



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Approved April 10, 2013 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, April 10, 2013, at the DOE Information Center, 1 Science.gov Way, Oak Ridge, Tenn., beginning at 6 p.m. A video of the meeting was made and may be viewed by contacting the ORSSAB support offices at (865) 241-4583 or 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

Jimmy Bell
Robert Craig
Lisa Hagy
Janet Hart
Bob Hatcher
David Hemelright, Vice
Chair

Bruce Hicks
Chuck Jensen, Secretary
Jennifer Kasten
Ross Landenberger¹
David Martin, Chair
Donald Mei

Greg Paulus
Belinda Price
Coralie Staley
Thomas Valunas
Sam Yahr¹

Members Absent

Alfreda Cook
Howard Holmes
Jan Lyons
Fay Martin
Scott McKinney
Robert Stansfield
Scott Stout

¹Student Representative

Liaisons, Deputy Designated Federal Officer, and Federal Coordinator Present

Dave Adler, Liaison and Alternate Deputy Designated Federal Officer, Department of Energy-Oak Ridge Office (DOE-ORO)

Susan Cange, DOE-ORO Deputy Manager for Environment Management (EM) and Deputy Designated Federal Officer

Connie Jones, Liaison, Environmental Protection Agency (EPA), Region 4

Melyssa Noe, ORSSAB Federal Coordinator, DOE-ORO

John Owsley, Liaison, Tennessee Department of Environment and Conservation (TDEC)

Others Present

Terry Cothron, DOE-Y-12 National Security Complex

Susan Gawarecki

Spencer Gross, ORSSAB Support Office

Jim Kopotic, DOE-ORO

Bill McMillan, DOE-ORO
Norman Mulvenon
Pete Osborne, ORSSAB Support Office
Chris Thompson, TDEC
Laura Wilkerson, DOE-ORO

Ten members of the public were present.

Liaison Comments

Mr. Adler – no comments

Ms. Cange – The President presented his FY 2014 budget request to Congress on this date. Ms. Cange provided a link to the full DOE budget request (http://energy.gov/sites/prod/files/2013/04/f0/FY14_DOE_Budget_Highlights_Final.pdf). In summary she said the EM budget request for FY 2014 across the complex is down from FY 2012 by about \$100 million to \$5.6 billion. The Oak Ridge EM budget request is about \$413 million, down by approximately 1.3 percent from FY 2012. She noted the Oak Ridge budget request does not include money for safeguards and security, which is about \$18.8 million. She said that added to what is noted in the Budget Highlights equals the \$413 million.

A public workshop on the DOE Oak Ridge EM budget request for FY 2015 is scheduled for Tuesday, April 23 at 4 p.m. at Pollard Auditorium in Oak Ridge. The purpose of the workshop is to discuss DOE Oak Ridge EM accomplishments and plans and ask for public comment on cleanup priorities. Those comments will be factored into the budget request to DOE Headquarters. Ms. Cange invited board members to attend and participate in the workshop.

Mr. Owsley – Mr. Owsley introduced Ms. Thompson as TDEC's director of external affairs for the Knoxville TDEC field office.

Ms. Jones – no comments

Public Comment

Mr. Mulvenon asked those present to pay close attention to presentations. He also encouraged the departing student representatives to talk to their classmates about their experience on the board.

Ms. Gawarecki said the ability for the Oak Ridge EM Program to dispose of transuranic (TRU) waste in Oak Ridge is key to the cleanup of the Oak Ridge Reservation (ORR). She said there have been delays in characterization of TRU waste because of budget issues and disposal tends to be delayed as well. She said the opportunity to dispose of Oak Ridge remote-handled TRU waste at the Waste Isolation Pilot Plant in New Mexico can't be lost before the plant closes. She said occasionally the plant has permit changes and she thinks ORSSAB should be monitoring the situation closely and be prepared to comment on changes that could affect disposal of Oak Ridge TRU waste. She suggested setting up a fast track process so the board can make comments quickly on issues that affect disposal of TRU waste.

Presentation

DOE Oak Ridge EM has developed a strategic plan for the cleanup of the ORR, which emphasizes an integrated approach to identify environmental legacies at Y-12 National Security Complex, Oak Ridge National Lab (ORNL), and East Tennessee Technology Park (ETTP). Portfolio plans have been produced for each site, which describe plans, challenges, sequencing, schedule for cleanup, and approximate cost to complete.

The three federal project directors (FPD) for the three sites were on hand to provide information on their respective sites.

Mr. Kopotic is the FPD for ETTP. The main points of his presentation are in Attachment 1. He began by saying that the purpose of the cleanup at ETTP is to make it available for private use as a commercial industrial part. The scope of the cleanup includes building demolition, soil, buried waste and groundwater remediation (Attachment 1, page 3). He noted that everything with hatch marks on the figure require no further action on the soil and buried waste. DOE has recommended no further action on areas in dark green.

Mr. Kopotic said the deteriorated state and presence of technetium in the remaining part of the K-25 building and K-27 present challenges to workers (Attachment 1, page 4).

Almost all of K-25 has been demolished except for the 6 units on what was the south end of the west wing (Attachment 1, page 5). Pre-demolition activities are underway in K-27. Surveillance and maintenance, waste operations, security, infrastructure, and landlord activities continue.

The primary points of the ETTP Portfolio Plan are listed on page 6 of Attachment 1. Mr. Kopotic said these points provide the basis for the ETTP portion of the DOE Oak Ridge EM strategic plan. Execution of the plan (Attachment 1, page 7) will include disposition of legacy waste and materials, eliminating deteriorating facilities, remediating soil and groundwater, and making the area available for reindustrialization.

The chart on page 8 of Attachment 1 shows project scope at ETTP. The schedule to address those projects is on page 9. Mr. Kopotic said the schedule for completion of activities at ETTP is 2024.

The budget forecast is charted on page 10 of Attachment 1. Mr. Kopotic said it is based on assumptions of appropriations of about \$420 million per year, which could fluctuate through the years. He noted that the FY 2014 request is less than that, but he also said some projects are running under budget. Ms. Cange said it would take about \$2.3 billion to complete cleanup of ETTP.

After Mr. Kopotic's presentation a number of questions were asked. Following are abridged questions and answers.

Mr. Bell – What is the status of remaining concrete pads from demolished buildings? Mr. Kopotic – All of the slabs in the front half of the site will come out. In the back half of the site, if we have to go in and dig out soil, it's often cheaper to remove the slab as well. K-1401 had a basement. After we had dug out the basement we used the slab material as fill. We ended up with a much larger clean, grassy area that's more conducive for someone coming in with new construction rather than starting with an old slab.

Mr. Hatcher – What's being done with the technetium-99 and chromium 6 problems? Mr. Kopotic – We have treatment plant installed to address chromium 6, and it's working well. Characterization is being completed for tech-99 contamination. We assumed all six remaining units in K-25 would be contaminated with tech-99 above the waste acceptance criteria for the onsite disposal facility. However, preliminary information indicates that while all of the three southern units will have to be disposed offsite, the rest can be disposed onsite. Mr. Hatcher – What about tech-99 in groundwater? Mr. Kopotic – I'm not aware of any technetium in the groundwater. Mr. Adler – The principal issues in groundwater at ETTP are solvents.

Ms. Gawarecki – How much of K-27 is contaminated with tech-99 that will have to be disposed offsite? Mr. Kopotic – We just started the phase one characterization. I'm going to say a little more than half of the equipment in K-27 will have to be sent offsite. Most of the building can be disposed

on site. It's the equipment I'm talking about – the converters and compressors, the process gas equipment. Of the nine units in K-27, four to five will have to go off site.

Ms. Gawarecki – Will K-27 be taken down differently than K-25? Will it be segregated? Mr. Kopotic – It depends on how we come up with the demolition plan. The best way to do it is to do it like we're doing on K-25. We'll work with EPA and TDEC and get the high-risk equipment out and take the building down using heavy equipment.

Ms. Wilkerson is the FPD for Y-12. The main points of her presentation are in Attachment 2. Y-12 has a continuing mission in national security focused on uranium storage and processing.

The cleanup objectives for Y-12 are noted on page 3 of Attachment 2. The areas in yellow note the primary sources of mercury contamination. The three areas on the west end of Y-12 include Alpha 4, Alpha 5, and Beta 4, the three former mercury use buildings, and the 81-10 area, a former mercury reclamation area, which is now the remaining slab and surrounding contaminated soils.

Ms. Wilkerson said there are many other facilities at Y-12 that need to be demolished and areas remediated of contamination besides mercury.

The portfolio strategy for Y-12 (Attachment 2, page 4) is divided into near-term, mid-term, and long-term activities. She said near-term is considered present to about 2019, mid-term from 2019 to 2030, and long-term 2030 and beyond. She said because the bulk of ORR cleanup funds are on cleanup at ETTP, the near-term focus at Y-12 is on reduction of mercury flux and expansion of waste disposal capacity for the ORR.

Page 5 of Attachment 2 notes the Y-12 cleanup challenges. In addition to the challenges noted on page 5, Ms. Wilkerson said all of this work is to be done in close proximity to the mission activities at Y-12.

Ms. Wilkerson said almost 100 facilities at Y-12 require demolition, many of them small ancillary facilities to larger structures that are to be demolished (Attachment 2, page 6). Three areas of Y-12 require soil remediation (Attachment 2, page 7).

For the near-term Ms. Wilkerson said there are two main projects at Y-12 (Attachment 2, page 8). A proposed treatment facility at Outfall 200 is designed to reduce the amount of mercury leaving the contaminated areas and entering East Fork Poplar Creek. Outfall 200 is the headwaters of the creek and is the primary point where mercury is discharged from the storm sewer lines in the West End Mercury Area of Y-12. The plan for the treatment facility has been completed and will be submitted to EPA and TDEC for review. She said the design of plant is such that it can be expanded as needed.

The other near-term project is to expand the disposal capacity for waste generated from cleanup of Y-12 and ORNL. The new facility will be approximately the same size as the Environmental Management Waste Management Facility in Bear Creek Valley. Ms. Wilkerson said construction of the new facility should begin in the 2018 timeframe.

The schedule of work for Y-12 is noted on page 9 of Attachment 2. Ms. Wilkerson said the plan is to begin soil remediation after each building slated for demolition is razed.

The chart on page 10 of Attachment 2 is the Y-12 budget forecast. Ms. Wilkerson said it is based on a \$420 million annual appropriation escalated over time. During the peak of cleanup work at Y-12 in the 2034 timeframe about three-fourths of the Oak Ridge budget would be used for cleanup at Y-12.

She noted that as work wraps up at ETPP in about 2024 the budget for cleanup at Y-12 increases significantly.

An artist's rendition of what Y-12 would look like after completion is shown on page 11 of Attachment 2.

After Ms. Wilkerson's presentation a number of questions were asked. Following are abridged questions and answers.

Mr. Bell – Can you tell us the chemistry involved in the mercury removal process in the treatment facility? Ms. Wilkerson – It's basically solid precipitation and using chemicals to separate the mercury from water. Mr. Bell – What is the mercury that is released at Outfall 200? Mr. Cothron – Organic, inorganic, methyl, elemental. Mr. Bell – At ORNL there was mercury underneath Building 4501 and 4505. Do you have this situation at Y-12? Mr. Cothron – We'll encounter that when we get to the building demolition. Some of that mercury is making its way out today. The front end of the water treatment plant will be typical headworks for a water treatment plant. We'll do grit removal and sediment removal. There would be a series of steps where you capture elemental mercury in the grit removal process. Ms. Wilkerson – We have done something recently using remaining Recovery Act funds. A lot of the mercury collects in the manholes before it gets into the creek. We have installed mercury traps at nine different locations, which allows the mercury by gravity to get collected in the traps, and it's removed from the traps periodically before it reaches the water. We've removed about 26 pounds since we began in the summer.

Mr. Bell – I read in the paper a few months ago that mercury levels in the creek were improving with time. Ms. Wilkerson – In the 1980s and early 1990s a lot of remedial actions were taken to reduce mercury levels in Upper East Fork Poplar Creek. We saw a significant decline in mercury levels. But we have not seen significant reductions in mercury since then. The most recent action was the cleanout of the storm sewer system in the West End Mercury Area of Y-12. As a result of the cleanup we actually saw an increase of mercury leaving Y-12 at Station 17. We believe that was the result of an upset to the system because of the cleanup, and we expect that to level out over time. But in general until we take additional actions I don't think we'll see a reduction of mercury in the water.

Mr. Paulus – The water treatment facility that is being built in 2015, that is based on existing, proven removal technology? Ms. Wilkerson – That is correct. Mr. Hicks – I'm interested in that technology and I'll be looking for evidence that the chemistry used in the treatment does not increase the amount of organic mercury. It's the organic, the methylated mercury that I'm, interested in. Ms. Wilkerson – The technology we're proposing to use is essentially the same technology in the Big Springs Water Treatment Plant that treats water from the springs under Alpha 2 and has been working very well. Mr. Hicks – Does it show a reduction in the methylated mercury? Ms. Wilkerson – Not a reduction in the methylation, but a reduction in mercury flux. Mr. Cothron – Methyl mercury is not a problem in this process.

Mr. Hatcher – What is being done with the mercury that is recovered? Ms. Wilkerson – For the work that we did under the Recovery Act, most of it was treated and disposed in facilities out west. The mercury that we will be collecting, because it will be in small amounts, will be stored until we have a quantity sufficient to dispose.

Mr. Bell – Of the new activities at Y-12, are they isolated from the mercury problem? Ms. Wilkerson – No. Ms. Cange – There is a slide in the presentation (Attachment 2, page 6, shaded area) that shows where the Uranium Processing Facility will be constructed. You can see the close proximity to the Alpha and Beta Buildings. Mr. Bell – Do you foresee the new facilities having any problems related to the mercury? Mr. Cothron – All of that is up gradient from the mercury

problem areas. (Page 3 of Attachment 2, shows the storm sewer lines with mercury contamination are to the south, down gradient, of the site of the proposed Uranium Processing Facility)

Mr. McMillan is the FPD for ORNL. The main points of his presentation are in Attachment 3.

The cleanup strategy for ORNL is divided into two phases – near-term and out-year (Attachment 3, page 3). It is sequenced in with the DOE Oak Ridge EM priorities to finish work at ETTP first and then to focus on the mercury at Y-12. Mr. McMillan said significant demolition work at ORNL will not begin until the mid-2020s. Near term actions are focused on removal of legacy materials, primarily transuranic waste and uranium-233.

Demolition activities to begin around 2024 are focused on higher risk facilities in the central campus (Attachment 3, page 4). Demolition of Melton Valley facilities would begin in the 2030 timeframe. After demolition of facilities the next step is remediation of media underneath. When all of that is complete the areas will be turned back to ORNL for continued development of the science mission. Mr. McMillan noted that challenges to be encountered are primarily related to the location of high risk facilities in proximity to new science facilities (Attachment 3, page 4). Certain isotopes, primarily strontium and cesium, require special handling.

Mr. McMillan said there are 268 facilities that will require eventual demolition (Attachment 3, page 6); most are in Bethel Valley in the main campus of ORNL. Many of the facilities are smaller ancillary units.

The map on page 7 of Attachment 3 indicates facilities in Melton and Bethel valleys that are to be demolished or preserved for historical purposes. Mr. McMillan said the demolition activities are planned to follow the groundwater flow direction.

Demolition/remediation activities for both Bethel Valley and Melton Valley are noted on pages 8 and 9 of Attachment 3.

The schedule for ORNL facilities demolition is shown on page 12 of Attachment 3.

The budget forecast for ORNL is noted on page 13 of Attachment 1. Page 14 is an artist's conception of what ORNL would look like when work is completed.

After Mr. McMillan's presentation a number of questions were asked. Following are abridged questions and answers.

Mr. Valunas – In developing budgets how do you determine what projects get money and when they get it? Mr. McMillan – We take a look at the entire portfolio and the projects that are either regulatory driven or discharge releases, either real or potential. We assess those risks and then lay them in to what our budget constraints are so we try to address them logically. Ms. Cange – What we do each year during our budget formulation process is we review with the regulators what our priorities are near-term, which is a four to five year window for budget planning purposes. The FPDs work hard to obtain as much funding as possible to do the work at their sites. But we are somewhat limited to a relatively flat budget and after we talk and come to an agreement with the regulators on the priorities we distribute the expected available funds across those near-term priorities. Mr. Valunas – How real are the graphs beyond five years? Ms. Cange – This is a difficult process because as you know we receive our budget annually from Congress. It is difficult to be able to plan and execute projects that are sometimes tens or hundreds of millions of dollars when we receive annual appropriations from Congress. So those out year projects are based on assumptions and every year we have to reevaluate based on the funding we have received for that year as well as any insight we might have about the next few years. Our strategic plan is a living

document that is evaluated on an annual basis. We will see some slight variation in schedule and cost as we progress through the cleanup work. Mr. Valunas – Is there a baseline to compare over time? Ms. Cange – We do have a programmatic baseline and just recently completed the first round of a new baseline for the entire program in Oak Ridge. That baseline is the basis for the strategic plan and for the ‘mountain’ charts (budget charts) for each of the portfolios shared today. Mr. Kopotic – It’s relevant to know that the uranium enrichment decontamination and decommissioning fund appropriated by Congress can only be spent at ETTP, Portsmouth, and Paducah. If we cut that, it really wouldn’t benefit Mr. McMillan or Ms. Wilkerson; it would most likely go to Paducah.

Mr. Bell – You had a picture of Melton Valley that included a picture of the old Experimental Gas Cooled Reactor (Attachment 3, page 9). There’s no contamination, no problems there. What’s the concern? Mr. McMillan – Part of that will be saved for historic purposes. You’re right, it’s never been used. Building 7602 does have some contamination in it, but it should be fairly simple. But this is not a high priority project.

Committee Reports

Board Finance & Process – Mr. Valunas said the committee met to formulate a recommendation on the DOE Oak Ridge EM Budget request to Congress.

The committee will not meet in April because a webinar of the EM SSAB Chairs’ meeting will be going on during the committee’s normal meeting time on April 25.

Mr. Hemelright said there was a teleconference on April 9 of committee members involved in planning the ORSSAB annual meeting. A draft agenda for the annual meeting on August 17 has been prepared. Mr. Hemelright said plans are to streamline the meeting from previous years. Jenny Freeman will be the facilitator again for the meeting. Mr. Hemelright said she will be contacting each board member for input that will be useful for the meeting.

EM – Mr. Hatcher reported that the committee met on March 20, and although he was absent he complimented committee vice chair Alfreda Cook for conducting the meeting. The main presentation at the meeting was on the Molten Salt Reactor Experiment. The defueled salts stored in the tanks at the facility apparently are eligible for disposal at the Waste Isolation Pilot Plant in New Mexico.

The committee reconsidered a recommendation on disposition of legacy waste that was returned to the committee after the March meeting. The committee agreed to revisions and resubmitted to the board for consideration.

The next meeting on April 17 will feature an update on the Uranium-233 Project at ORNL. Mr. McMillan will be the main presenter for that meeting.

Public Outreach – Ms. Hart reported that the committee met by teleconference on March 26. She said eight board members have volunteered to work at the ORSSAB booth for the Earth Day celebration on Saturday, April 27 at Bissell Park in Oak Ridge from 11 a.m. to 5 p.m.

She said the Secret City Festival will be June 21-22 also at Bissell Park. Volunteers are needed to staff that event as well.

The next meeting will be on Tuesday, April 23 at 5:30 at the DOE Information Center. Guests will include representatives from DOE and TDEC to talk about stream postings around the ORR. The committee is working on a publication to explain the stream postings to the public.

Stewardship – Mr. Martin reported the committee heard a presentation on the 2013 Remediation Effectiveness Report. There was discussion about having a presentation made on the report to the EM Committee. Mr. Martin also talked with Mr. Adler about possibly having a presentation made to the full board.

The committee will meet on April 16 and consider several draft recommendations.

Executive – Mr. Martin said the committee discussed a proposed vision statement that was considered at the March meeting, but was not approved by the board as written or as revised at the meeting. Mr. Martin said he would not submit a revised vision statement. He said Mr. Valunas suggested it could be something the board leadership might need additional information about and possibly discuss at the board's annual meeting in August.

The committee also discussed having simple up or down votes on recommendations when they come to the board for consideration. Mr. Martin said he did not favor that approach, but thought it was worthy of discussion by board members at the annual meeting.

The committee will meet on Thursday, April 25 at 5:30 at the DOE Information Center.

Mr. Martin reminded the board of the EM SSAB Chairs' webinar on April 25. He suggested members interested in participating should contact staff for information on how to register.

Announcements and Other Board Business

ORSSAB will have its next meeting on Wednesday, May 8 at 6 p.m. at the DOE Information Center.

Ms. Cange recognized Messrs. Landenberger and Yahr for their service as student representatives to board.

The minutes of the March 13, 2013, meeting were approved.

The Recommendations on Remaining Legacy Materials on the Oak Ridge Reservation and the FY 2015 DOE Oak Ridge EM Budget Request were tabled for lack of a quorum to vote on recommendations.

Federal Coordinator Report

Ms. Noe said there will be a reception on May 2 from 5-7 p.m. at Pollard Auditorium in Oak Ridge to celebrate accomplishments of the EM Program since its inception. There will be a follow up meeting on May 3 by the East Tennessee Economic Council, also at Pollard Auditorium from 7:30 to 9 a.m. It will feature Dave Huizenga, the DOE Senior Advisor for EM.

Ms. Noe said that new membership packages are progressing and it's estimated that Mr. Huizenga will sign off on them in a couple of weeks.

Additions to the Agenda

None.

Motions

Ms. Staley was not present for motions.

4/10/13.1

Mr. Jensen moved to approve the minutes of the March 13, 2013 meeting. Mr. Hatcher seconded and the motion **passed** with one abstention (Ms. Hagy, who was not in attendance at the March meeting).

The meeting adjourned at 7:50 p.m.

Action Items

Closed.

1. Ms. Jackson will determine the number of woman-owned companies that have DOE contracts in Oak Ridge. **Complete.** Karen Shears reported on April 8, 2013, that DOE has seven contracts, five purchase orders, and three blanket purchase agreements with women-owned contractors.

Attachments (3) to these minutes are available on request from the ORSSAB support office.

I certify that these minutes are an accurate account of the April 10, 2013, meeting of the Oak Ridge Site Specific Advisory Board.



David Martin, Chair 5/9/13
Oak Ridge Site Specific Advisory Board
DM/rsg

Chuck Jensen, Secretary