



**Environmental Management  
Committee Meeting Minutes  
Wednesday, October 17, 2012, 5:30 p.m.  
DOE Information Center  
Office of Science and Technical Information**

---

**Committee Members Present**

Jimmy Bell  
Alfreda Cook, Vice-chair  
Susan Gawarecki  
Bob Hatcher, Chair  
Dave Hemelright  
Jennifer Kasten  
Steve Kenworthy  
David Martin  
Donald Mei  
Norman Mulvenon  
Bob Olson  
Robert Stansfield

**Others Present**

Dave Adler, Department of Energy (DOE)  
Holly Clancy, Pro2Serve  
Jason Darby, DOE  
Amy Fitzgerald, City of Oak Ridge  
Spencer Gross, ORSSAB support staff  
John Hampshire, UCOR  
Ellen Matson  
Ellen Smith, City of Oak Ridge

**Absent**

John Coffman  
Charles Jensen  
Dick Ketelle  
Gloria Mei  
Lance Mezga  
Tim Myrick  
Kerry Trammell  
Curt Walker  
Kevin Westervelt

**Siting of a second CERCLA Waste Disposal Facility** – Alfreda Cook, issue manager

Mr. Darby and Ms. Clancy provided a status report on the remedial investigation/feasibility study (RIFS) (DOE/OR/01-2535&D1) that was released in September on the siting of a second CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) waste disposal facility on the Oak Ridge Reservation. The main points of the presentation are in Attachment 1.

Mr. Darby began by saying the current facility, commonly known as the EMWMF (Environmental Management Waste Management Facility) is expected to reach capacity in early 2020. Because of an expanded work scope a second waste disposal facility will be needed (Attachment 1, slide 2). Mr. Darby said experience has shown that a new facility needs to be ready 18-24 months prior to the EMWMF reaching its capacity (2.18 million cubic yards). He said the overlapping timeframe allows for availability of open cell floor space, which provides for more operational flexibility.

The current schedule calls for comments from the regulators (Environmental Protection Agency and the Tennessee Department of Environment and Conservation) on the D1 version of the RIFS, address those comments, and submit a D2 version in February 2013. A proposed plan announcing a site selection will be submitted in November 2013. After comments are received from the regulators a D2 proposed plan will be submitted in February 2014. After DOE and the regulators

have agreed on the D2, a final proposed plan will be released for public comment in April 2014 (Attachment 1, slide 3). Slide 4 of Attachment 1 shows the scheduled start up for site preparation and construction in early 2016 with operations beginning in early 2018.

Mr. Darby reviewed the RIFS approach, which includes alternatives for no action, on-site disposal, and off-site disposal (Attachment 1, slide 5). Under a no action alternative each waste generator would have to determine how to dispose of its waste. A no action alternative is not practical and off-site disposal is very expensive. The DOE preferred site location is a 60-70 acre site just to the east of EMWMF (Attachment 1, slides 6 and 9). There are other waste disposal sites in the immediate area.

Ms. Clancy said 13 sites were evaluated for a new facility (Attachment 1, slide 7). Some of the same sites were considered in the original study for EMWMF. She said previous conclusions about East Bear Creek Valley that were made for EMWMF hold true for a new facility – it's compatible with the current land use plan and is in a secure area.

Ms. Clancy reviewed the site screening criteria (Attachment 1, slide 8) and reasons for elimination. While the proposed Environmental Management Disposal Facility (EMDF) crosses a stream (NT-3) and doesn't meet buffer zone (depth to groundwater) requirements spelled out in the Toxic Substances Control Act, those requirements were waived for the EMWMF because the construction design was considered protective. The conceptual design of the proposed EMDF would re-route a portion of NT-3 around the facility and includes the installation of an underdrain, engineered buffers, and other features for protectiveness. Mr. Mulvenon said he thought DOE had determined not to build waste facilities on top of a stream. Ms. Clancy repeated that the design was considered protective and other sites studied had more challenges.

Ms. Gawarecki asked why Melton Valley wasn't considered. Mr. Darby said it was included in the original EMWMF study but was rejected because there wasn't enough usable space without building on top of already disposed waste.

Ms. Clancy explained why EMWMF wasn't considered for expansion (Attachment 1, slide 10). An evaluation to expand EMWMF was done in 2008, but constraints for lateral expansion include steep slopes of Pine Ridge to the north, a high berm to the east of Cell 1, stream NT-5 to the west, and existing facilities and shallow groundwater.

The engineered features to control surface and groundwater are shown on slide 12 of Attachment 1. Ms. Clancy said the combined features would lower the water table.

The current site characteristics are on slide 13. The most significant impact would be eliminating trees, which make up about 90 percent of the area and re-routing the upper portion of NT-3. Wetlands in and near the landfill would be permanently impacted (Attachment 1, slide 14).

Since the preferred site for EMDF is near EMWMF, the geology and hydrogeology are similar. There is a densely spaced network of fractures, but no apparent sink holes or faults. Most groundwater flows within 100 feet of the surface and the water table is at depths of 3 to 45 feet. Mr. Hatcher asked how deep fractures went. Neither Mr. Darby nor Ms. Clancy had the answer. Mr. Adler asked that an action be taken to determine answer.

Slide 15 is a chart of estimated wastes, most of which is low-level waste debris. There is a 28 percent uncertainty allowance figured into the disposal estimates (slide 16). That is because of a lack of current characterization data and detailed planning has not yet been done. Ms. Fitzgerald asked if there were consideration for changes in work scope. Mr. Adler said the EMDF needs to be built because of the change in scope to clean up the entire reservation, which takes in remaining legacy buildings and waste. He said the objective is to have enough disposal space to

completely cleanup that debris. The uncertainty involved is because it's not clear how much of the rubble is contaminated and how much can go to existing sanitary landfills.

The waste volume project is illustrated on slide 17. The conceptual design capacity for EMDF is approximately 2.5 million cubic yards, with the 28 percent uncertainty in future volumes.

The off-site disposal alternative is illustrated in slide 19. It estimates more than 24,500 railcar loads of low-level, non-classified waste would be sent to Arizona then transferred by truck for shipment to a disposal facility in Nevada or sent directly to a disposal facility in Utah. About 380 truckloads of classified waste would go to Nevada.

The benefits of volume reduction are noted on slide 20. It indicates monetary and space savings for on-site disposal, but notes off-site disposal is considerably more expensive.

Slides 21 and 22 show the differentiating criteria for on-site and off-site alternatives. While there are pluses and minuses for each alternative, off-site disposal is estimated to be almost three times more expensive than on-site disposal.

Mr. Martin said he was concerned that the waste disposal contractors, knowing that a new facility was going to be built, would become complacent about efficiently disposing in EMWDF. Mr. Adler said that was a valid concern, also expressed by the regulators. He said that is why the capacity assurance remedial action report (CARAR) was implemented. He said there are people responsible for monitoring that.

Related to the volume reduction study (Attachment 1, slide 20) Ms. Gawarecki encouraged the use of volume reduction as much as possible and consider recycling where possible.

Ms. Cook asked if having a RCRA (Resource Conservation Recovery Act) permit would allow more types of waste disposal. Mr. Adler said there are additional issues including expanding the universe of waste from cleanup waste to operational waste. That's not a large volume of waste, but needs to be considered, he said.

Ms. Fitzgerald asked about how the lifecycle costs were calculated, in particular, whether the costs included community impact costs such as economic opportunities lost as a result of having a nuclear waste disposal facility in the community. Ms. Clancy responded that these types of costs were not included.

Ms. Gawarecki asked how far out lifecycle costs are projected. Ms. Clancy said the assumed value for perpetual care is for a 23-year operational period at \$1 million a year. She said the perpetual care fund then would earn interest for post-closure upkeep.

Mr. Martin said he had not heard any discussion about a hybrid option of waste disposal, such as sending classified waste out west and disposing of low-level waste on site. Mr. Adler said the reason to have public comment on the proposed plan is to answer such questions. He said the RIFS doesn't include waste material that can't be handled safely in Oak Ridge. He said the primary decision ORSSAB needs to make is whether or not to support on-site disposal.

Mr. Bell said building a disposal facility over water 'is not smart' and wondered if higher elevations had been considered.

#### **Discussion of possible recommendation on second CERCLA Waste Disposal Facility**

Ms. Fitzgerald said ORSSAB's Recommendation 200 on siting a second CERCLA waste disposal facility said DOE should engage the community early in the decision making process.

She said the city council and city manager are interested in the topic and that the community needs to be engaged before the Federal Facility Agreement parties make a decision.

Mr. Mulvenon suggested the committee do a presentation on the topic to city council. Mr. Hatcher said that should be done by the people doing the work; the committee or ORSSAB doesn't have the expertise.

Mr. Bell asked if DOE wanted a recommendation on the issue. Mr. Adler said ORSSAB can make a recommendation whenever it likes, but this evening's presentation was primarily a status update. The RIFS indicates what DOE is thinking should be done, but no decision has been made; the regulators haven't commented yet.

Ms. Smith said it is important to have community discussion and now is probably the right time to start. Mr. Adler said DOE intends to have as much public involvement as with EMWMF, but it will have more time to engage the public.

Ms. Gawarecki requested that DOE move forward on city and public participation. Mr. Adler said DOE will present to the city so there was no need for ORSSAB to make a recommendation or write a letter in that regard.

Mr. Hatcher suggested the committee receive this evening's presentation as a status report and take no action at this time. The majority of committee members agreed.

**Other business**

Because the regular meeting date in November falls on the Wednesday before Thanksgiving the committee decided to move its meeting date to Wednesday, November 28.

**Action Items**

1. DOE will research the depth of fractures at the proposed Environmental Management Disposal Facility.

The meeting adjourned at 7:15 p.m.

Attachments (1) are available on request from the ORSSAB support office.

rsg