



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Monthly Meeting of the Oak Ridge Site Specific Advisory Board

Approved May 10, 2017, Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, May 10, 2017, 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

Leon Baker
Christopher Beatty
Richard Burroughs
Martha Deaderick
Eddie Holden
Greg Paulus
Deni Sobek
Fred Swindler
Venita Thomas
Ed Trujillo, presiding

Rudy Weigel
Phil Yager

Members Absent

Kathryn Bales
Mike Ford¹
Rosario Gonzalez¹
David Hemelright, Secretary
Howard Holmes
Belinda Price, Chair
Mary Smalling¹
Dennis Wilson, Vice Chair

¹Second consecutive absence

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), via telephone hookup
Jay Mullis, Acting Manager DOE-OREM and ORSSAB DDFO
Melyssa Noe, ORSSAB Alternate DDFO, DOE-OREM

Others Present

Brian DeMonia, DOE
Luther Gibson
Spencer Gross, ORSSAB Support Office
Lara Manning, Oak Ridge High School
Gabrielle McAllister, Hardin Valley Academy
Bill McMillan, DOE
Chloe Nussbaum, Oak Ridge High School

Eleven members of the public were present.

Liaison Comments

Mr. Mullis – Congress has approved the FY 2017 federal budget and Mr. Mullis said OREM received increases in some key areas such as transuranic (TRU) waste and uranium-233 disposition. He said OREM received about \$20 million more to address excess facilities at Y-12 National Security Complex.

He said he can provide more details on budget appropriations at a subsequent meeting.

Mr. Adler – no comments

Mr. Czartoryski – no comments.

Ms. Jones – EPA’s delegation of authority manual has been revised by the new EPA administrator E. Scott Pruett. Ms. Jones said that change will impact the remedial decision for the proposed Environmental Management Disposal Facility, because the record of decision (ROD) for the facility will not be signed at the regional level, but by Mr. Pruett at EPA headquarters. This is a change from previous procedures, but Ms. Jones said it is not unusual for a new administration to change procedures. Mr. Trujillo asked if the change would affect the schedule for building the new disposal facility. Ms. Jones said it would have some impact in terms of time to get an agreed upon ROD to EPA headquarters and answer any questions headquarters may have. Ms. Jones explained that the regional administrator can approve any remedial work up to \$50 million but anything more than that must be signed by the EPA administrator.

Mr. Mullis said OREM had just learned of this change and will have to see what impact it will have on the schedule for the proposed facility.

Public Comment

Mr. Gibson was an ORSSAB member from 1999 to 2005. He has recently retired from Y-12 and hopes to attend more board meetings.

Presentation

Two presentations on key material disposition were given. Mr. DeMonia presented first on Progress in Oak Ridge Key Material Disposition. The main points of his presentation are in Attachment 1.

At the beginning of fiscal year (FY) 2012 there were eight waste streams that had no path to disposal. All but one have been addressed (Attachment 1, page 2). In addition to the eight there were several others that were either too expensive or too difficult to address.

One of the no-path-to-disposal waste streams was legacy mercury waste. It had been previously treated by vacuum-assisted thermal absorption (Attachment 1, page 3). In 2012 UCOR, OREM’s waste management contractor, solicited a bid to re-treat the material. Only one offer was submitted for \$4.7 million. DOE petitioned EPA for a variance for treatment standards. The proposal was to macroencapsulate six containers that had heavy metals and to direct dispose the remaining 28 containers offsite in Nevada. EPA agreed to the proposals and OREM was able to dispose of the material for \$160,000.

Another waste stream was 4,000 cubic yards of PCB contaminated soil that was generated from a remedial action in 1987 (Attachment 1, page 4). The soil did not meet the waste acceptance criteria (WAC) for disposal in the onsite disposal facility, the Environmental Management Waste Management Facility (EMWMF). The only option at the time was to treat the soil and dispose offsite. OREM decided to resample the soils to see if the waste no longer contained solvents that prevented onsite disposal. The results were presented to TDEC and EPA, which agreed with OREM’s petition for a ‘no longer contains’ designation and that the soils now meet EMWMF’s WAC. The original estimate to treat and dispose the soil offsite was \$121 million. The new estimate to dispose at EMWMF is \$3 million. Mr. DeMonia said this project was originally designated as too expensive/too difficult to address, but he said with additional funding the soil should be disposed in EMWMF in the near future.

The last no-path-to-disposal waste was 60 containers of dioxin/furan that could not be disposed in EMWMF. Mr. DeMonia said OREM decided to research the original documents to validate the original waste codes. He said that research determined that 34 containers of the material could be incinerated. DOE EM headquarters sponsored a treatability study for the remaining 26 containers. Mr. DeMonia said nine drums that contained solid waste could be sent out west for disposal. OREM contacted some local vendors about incinerating 17 containers that contained aqueous waste. DSSI, a local incineration firm, agreed to incinerate the contents of the remaining 17 drums, which will eliminate the last no-path-to-disposal waste.

Mr. DeMonia said recycling of scrap metal is a waste stream that had been designated as too expensive/too difficult to do (Attachment 1, page 6). He said it is difficult to declare scrap metal as having no radioactive contamination. Because scrap metal is generated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) offsite facilities must have authorization from EPA to receive CERCLA waste and the waste must be uncontaminated. The strategy to dispose of scrap metal was to allow for recycling without need for CERCLA authority, which allows for offsite recycling. Mr. DeMonia said OREM negotiated with TDEC and EPA to take the scrap metal out of the CERCLA program. As a result more than 5,200 cubic yards of scrap metal have been recycled.

Mr. DeMonia said OREM has dispositioned all but two legacy mixed waste streams, but he said there now is a disposal path for them (Attachment 1, page 7). He said all legacy mixed waste streams should be addressed by this time next year. He said success of the program was possible because of the partnership among OREM, EPA, TDEC, and UCOR. Mr. DeMonia said OREM's policy of disposing when generated will prevent future accumulation of waste.

After Mr. DeMonia's presentation, some questions were asked. Following are abridged questions and answers.

Mr. Beatty – On slide 3 you said the original estimate for retreatment was \$4.7 million and the new strategy estimate was \$160,000. That's pretty amazing. What changed? Were the original requirements for retreatment so unknown that you really didn't understand it at first? Mr. DeMonia – The regulations required that the waste be retreated unless we petitioned EPA for release from that regulation. To retreat would have resulted in a 300 percent increase in volume of waste. We had to convince EPA that it didn't make sense to do that and they agreed with us.

Mr. Czartoryski – What we have to focus on is this was a very difficult waste stream. It contained mercury and PCBs. The treatment standards were not established for this type of complicated waste. It required some alternative thinking and approaches, and I would like to recognize DOE and Mr. DeMonia for marshalling this process and being able to get this waste out of Oak Ridge to safe disposal at the Nevada National Security Site (NNSS).

Mr. Trujillo – Regarding the chart on page 2, the first three are listed as classified waste. Were they disposed as non-classified? Mr. DeMonia – It was blended so it could be shipped. Mr. Trujillo – What about all the money that was saved? Mr. Mullis – Much of this waste was not in the original UCOR contract for disposition. It was stored because there was no path. Much of the funding used for this came from projects that were completed under budget. When we received some increases in appropriations we were able to use some of that additional money for these projects.

The second presentation of the meeting was a Transuranic Waste Update provided by Mr. McMillan. The main points of his presentation are in Attachment 2.

The TRU Waste Processing Center (TWPC) was built in the early 2000s to process TRU debris and liquids (Attachment 2, page 2). It was built near the Melton Valley Storage Tanks, which holds about

2,000 cubic meters of TRU sludge. It came from operations at Oak Ridge National Lab from the liquid low level waste treatment system. The first mission of TWPC was to process the supernate of the liquid low level waste. Supernate is the headwater in a waste container after the solid material has settled. TWPC processed the supernate as a low level waste stream in 2004 and shipped it to NNSS. The original plan was to process the remaining sludge and ship it to the Waste Isolation Pilot Plant (WIPP) in New Mexico, but WIPP was not ready at the time to receive remote-handled (RH) TRU waste. TWPC decided to focus on debris waste streams of contact-handled (CH) and RH waste. Mr. McMillan said TWPC will be finished with TRU debris processing in two or three years.

TRU debris processing at TWPC is done by Northwind Solutions. The certification of the waste to ensure it is processed and packaged properly before shipping to WIPP is done by the Nuclear Waste Partnership, LLC Central Characterization Program, managed by the DOE Carlsbad Field Office.

Mr. McMillan explained that TRU waste is long-lived radioactive waste that must be disposed in a deep geologic repository (WIPP). He said most of the wastes processed in Oak Ridge are things like contaminated clothes, rags, tools, glassware, and other trash. Oftentimes as the waste is characterized it is determined that it is no longer considered transuranic and can be disposed as low level waste at NNSS.

Significant progress has been made in processing and disposing of TRU waste in Oak Ridge (Attachment 2, page 4). Of the original CH inventory of about 1,580 cubic meters, 95 percent has been processed and 66 percent has been shipped. Mr. McMillan said most of the waste shipped was actually low level waste sent to NNSS.

Of the RH inventory of about 670 cubic meters, 85 percent has been processed and 26 percent has been shipped. Mr. McMillan said some of that waste was determined to be CH or low level. The remaining inventory includes a small volume of waste streams that are difficult to process (Attachment 2, page 4). Mr. McMillan said some techniques had to be developed to deal with some of these wastes.

In 2014 WIPP was shut down because of a couple incidents, and it has just recently reopened. TWPC continued to process TRU during the shutdown that has resulted in a significant backlog of waste that is ready to ship (Attachment 2, page 5). TWPC had processed 3,177 drums of CH waste under WIPP's WAC Revision 7. In addition, TWPC has processed 2,754 drums of CH waste under WAC Revision 8 that is ready to ship.

On the RH side, TWPC processed 58 drums under WAC Revision 7, and 101 under WAC Revision 8.

During the WIPP shutdown TWPC continued to process CH TRU waste and the waste has been stored at TWPC and nearby UCOR facilities (Attachment 2, page 6). The configuration of TWPC only allows storage of 19 canisters of RH waste. To solve the storage problem OREM developed remote handled overpack containers (ROPs). The canisters holding RH waste are placed in the shielded ROPs, which can be directly handled and taken to a UCOR facility for storage until shipments resume to WIPP. When ready for RH waste shipment, the ROPs can be brought back to TWPC, the canisters removed and placed in a shipping container for WIPP.

Mr. McMillan said OREM expects to be finished with TRU debris processing in 2019. CH shipments to WIPP are expected to resume in summer 2017. Mr. McMillan said OREM has some soils waste in storage that WIPP needs to balance some of the debris shipments it is getting from other sites. The soils waste will be the first shipped from Oak Ridge.

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

Ms. Sobek – When the waste gets to WIPP does it stay in the containers? Mr. McMillan – Yes. Packs of drums of waste go into TRUPACT containers, which are placed on trucks to WIPP. When a truck arrives the packs are removed and go into the underground mine at WIPP. Mr. Sobek – If it's packaged like that how do they use that to balance the other debris they need the soils for. Mr. McMillan – In the rooms they call panels at WIPP there must be a certain ratio of debris waste that is higher activity versus soil waste of lower activity. These packs of waste are placed with other waste streams in the correct configuration within the panels.

Mr. Holden – How long will it take to transport all of the TRU waste out of Oak Ridge? Mr. McMillan – It will probably take four to five years. Mr. Mullis – After the accidents at WIPP they had to throttle back the ventilation. As a result there can't be as much equipment underground. But as ventilation is upgraded we hope the shipping rate will go up. Right now it will be about one shipment a week from Oak Ridge. It used to be four or five. Mr. McMillan – Prior to the accident WIPP used to receive 20-25 shipments a week from sites across the complex. Right now they are targeting five.

Mr. Paulus – Will the ROPs be contaminated after you use them? Mr. McMillan – The canisters holding radioactive material are clean on the outside so they won't contaminate the ROPs.

Mr. Swindler – Is there any applicability of the vitrification program at Hanford that would apply to any of the things you're doing here? Mr. McMillan – I'm not aware of any connection of TRU waste to vitrification.

Mr. Holden – How long will it take to transport all of the TRU waste out of Oak Ridge? Mr. McMillan – It will probably take four to five years. Mr. Mullis – After the accidents at WIPP they had to throttle back the ventilation. As a result there can't be as much equipment underground. But as ventilation is upgraded we hope the shipping rate will go up. Right now it will be about one shipment a week from Oak Ridge. It used to be four or five. Mr. McMillan – Prior to the accident WIPP used to receive 20-25 shipments a week from sites across the complex. Right now they are targeting five.

Mr. Czartoryski – DOE is not taking full credit for the tremendous job that its contractors are doing on this job. The certification requirements are the most stringent in the world to get waste to WIPP. We're talking about waste that accumulated for many years. Some of the drums are coming from storage and some are bulging and have to be vented. You have to prevent some pyrophoric incidents. You have a lot of unknowns. There are some heavy boxes that must be broken apart. Some of it has to be manipulated in glove boxes. This is an important project. This is some of the most dangerous waste we have on the Oak Ridge Reservation and we are making tremendous progress in dispositioning this inventory. Mr. McMillan – As an example we used to super-compact waste and we had drums that had metal pucks that were mashed together in a dense block. Requirements changed, resulting in the elimination of the acceptability of super-compacted waste at WIPP. We had to develop methods in the box breakdown area where workers cut through these metal blocks of waste with saws. Managing transuranic waste with saws and working in bubble suits - it's probably one of the most hazardous operations in Oak Ridge.

Committee Reports

EM & Stewardship – Mr. Trujillo said the committee discussed and agreed to send to the board for approval the two recommendations that were approved at this meeting.

The committee also had a preliminary discussion about a recommendation to OREM on its 2019 budget request to DOE Headquarters. Ms. Noe said OREM is interested in the board's priorities for cleanup and could move forward on putting together a recommendation based on those priorities.

Mr. Trujillo said Roger Petrie with RSI distributed a four-page color publication "Groundwater Activities on the Oak Ridge Reservation" at the meeting. Mr. Trujillo encouraged members to read the publication

(staff distributed the publication via email to board and committee members after the April 26 meeting. It is also available at the DOE Information Center).

Executive – Mr. Trujillo said the committee reviewed the recommendations that were approved at this meeting and approved them to go on the agenda for full board approval.

The committee also discussed plans for the annual planning meeting and new member applications that have been submitted to headquarters for approval.

Open Discussion

None.

Announcements and Other Board Business

ORSSAB's next meeting is Wednesday, June 14. The topic will be on the Federal Advisory Committee Act. The speaker will be the EM SSAB Designated Federal Officer David Borak.

Mr. Mullis recognized outgoing student representatives Lara Manning and Gabrielle McAllister for their service to the board by presenting them with appreciation plaques. Mr. Trujillo also thanked them for their service. They received thank you letters from ORSSAB Chair Belinda Price.

Mr. Mullis introduced new student representative from Oak Ridge High School Chloe Nussbaum to the board.

Alternate DDFO Report

Ms. Noe said the new member membership package is being vetted at DOE Headquarters. She said it will be a few weeks before the appointees are approved.

David Borak, the Designated Federal Officer for the EM SSAB, will be giving the presentation at next month's meeting on the Federal Advisory Committee Act, which is the legislation that establishes advisory boards like the EM SSAB and ORSSAB. He has told Ms. Noe he will need at least an hour to an hour and half on the topic so the June board meeting could go until 8 p.m.

The ORSSAB annual planning meeting is scheduled for Saturday, August 19 in Townsend, Tenn. Staff will be contacting members to determine if they plan to attend so arrangements can be made for travel and lodging. She said she is working with the Dancing Bear Lodge to arrange a Friday evening dinner that will be within the per diem allowed for meals.

Motions

5/10/17.1

Mr. Weigel moved to approve the minutes of the February 8, 2017, board meeting. Mr. Paulus seconded and the motion passed **unanimously**.

5/10/17.2

Mr. Paulus moved to approve the Recommendations on Biology Complex Facilities at the Y-12 National Security Complex (Attachment 3). Mr. Swindler seconded and the motion passed **unanimously** (Ms. Bales and Ms. Price voted *yea* via telephone).

5/10/17.3

Mr. Burroughs moved to approve the Recommendations on Groundwater Investigations at the DOE Oak Ridge Reservation (Attachment 4). Mr. Baker seconded and the motion passed **unanimously** (Ms. Bales and Ms. Price voted *yea* via telephone).

Action Items

None.

The meeting adjourned at 7:19 p.m.

Attachments (4) to these minutes are available upon request from the ORSSAB support office.

I certify that these minutes are an accurate account of the May 10, 2017, meeting of the Oak Ridge Site Specific Advisory Board.

Dave Hemelright, Secretary



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

June 15, 2017