



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Approved July 11, 2012 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, July 11, 2012, 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

Alfreda Cook

Lisa Hagy

Janet Hart

David Hemelright

Bruce Hicks

Howard Holmes

Charles Jensen, Secretary

Jennifer Kasten

Jan Lyons

David Martin

Fay Martin

Donald Mei

Maggie Owen, Chair

Greg Paulus

Coralie Staley

Robert Stansfield

Scott Stout

Thomas Valunas

Members Absent

Jimmy Bell²

Bob Hatcher

Chris Hepler

Matt McDaniel^{1,2}

Scott McKinney

Sam Yahr^{1,2}

¹Student Representative

²Second consecutive absence

DDFO, Liaisons, and Federal Coordinator Present

Dave Adler, DOE Liaison, Department of Energy - Oak Ridge Office (DOE-ORO)

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

Connie Jones, Environmental Protection Agency (EPA)

Melyssa Noe, ORSSAB Federal Coordinator, DOE-ORO

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

Others Present

Bob Alexander, TDEC

Spencer Gross, ORSSAB Support Office

Jack Hanley, Agency for Toxic Substances and Disease Registry (ATSDR)

Norman Mulvenon, Citizen's Oversight Panel

Pete Osborne, ORSSAB Support Office

Eleven members of the public were present.

Liaison Comments

Ms. Cange – Ms. Cange introduced new board members Ms. Cook, Mr. Hicks, Ms. Kasten, Ms. Lyons, Mr. Mei, and Mr. Stout. New appointee Chris Hepler was unable to attend.

Ms. Cange said she and John Krueger, the federal project director for the Uranium-233 Project, visited Secretary of Energy Steven Chu recently and updated him on the status of the project. She said the secretary was pleased with the progress of the work and was complimentary of the Oak Ridge Office in general.

A Memorandum of Agreement for Historical Properties at East Tennessee Technology Park (ETTP) was issued to signatory and consulting parties in June. Ms. Cange said the parties were asked to respond to the agreement by July 13. Two of the four signatory parties have signed the agreement. Comments from a third party have been received and comments are expected from the fourth party. She hopes to have a fully executed agreement by the end of the month. Ms. Owen signed the agreement for ORSSAB as a consulting party. A signed agreement will allow demolition of the K-25 Building at ETTP to proceed without impacting the work.

Mr. Adler – Each year ORSSAB asks DOE, EPA, and TDEC for suggestions for the board to consider in the next fiscal year. Mr. Adler said DOE is working on that response and will be provided by August 1.

Ms. Jones – no comments.

Mr. Owsley – no comments.

Public Comment

Mr. Mulvenon encouraged members to listen carefully to Mr. Hanley's presentation. He said ATSDR has been instrumental in monitoring potential health effects from work done on the Oak Ridge Reservation (ORR), particularly mercury discharges in Upper East Fork Poplar Creek.

Presentation

Mr. Hanley's presentation was on Public Health Activities at the DOE Oak Ridge Reservation. The main points of his presentation are in Attachment 1.

ATSDR is the primary federal public health agency charged with evaluating human health exposures to hazardous substances in the environment. ATSDR is part of the Department of Health and Human Services and is independent of DOE and EPA. ATSDR is an advisory, non-regulatory public health agency.

ATSDR's congressional mandates are noted on page 3 of Attachment 1, slide 1. Mr. Hanley said he was focusing his remarks on the public health assessments, health consultations, and education and training concerning hazardous substances.

Public health assessments are evaluations of releases of contaminants into the environment. They identify how and where people might have been exposed. Assessments determine if sites are public health hazards. ATSDR makes recommendations to safeguard the health of the public (Attachment 1, page 3, slide 2). Evaluations are made based on environmental and health data and community

information. Based on that information ATSDR tries to provide an independent, objective public health decision. Sometimes additional information is required and ATSDR will conduct limited health studies.

ATSDR does not do large scale environmental sampling, nor does it enforce regulations or provide medical and health care services.

ATSDR has been working in Oak Ridge since 1991. Mr. Hanley stressed that ATSDR is concerned with exposure off of the Oak Ridge Reservation and not with issues 'inside the fence' of the reservation.

Between 1991 and 1999 ATSDR did investigations on exposures in East Fork Poplar Creek and the Watts Bar Reservoir (Attachment 1, page 6, slide 1). Findings of those investigations were incorporated in the Record of Decision for East Fork Poplar Creek and Watts Bar Reservoir.

Between 2001 and 2012, ATSDR conducted nine health assessments for contaminant releases from Y-12 National Security Complex, Oak Ridge National Laboratory, ETP, and the ORR in general (Attachment 1, page 7, slide 1).

The results of eight of the nine assessments, excluding health effects for mercury, indicated current and past off-site exposures to released contaminants were below levels that cause health effects (Attachment 1, page 7, slide 2).

Mr. Hanley discussed the public health assessment on Y-12 mercury releases in more detail. He said the highest releases of mercury from Y-12 occurred in the 1950s and early 1960s. The scope of the health assessment for mercury was to evaluate past and current offsite exposures from 1950 to 2009 (Attachment 1, page 9, slide 1). Three forms of mercury were evaluated: elemental, inorganic, and organic. Table 7 of Attachment 2 indicates the primary exposure pathway for each form and the primary target organ in the human body. Seven communities around the creek and Watts Bar were investigated.

The assessments indicated that during certain times in the past children or pregnant women could have been exposed to amounts of mercury that were potentially harmful to health (Attachment 1, page 9, slide 2 and page 10, slide 1). Mr. Hanley said the health effects depended on how often children played in the waters of the creek, how long they played, and how much water might have been ingested by a child, especially during specific weeks during 1956-58.

The assessment also indicated that pregnant women or nursing mothers who ate large amounts (twice a week or more) of certain species of fish in the 1970s-90s could have been at increased risk of subtle neurodevelopment health effects in their children (Attachment 1, page 10, slide 1).

There also could have been potential exposure to family members by workers at Y-12 who came home with mercury carried on their clothing. Vapors from the mercury could have caused some harm to young children.

Limitations on the mercury release assessment are noted on page 10 of Attachment 1, slide 2.

Mr. Hanley then provided information on current exposures to Y-12 mercury releases. He said mercury in current air, soil, and sediment in the East Fork Poplar Creek floodplain does not pose a

public health hazard (Attachment 1, page 11, slide 1). Prior to 1997, levels of mercury were elevated but the floodplain was cleaned up in 1996.

He said vegetables grown around East Fork Poplar Creek and in Oak Ridge were sampled and inorganic mercury doses in the produce were well below health effects levels. Since 1992, even before the cleanup of the creek in 1996, water samples in East Fork Poplar Creek have not exceeded EPA comparison values (Attachment 1, page 11, slide 2).

Mr. Hanley said the mercury in the fish in East Fork Poplar Creek and Watts Bar are not a public health hazard based on the ATSDR assessment (Attachment 1, page 12, slide 1).

As a result of the health assessment for mercury ATSDR believes a follow-up study is not needed (Attachment 1, page 13, slide 1). While the assessment indicated no health hazards from soil, sediment, water, or fish in the creek or Watts Bar, he said it was prudent for people to limit their exposures to those media.

ATSDR did make three recommendations regarding mercury releases from Y-12. Those recommendations are noted on page 13, slide 2 of Attachment 1.

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

Mr. Paulus – Have there been increases in diseases in the Oak Ridge area in the last 60 years from contaminant releases? Mr. Hanley – We looked at some of the health data that the state had on cancer. We looked at cancer incidence data in the eight counties in the area. We looked at 42 different cancers over a 10-year period. We found that in some counties there were slight elevations of some cancers, but in other counties there were other cancers that were elevated. But we didn't identify any trends or consistent patterns of cancer occurrence that could be tied to cause and effect.

Mr. Jensen – It seems most of the projects that the board looks at are related to stopping or mitigating the concentrations of mercury that are released from Y-12. Is it accurate to say that since there are no perceived health effects off-site for the current level of mercury releases that it's not going to have an effect from a health standpoint if mercury releases are cut in half? Mr. Hanley – I would say that less is better and it's prudent to minimize exposures. We support minimizing those releases as much as possible. Mr. Jensen – For mercury releases it isn't going to change sign postings offsite? Mr. Owsley – Current data and research indicate you have to reduce the concentration of mercury in the environment to significantly low levels in order to achieve a reduction of mercury in fish. But it can be done. To answer your question, if you reduce the amount of mercury by half you won't reduce the mercury in the fish sufficiently to remove the signs. It will take significantly more reduction over time.

Mr. Martin – Can people be genetically predisposed to problems brought on by mercury exposure? Mr. Hanley – Genetically, I don't know. But in fetuses, infants, and smaller children it does have more of an effect on brain development.

Mr. Mei – What are some of the effects that mercury has on children? Mr. Hanley – There have been a variety of tests that indicate some subtle neurodevelopmental problems like slight attention deficit, verbal memory, confrontational name recall, fine motor skills. In the Boston Naming Test a 5 percent abnormal score was detected in children with whose mothers were exposed to mercury at the National Academy of Sciences' health effect level.

Mr. Jensen – On the neurodevelopmental, if the exposures are taken away do the symptoms subside or if damage is done is it permanent? Mr. Hanley – I think that is still being studied. I'm sure if you get large doses, yes, the damage would be permanent. The doses we're talking about, I'm not sure where the research is on that.

Mr. Alexander – We base Y-12's National Pollutant Discharge Elimination Permit on EPA's guidance that says fish tissue should only have a certain level of mercury. We back calculate from that to determine what the permitted limit of mercury should be in the stream. I'm wondering how serious we should try to enforce that permit if we don't have the health risk we thought we were protecting against. Mr. Hanley – That process is a way to come up with a level that is known to be protective of health. Those are levels that EPA knows is safe for the most sensitive receptor.

Mr. Valunas – One of the things we try to do is help set priorities of which problems to attack first. Could you or someone in your organization rank these issues as far as danger – mercury versus other things that are occurring on the reservation? Mr. Hanley – We don't have information for issues going within the boundaries of the ORR.

Mr. Paulus – (to Ms. Jones) Do you know why the EPA standards are one-tenth of what's recommended by the National Academy of Science as the safe level? Ms. Jones – EPA's levels look at risk over time. We're looking at cleanup and the residual contaminants in the environment. Mr. Hanley – I can clarify that. Look at (Attachment 2, Figure 14). If you look at the upper yellow arrows, EPA has benchmark dose limits. That is where they found increases in neurological effects based on concentrations in maternal blood. The reason there is a range is because EPA looked a variety of neurological tests with a range of effects all occurring close together. But the Academy of Science only uses the Boston Naming Test. Because of uncertainty in these estimated doses EPA uses an uncertainty factor of 10. EPA doesn't want to set regulation levels where the health effects take place. They want to back off a bit so they make sure there is a cushion between the regulation level and health effect levels.

Mr. Hicks – Is there a PCB issue that should be of concern to this group? Mr. Hanley – When we estimated those exposures we thought they were potentially a problem for people who consumed a lot of PCBs. The state has an advisory out there already. We not saying don't eat any fish. We're saying don't eat certain fish in large quantities to minimize exposure to PCBs.

Committee Reports

Board Finance & Process – Mr. Paulus reported that the committee did not meet in June, but will meet July 26 at 5 p.m. at the DOE Information Center.

He reminded the group of the annual meeting on Saturday, August 18 at the Holiday Inn in Pigeon Forge.

EM – Mr. Martin reported that John Glenn, DOE, gave the committee an update on the status of removal of legacy waste from the central campus of Oak Ridge National Lab at the June meeting.

He said plans are being made to bring in Dan Goode, U.S. Geological Survey, for preliminary discussions on August 15 and 16 about researching groundwater characteristics on the ORR.

Public Outreach – Mr. Hemelright reported that the committee met on June 26 and reviewed its six-month planning calendar. News releases on members who retired from the board in June and on student representative Sam Yahr were sent to local newspapers.

A presentation on ORSSAB will be revised, and some of the members will be giving that presentation to civic groups in the area.

Mr. Hemelright reported that the board's Public Environmental Survey will be placed on DOE's Facebook and Twitter sites. A random test mailing to 15 households in seven counties around the Oak Ridge Reservation will be done.

The committee will follow up with WBIR television regarding a feature on the board.

The committee will meet by teleconference on July 24 at 5:30.

Stewardship – Ms. Staley reported that the committee heard a status report on the establishment of DOE's stewardship verification program that the board recommended be established. The system is being developed and is now called the Land Use Manager. The system is expected to be fully operational by October.

The committee also received an update on the status of the Five-year Review. The D1 version of the report was issued in November 2011. There were numerous comments on the document by EPA that need resolution before the D2 is issued.

The committee discussed the possibility of updating the Stewardship Education Resource Kit. Because of the time involved and the difficulty of placing the kit in public schools, the committee decided not to revise the kit.

The committee will meet again on Tuesday, July 17.

Executive – Ms. Owen said the committee met on June 28 and discussed the presentation from the June board meeting regarding cleanup of Y-12. The committee determined no further action was required regarding the presentation.

The committee discussed election of an interim vice chair. Since the position would only be filled for a month before officers are elected in September, the committee decided not to fill the position.

Ms. Owen said a representative from the board was requested to sit on the advisory board of the Center for Oak Ridge Oral History. Ms. Staley volunteered to be that representative.

The committee will meet on Thursday, July 26 at 5:30 p.m. at the DOE Information Center.

Announcements and Other Board Business

ORSSAB will have its annual planning meeting on Saturday, August 18, from 8:30 to 4 p.m. at the Holiday Inn in Pigeon Forge, Tenn. The minutes of the June 13, 2012, meeting were approved.

Ms. Cook, Mr. Hicks, Ms. Kasten, Ms. Lyons, Mr. Mei, and Mr. Stout were introduced as new members to the board. New member Chris Hepler was unable to attend.

A Nominating Committee for FY 2013 board officers was elected. The committee includes Ms. Hagy, Mr. Holmes, Mr. Paulus, and Mr. Stansfield.

Federal Coordinator Report

No report.

Additions to the Agenda

None.

Motions

7/11/12.1

Mr. Jensen moved to approve the minutes of the June 13, 2012, meeting. Mr. Valunas seconded and the motion passed **unanimously**.

7/11/12.2

Mr. Jensen moved to approve the Nominating Committee. Mr. Martin seconded and the motion passed **unanimously**.

The meeting adjourned at 7:45 p.m.

Action Items

Open

1. Mr. Hanley will supply the name of the document he mentioned that details the differences between ATSDR's public health assessment process versus an EPA environmental risk assessment.

Closed

1. The data quality objective process will be considered by the Executive Committee as a board presentation topic. **Completed 7/3/12**

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 July 11, 2012, meeting of the Oak Ridge Site Specific Advisory Board.

Chuck Jensen, Secretary



Maggie Owen, Chair
Oak Ridge Site Specific Advisory Board
MO/rsg

September 13, 2012