



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

Approved February 14, 2018, Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, February 14, 2018, at the DOE Information Center, 1 Science.gov Way, Oak Ridge, beginning at 6 p.m. A video of the meeting was made and may be viewed by contacting ORSSAB support offices at (865) 241-4583 or (865) 241-4584. The presentation portion of the video is available on the board's YouTube site at www.youtube.com/user/ORSSAB/videos.

Members Present

Leon Baker
Kathryn Bales
Christopher Beatty
David Branch
Richard Burroughs
Martha Deaderick
Belinda Price, Vice Chair

Michelle Lohmann
Leon Shields
Bonnie Shoemaker
Fred Swindler
John Tapp (by phone)
Venita Thomas
Ed Trujillo
Rudy Weigel

Members Absent

Rosario Gonzalez
Eddie Holden
Deni Sobek
Tara Walker¹
Dennis Wilson, Chair

¹Second consecutive absence

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Dave Adler, Acting deputy manager and ORSSAB Alternate Deputy Designated Federal Officer (DDFO),
Department of Energy, Oak Ridge Office of Environmental Management (DOE-OREM)
Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)
Connie Jones, U.S. Environmental Protection Agency (EPA) (by phone)
Melyssa Noe, ORSSAB Alternate DDFO, DOE-OREM

Others Present

Shelley Kimel, ORSSAB Support Office
Chloe Nussbaum, Oak Ridge High School
Brian Henry, DOE-OREM
Bill McMillan, DOE-OREM

Eight members of the public were present.

Liaison Comments

Mr. Adler – Mr. Adler updated members on the current federal budget activities. He reported that another continuing resolution was approved by Congress, giving DOE temporary funding. The budget, he said, has been appropriated through March and Congress has authorized funding caps for the next couple of years that “look pretty good for Oak Ridge,” and include significant amounts of money for local cleanup work.

Mr. Adler also gave an update on the proposed new landfill project, the EM Disposal Facility (EMDF). Work on the project is moving forward after a formal dispute was resolved among DOE, EPA and TDEC. The parties will now craft a proposed plan to release for public comment, which is expected to be available this summer. As part of that process, DOE has issued a contract for drilling testing wells in the preferred site for the landfill in Bear Creek Valley. Sixteen wells are planned and three of those are already complete.

Mr. Czartoryski – No comments.

Ms. Jones – No comments

Public Comment

None.

Presentation

Mr. Henry and Mr. McMillan gave a presentation (Attachment 1) on “Risk Reduction in Excess Contaminated Facilities at the Y-12 National Security Complex (Y-12) and the Oak Ridge National Laboratory (ORNL).”

Mr. Henry began the presentation with an overview of the Oak Ridge Reservation (ORR), which covers 34,000 acres. The ORR he said, includes three sites with cleanup challenges: East Tennessee Technology Park (ETTP), ORNL, and Y-12. The primary driver of risk at ETTP is lifecycle risk – just being there operating the site is a significant expense, said Mr. Henry. At Y-12, environmental risk is the primary risk, particularly reducing mercury in streams, but there is also radiological risk. Y-12 also has close proximity to residential areas with the closes resident, he estimated, being about half a mile away. At ORNL the primary risk is radiological contamination from Office of Science research missions. It’s also challenging to run the cleanup mission alongside an active, high-priority science operation, he said.

DOE has more than 1,600 excess facilities across the DOE Complex with more than a quarter of those at sites on the ORR. Cleanup of these sites came under increased scrutiny in 2015 after an audit by the Government Accountability Office (GAO). At that time Congress provided additional funds to reduce risk at these facilities. Oak Ridge received \$28 million for this task in FY16 and \$45 million dollars in FY17. Mr. Henry noted the FY18 budget is not final, but said the continuing resolution discussed by Mr. Adler is funding OREM at FY17 levels to continue work at both ORNL and Y-12.

Also in 2015 in response to the GAO audit, DOE created the Excess Contaminated Facilities Working Group to address issues raised in the audit, gather data and report progress on the removal of these facilities. The group in 2016 provided a report to Congress on DOE’s plan to address excess facilities. Mr. Henry estimated that it would take about \$6 billion to clean up all the excess facilities that have been identified. As that amount of funding is not available, the goal is to prioritize risk reduction and begin work where feasible, he said. While the money Oak Ridge actually receives is a result of the appropriations process with the House and Senate, OREM is optimistic that there are additional funds available in the budget for excess contaminated facilities cleanup, Henry said. The working group is also looking potential technology development needs to ensure that cleanup is efficient and effective. Some funds are allocated to evaluate different methods to address the hazardous cleanup operations.

Mr. Henry moved on to discussion of specific Y-12 facilities. He noted that in addition to cleanup funds given to OREM, Y-12 has also received funds to reduce risks in buildings on site that are not part of the OREM portfolio. This highlights, he said, the challenges in the fact that Y-12 is a multi-program site with buildings owned by OREM and several other DOE organizations. OREM works closely with all stakeholders to prioritize facilities that are important to all of the programs. Mr. Henry singled out Y-12’s Alpha 4 site (Building 9201-04) as well as the other Biology Complex facilities as the current cleanup focus.

Alpha 4 has been idle for about 25 years, he said. Some of the first FY16 funds spent funded roof repairs for the building. OREM has learned over time that infiltration of rainwater into the facilities is one of the biggest enemies to future cleanup, he said, and this was a primary example. Work started in FY17 and continuing into FY18 includes removal of mercury and contaminated equipment on the west side of the Alpha 4 building. The equipment was used in the separation of lithium isotopes. OREM has removed more than two tons of mercury to date from this equipment, Mr. Henry said. Also removed were 20 to 30 drums of grit from around the facility that was contaminated with mercury and sent off for treatment. Work is expected to be finished on that portion of the site late this summer and then move to similar equipment on the east side of the facility. OREM has learned a

great deal while cleaning up the west side of Alpha 4 that will improve cleanup of the other side of the building, Mr. Henry said. Planned efforts will be more cost effective and reduce worker exposure to mercury when work begins later this year.

Building 9207 is the largest of the remaining buildings at the biology complex and OREM expects to have a contract to start cleanup activity on it soon. Funds from FY17 were used to characterize the entire Biology Complex to understand the hazards involved and file plans with regulators. Based on funding, OREM expects to begin pre-demolition activities on Building 9207 in the near future.

Building 9210, also known as the Mouse House, is the second largest building in the complex. There were some early uranium operations in this building, but primarily it was used for genetics research and biological research, Henry said. Contingent on funding for FY18, OREM believes there will be money to address the entire Biology Complex and potentially have decommissioning and demolition complete by 2021.

There are also several smaller buildings associated with the Biology Complex. One, known as the Pigeon Quarters, has degraded to such an extent that work crews cannot enter the building. OREM has contracted with a small business to demolish that building this spring as well as a second small structure known as the Radiological Source Shed. OREM will perform characterization on the remains, but no radiological contamination is expected in these buildings, Henry said. There are two mechanical-electrical buildings that are attached to Building 9207 that will also be addressed as part of the pre-demolition efforts that will start this year.

At this point, Mr. McMillan took over the presentation to talk about priorities at ORNL and work planned there in the near future.

Building 3026, a former hot cell facility, was initially supposed to be demolished with Recovery Act funding, but cleanup workers ran into unexpected hazards during that time that caused work to be suspended, Mr. McMillan said. The current work is to try and stabilize these facilities and keep them maintained so they will be safe to enter when funding is available. Through those efforts, Building 3026 has been downgraded from a Category 3 facility to a radiological site after removal of some of its contaminated equipment. The FY16 work scope for Building 3026 addressed a leaking roof over the hot cell bank. Work performed included removing a wind enclosure and sealing the roof. In addition, a tunnel connecting the hot cells was found to be a collection area for water leaks. While the roof repairs solved much of the leaking issues, that tunnel is now monitored and water is periodically pumped out and treated.

Buildings 3028 and 3029 are also former hot cell facilities that have been shut down for more than 30 years. These two facilities still contain hot cells with residual contamination. OREM's goal in these buildings was to immobilize contamination in hot cells and prevent any spread, Mr. McMillan said. Fogging of the cells was completed just a few weeks ago and samples taken afterward show that it was successful in containing loose contamination. Fogging the cells involves inserting a tube into the cell and blowing a fine mist of material into the chamber that then dries to create a surface seal. In some cases multiple coats of the fixative are used to ensure everything is contained, he said.

Building 3517 is one of the major facilities at the site. It's in "standby condition, said Mr. McMillan, meaning it is stable and not in poor repair like some of the previous buildings, but facility monitoring recently showed that the HEPA filters for ensuring clean airflow through the building had reached the end of their useful life, which is about 10 years, he said. They were replaced with new filters in December 2017 and the contaminated filters were packaged and sent for safe disposal.

Building 7500, the Homogeneous Reactor Experiment, was originally a nuclear safety pilot project that operated from 1952 to 1961. This building also had problems with water leakage, which caused mold in the facility and damage to the façade and ceilings. These hazards complicated the work and made it dangerous for workers to enter the building to maintain the surveillance functions. OREM made the building a priority for remediation. Work started in FY16 with removing combustible materials to allow shutdown of fire protection requirements,

which will save on maintenance costs. Once that was done, efforts began to remove asbestos from piping, ceilings and walls to stabilize the building. With the elimination of fire hazards and asbestos removed, workers now require much less personal protective equipment to enter the building.

Building 7503, the Molten Salt Reactor Experiment, is one of the few buildings to remain partially operational, said Mr. McMillan. That's due to the remaining fuel salt and drain tanks with material still in them that generates a dangerous hydrofluoric acid gas that is pumped out regularly to maintain safe pressure levels. With previous funds, OREM performed an engineering evaluation for the building to determine associated risks and how to reduce them. Some things it learned was there were electrical system deficiencies that need to be improved to maintain the ventilation system. Electrical improvements have since been made the central ventilation system. Efforts to engineer a new ventilation method for the tank is also important – a continuous ventilation will eliminate any pressure buildup. Funds from the anticipated FY18 budget will be used to collect samples of the headspace gases in the tanks, which will be used to support the design of the ventilation strategy. Once ventilation systems for the tanks are taken care of further electrical upgrades will be done for essential equipment and personnel will be relocated to allow for minimum surveillance and maintenance of the facility, reducing risks to workers and costs.

FY18 funds will also be used to address liquid/gaseous waste operations equipment removal and Moyno Pump replacement for tanks in the Bethel Valley storage tank area, Mr. McMillan said. Some of the tanks there have accumulated sludge that is periodically pumped out. There are two pumps in a pump vault and one of those pumps has failed. Complicating the effort to replace the pump is surplus equipment on top of the pump vault that was used in the early 2000s to move sludge the last time removal was needed. The equipment will need to be removed to allow the pump to be replaced. Also with liquid/gaseous waste operations, OREM has performed a couple of engineering evaluations over the past couple of years that have identified some improvements that can be made to the waste operations to consolidate operations at Building 3608. However, additional evaluations are needed to determine the condition of above and below ground piping, facility electrical conditions, the Liquid Low-Level Waste evaporator feed system, and tritium treatment options.

The cost for the MSRE activities associated with the headspace gas sampling, electrical improvements and achieving minimal surveillance and maintenance is about \$10 million, Mr. McMillan said, that would be spent over the next year or two.

After the presentation board members asked the following questions.

Mr. Swindler: Could you provide some specifics on the process for fogging the hot cells?

Mr. McMillan said it's a product called "CC Fix" that has been used a lot for a fixative for contamination.

Basically the material is sprayed through a fogging machine hose. It creates a fine mist that coats all the walls and equipment. Then it's allowed to dry and seal itself similar to hairspray.

Mr. Trujillo: The pre-remediation activities is what's happening now right at the two sites?

Mr. McMillan said no, it's not decommissioning activities where we remove material and clean facilities to support decommissioning and demolition (D&D). The activities we are taking today allow us to continue surveillance and maintenance functions. Stabilization is for long-term safety. Mr. Trujillo also asked, for the actual decommissioning, is there a more fixed target as far as time goes? Are they part of target date vision? Mr. McMillan said the OREM lifecycle baseline has an overall schedule for when we tackle D&D activities for all of our facilities. For ORNL most of that is in the mid 2020s. Mr. Henry said Oak Ridge has been fortunate with the plus ups in the last few years and potentially good news now in the FY18 budget. Many facilities have been able to be moved up on the timeline. The Biology Complex facilities are an example. The more that plus ups continue, the sooner we are able to get to actual D&D.

Ms. Price: Regarding the two slides colored to indicate excess contaminated facilities and ones that have work underway – other than putting together a list of high risk facilities, is there a consideration given to demolishing facilities in a particular area that could make room to add new facilities? Mr. McMillan said the overall plan does

have some priorities on laboratory needs and goals for its mission. However, most lab development is focused right now to the east of the central campus area where these excess facilities, mostly are located. Other development has been done to the far west also. The lab is waiting on us to do the cleanup, but they are interested in the additional footprint after remediation. ORNL has not indicated an urgent need for new development in the central campus area. We evaluated all the facilities and ranked them based on risk. Mr. Henry said when a specific future need is identified at these locations, I think that goes a long way to making sure we get cleanup funds. For example the National Nuclear Security Administration (NNSA) has identified a future mission need for the Biology Complex area. Also keep in mind at Y-12 the yellow is only where OREM has facilities. Some other facilities owned by other organizations could also be considered yellow because those organizations are undertaking their own risk reduction work.

Mr. Trujillo: The fact that some buildings are owned by OREM and some are the property of NNSA or others ... is there an idea of putting together something as partners as far as funding? Mr. Henry said OREM routinely meets both with different Office of Science and NNSA program representatives to evaluate the priority list and to touch base as we get new funding. Mr. Trujillo also asked, is the urgency of obtaining funds similar with the other programs outside of OREM? Mr. Henry said currently, we see from the budgets coming out, there is a significant potential increase on the NNSA side. That may translate into the ability to empty and turn over some of those buildings to OREM sooner. But we can't make plans until the budget is final. Mr. Trujillo also asked, once the Mercury Treatment Facility is done the buildings will fall faster, yes? Mr. Henry said the approach with building the Mercury Treatment Facility is to ensure we don't delay any cleanup.

Mr. Czartoryski noted that he would like to express appreciation to the federal portfolio directors regarding the complexity and scope of the work. He reminded everyone to remember that while in the presentation the excess facilities contamination group was established in 2015, they should keep in mind there was awareness of excess facilities much before that, but there was no funding. What OREM is doing now, he said, is dealing with facilities with deferred maintenance and that were not deactivated, he said. The decision matrix of what facility to demo and what to maintain are very hard that these gentlemen deal with.

At the close of the presentation portion of the meeting, Ms. Price reminded members of the tour of excess facilities in the next week and to sign up.

Motions

2/14/2018.1

Ms. Price motioned to approve the meeting agenda. Mr. Weigel moved to approve and Mr. Branch seconded. The motion was approved unanimously.

2/14/2018.2

Ms. Price motioned to approve the November minutes. Ms. Thomas moved to approve and Mr. Beatty seconded. The motion was approved unanimously.

Alternate DDFO Report

Ms. Noe said DOE is working on approving the new member packages. We need a bit more information and then hope to get them out no later than the end of February, she said, at which point DOE headquarters will need to approve the selections.

Committee Reports

EM & Stewardship – Mr. Swindler went over the November 9, 2018 EM&S meeting on a presentation by Steve Cooke on land transfer and deed restrictions at ETPP. The transfer process takes about 2 years. Mr. Cooke also talked about enforcement of deed restrictions and any changes in use of land. Members asked a number of questions including about discharge permits, funding, discussion of future actions if contamination is discovered.

Executive – The committee met on February 7, 2018. Ms. Price noted that staff had sent out last year's recommendation on excess facilities to issue group managers to inform their recommendation this year. The committee also decided to begin including incoming correspondence in members' monthly meeting packets. Ms. Price mentioned the board may give presentations about the board to the community. She noted the presentation needs to be updated but encouraged members to take initiative to do a presentation with a community group.

Open Discussion

Ms. Price asked Martha Deaderick to give an update on the Center for Oak Ridge Oral History. Ms. Deaderick said the organization has completed more than 700 interviews and is looking to add more. She informed members that anyone may participate, not just those who have been in Oak Ridge since the beginning – anyone with interest or experience may contribute. The contact for this is Jordan Reed at the public library, she said.

Ms. Price reminded members that they could join issue groups at any time.

Ms. Lohman gave a quick overview of her attendance at a TDEC wastewater permit meeting involving an NNSA permit at Y-12. She noted she was concerned about the request to remove some restrictions on the permit by DOE/OREM. The request is based on the Mercury Treatment Facility being operational, which Ms. Lohmann noted would not be for several years. She offered to share her notes with other board members. She also said she submitted a comment on the permit.

Announcements and Other Board Business

ORSSAB's next scheduled meeting will be Wednesday, March 14, 2018 at the DOE Information Center. The topic will be Ongoing Efforts to Assure Waste Disposal Capacity. Issue Managers: Bales, Burroughs, Holden, Shields, Shoemaker, Tapp, Thomas, Trujillo. (*Note: This meeting was later cancelled and the topic rescheduled for the April 11 board meeting.*)

Mr. Burroughs noted there was a second consecutive absence by Ms. Sobek. She was also not present at tonight's meeting. He will continue trying to contact her.

Action Items

Open

1. Staff will send an email to board members to gauge their interest in giving presentations about the board to community groups. **Completed by email 2/15/2018**

Closed

None.

Ms. Price adjourned the meeting at 7:17 p.m. Attachments (1) to these minutes are available upon request from the ORSSAB support office.

I certify that these minutes are an accurate account of the February 14, 2018, meeting of the Oak Ridge Site Specific Advisory Board.

Richard Burroughs, Secretary



Dennis Wilson, Chair
Oak Ridge Site Specific Advisory Board
DW/smk

4/12/18