



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Approved January 13, 2016 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, January 13, 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 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

Richard Burroughs

Alfreda Cook, Vice Chair

Martha Deaderick

Lisa Hagy

Bob Hatcher

David Hemelright, Secretary

Howard Holmes

Donald Mei

Greg Paulus

Belinda Price, Chair

Scott Stout

Ed Trujillo

Dennis Wilson

Wanfang Zhou

Members Absent

Mike Ford

Jennifer Kasten

Mary Smalling

Coralie Staley

Liaisons, Deputy Designated Federal Officer, and Alternates Present

Dave Adler, ORSSAB Alternate Deputy Designated Federal Officer (DDFO)

Susan Cange, Manager for Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) and ORSSAB DDFO

Jeff Crane, Environmental Protection Agency (EPA) Region 4 (via telephone)

Kristof Czartoryski, Tennessee Department of Environment and Conservation (TDEC)

Melyssa Noe, ORSSAB Alternate Deputy Designated Federal Officer (DDFO)

Others Present

Brian DeMonia, DOE

Spencer Gross, ORSSAB Support Office

Brian Henry, DOE

Ashley Huff, ORSSAB Support Office

Alana Joldersma, Student Representative

Bill McMillan, DOE

Pete Osborne, ORSSAB Support Office

Seventeen members of the public were present.

Liaison Comments

Ms. Cange –

- With regard to funding for FY2016, Congress passed an appropriations bill on December 19, with support from Sen. Alexander and Rep. Fleischmann, that will benefit significantly the Oak Ridge cleanup program. Total funding for FY2016 is \$474 million, an increase of \$108 million above the president's request. Planning is currently underway for the allocation of these funds, and more information will be shared in the coming months as these plans are finalized. No restrictions are placed on spending the money in a specific time frame. Plans are underway for this year's spending, but some of these funds may carry over into next year, per common practice.
- The demolition for K-27, the last of the gaseous diffusion plant buildings at the East Tennessee Technology Park (ETTP), has been set for Monday, February 8 at 10 a.m. This event marks the end of "Vision 2016," a push to demolish all five gaseous diffusion plant buildings at ETTP by the end of the calendar year. A small celebration will be held at the site to commemorate the demolition. ORSSAB board members are invited to attend. Interested members should notify Melyssa Noe or ORSSAB staff.

Mr. Adler – No comment.

Mr. Crane – In regards to FY2016 funding, EPA will work with DOE to plan and utilize the additional funding.

Mr. Czartoryski – No comment.

Public Comment

None.

Presentation

Three presenters discussed waste management operations on the Oak Ridge Reservation (ORR) who discussed various waste streams and treatment and disposal practices for ETTP, Oak Ridge National Laboratory (ORNL), and the Y-12 National Security Complex. Presentation visuals and key points are included as Attachment 1. A brief overview of each presentation is given below:

Brian DeMonia, *Branch Chief, Safety, Security and Waste Management*, discussed "Environmental Management (EM) Waste Management," and gave a broad overview of the various waste streams generated at ORR, along with the treatment and disposal options allowable for each type of waste.

EM waste management practices are foremost governed by environmental and safety regulations that determine how and where waste can be processed, stored, and/or disposed. Secondly, the most cost-effective options are preferred. In keeping with these objectives, waste disposal follows a hierarchy that prefers reuse when possible, onsite disposal as appropriate, and, lastly, offsite disposal when necessary (slide 3). Reusing or recycling are the best and most cost-effective options but are not always possible given the types of waste being handled. Generally, ORR-generated waste must be treated and disposed or stored, and the most cost-effective approach is to utilize onsite landfills. If the requirements for onsite landfills cannot be met, then offsite disposal becomes necessary. In this case, preference is given first to DOE facilities as cheaper options and lastly to commercial vendors as these are more expensive.

A number of waste streams are generated at ORR (slide 2), and not all of them are radiological or hazardous. Some ORR-generated waste can be treated and/or disposed onsite by various facilities, including ORR landfills, the Liquid Gaseous Waste Operations (LGWO), and the Environmental Management Waste Management Facility (EMWMF). Waste that cannot meet the criteria for onsite facilities is handled offsite preferably by a DOE facility, such as the Nevada National Security Site (NNSS) or the Waste Isolation Pilot Plant (WIPP) in New Mexico, or alternatively by commercial vendors. The table below illustrates various waste types and their disposal pathways.

Waste Type	Onsite	Offsite
Clean waste (office, cafeteria, clean building debris)	ORR Landfills	N/A
Liquid Low-Level Waste (LLLW)	LGWO	Commercial vendor
Solid Low-Level Waste (SLLW)	EMWMF	NNSS; commercial
Transuranic (TRU) Waste	Treatment only	WIPP
Liquid Mixed Waste	N/A	Commercial vendor
Solid Mixed Waste	EMWMF	NNSS; commercial vendor

Significant progress has been made toward dispositioning legacy waste.

- ✓ As of FY2012, 501 containers of mixed low-level waste with no clear path for disposal were in storage. An enormous amount of research was conducted to find appropriate and cost-effective treatment and disposal options. Much of that waste has now been disposed, allowing for the closure of several ETPP storage facilities and the subsequent reindustrialization of those areas. Currently, 32 containers remain.
- ✓ Likewise legacy mercury waste had no clear cost-effective option in FY2012. The single bid at that time was \$4.7 million. This waste is now being disposed of for \$120,000.
- ✓ Additionally, copper recycling at Switchyard K-732 at ETPP has also reduced demolition costs (slides 4-5).

Bill McMillan, *Portfolio Federal Project Director for ORNL*, discussed “Liquid, Gaseous, and TRU Waste Management at ORNL.”

LGWO at ORNL consists of approximately 64 facilities, which include manholes, pump stations, ventilation, and hard piping. The LGWO treats liquid and gaseous waste streams generated by OREM and the Office of Science. The waste includes process water, groundwater, and exhaust from building ventilation systems.

The entire LGWO infrastructure includes three separate systems for (1) liquid low-level waste (LLLW), (2) process waste, and (3) gaseous waste.

- The LLLW System treats highly contaminated liquid wastes from ORNL operations, generated primarily by the Radiochemical Environmental Development Complex, an Office of Science facility where most of the medical isotope work is done. LLLW is collected by a series of tanks and underground piping, treated for volume reduction, and the resulting concentrated LLLW or “sludge” is transferred to long-term storage tanks in Bethel and Melton Valleys. (This sludge will eventually be processed at the Transuranic Waste Processing Center (see below). Approximately 120,000 gallons per year of waste water are produced and treated (slide 8).

- The Process Waste System treats lightly contaminated waste water and groundwater collected from various sources throughout Bethel and Melton valleys. A series of tanks, pumping stations, and hard piping transfer collected waste to the Process Waste Treatment Complex. Two primary buildings are used, 3608 and 3544. Building 3544, the older of the two, uses ion exchange columns to treat the radiological component. Treated waste from 3544 is pumped to 3608, which removes organics, mercury, and adjusts PH before discharge. The Process Waste System treats approximately 110 million gallons per year (slide 9).
- The Gaseous Waste System provides ventilation services to ORNL. It consists of a ventilation collection system, including cell ventilation and hot off-gas systems, that treats the air before it is discharged from the 3039 stack. Around 100,000 cubic feet per minute of air is released from the stack (slide 10).

LGWO typically has an annual budget of \$23 million. Some of the additional funding received for FY2016 will go toward deferred maintenance of these facilities, which would entail replacing and upgrading pipelines and electrical components as well as repairing and resealing dikes, etc.

In addition to LGWO at ORNL, a separate facility called the Transuranic (TRU) Waste Processing Center (TWPC) manages the treatment and disposal of legacy and newly generated TRU waste (slide 11). TRU waste is a special class of waste that has higher concentrations of transuranic alpha-emitting radio isotopes. It poses a high risk, particularly in terms of breathing, so processing of TRU waste is done in hot cells or glove boxes to protect personnel from contact hazards. TWPC sorts, characterizes, and packages waste so that it can be disposed of properly. Much of the waste processed by TWPC actually classifies as low-level waste and can be disposed of at NNS. Waste classified as TRU waste is packaged for disposal at WIPP.

Despite the temporary closure of WIPP, the Oak Ridge TRU Waste Program is making good progress in dispositioning legacy TRU waste (slide 12). Inventive strategies, such as the development of 72B canister “over-packs” (slide 13), have allowed processing operations to continue. TRU waste is temporarily being stored onsite and is ready to ship offsite for disposal when WIPP resumes operations.

The annual budget for TWPC is approximately \$50 million.

Brian Henry, *Acting Portfolio Federal Project Director for Y-12*, discussed “Oak Ridge Reservation Y-12 Area Landfills.”

Multiple landfill operations at Y-12 manage ORR waste streams (slide 15). In addition to EMWMF, which only accepts Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) waste, separate landfills exist for industrial waste, some of which can be classified, and clean construction and demolition debris.

EMWMF has been critical to the success of the Oak Ridge Cleanup Program. It has a waste footprint of 28 acres with a capacity of approximately 2 million cubic yards. It can receive low-level, mixed low-level, and mixed waste (see slide 16). It is approximately 70 percent full.

In addition to EMWMF, a smaller landfill is available to accommodate classified waste (slide 17). This 4-acre landfill essentially takes industrial waste with minor contamination and has a capacity of 89,000 cubic yards (16 percent full).

Two landfills on Chestnut Ridge also serve ORR sites (slide 18-19). One is a 26-acre industrial landfill that receives office-related sanitary waste from ORR sites. It can also accept minimally contaminated industrial debris. It has a capacity of approximately 2 million cubic yards (40 percent full). Another landfill on Chestnut Ridge receives only clean construction and demolition debris. It is a 30-acre landfill also with approximately a 2 million cubic yard capacity (42 percent full).

Except for the clean landfill, which contains no contaminated waste, all of the others have leachate protection systems in place to collect and sample contact water before it is approved for discharge into the Y-12 system, which ultimately flows into the City of Oak Ridge sewer system.

The annual budget for ORR Y-12 area landfills is approximately \$23 million.

After the presentation, board members posed the following questions:

Mr. Trujillo asked Mr. McMillan: While WIPP is not taking waste, is a timeline in place for processing our TRU waste further when they do get ready to accept? Mr. McMillan responded: The timeline cannot be determined until we know what changes WIPP will implement and whether or not any new requirements or criteria in characterization or waste acceptance will be in effect. We do not foresee any changes to processing and do not expect to reprocess any of our TRU waste, but requirements for additional analysis or recharacterization are possible. We will soon be meeting with the TRU corporate board and will hopefully gain additional insights.

Mr. Hatcher asked the presenters: Can you tell whether or not you are capturing all the groundwater effluent and that it is not, for example, going into White Oak Lake? Mr. McMillan responded: It's actually cap leachate, rather than groundwater, that is being captured as runoff. No active pumping of the groundwater occurs in that area. It is collection of cap runoff and leachate that is being done. The only exception in Bethel Valley is the tank W-1 plume where we are doing some capture, pump, and treat.

Committee Reports

EM & Stewardship

- At the October meeting the committee unanimously elected Mr. Trujillo and Mr. Hatcher as co-chairs.
- A follow-up discussion addressed the October 14 ORSSAB presentation on progress at ETTP, combined with a tour of ETTP. The tour, led by Mr. Adler, was found to be immensely helpful in clarifying cleanup operations and answering questions.
- Lengthy discussion revisited a draft of the Recommendation on the "Final Proposed Plan for Soils in Zone 1 at East Tennessee Technology Park."
- The FY2016 work plan was also addressed. An effort will be made to illustrate the cleanup operations with more informative visual aids. Mr. Adler said DOE is looking for ways to augment presentations and discussions with information on the walls to make the board meetings easier and more productive.

- The committee is interested in DOE engagement with the public on the issue of the proposed Environmental Management Disposal Facility (EMDF), for example, through meetings with the League of Women Voters and the Oak Ridge City Rotary Club. Ms. Cange said DOE is in the planning stages for a new disposal cell, EMDF, and is working to revise CERCLA documentation. DOE plans to submit the document to the State of Tennessee and EPA in March. In the meantime, DOE is participating in local meetings to provide information to the public on the planning status and answer questions. DOE will continue its communications effort and is currently working to incorporate all three agencies (State of Tennessee, DOE, EPA) into these meetings so that they can go together and discuss the various disposal options being evaluated and help to answer questions that come up in advance of the release of a proposed plan, which would then undergo a public comment period.

Executive

- Ms. Price and Ms. Cook participated in a conference call with EM SSAB Chairs. Of note is that Monica Regalbutto participated for the first time since being named Assistant Secretary for Environmental Management.
- The committee followed up on concerns addressed by Ms. Cook on the K-25 Virtual Museum. Mr. Hemelright and Ms. Cook will solicit comments from the board via email regarding the website. Responses will be collected and circulated to the board and then presented to DOE.
- Planning for the EM SSAB Spring Chairs Meeting is underway. It will take place April 19-21, 2016, at the Doubletree Hotel, Oak Ridge, Tennessee. A tour of ORR is scheduled for April 19, a full day of meetings on April 20, and a half day of meetings on April 21. Board members are encouraged to attend. A social gathering will take place on April 20. High-level DOE managers will report on topics such as WIPP and the budget. A steering committee is working on an agenda for the meeting. Board members should inform ORSSAB staff if they would like particular topics to be considered for the agenda. Board members will be provided with an agenda as soon as one is finalized.
- Ms. Deaderick attended a November 19 meeting of the Center for Oak Ridge Oral History at the Oak Ridge Public Library, which included a report from D. Ray Smith on a recent conference in Washington, D.C., to establish the major themes for the Manhattan Project National Historic Park. Mr. Smith emphasized the value of the center's collection, which includes over 600 interviews, transcripts, and tapes.

Announcements and Other Board Business

- Lisa Hagy, who has served ORSSAB for four years, is retiring from her seat on the board. OREM and ORSSAB thanked Ms. Hagy for her contribution to the board over the years. Ms. Hagy was presented with a commemorative plaque honoring her commitment.
- Ashley Huff has joined ORSSAB staff and will be replacing Spencer Gross, who will retire.
- A tour of the Y-12 landfills is scheduled for Tuesday, January 19, at 9 a.m. Board members interested in attending the tour should notify staff immediately.
- ORSSAB's next scheduled meeting will be Wednesday, February 10, 2016, at 6 p.m. at the DOE Information Center. The topic will be the "Groundwater Monitoring Program."

- The minutes of the October 14 meeting were approved.
- The minutes of the November 10 meeting were approved.
- The Recommendation on the “Final Proposed Plan for Soils in Zone 1 at East Tennessee Technology Park” was approved (Attachment 2).

Alternate DDFO Report

Melyssa Noe said ORSSAB will be gaining three new members. The new member package is expected to be approved by DOE-EM within two weeks. Also, the first planning meeting for the spring Chairs Meeting will take place next week. DOE will begin to have more information on the agenda and will pass that information along to ORSSAB as it becomes available.

Motions

1/13/16.1

Mr. Hemelright moved to approve the minutes of both the October 14, 2015, meeting and the November 10, 2015, meeting. Mr. Paulus seconded and motion passed **unanimously**.

1/13/16.2

Mr. Paulus moved to approve the Recommendation on the “Final Proposed Plan for Soils in Zone 1 at East Tennessee Technology Park.” Mr. Hemelright seconded and the motion passed **unanimously**.

Action Items

Closed Action Items

1. Lacking a quorum to vote at the November 10 meeting on the draft of the Recommendation on the “Final Proposed Plan for Soils in Zone 1 at East Tennessee Technology Park,” Ms. Cook asked if a D4 version of the proposed plan would be coming out before the board meets again in January. Ms. Noe said she would check to see if a D4 is planned. A D4 has been issued and has been shared with board leadership.

Open Action Items

1. Mr. Hemelright will solicit responses from absentee members.

The meeting adjourned at 7:38 p.m.

Attachments (2) to these minutes are available on request from the ORSSAB support office.

I certify that these minutes are an accurate account of the January 13, 2016, meeting of the Oak Ridge Site Specific Advisory Board.

Dave Hemelright, Secretary



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

2-11-16