



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

APPROVED June 8, 2022 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting virtually via Zoom on Wednesday, June 8, 2022 at 6 p.m. Copies of referenced meeting materials are attached to these minutes. A video of the meeting was made and is available on the board's YouTube site at www.youtube.com/user/ORSSAB/videos.

Members Present

Lorna Hollowell
Amy Jones, Vice Chair
Shell Lohmann, Secretary

Thomas McCormick
Harriett McCurdy
Michael Sharpe

Leon Shields, Chair
Bonnie Shoemaker
Tom Tuck

Members Absent

Thomas Geissberger
Chris Hampel
Noah Keebler
Greg Malone

Marite Perez
Georgette Samaras
Fred Swindler
John Tapp

Rudy Weigel
Zach Wilkin

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Sam Scheffler, OREM
Melyssa Noe, ORSSAB Alternate Deputy Designated Federal Officer (DDFO), OREM
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)
Samantha Urquhart-Foster, U.S. Environmental Protection Agency (EPA)

Others Present

Shelley Kimel, ORSSAB Support Office
Sara McManamy-Johnson, ORSSAB Support Office
Roger Petrie, OREM
Michael Pribish, DOE
Carl Froede, EPA
Craig Van Trees, EPA
Samantha Pack, UCOR
Bob Gellinas, UCOR
Heather Lutz, TDEC
Eileen Marcillo, TDEC
Jared Brabazon, TDEC

Twelve members of the public were present.

Liaison Comments

Ms. Noe – Ms. Noe told members that United Cleanup Oak Ridge began its new contract with OREM on May 23. She said UCOR finished its previous contract, which focused on the cleanup of the East Tennessee Technology Park (ETTP), \$100 million under budget. The new contract has a ceiling of \$8.3 billion for the next ten years, and the scope will focus on Y-12 National Security Complex (Y-12), an finishing soil and groundwater remediation at ETTP.

She also told members the first episode of OREM’s new monthly newscast aired on May 22. The show focuses on raising awareness in the community about the full scope of OREM’s progress and partnership, and episodes will air on community television in Oak Ridge and Knoxville on Sundays at 5 p.m. She said the next episode will air on June 19 and will spotlight member Bonnie Shoemaker.

Ms. Noe then told members OREM had a public meeting about the proposed Environmental Management Disposal Facility (EMDF) on May 17, with more than 100 people attending, including EPA, TDEC, stakeholder organizations, and others. She said the public comment period continues through June 7, and there is a website available with more information.

Ms. Samantha Urquhart-Foster – Ms. Urquhart-Foster said she was grateful for the positive public meeting held recently with DOE. She said one of EPA’s top priorities is groundwater, so she was looking forward to the evening’s groundwater presentation and for the upcoming meeting scheduled to discuss “big-picture items” for groundwater.

Mr. Czartoryski – Mr. Czartoryski said groundwater is also a priority for the State and he added that most of the data from monitoring wells on the Oak Ridge Reservation (ORR) is historical data, so it is important to delineate the extent of the plumes to assist in making the decisions that will lead to the protection of human health and the environment.

Presentation

Ms. Jones introduced Sam Scheffler, presenter for the evening’s topic on Groundwater Remedies.

Mr. Scheffler began his presentation by showing members an overview map of the ORR to illustrate the specific area of the reservation being discussed. He said the focus for the evening is on ETTP’s Zone 1, Zone 2, K-31/K-33 Area, and Main Plant Area in the northwestern portion of the reservation.

Mr. Scheffler told members OREM will soon be looking for more public engagement via proposed plans for the K-31/K-33 Area and the Main Plant Area. He said at that time OREM will have selected a preferred cleanup alternative for those sites. He said OREM is still in the remedial investigation work plan phase for Zone 1.

In the K-31/K-33 Area, Mr. Scheffler said OREM has been collecting groundwater data for more than 30 years and now has a substantial amount of data. He said the data collection is reaching a point of diminishing returns so it’s nearly time to decide on a preferred alternative for the remedy for the area. He told members OREM recently installed five piezometers in the K-31/K-33 footprints at the request of the State during the remedial investigation and feasibility study phase. This is the phase, he said, during which OREM is looking at alternatives or technologies to implement a remedy. He said the sources of the groundwater contamination have been already been remediated.

Mr. Scheffler then went into additional detail on the legacy materials affecting this area and their origins. He said

chromium and nickel was used previously in this area, and levels for these materials have been detected in wells at levels just above and just below the maximum allowable level, which is the highest limit allowable for the materials in drinking water per EPA national drinking water regulations. He said because of those levels, OREM's preferred alternative for the K-31/K-33 Area likely would be monitored natural attenuation. He said this would involve continuing to monitor and allowing natural processes to remediate the materials to below the maximum allowable level.

Next, Mr. Scheffler focused his attention on the Main Plant Area, where he detailed the legacy materials affecting this area and their origins. He said the chlorinated volatile organic compounds (CVOCs), more specifically, trichloroethylene (TCE), have migrated into the ground sub-grade and bedrock in this area. For these materials, he said, OREM is considering proposing a monitored natural attenuation demonstration study. He then told members OREM has considered a variety of technologies and combinations of technologies to address CVOC sources, and the proposed preferred alternative in the proposed plan recently submitted to regulators involves enhanced in-situ bioremediation.

Mr. Scheffler then discussed Zone 1, for which he said OREM is currently working with regulators on the remedial investigation work plan to determine what investigation data is still need for that area and how to best collect that data. He said the current milestone date for a proposed plan for that area is in fiscal year 2025.

After the presentation, board members asked the following questions:

- Mr. Tuck asked for clarification on when the most recent wells were installed in the K-31/K-33 Area. He then followed up to ask if he understood correctly that a handful of the wells were hovering around drinking water quality and whether there was an estimated time frame for how long natural attenuation would take to resolve the K-1401 plume.
 - Mr. Scheffler said the five piezometers referenced earlier were installed around 2019-2020. He confirmed that a handful of wells were hovering around drinking water quality. Regarding the K-1401 area, he said an active remedy – likely enhanced in-situ bioremediation – would be required in that area.
- Mr. Tuck then asked if there was an estimated time frame for when the K-1401 plume would be at the target quality.
 - Ms. Pack said the first interim remedy is addressing the primary source area in the shallow zone, and since the K-1401 plume has migrated to bedrock, it's not part of this decision so an estimated timeframe is not currently available. She said the proposal includes implementing active in-situ bioremediation for five years and then re-evaluating.
- Ms. McCurdy said that in comparing maps of plumes from 2019 to the current maps, some plumes appear to have shrunk and she asked if that was the result of natural attenuation.
 - Mr. Gellinas said one would not see significant natural attenuation over such a short period of time.
 - Ms. Pack added that earlier maps included wide swaths of areas that did not have any wells but were assumed to contain contamination. During the K-1401 treatability study, additional wells were installed and it was discovered that some areas in that swath were not contaminated and the newer maps reflect that.
- Ms. McCurdy then asked whether industrial plumes similar to these exist in other parts of the country for which these remedies could then be later used.

- Mr. Gellinas said these types of plumes are very common throughout the country and in-situ bioremediation is a mature technology that has been used in thousands of sites worldwide. He said the 7000 area at the Oak Ridge National Laboratory (ORNL) had a demonstration pilot several years ago that showed great efficacy, and geology in both areas are similar enough to believe the remedy would be very successful in this area also.
- Mr. Sharpe asked whether the VOCs at the K-1232 plume are making their way into Poplar Creek.
 - Mr. Gellinas said they are, at very dilute concentrations.
- Mr. Czartoryski asked for clarification on adaptive management and he asked for EPA's position on adaptive management.
 - Ms. Pack said adaptive management is a concept in which you try something, see how well it works, and adapt to whether it's working or not. She said you can have formal decision criteria, if/then statements, with which you can learn as you go and adapt to that.
 - Mr. Froede said adaptive management is a tool EPA recognizes. He said it's an iterative tool that allows you to review data and make changes based on that data, and while the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process already has that adaptability, adaptive management gives a better way to document it. He added that the complete development of adaptive management as applied to remediation sites was never fully developed before a new administration came in, so it's not complete. He said EPA has recommended in comments that DOE consider using the CERCLA process to avoid confusion in terms.

Questions from the Public

None

Public Comment

None.

Board Business/Motions

1. Mr. Shields asked for a motion to approve March 9, 2022 meeting minutes.
 - a. **6.8.22.1 Motion to approve March 9, 2022 meeting minutes**
Motion made by Ms. Lohmann and seconded by Ms. Jones. Motion passed.
2. Mr. Shields asked for a motion to approve the May 11, 2022 meeting minutes.
 - a. **6.8.22.2 Motion to approve May 11, 2022 meeting minutes**
Motion made by Ms. Jones and seconded by Mr. Sharpe. Motion passed.
3. Mr. Shields asked for a motion to approve the FY 2024 Budget Recommendation.
 - a. **6.8.22.3 Motion to approve the FY 2024 Budget Recommendation**
Motion made by Ms. Jones and seconded by Ms. Lohmann. Motion passed.

Responses to Recommendations & Alternate DDFO Report

Ms. Noe reminded members the Annual Planning Meeting was scheduled for August 13 in Townsend, Tennessee at the Tremont Lodge and asked members to let staff know if they planned to attend.

Committee Reports

Executive – Mr. Shields asked members to consider participating in leadership positions on the board, noting that several current members will be retiring from the board at the completion of this term.

EM & Stewardship – Mr. Sharpe told members that OREM’s Dennis Mayton attended the last committee meeting to discuss EMDF and waste acceptance criteria. Also during the last committee meeting, members discussed the FY 2024 Budget Recommendation.

Additions to the Agenda & Open Discussion

None.

Action Items

Open

None

Closed

None

The meeting adjourned at 6:55 p.m.

I certify that these minutes are an accurate account of the June 8, 2022, meeting of the Oak Ridge Site Specific Advisory Board.



Leon Shields, Chair



Michelle Lohmann, Secretary

November 9, 2022

Oak Ridge Site Specific Advisory Board

ML/sm