



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

Approved November 9, 2016, Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, November 9, 2016, at the DOE Information Center, 1 Science.gov Way, Oak Ridge, Tennessee, 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

Kathryn Bales
Christopher Beatty
Martha Deaderick
Rosario Gonzalez
David Hemelright
Eddie Holden
Howard Holmes
Greg Paulus
Belinda Price
Elizabeth Ross
Deni Sobek

Rudy Weigel
Dennis Wilson
Phil Yager

Members Absent

Leon Baker
Richard Burroughs
Mike Ford
Mary Smalling
Fred Swindler
Venita Thomas
Ed Trujillo

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Dave Adler, 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, Environmental Protection Agency (EPA) Region 4 (via telephone)
Jay Mullis, Deputy Manager for OREM and ORSSAB DDFO
Melyssa Noe, ORSSAB Alternate DDFO, DOE-OREM

Others Present

Brian Henry, DOE
Ashley Huff, ORSSAB Support Office
Bill McMillan, DOE
Pete Osborne, ORSSAB Support Office

Nine members of the public were present.

Liaison Comments

Mr. Mullis –

Mr. Mullis provided context for the feature presentation on DOE's excess contaminated facilities at the Y-12 National Security Complex (Y-12) and the Oak Ridge National Laboratory (ORNL). Funding appropriations for fiscal year (FY) 2016 have allowed OREM to begin risk-reduction and stabilization efforts at these facilities. DOE is working to address excess contaminated facilities across the complex,

but some of the worst of these facilities are located in Oak Ridge. Even though these facilities are slated for future decontamination and decommissioning (D&D), risk-reduction activities prior to demolition are vital to ensuring worker safety, protecting the environment, and stabilizing deteriorating structures so that they remain safe for future operations.

Ms. Jones – No comment.

Mr. Czartoryski – The State of Tennessee fully supports risk reduction, including the removal of excess contaminated facilities from the Oak Ridge Reservation (ORR). TDEC extends support in working with DOE on this mission.

Public Comment

None.

Presentation

Bill McMillan and Brian Henry, DOE Portfolio Federal Project Directors, delivered a presentation on “Risk Reduction in Excess Contaminated Facilities at ORNL and Y-12” (Attachment 1). They discussed notable high-risk facilities in Oak Ridge and detailed the risk-reduction activities made possible with FY16 funding appropriations for excess facilities.

Background

Following a 2015 audit by the Government Accountability Office (GAO), DOE’s excess contaminated facilities have come under increased scrutiny in the U.S. Not only do these deteriorating structures pose risks to workers and the environment, but they also carry the burden of high maintenance costs for the government programs that continue to manage them. Some of the worst of these facilities are located in Oak Ridge, including the notorious Alpha 5, considered to be at the top of the list. There are approximately 350 excess contaminated facilities located on the ORR, and nearly half of those are classified as high risk, accounting for forty percent of the high-risk facilities in DOE’s nationwide inventory.

OREM began to address its own concerns for excess facilities and their rising maintenance costs prior to the GAO audit in 2015. In 2007, an Integrated Facilities Disposition Program (IFDP) was developed to consider the entire scope of Oak Ridge cleanup, including the excess facilities from Y-12 and ORNL expected to be transferred to OREM’s responsibility in the future. The IFDP partnered EM with operating programs at Y-12 and ORNL to identify facilities, conduct walkthroughs, perform research and characterization, and assess the overall scope and hazards likely to be encountered in these facilities. The expectation at that time was that D&D would be imminent, and the assessments in 2008 estimated a \$9-14 billion cost with a 25-year duration for the Oak Ridge cleanup program. Today, however, funding for D&D has been pushed out much further in the future, with the first removal operations scheduled to begin at Y-12 sometime in the 2020s.

Increased attention from the GAO audit contributed to funding “plus-ups” for FY16. OREM received \$28 million for excess contaminated facilities in FY16 and has used those funds to help stabilize structures for long-term stewardship until D&D begins. Excess facilities funding covers a range of risk-reduction activities, including removal of hazardous material, some repairs and maintenance, sampling, characterization work, and meeting documentation requirements. It does not cover demolition and is specifically meant to reduce the risks of continued degradation until D&D can be funded in the future.

Below is an overview of OREM’s priorities at ORNL and Y-12 for utilizing excess facilities funding in the current and near term.

Excess Facilities Work Scope at ORNL

Building 7500—Building 7500, the Homogeneous Reactor Experiment (HRE), was built in the 1950s and operated until the 1980s with missions in chemical processing and reactor research. Prior remedial actions removed accessory buildings and a flush pond. Current work scope focuses on removing combustibles, asbestos, and standing water in the basement of the building. The first activity funded with excess facilities appropriations in FY16 was the removal of combustibles from HRE. In addition to eliminating a fire hazard risk, this action allowed OREM to deactivate the heat detection system and save maintenance costs. Additional funding will be applied toward removing the asbestos and addressing the accumulation of water in the basement. Asbestos and mold creates a breathing hazard for workers.

Building 3038—Building 3038 is a former isotope laboratory that was used for research in shipping and production. Prior remedial actions made possible with funding from the 2009 American Recovery and Reinvestment Act (ARRA) removed legacy materials from the facility. However, glove boxes and radioactive isotopes remain, contributing to a classification as a Category 3 nuclear facility. Current work scope is focused on reducing the contamination level so that the facility can be downgraded to a less hazardous rating as a radiological facility, which would not only reduce risks but would simplify further surveillance and maintenance activities. Planned actions include stabilizing loose contamination in glove boxes. If funding permits, glove boxes will be removed altogether and put into inventory for waste disposition. A large HEPA filter on the roof will also be removed. OREM is currently doing further characterization of the inventory, which will dictate the next steps for remedial actions.

Building 3026—Building 3026 is a former hot cell facility that was used in isotope reduction. Previous remedial actions removed the wooden structure around the hot cells, but two hot cell structures and the foundations remain. FY16 work scope for Building 3026 addressed a leaking roof. Work performed included removing a wind enclosure and sealing the roof. In addition, a tunnel connecting the hot cells was found to have water inside, possibly entering through the wind enclosure. OREM is pumping out the water and characterizing the samples to determine the radiological content. The tunnel will be observed to determine if water continues to enter now that the roof has been sealed and to assess any further actions that might be necessary. The concrete pedestals for the hot cell foundations were enclosed in concrete to contain loose contamination and prevent potential runoff in rainfall.

Buildings 3028 & 3029—Buildings 3028/29 are two hot cell facilities used in past production and research efforts. Materials were removed in the 1990s, but the hot cells themselves along with some loose contamination remain. Planned work scope includes fogging to fix loose contamination in order to reduce worker hazards and make future remedial actions in the buildings easier to perform.

Excess Facilities Work Scope at Y-12

The excess contaminated facilities at Y-12 are operated by various programs, including EM. The majority are currently owned by the National Nuclear Security Administration (NNSA) and some by Nuclear Energy (NE) and the Office of Science, but they will all ultimately become EM's responsibility in future transfer agreements.

Biology Complex—The Biology Complex is an Office of Science facility. Four of the twelve buildings in the complex were demolished with funding from the ARRA. The remaining buildings have been inactive for over a decade and are in deteriorating conditions. Most of the loose materials were cleaned out prior to deactivation, but water infiltration has contributed to further degradation. Air quality has a major impact on worker safety. Airborne risks like asbestos, mold, and animal droppings require workers to dress out fully with respirators and further constrain the risk-reduction work that needs to be

performed. Before the Biology Complex can be demolished, characterization to determine the extent of contamination is necessary and will help determine what needs to be removed, where waste can go, and other related remedial actions.

Alpha 4—Alpha 4 is a nuclear facility originally used for lithium separation. It has been transferred to EM. The building contains hazardous materials, such as mercury and asbestos. Although deteriorating, the building remains in stable condition. A new roof and additional repairs, funded with FY16 plus-ups, will help maintain Alpha 4 in good condition for the next five to ten years.

COLEX—The lithium separation done at Alpha 4 required large amounts of mercury as feed material. A column exchange (COLEX) process was used to supply the mercury feed for operations at Alpha 4, and the large equipment used for that process is stored outside of the building. The COLEX equipment has some mercury contamination and continues to rust and degrade. Characterization of the equipment on the west side of Alpha 4 is being done now to determine the waste disposal pathway. Sealing work will also be performed to prevent an environmental release from the rusting out of equipment.

Processing equipment on the east and south side of Alpha 4 will also be addressed as funds are available. OREM expects to complete removal of the west COLEX equipment and complete characterization of the east and south in 2017. Some removal work on the east and south COLEX may also be possible with funding in FY17.

After the presentation, board members and guests raised the following questions:

Mr. Hemelright—In regards to Building 3026 at ORNL and the hot cells encased in concrete, will those be torn down and removed? Mr. McMillan said that, yes, that is the plan for future D&D. Mr. Hemelright also asked about the concrete pads poured on the west hot cell bank. Mr. McMillan said that future D&D actions would chip out and remove these pads and the overall building pad would be removed as well.

Mr. Wilson—On the basement of Building 7500, is that water runoff from drainage, or it is contaminated? Mr. McMillan said that samples were being collected to determine the level of contamination. The water is believed to be relatively clean groundwater that has seeped in through the foundation.

Mr. Beatty—In prioritizing excess facilities, what were some of the criteria used in your rating and how did those criteria factor in community impact? Mr. McMillan explained that the initial analysis looked at the facilities and hazards in them in relation to three factors: Are they an impact to the worker? Do they pose a risk of release to environment? Is there a risk for offsite release? If all three variables were probable, for instance, that facility would be higher on the priority list. Mr. Mullis said that OREM also involved its partners at NNSA and the Office of Science for their input on what facilities were most problematic or impeding modernization. Those needs also entered into OREM's priorities. Mr. McMillan added that OREM also considered what work, if not performed now, would make cleanup more difficult or more expensive in the future. Water, for instance, contributes to mold, corrosion, and further building degradation, so water issues would be a high priority. Mr. Mullis also pointed out that OREM does not know from year to year how much funding will go to excess facilities, so another factor in determining scope for FY16 was to address work that could be completed with the current funding. Thus, OREM undertook discrete scopes of work, for the most part. Most of the current work will carry over into FY17 with the hope that additional funding will allow OREM to complete that scope as well as initiate some other projects.

Mr. Yager—In 2008 the IFDP received Critical Decision 1 approval and estimated a \$9-14 billion cost range and a 25-year duration. What has that cost range and duration become today? Mr. McMillan

explained that some of the work in that original \$9-14 billion range has already been performed due to ARRA funding. The remaining capital project is now less than the \$9-14 billion estimate. Mr. Mullis said the current estimate is \$5-9 billion. That range reflects work scope pulled out because it was already completed under the ARRA. Also, the IDFP estimate had originally included estimates for new construction. In 2007, there was interest in replacing ORNL's Liquid Gaseous Waste Operations with a new plant, but the Office of Science is no longer considering that option. There were also plans to replace the Transuranic Waste Processing Center with a new center that would support the Radiochemical Engineering Development Center and the High Flux Isotope Reactor at ORNL, but that is no longer the case. Those two projects were high capital costs, and they have been removed from current estimates. The current estimate of \$5-9 billion includes D&D capital projects only, so it is lower than the original estimate.

Mr. Weigel—In regards to Building 3026 and water in tunnel, has any of that leaked out or do you anticipate a plume emanating from that tunnel? Mr. McMillan explained that Building 3026 is in an area with a known plume from past operations. The source of the water in the tunnel is uncertain. It could be in-leakage from groundwater or from rainfall. Samples and observations will help to determine the source. Mr. Weigel also asked about HRE and the pond remediated in the 1990s. He asked if the stabilization occurred in the 1990s or the actual remediation. Mr. McMillan explained that there was a pond located near HRE where they flushed water from the operations in the building. It was remediated and capped, but he did not know the exact date. Mr. Weigel asked if the pond had been removed. McMillan said that the pond had subsequently been removed. (Note: The pond was remediated and capped in the 1990s. It was subsequently dug up and disposed in the 2000s.)

Mr. Paulus asked about the combustible material in HRE/7500. He asked if the material was contaminated and, if so, where was it disposed. Mr. McMillan said that it was low-level waste, and it was shipped offsite to the Nevada National Security Site.

Ms. Ross—For the roofing materials that are being replaced at ORNL, are you testing new materials before you install them to make sure they do not contain asbestos? She clarified that her concern was for the roofing materials used in roof replacement work at ORNL. Mr. McMillan explained that OREM was not installing new roofing at ORNL. He said that a roofing seal was placed over Building 3026. It was a polyurethane, plastic liner, rather than a new roof.

Ms. Ross elaborated to explain that asbestos-containing materials are still widely sold in the U.S. She said it was a common misconception that they are not sold, and they can be found in any building supply store. These materials are routinely installed in abatement projects where asbestos is unknowingly put back into structures, increasing abatement costs further down the line.

Mr. Griffin, from the Energy Technology and Environmental Business Association, asked about the report on excess contaminated facilities compiled by the Facilities Working Group (FWG). When will that be finalized, and will there be enough detail in that report to serve as a basis for budget projections on these facilities? Mr. Mullis said that he did not know when or if the report would be released. These reports require input from multiple program offices (e.g., EM, NNSA, Office of Science, and NE), and they are then reviewed by Congressional Affairs and the General Counsel. Currently, the document is going back and forth from DOE and the Office of Management and Budget (OMB). Similar reports in the past have never made it out of OMB, so it may or may not be released to Congress. Mr. Mullis confirmed that the last version of the report he had seen did have budget projections and life-cycle estimates.

Ms. Jones asked for further details about the budget information included in the FWG report. Is there enough detail that the information could be used to project Federal Facility Agreement milestones for

implementing these projects? Mr. Mullis said no, the report would not have enough detail at that level. It is a high-level report on overall departmental budget estimates only and would not cover individual project estimates. So many offices are involved that the report cannot cover those specifics.

Ms. Jones asked if the framework OREM used for the high-level budget estimates in that report could be used as a foundation for building a more detailed, milestone-oriented budget. Mr. Mullis explained that the input OREM put into the high-level budget estimate was drawn from the budget information already shared with EPA through OREM's Dynamic Planning Model (DPM). The DPM was the basis for the input OREM provided for the FWG report.

Mr. Beatty asked about the waste disposal pathway for materials removed from Y-12. How much of the waste you are removing from excess facilities will be disposed locally? Mr. Henry explained that currently for excess facilities work, other than personal protective equipment, the only waste being generated is the mercury-contaminated equipment stored outside Alpha 4. Because of the mercury hazard, the waste will go offsite for treatment and disposal. Some minor amounts of waste generated that contain only minor amounts of mercury (i.e., detectable but not hazardous) can be disposed onsite at the EM Waste Management Facility.

Committee Reports

EM & Stewardship

Mr. Wilson reported –

- At the October 26, 2016, meeting, the EM & Stewardship Committee reviewed the board presentation by Mr. Mullis on the state of the OREM cleanup program. Tonight's presentation addressed many of the board's comments following the October 12, 2016, meeting by providing additional details on risk-reduction activities.
- The next EM & Stewardship Committee meeting is scheduled for Wednesday, November 30, 2016, at 6 p.m. Discussion will follow on the November 9, 2016, presentation on excess contaminate facilities in Oak Ridge. Please note that the meeting will occur one week later than usual in order to accommodate the Thanksgiving holiday.

Executive

Ms. Price reported –

- The Executive Committee formed an ad hoc committee to make arrangements for an ORSSAB holiday gathering.
- By request of a former board member, a new item has been added to the monthly meeting notebooks. A waste definitions table will now be included.
- The next meeting of the Executive Committee is scheduled for Wednesday, January 4, 2016, at 6 p.m.

Announcements and Other Board Business

- A site tour of excess contaminated facilities has been scheduled for Monday, November 28, 2016, at 3 p.m., departing from New Hope Visitor's Center in Oak Ridge. The tour will provide an overview of key excess facilities at Y-12 and ORNL. Board members interested in attending should contact staff at Ashley.Huff@orem.doe.gov asap.
- ORSSAB's annual holiday gathering is scheduled for December 15, 2016, at 5 p.m. at Aubrey's Restaurant in Oak Ridge. The event will consist of a group dinner, open to all board members. Significant others are welcome. Please RSVP to Ashley Huff at Ashley.Huff@orem.doe.gov by November 23, 2016.

Alternate DDFO Report

Ms. Noe – Ms. Noe acknowledged an outstanding recommendation from the board on the proposed EM Disposal Facility (EMDF). DOE is reviewing the recommendation and will issue a response by the December deadline.

Motions

11/9/16.1

Mr. Hemelright moved to approve the minutes of the October 12, 2016, board meeting. Mr. Paulus seconded and the motion passed **unanimously**.

Action Items

Open Action Items

None.

Closed Action Items

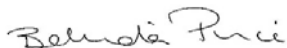
1. Mr. Adler will update Mr. Czartoryski and the board on the status of a response to TDEC's letter concerning a request for additional EM milestones. (*Carryover from 3/9/16*). **Closed.** OREM has provided EPA and TDEC with the final FY+2 Identified Priorities List (including priorities identified by regulators and ORSSAB) submitted in the FY18 budget request to HQ. In addition, DOE has renegotiated FY18 milestones with regulators. New Appendix E milestones for FY 2017-2019 are available at http://www.ucor.com/_docs/ffa/appendices/appende.pdf.
2. DOE will schedule a technical overview of the proposed EMDF for the February 8, 2016, monthly meeting. **Closed.** Mr. Henry's presentation on waste disposal capacity is scheduled for February 8, 2016. He is expected to provide a technical overview in response to the board's inquiry.

The meeting adjourned at 7:18 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 November 9, 2016, meeting of the Oak Ridge Site Specific Advisory Board.

Dave Hemelright, Secretary



Belinda Price, Chair
Oak Ridge Site Specific Advisory Board
BP/ach

January 12, 2017