

The proposed on site disposal option has a number of aspects that have not been considered in the cost or technical/geologic , etc factors of the on site proposed plan.

---Respectfully , Doug

From: ORSSAB@orem.doe.gov
To: dougcolcl@aol.com
Sent: 4/28/2021 7:35:25 PM Eastern Standard Time
Subject: RE: [EXTERNAL] ORSSAB Meetings scheduled for April 28, May 5th, and May 12th

Mr. Colclasure,

I did not see you at tonight's EM & Stewardship Committee meeting, and I noticed you have not accepted the calendar invitations for the other two meetings next month that were sent per your request. Can you please confirm that you received those?

Thank you,

Shelley Kimel

Referenced documents from public comment:

Email from Jay Mullis April 28, 2021

Letter from the Southern Environmental Law Center to DOE August 1, 2019

From: Jay.Mullis@orem.doe.gov
To: dougcolcl@aol.com
Cc: Jay.Mullis@orem.doe.gov
Sent: 4/28/2021 4:19:02 PM Eastern Standard Time
Subject: EMDF Cost Estimate Question

Doug,

Ike White let me know you were looking for the document that details the ~\$700 million in cost avoidance for DOE's Environmental Management program if we construct EMDF. That information is included in the EMDF Remedial Investigation/Feasibility Study (RI/FS) and Proposed Plan, both of which are publicly available.

For your convenience, I have attached the Proposed Plan to this email. The cost information is included in Table 2. The RI/FS is too large to email, but it is available to you in the administrative record found at the DOE Information Center (DOEIC). You can access documents at the DOEIC at this link: <https://doeic.science.energy.gov/>.

Best regards,

Jay

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 615-921-9470

1033 DEMONBREUN STREET, SUITE 205
NASHVILLE, TN 37203

Facsimile 615-921-8011

August 1, 2019

John Michael Japp
FFA Project Manager
Oak Ridge Environmental Management
U.S. Department of Energy Oak Ridge Operations
P.O. Box 2001
Oak Ridge, TN 37831

RE: Continuing lack of meaningful public comment on Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act Waste (September 2018)

Dear Mr. Japp,

The U.S. Department of Energy (Department) has failed to provide an opportunity for meaningful public comment on its proposed plan to build and operate a hazardous and radioactive waste landfill that would corrupt existing greenfields (Proposed Plan).¹ Under established law, the Department failed to “include sufficient information” regarding the Proposed Plan before the first public comment period.² Simply speaking, this means the Department must not only reopen public comment, but also provide the “notice and analysis” necessary to fully inform the public and provide for meaningful public comment.

This is not the first time that we have raised this concern. In a letter dated December 10, 2018, the Southern Environmental Law Center, Advocates for the Oak Ridge Reservation, Tennessee Chapter of the Sierra Club, and Tennessee Citizens for Wilderness Planning commented on the Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Waste (the Proposed Plan).³ We stated that the Proposed Plan was inadequate for many reasons, including the Department’s failure to provide sufficient supporting analysis, data, and information, including an incomplete characterization of the proposed landfill location and proposed regulatory waivers that have not been obtained.⁴ The Proposed Plan also failed to include waste acceptance criteria, discuss long-term effectiveness and permanence of the proposed landfill, disclose its primary

¹ U.S. Dep’t of Energy, *Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act Waste* (Sept. 2018) [hereinafter “Proposed Plan”].

² 42 U.S.C. § 9617(a) (“[T]he notice and analysis published . . . shall include sufficient information as may be necessary to provide a reasonable explanation of the proposed plan”); 40 C.F.R. § 300.430(f)(3) (requiring the lead agency to provide a reasonable opportunity for public comment on “the proposed plan and the supporting analysis and information located in the information repository”).

³ Attachment (Att.) 1, Letter from Christina I. Reichert, SELC, et al., to John Michael Japp, DOE, Dec. 10, 2018.

⁴ *Id.* at 3–4.

balancing criteria, or account for the proposed landfill's long-term liability and costs.⁵ As a result, the public comment period was too hobbled for the Department, based on its "review [of] the public comments . . . to determine if the alternative remains the most appropriate remedial action for the site or site problem."⁶

The Department should not be allowed to rush ahead with a Proposed Plan that could put higher levels of radioactive pollution into nearby waters that Tennesseans use for recreation and fishing, particularly when both the State of Tennessee and the U.S. Environmental Protection Agency have raised concerns that this proposed landfill would impact human health and the environment.⁷ After the close of the comment period, correspondence between the Department, the Tennessee Department of Environment and Conservation (TDEC), and the U.S. Environmental Protection Agency Region IV (EPA Region IV), regarding gaps in the Department's Proposed Plan has only heightened our concern about the Proposed Plan and the Department's ongoing failure to provide sufficient information to support it.

Our concern is further heightened because the Department has a history of failure to adequately address the legacy of waste created as part of its nuclear program.⁸ Indeed, at Oak Ridge Reservation, TDEC has expressed concern that the Department's existing landfill, which

⁵ Att. 2, Letter from Virginia H. Dale, Advocates for the Oak Ridge Reservation (AFORR), to John Michael Japp, DOE, Dec. 3, 2018 [hereinafter "AFORR Comment Letter"]; Att. 3, Comments from Mark Watson, City of Oak Ridge, to John Michael Japp, DOE, at the Public Hearing on the U.S. Department of Energy's Proposed Plan for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Waste, Nov. 7, 2018 [hereinafter "City of Oak Ridge Comments"]; Att. 4, Letter from Axel C. Ringe, Tennessee Chapter of the Sierra Club, to John Michael Japp, DOE, Dec. 10, 2018 [hereinafter "Sierra Club Comment Letter"].

⁶ 40 C.F.R. § 300.430(f)(1)(ii).

⁷ Att. 5, Letter from Chuck Head, TDEC, to David Adler, DOE, Jul. 8, 2019 [hereinafter "TDEC's Groundwater Conditions Letter"], https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/rod-&-supplemental-documents/73212_EMDF_GW_Model_TDEC_07_08_2019.pdf; Att. 6, Letter from David W. Salyers, TDEC, to John A. Mullis, DOE, & Mary S. Walker, EPA, Apr. 5, 2019 [hereinafter "TDEC Formal Dispute Position"], https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/ffs-water-management/73212_EMWFM EMDF FFS Formal Dispute_TDEC_04_05_2019.pdf; Att. 7, Letter from Mary S. Walker, EPA, to John A. Mullis II, DOE, & David W. Salyers, TDEC, Mar. 21, 2019; [hereinafter "EPA Formal Dispute Position"], https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/73212_EMWFM EMDF FFS Formal Dispute EPA_03_21_2019.pdf; Att. 8, Letter from David W. Salyers, TDEC, to Andrew Wheeler, EPA, Jul. 5, 2019, [hereinafter "TDEC Formal Dispute Position Supplement"] https://www.tn.gov/content/dam/tn/environment/remediation/documents/oakridgereservation/emdf-documents/ffs-water-management/73212_EMWFM EMDF FFS Formal Dispute TDEC_07_05_2019.pdf.

⁸ Att. 9, U.S. Gov't Accountability Office, Report to the Chairman of the Subcommittee on Strategic Forces, Committee on Armed Services, U.S. Senate, *Department of Energy: Program-Wide Strategy and Better Reporting Needed to Address Growing Environmental Cleanup Liability* (Jan. 2019); Att. 10, U.S. Gov't Accountability Office, Report to the Subcommittee on Strategic Forces, Committee on Armed Services, U.S. Senate, *Nuclear Waste: DOE Should Take Actions to Improve Oversight of Cleanup Milestones* (Feb. 2019); Att. 11, U.S. Gov't Accountability Office, Testimony Before the Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, *Department of Energy: Environmental Liability Continues to Grow, and Significant Management Challenges Remain for Cleanup Efforts* (May 2019).

is strikingly similar to the proposed landfill, is sited within the water table and is contaminating groundwater and nearby surface water.⁹ It is important that the Department take the time necessary to ensure that this clean up does not repeat, again, the mistakes of the past.

The Department itself has admitted that there are significant information gaps in the Proposed Plan that was provided for public comment, including but not limited to an unfinished characterization of the proposed landfill location and proposed waivers for three applicable or relevant and appropriate requirements from the Toxic Substances Control Act and Tennessee law.¹⁰ Moreover, the Department has still not provided the public with a complete site characterization, groundwater modeling based on actual conditions, or the Department's waste acceptance criteria. These are not the only information gaps that prevented meaningful public comment. At a minimum, the Department should provide:

- 1) Complete data demonstrating the hydrologic conditions underlying the proposed disposal site under both wet and dry conditions;¹¹
- 2) All of the applicable or relevant and appropriate requirements (ARARs) under federal environmental, state environmental, or facility siting laws. The proposed plan includes exceptions to known ARARs before those requirements were evaluated by TDEC and EPA Region IV. Since then, both TDEC and EPA Region IV have insisted that the Department abide by the ARARs and objected to some of the exceptions the Department generated for itself;¹²
- 3) Waste acceptance criteria, including an analytical limit for mercury co-contamination;¹³
- 4) A complete Composite Analysis and a Comparative Analysis of costs for Onsite and Offsite alternatives;¹⁴
- 5) Adequate detail to assess the Department's plan for remediation and disposal of mercury wastes;¹⁵
- 6) Data to assess the proposed landfill's control of radionuclides;¹⁶ and
- 7) Its knowledge of the failures caused by the design, construction, and operation of the Environmental Waste Management Facility landfill (EMWMF landfill) that began receiving waste in 2002, and any other information regarding the short and long-term performance of the EMWMF.¹⁷

⁹ TDEC's Groundwater Conditions Letter.

¹⁰ Proposed Plan at 6, 18, 21.

¹¹ TDEC Groundwater Conditions Letter; AFORR Comment Letter; City of Oak Ridge Comments.

¹² TDEC Formal Dispute Position; EPA Formal Dispute Position; TDEC Formal Dispute Position Supplement; City of Oak Ridge Comments; Sierra Club Comment Letter.

¹³ EPA Formal Dispute Position; TDEC Groundwater Conditions Letter; AFORR Comment Letter; City of Oak Ridge Comments; Sierra Club Comment Letter.

¹⁴ TDEC Groundwater Conditions Letter; AFORR Comment Letter; City of Oak Ridge Comments; Sierra Club Comment Letter.

¹⁵ City of Oak Ridge Comments; Sierra Club Comment Letter.

¹⁶ TDEC Groundwater Conditions Letter; Sierra Club Comment Letter.

¹⁷ TDEC Groundwater Conditions Letter; Sierra Club Comment Letter.

All of this information should have been made available to the public prior to the public comment period. As a result, the Department must “[s]eek additional public comment on a revised proposed plan,”¹⁸ once it has provided the necessary information to the public.

Based on the concerns raised above, we ask that the Department provide meaningful opportunities for public comment. Since the Department failed to adequately perform its required tasks prior to the initial public comment period, it must now, to the extent it has taken any steps to address the numerous deficiencies in the Proposed Plan, provide this information to the public and reopen the public comment period. Before any record of decision is approved, the Department must hold a new public comment period after it has provided the information it is required to provide pursuant to CERCLA and the Department’s regulations.

Sincerely,



Nate Watson*
Southern Environmental Law Center

Christina Reichert
Southern Environmental Law Center

Ellen D. Smith
Advocates for the Oak Ridge Reservation

Axel Ringe
Tennessee Chapter of the Sierra Club

Sandra Goss
Tennessee Citizens for Wilderness Planning

*Tennessee Bar Applicant

Attachments provided via ShareFile: <https://southernenvironment.sharefile.com/d-sd546379b8554d858>

¹⁸ 40 C.F.R. § 300.430(f)(3)(ii)(B).

From: [Virginia Dale](#)
To: [ORSSAB](#)
Subject: [EXTERNAL] Letter to Sec Granholm re EMDF Landfill
Date: Thursday, April 29, 2021 9:44:02 AM
Attachments: [AFORR SC letter to DOE re EMDF April 8 2021.pdf](#)

Dear Ms. Kimel,

Since the ORSSAB will be discussing the EMDF landfill on May 6, could you please share with all of the members of the ORSSAB the attached letter regarding the EMDF. This letter was sent to Secretary Granholm from the Advocates for the Oak Ridge Reservation and the Tennessee Chapter of the Sierra Club to express our concerns with the project. Thank you for your help.

Best wishes,
Virginia Dale
President, Advocates for the Oak Ridge Reservation

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Use caution if this message contains attachments, links or requests for information.

Referenced document from public comment:

Joint letter from The Advocates for the Oak Ridge Reservation and The Sierra Club to Department of Energy Secretary Jennifer Granholm



Tennessee Chapter
P.O. Box 113, Powell TN 37849
www.sierraclub.org/tennessee



Advocates for the Oak Ridge Reservation
209 Whipoorwill Drive, Oak Ridge, TN 37830
www.aforr.info

April 8, 2021

Re: Proposed Environmental Management Disposal Facility (EMDF) in Oak Ridge, Tennessee
To: US Department of Energy Secretary Granholm

Dear Secretary Granholm,

Our two organizations want you to be aware of our concerns about a proposal by the Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) to build a new landfill on the DOE Oak Ridge Reservation (ORR) for radioactive and hazardous waste from ongoing cleanup. Cleanup waste is currently going to a similar landfill that was supposed to have capacity for all planned cleanup. Even after doubling in size from the originally planned capacity, the current landfill has filled faster than expected, largely because space was taken by large volumes of clean soil backfill and by some demolition waste that may have been suitable for disposal in other onsite landfills.

The proposed new landfill site is in an area of the ORR that the OREM End Use Working Group (a federal-state-local community partnership, see <https://www.energy.gov/orem/downloads/end-use-working-group-report>) designated to be kept uncontaminated, while other areas were stipulated to be permanently sacrificed to contamination. 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. Because the proposed landfill is classified as a remedial action under CERCLA (Superfund), it would be built and operated without the prescriptive regulatory oversight that applies to ordinary landfills. Furthermore, OREM will request waivers from some substantive environmental regulations. More information can be found at <https://aforr.info/hazardous-waste-landfill-emdf/> and specifically at <https://aforr.info/wp-content/uploads/2021/03/Radioactive-and-hazardous-waste-disposal.pdf>.

After proper characterization, some of the waste could be sent to approved facilities at dry, isolated locations in the western U.S. that have suitable conditions for effective long-term isolation, unlike wet and populous eastern Tennessee. Instead, OREM has been pursuing its landfill plan for over a decade but has not answered basic questions from environmental groups, local government, and the public. **We ask that information about the four items below be provided and that DOE engage full public participation in discussion of these issues prior to the release of the draft ROD.**

- 1) Details of waste acceptance criteria and requirements for waste. (see [letter from the Tennessee Department of Environment and Conservation dealing with these concerns](#)).
- 2) Full details of the comparative analysis of costs and local jobs for the Onsite and Offsite alternatives.

- 3) The specific waivers of regulatory requirements that would be requested for each of the onsite options and the rationale for each requested waiver.
- 4) Treatment technologies that have been evaluated or are planned to reduce waste volume in the disposal facility and immobilize any mercury waste prior to disposal.

Before an alternative is chosen for onsite disposal, the site for the landfill and the waste to be disposed should be characterized well enough to ensure it can be designed to protect human health and the environment. This characterization is essential to adequately evaluate environmental justice impacts to the nearby Scarboro neighborhood, which was designated as a segregated community during World War II. Furthermore, credible limits on the amount and concentration of hazardous chemicals and radionuclides that can be disposed in a landfill in Oak Ridge must be established and used to determine the volume of waste that should be buried onsite.

OREM told members of the Oak Ridge Site Specific Advisory Board (SSAB) that DOE will likely issue in April a draft Record of Decision (ROD) to build the landfill. We have been told that the questions above will be addressed after a decision is made to build the landfill. However, after the final decision to build the landfill is made, these questions will be answered to fit within the framework of the landfill, not in an objective manner that protects human health and the environment. Moreover, the public deserves to have detailed information about these issues before that decision is made. Wastes from the Manhattan Project and Cold War are not truly being cleaned up if they are merely moved to a previously clean site without adequate consideration for their unique properties and long-term protection of the environment. We appreciate your attention to these concerns.

Sincerely,

Virginia H Dale

Virginia H. Dale
Advocates for the Oak Ridge Reservation, President
Virginia.dale4@gmail.com



Mac Post
Tennessee Chapter Sierra Club, Chair
chapter.chair@tennessee.sierraclub.org

CC:

Tennessee Department of Environment and Conservation
David W. Salyers, Commissioner
Greg Young, Deputy Commission for Bureau of the Environment
Patrick Flood, Commissioner's Designee, Dept. of Environment and Conservation for
Underground Storage Tanks and Solid Waste Disposal Control Board
Colby Morgan, Deputy Director, Remediation
Randy Young, TDEC FFA Project Manager
Environmental Protection Agency
Michael Regan, Administrator
Connie Jones, EPA Region 4 FFA Project Manager
DOE EM
Ike White, Acting Assistant Secretary for the Office of Environmental Management
Roger Petrie, DOE FFA Project Manager

Council on Environmental Quality

Sara Gonzalez-Rothi, Senior Director for Water
Senators Tennessee; Marsha Blackburn and Bill Hagerty

Congressman Chuck Fleischmann

Oak Ridge City Council

Amy Fitzgerald, City of Oak Ridge

Eric Ault, City of Oak Ridge Environmental Quality Advisory Board