



# Oak Ridge Site Specific Advisory Board

# FY 2008 Annual Report

September 2007 - September 2008

# A Message from the Chair



*Steve Dixon, Chair*

FY 2008 proved to be a pivotal year for the Department of Energy's Environmental Management (EM) Program and the Oak Ridge Site Specific Advisory Board (ORSSAB).

A major accomplishment by EM this year was to initiate shipments of contact-handled transuranic waste to the Waste Isolation Pilot Plant in New Mexico. The first shipment left Oak Ridge in late September, marking the start of a long campaign to safely dispose of both contact- and remote-handled transuranic wastes. The first shipment of remote-handled transuranic waste is expected to be shipped in early 2009.

The biggest change to EM, however, was the continued move to incorporate Integrated Facility Disposition Project scope into current cleanup plans. Progress to add more than 200 facilities into EM proceeded with the approval of the Critical Decision-1 package by DOE Headquarters. A meeting will be held in February or March to inform the public about the changes to the scope of the Federal Facility Agreement and the periods in which cleanup work will be done.

For the board's part, FY 2008 was a highly productive year. We submitted 13 recommendations to EM and participated in four recommendations developed by the seven EM SSABs chartered at sites across the DOE complex. Foremost this year was ORSSAB's recommendation on the K-25 Building. The board's input and leadership on this issue will have a lasting effect on current and future cleanup actions. Also important was the "Recommendation on Conducting Future Verifications of Cleanup" because it will help assure the validity of DOE's cleanup actions on site and in the perceptions of the public and business community.

In 2008 the board jump-started the establishment of the Center for Oak Ridge Oral History, a community-wide organization created to oversee the consolidation of existing oral histories and manage an ongoing effort to gather, catalog, transcribe, and provide access to these significant historical resources.

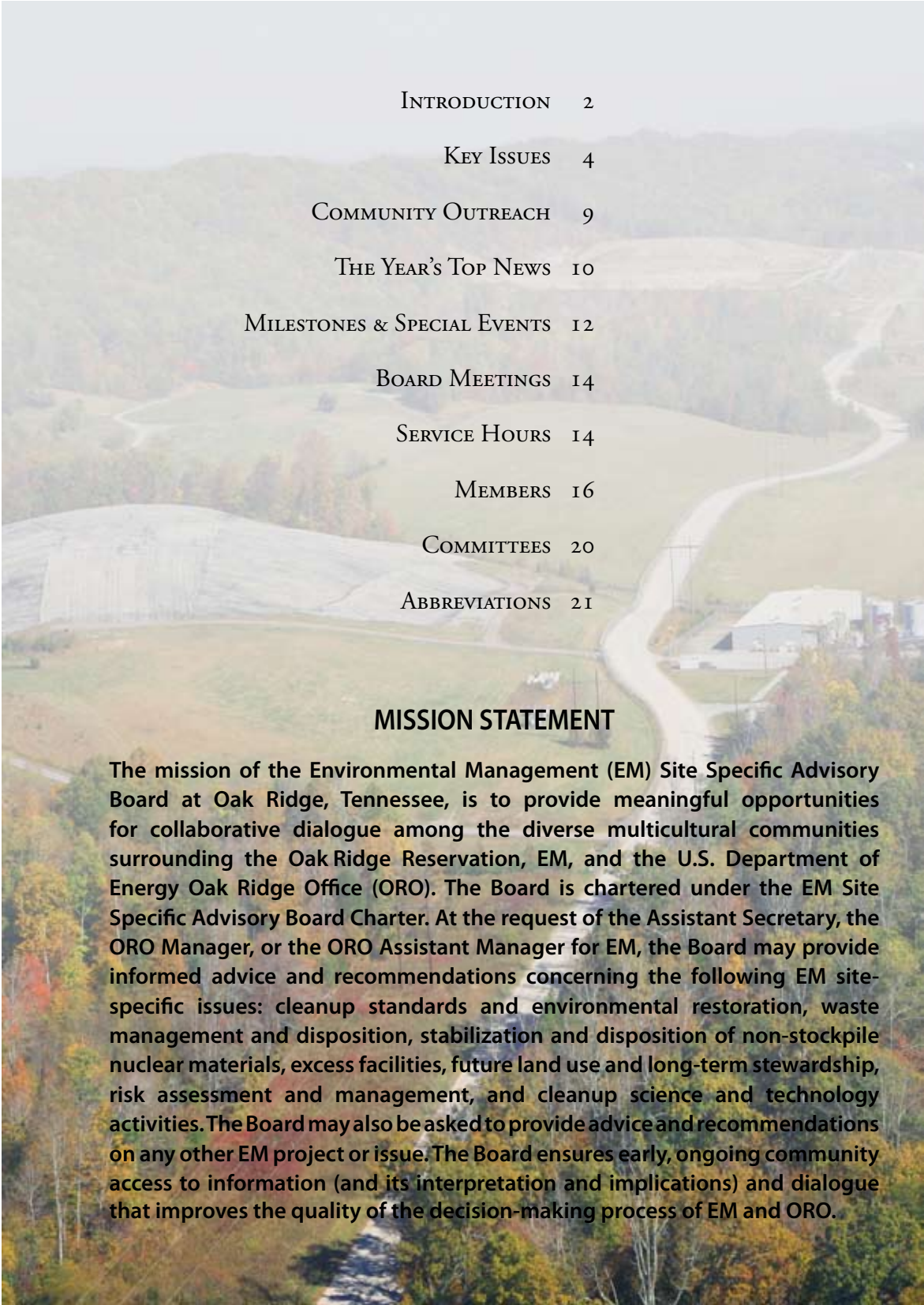
In February 2008 ORSSAB co-sponsored a meeting to gather input from the public on how best to preserve the historic significance of the K-25 Building. The meeting was attended by about 160 people and provided a key opportunity for members of the public to express their views.

Our Stewardship Committee worked with DOE this year to produce a map that shows all remediated areas on the Oak Ridge Reservation and what land use controls are in place. The map will be updated periodically and will play an integral role in helping the public maintain knowledge about land use controls on the reservation.

I hope you'll take the time to read through this report and learn even more about ORSSAB and DOE's EM program. Understanding the events that occurred this year will offer important insights into the changes and challenges for the cleanup program in 2009.

A handwritten signature in black ink that reads "Steve Dixon". The signature is written in a cursive, flowing style with a prominent loop at the end.

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## MISSION STATEMENT

The mission of the Environmental Management (EM) Site Specific Advisory Board at Oak Ridge, Tennessee, is to provide meaningful opportunities for collaborative dialogue among the diverse multicultural communities surrounding the Oak Ridge Reservation, EM, and the U.S. Department of Energy Oak Ridge Office (ORO). The Board is chartered under the EM Site Specific Advisory Board Charter. At the request of the Assistant Secretary, the ORO Manager, or the ORO Assistant Manager for EM, the Board may provide informed advice and recommendations concerning the following EM site-specific issues: cleanup standards and environmental restoration, waste management and disposition, stabilization and disposition of non-stockpile nuclear materials, excess facilities, future land use and long-term stewardship, risk assessment and management, and cleanup science and technology activities. The Board may also be asked to provide advice and recommendations on any other EM project or issue. The Board ensures early, ongoing community access to information (and its interpretation and implications) and dialogue that improves the quality of the decision-making process of EM and ORO.

# Introduction

The Oak Ridge Site Specific Advisory Board (ORSSAB) is an independent, federally appointed citizens' panel that provides advice and recommendations to the U.S. Department of Energy (DOE) on its Oak Ridge Environmental Management (EM) Program. Chartered under the Federal Advisory Committee Act, the board began its work in 1995. DOE Oak Ridge considers ORSSAB its primary source for community input on decisions related to the cleanup of the Oak Ridge Reservation (ORR).

The board provides informed recommendations and advice to the DOE EM program regarding environmental restoration and waste management, as well as long-term stewardship, land use, and economic development of contaminated areas. Recommendations re-

garding environmental justice, health and safety issues, historical preservation, and other issues may be developed at the board's discretion or at the request of DOE Oak Ridge. The board is committed to reflecting the concerns of the communities impacted by EM activities on the ORR and to serving as a communications link between the public and relevant government agencies, including local governments.

The board is composed of up to 20 voting members, chosen to reflect the diversity of gender, race, profession, views, and interests of persons living near the ORR. Members are appointed by DOE and serve on a voluntary basis, without compensation. At the close of Fiscal Year (FY) 2008, the board consisted of members from five counties: Anderson, Blount,



Figure 1. Map of the Oak Ridge Reservation showing East Tennessee Technology Park, Oak Ridge National Laboratory, and Y-12 National Security Complex.

Knox, Loudon, and Roane. Two non-voting student participants also serve on the board to represent the viewpoints and concerns of area youth.

Non-voting liaisons include representatives from DOE Oak Ridge, the U.S. Environmental Protection Agency (EPA) Region 4, and the Tennessee Department of Environment and Conservation (TDEC). These liaisons advise the board on their agencies' policies and views.

ORSSAB provides a number of avenues for the public to learn about and express views on DOE Oak Ridge EM work. All board and committee meetings are open to the public and are announced in newspaper advertisements and at the DOE Information Center in Oak Ridge (865-241-4780). Board meetings are also advertised in the *Federal Register* and are video recorded and broadcast on local cable television stations. Copies of the meeting videos are available to the public at the Information Center.

The board maintains a web site at [www.oakridge.doe.gov/em/ssab](http://www.oakridge.doe.gov/em/ssab). Information is also available by calling the ORSSAB support office at 865-241-4583 or 865-241-4584.

## Board Meetings

The board meets each month to hear presentations by personnel working on relevant EM topics, listen to and discuss input from concerned citizens, consider recommendations to DOE developed by the various ORSSAB committees,

and conduct other business. Each August board members gather for an annual retreat to evaluate the board's work for the year and plan activities for the next fiscal year.

The board conducts its deliberations under ORSSAB bylaws and Robert's Rules of Order and strives to consider all relevant positions in reaching decisions.

## Committees

A diagram of the board's FY 2008 structure is shown in Figure 2. General board business is handled at the monthly Executive Committee meeting. This committee, which is composed of the elected officers of the board and the standing committee chairs, holds general administrative authority to set board agendas, coordinate the work of committees, and transact business as necessary.

ORSSAB committees usually meet monthly, and all meetings are open to the public. Each

ORSSAB committee creates its own work plan to guide its activities during the year, and these work plans are updated continually as the board year progresses. Information about ORSSAB committees can be found in the "Committees" section of this report.

## FY 2008 Board Officers

Officers for the year were Lance Mezga, Chair; Steve Dixon, Vice Chair; Ted Lundy, Secretary.

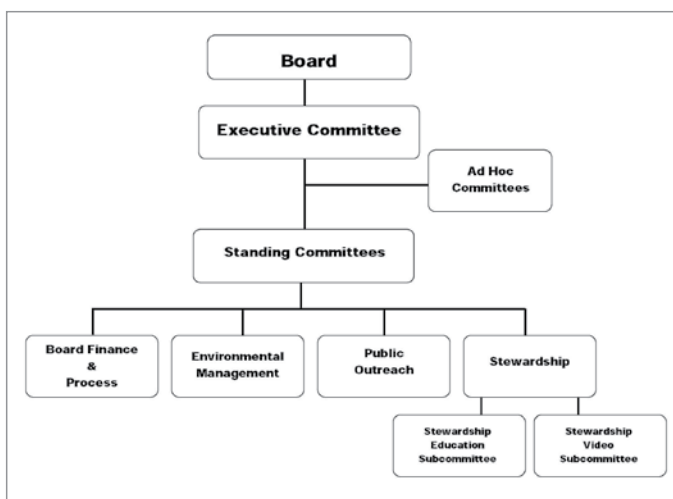


Figure 2. FY 2008 ORSSAB committee structure.

# Key Issues

Following are key issues that resulted in board recommendations in FY 2008. ORSSAB sent 13 recommendations to the Department of Energy Oak Ridge Office for consideration. Four recommendations were sent by the combined chairs' of the EM SSABs. The complete texts of all recommendations are available on the ORSSAB website at: [www.oakridge.doe.gov/em/ssab/recc.htm](http://www.oakridge.doe.gov/em/ssab/recc.htm).

## **Recommendation 158 on the EMWMF Explanation of Significant Difference for Leachate Management Information Sheet**

DOE Oak Ridge provides information sheets on explanations of significant differences (ESDs) for review to ensure the information is understandable by the public. In July 2007, DOE provided an information sheet on the EM Waste Management Facility ESD for Leachate Management to the ORSSAB EM Committee for review. The board recommended publication of the information sheet.

## **Recommendation 159 on the Notice of Intent to Prepare an Environmental Impact Statement for the Disposal of Greater-Than-Class C Low-Level Radioactive Waste**

DOE is preparing an environmental impact statement (EIS) under the National Environmental Policy Act for the disposal of Greater-Than-Class C (GTCC) low-level radioactive waste. Two of the proposals were for an intermediate depth borehole and enhanced near surface facility in Oak Ridge.

The board did not believe the ORR was a viable disposal site for the wide range of GTCC waste, but it understood that there was insufficient information to the scope and nature of the GTCC being proposed for disposal. The board asked to be included on any further discussions on the EIS as it relates to Oak Ridge.

Responses to comments will be published in the final EIS, which is not expected until 2009.

## **Recommendation 160 on Independent Verification of Locations of Waste Sites in Melton Valley**

Remedial actions in Melton Valley on the ORR left hazardous substances in place that could pose a future threat if exhumed. These materials were buried under a number of engineered isolation caps, but the record of decision (ROD) for Melton Valley does not require location of the caps for future discovery.

The board recommended that an independent survey should be done to validate the boundary surveys of areas where hazardous materials were left in place.

DOE declined this recommendation saying the boundary caps had been surveyed by two reputable firms each surveying different areas.

## **Recommendation 161 on Developing a Stewardship Map Showing Remediated Areas With Waste Left in Place**

The board recommended that a map be developed that would allow the public to easily understand what cleanup work was undertaken on the ORR, where remediated sites are that have waste left in place, and help assist in accessing the appropriate administrative record information and remediation effectiveness report records. The map would be on public display at the DOE Information Center and the American Museum of Science and Energy and be included in the Stewardship Education Resource Kit.

DOE agreed with the recommendation. The map is currently on display in the

Information Center. It is also posted on the Oak Ridge Environmental Information System ([www.ories.bechteljacobs.org/oreis/help/oreishome.html](http://www.ories.bechteljacobs.org/oreis/help/oreishome.html)).

**Recommendation 162 for Long-term Stewardship Incorporation Into New EM Projects and Legacy Waste Decisions (EM SSAB Chairs' Recommendation)**

At the Fall 2007 EM SSAB Chairs' meeting the representatives recommended to DOE EM that management for all current and new EM projects should consider complete life-cycle analysis that includes long-term stewardship, final disposition, cleanup methods, and costs to meet end-state goals. The chairs also recommended that long-term stewardship be included in each proposed remedy for legacy waste and to consider the human and environmental risks and cost if the remedy leaves any contamination in place.

DOE Assistant Secretary for EM James Rispoli said in his response that EM takes long-term stewardship and risk to human health and the environment into account during the remedy selection process. The long-term costs of those decisions are also reviewed including the impact of leaving waste in place.

**Recommendation 163 for EM SSAB Participation in the EM Budget Process (EM SSAB Chairs' Recommendation)**

At the same Fall 2007 meeting, the EM SSAB chairs said their respective boards needed sufficient budget planning information by project to be able to make informed recommendations on DOE's EM budget planning process.

Secretary Rispoli said his staff would provide clarifying guidance for the site managers to supply needed information to the individual boards.

**Recommendation 164 on Engineering and Technology Development on the ORR**

ORSSAB noted that the Oak Ridge EM Environmental Technology Program did not appear to be focused on developing appropriate technologies for key Oak Ridge needs and did not possess the resources necessary to produce these technologies on schedules that help projects meet regulatory milestones.

The board recommended that EM re-establish the Oak Ridge Site Technology Coordination Group, focused specifically on ORR cleanup issues and involving all key stakeholders associated with the Oak Ridge cleanup program and technology development program.

DOE responded saying that Oak Ridge EM and the Office of Science will collaborate to develop technologies to effectively remediate contamination on the ORR, but there are no plans to reestablish the Site Technology Coordination Group.

**Recommendation 165 on Conducting Future Verifications of Cleanup**

Independent verification of cleanup has been employed successfully on several occasions on the ORR and elsewhere around the country. The board recommended that DOE continue to use independent verification of cleanup during future remediation projects.

Guidance from DOE Headquarters directs DOE field offices to assure independent verification for all property transferred to the private sector. Adequacy of cleanup for remediated properties not planned for transfer is subject to external regulatory oversight by EPA and TDEC.

**Recommendation 166 on Preparing Future Explanations of Significant Differences**

In June 2007, DOE issued an information sheet explaining the need for an ESD to the ROD for the Disposal of ORR Comprehensive Environmental Response, Compensation, and

Liability Act of 1980 (see Recommendation 158 above).

The ESD was based, in part, on the assumption that the Central Neutralization Facility (CNF), which is the only facility on the ORR approved to accept Resource Conservation Recovery Act listed waste, would be closing. It appears now the CNF is not closing.

The recommendation cautioned DOE to base future ESDs on facts and science and not assumptions.

DOE said in its response to the recommendation that the delayed closing of the CNF would be noted in the revised ESD.

#### **Recommendation 167 on Historic Preservation of the K-25 Building at East Tennessee Technology Park**

In 2005 a memorandum of agreement was signed whereby DOE Oak Ridge agreed to save the north tower of the K-25 Building at the East Tennessee Technology Park (ETTP) from demolition. DOE was to decontaminate the building, install a new roof, and keep selected items in the building for public display.

But the building's condition has rapidly deteriorated and implementing the provisions has become problematic. Steve McCracken, DOE Oak Ridge assistant manager for EM, asked ORSSAB to provide input on how best to preserve the historical significance of K-25.

ORSSAB recommended that DOE Oak Ridge preserve the K-25 Building North Tower and gaseous diffusion equipment where possible.

However, support to retain the North Tower was not unanimous among board members. A minority opinion submitted by four members said DOE should raze the north end structure and develop alternate plans for commemorating the history of the site.

While a formal response has not been received at the time of this report, Mr. McCracken has indicated the building is probably not structurally sound enough to save, but insists the K-25 Building contributions should be memorialized in some way.

#### **Recommendation 168 on the FY 2010 DOE Oak Ridge EM Program Budget Request**

As part of the process to involve stakeholders in the development of DOE's EM budget, the board was asked to provide recommendations and comments on the draft FY 2010 budget request in time for DOE Oak Ridge to include them in its submittal to DOE Headquarters on April 10, 2008.

ORSSAB made a number of recommendations, the primary one being that worker/public safety and regulatory permit compliance projects should be the highest priorities for EM funding distribution.

The board also felt it was unacceptable for DOE to have missed a number of milestones due to inadequate funding. It recommended that new milestones should be established with EPA and TDEC. It believed funding levels should be at least what they were during FY 2006.

While the board was pleased to see that funding had been provided for work to downblend uranium-233 at Building 3019 at Oak Ridge National Laboratory (ORNL), it also noted that no additional dollars had been added to the baseline. The board recommended, as it did the year before, that additional funding be provided to meet the Building 3019 work scope.

The board recommended that additional funding be provided to handle newly generated waste treatment and disposal to ensure a backlog of wastes did not build up.



The anticipated budget shortfall for FY 2009 is expected to impact implementation of mercury-related contamination projects at the Y-12 National Security Complex and ETTP. The board recommended that the FY 2010 budget adequately fund those projects.

DOE Oak Ridge responded saying it had requested additional funding for work at ORNL, Y-12, and ETTP, but noted that it could not plan work that exceeds funding levels provided by headquarters.

#### **Recommendation 169 on Supporting an Oral History Program for the ORR**

Development of the atomic bomb during World War II is one of history's most fascinating stories. The Manhattan Project involved thousands of people, working in complete secrecy, across the United States. A crucial part of that story was played out in Oak Ridge.

After the war many of the people who worked in Oak Ridge during the Manhattan Project and ensuing Cold War recorded their stories for history. But many more still need to be gathered and of those available there is little coordination of efforts nor standardization of how they have been recorded and archived.

An Oral History Subcommittee, led by board member Steve Stow, began discussions on how to establish a comprehensive oral history program in Oak Ridge that would record recollections during the Manhattan Project, the Cold War, and more recent activities. The subcommittee sponsored an oral history workshop to study the matter and a recommendation came out of the workshop to form an advisory group to oversee such a program.

An advisory group was formed and the board recommended that DOE fund the program that became known as the Center for Oak Ridge Oral History. The board provided

\$7,000 in seed money to launch the program, which is being administered by the Oak Ridge Public Library.

DOE Oak Ridge is currently working with the National Nuclear Security Administration/Y-12 and ORNL to establish a framework in which they will work together on the topic of oral histories.

#### **Recommendation 170 on the Remedial Investigation/Feasibility Study for ETTP**

Before a final sitewide ROD for groundwater, surface water, and ecological soil risk at ETTP can be issued, a remedial investigation/feasibility study (RIFS) is conducted, which is used to develop the proposed plan to implement the sitewide ROD.

With help from a technical advisor, ARCADIS, the board developed a recommendation on the RIFS that included four main points:

- The use of risk-based remedial goals rather than maximum contaminant levels to facilitate active remediation options for groundwater.
- A re-evaluation of the 100-year duration for the monitored natural attenuation activities with a focus on a more reasonable time frame of 30 to 50 years.
- Employing a technology demonstration for at least one of the critical contamination areas prior to a final decision to employ a technical impracticability waiver.
- To complete the regulatory approval of the current RIFS document as a baseline for future decision documents.

In its response to the recommendation, DOE noted that EPA policy precludes risk-based standards for groundwater remediation. A groundwater treatability study is currently underway to determine any practical engineering restoration approaches.

DOE said the 100-year duration for natural attenuation was selected through discussions with EPA and TDEC and will be retained. DOE said it would pursue regulatory approval of the current RIFS as a baseline for future documents.

#### **Recommendation 171 on the DOE Waste Information Management System**

At its January 2008 meeting ORSSAB received a presentation on DOE's low-level/mixed low-level waste disposition strategy from Christine Gelles, the director of DOE's Office of Disposal Operations.

She said DOE's most tangible effort to develop waste disposition planning tools is the Waste Information Management System. The system was developed to provide DOE Headquarters and site waste managers with the tools necessary to easily visualize, understand, and manage the vast volumes, categories, and problems of forecasted waste streams.

ORSSAB recommended that the system be periodically updated and improved, and the board made several suggestions to increase the system's usability as an information resource.

To date a response to the recommendation has not been received.

#### **Recommendation 172 on Lessons Learned from Efforts to Preserve the North Tower of the K-25 Building**

Because the roof of the K-25 Building at ETTP was not well-maintained from the time operations ceased in 1964 to the present, the building deteriorated rapidly. As a result the cost and hazards of demolishing the building and preserving the North Tower for historic purposes increased dramatically.

The recommendation describes steps that could be taken to properly monitor and maintain structures targeted for demolition, some of which may have historic value, be-

fore they are allowed to deteriorate, making eventual demolition or historic preservation a costly undertaking.

To date DOE Oak Ridge has not responded to the recommendation.

#### **Recommendation 173 to Support the Establishment and Continuation of the Office of Communication (EM SSAB Chairs' Recommendation)**

At the Spring 2008 EM SSAB Chairs' meeting the representatives of the seven SSABs commended Assistant Secretary Rispoli on the establishment of an office of communications at DOE EM Headquarters.

Jeffrey Bobeck was subsequently appointed Director of the Office of Communications and External Affairs. He spoke at the Fall 2008 Chairs' meeting and explained that the office was created to strengthen EM's communications capabilities by providing more public accountability and stakeholder outreach, and to establish more of a "corporate model" for EM communications.

#### **Recommendation 174 That Quarterly Project Reviews Be Shared With the EM SSABs (EM SSAB Chairs' Recommendation)**

Also at the Spring EM SSAB Chairs' meeting, the representatives discussed the difficulty of tracking the budget and progress of cleanup projects at their respective sites.

Some of the boards benefitted from access to quarterly project reviews as a tool for evaluating clean-up progress at their sites, while others had difficulty getting access to the information. The chairs recommended these reports be provided to the local boards.

To date DOE Headquarters has not responded to the recommendation.

# Community Outreach

*The goal of ORSSAB outreach is to achieve the board's mission as it relates to community involvement. To do this, ORSSAB invites public participation in a variety of board activities.*

## Meetings/Presentations

- Notices are placed in the *Federal Register*, *Oak Ridger*, and *Oak Ridge Observer* to inform the public of board and committee meetings.
- Monthly board meetings begin with a relevant EM-related presentation. This portion of the meeting is subsequently broadcast on local public access cable stations.

## Publications/Reports/Presentations

- The ORSSAB annual report is prepared and distributed to state legislators, government agencies, and local media and organizations to summarize annual board activities and promote awareness of the board's mission.
- The board's *Advocate* newsletter is distributed quarterly to inform stakeholders about recent board activities and EM cleanup issues.
- Presentations are made by board members to local civic, educational, and government organizations to inform the public about the board and DOE cleanup activities.



*Board member Bill Bass helps one of four breakout groups in Nita Ganguly's advanced placement science class at Oak Ridge High School in January 2008. Bass and board member Tim Myrick presented two of Ganguly's classes with real life cleanup issues to resolve. The students then broke into groups and were tasked with developing solutions.*

## Special Events/Exhibits/Internet

- Members represent the board at events such as festivals and expos, where informational brochures and ORSSAB logo items are distributed to interested individuals.
- Educational materials, including teacher resources, are prepared to aid public understanding of cleanup and post-cleanup issues.



*Sondra Sarten and Ted Lundy staff the ORSSAB booth at the 2008 Secret City Festival in Oak Ridge.*

- Board members participate in high-profile awareness events, such as the teacher's workshop on the ORSSAB Stewardship Education Resource Kit, and plan new ways to reach out to the community.
- A toll free number (1-800-382-6938) and web site ([www.oakridge.doe.gov/em/ssab](http://www.oakridge.doe.gov/em/ssab)) provide avenues for information.
- ORSSAB maintains a permanent exhibit at the American Museum of Science and Energy in Oak Ridge, using touch-screen kiosks, posters, and displays to tell the Oak Ridge cleanup story.

# The Year's Top News

## **ORSSAB Co-hosts Public Meeting to Gather Input on K-25 Historic Preservation**

In February 2008 ORSSAB and the Local Oversight Committee hosted a public meeting to hear what citizens had to say about saving a portion of the K-25 Building at ETPP.



About 160 people attended the event with the overwhelming majority supporting preservation of the K-25 North Tower. The board also later issued a recommendation that the North Tower be preserved.

## **DOE and BJC Agree to Four-year, \$1.48 Billion Cleanup Contract**

DOE and its primary cleanup contractor Bechtel Jacobs, Co. (BJC), signed a cleanup contract worth \$1.48 billion in September 2008. The contract is retroactive to October 1, 2007, and extends to December 31, 2011.

The contract focuses on work at ETPP, which includes the monumental task of decontaminating and demolishing the huge K-25 Building, as well as its sister Building K-27.

## **DOE and Regulators Resolve Dispute Over Cleanup Milestones**

In late 2007 DOE, EPA, and TDEC went into formal dispute over cleanup milestones for FY 2009 as well as resolving the issue of some missed milestones in FYs 2007 and 2008.

While some of the issues were resolved by March 2008, other issues remained and were elevated to another level of management for negotiation. The primary basis of the dispute was DOE's inability to agree to milestones beyond available budget. The regulators, on the other hand, felt that cleanup schedules should

drive how much money comes to Oak Ridge for cleanup.

An agreement was reached in August 2008 that allowed for the setting of new cleanup milestones that will incorporate additional work expected to be gained through the approval of the Integrated Facility Disposition Project (IFDP). The agreement did not address four disputed milestones at Y-12 National Security Complex because the work exceeds available budget.

The agreement will push the completion date for ORR cleanup beyond 2016.

## **Significant Milestone Reached with First Shipment of Transuranic Waste**

In September 2008 the first shipment of contact-handled (CH) transuranic (TRU) waste left the ORR on its way to the Waste Isolation Pilot Plant in New Mexico.

DOE and the TRU Waste Processing Center have been working for years preparing



to send the first shipment of the long-lived and hazardous form of radioactive waste off the reservation. The trip to the final repository covered about 1,300 miles and took about 31 hours to complete with two specially-trained drivers taking turns behind the wheel.

While the Waste Processing Center continues to prepare CH waste for shipment, it is working to prepare the more perilous remote-handled (RH) TRU waste for shipment in early 2009. Oak Ridge has the largest inventory of RH TRU of any facility in the DOE complex.

About 2,100 cubic meters of CH and RH TRU waste will be shipped to New Mexico with the project scheduled for completion in early 2013.

### **Bridge Removal is First Demolition Effort at K-25 Building**



In May 2008 BJC completed the successful removal of the bridge that connected the west wing to the north tower of the K-25 Building at ETPP.

Removal of the bridge was a key

step in preparing for the demolition of the former gaseous diffusion plant.

Workers used excavators and other heavy equipment to bring down the structure.

### **Proposed Cleanup Project Brings Scores of Contractors and Experts to Workshop**

The possibility of a large-scale increase in cleanup opportunities on the ORR drew about 160 people to a two-day workshop to discuss contracting strategies.

The proposed IFDP would add more than 200 outdated and unneeded facilities on the reservation to DOE's current cleanup scope.

In January 2008, the Energy, Technology, and Business Association invited the large group of contractors, cleanup experts, and others interested in the project to discuss four major contracting alternatives for the project that could

cost as much as \$8 billion and take another 10-15 years to complete. If approved the project would begin in the 2010 time frame.

The conference participants offered pros and cons of each alternative, as well as ideas to make them more effective. The contracting alternatives discussed were:

- A single contractor coordinating work at both Y-12 and ORNL.
- Separate contractors for each site.
- Use of current management contractors at each site to direct cleanup efforts and oversee subcontractors.
- Multiple contracts managed by DOE.

### **Uranium Successfully Removed from Molten Salt Reactor**

The last of the fissile uranium-233 was removed from the Molten Salt Reactor in May 2008.

Removal of the uranium closed the book on a portion of one of the more difficult and frustrating jobs DOE was handling. There is still a lot of fuel salt remaining in storage tanks, which will be removed at some future date.



The uranium was removed from the fuel salts by reheating and introducing fluorine gas. The uranium-233 was captured on sodium fluoride traps, which were transported to Building 3019 at ORNL for safe storage.

# Milestones & Special Events

## ORSSAB Efforts Lead to New Community Oral History Program

The seeds sown at ORSSAB's oral history workshop held in October 2007 flowered in spring 2008 into a comprehensive oral history program called the "Center for Oak Ridge Oral History."



*Kathy McNeilly (right), director of the Oak Ridge Public Library, and Pat Halsey, ORSSAB federal coordinator, staffed a booth at the 2008 Secret City Festival for the Center for Oak Ridge Oral History.*

After jump-starting the establishment of the program, ORSSAB turned the project over to the Oak Ridge Public Library, where it is being led by a steering committee that includes representatives from DOE Oak Ridge, ORSSAB, the Oak Ridge Public Library, the Oak Ridge Heritage and Preservation Association, the National Nuclear Security Administration/Y-12, the DOE Office of Science and Technical Information, the Tennessee State Library and Archives, the American Museum of Science and Energy, the City of Oak Ridge, the Tennessee Valley Authority, and the University of Tennessee.

ORSSAB's work on the oral histories program provided an important step in bringing cohesion to the various interests in the community

on an issue of importance not only to the public but to DOE EM as well. Material contained in oral histories will offer invaluable information to EM when determining the scope and the data necessary to approach areas of the ORR requiring remediation or in determining if an area does not require remediation.

## ORSSAB Efforts Make a Difference in Historic Preservation Debate

How best to preserve the history of the iconic K-25 Building at ETPP was the subject of intense scrutiny and debate by ORSSAB, DOE, and the public this year.

K-25 was constructed as part of the Manhattan Project during 1944–45 to supply enriched uranium for the first atomic bombs and later for Cold War defense purposes and nuclear power reactors. Operations at the K-25 Building were permanently shut down in 1964.

In 2005 a memorandum of agreement was signed to retain the north tower of the K-25 Building and designate the footprint of the U-shaped structure.

However, the building is rapidly deteriorating, and DOE requested input on how to interpret the building's importance to the Manhattan Project and the Cold War.

On February 19, 2008, ORSSAB co-sponsored a public meeting on how best to preserve K-25's historic significance. The meeting, attended by about 160 people at Y-12's New Hope Center, provided a key opportunity for members of the public to express their views, and numerous comments were generated and forwarded to DOE by ORSSAB.

In March ORSSAB followed up on the public meeting by providing DOE EM with a recommendation on K-25 Building preservation. While the majority of board members supported preserving the K-25 North Tower, four

members submitted a minority recommendation that the building be razed and other avenues be considered to memorialize the building. In an attempt to prevent the loss of other buildings within the EM scope with historic significance because of neglect, the board submitted a follow-up recommendation on the subject at its July meeting.



*About 160 people attended the February meeting to express their opinions on how best to preserve the historical significance of the K-25 Building at ETPP.*

with information and gather public input on an issue that will have long-term implications for the public and EM.

### **Work Completed on New Long-Term Stewardship Map**

In FY 2008 ORSSAB's Stewardship Committee worked with DOE to produce a stewardship map that shows all remediated areas on the ORR and what land use controls are currently in place.

The 50- by 64-inch map is on display in the DOE Information Center. The map is also available on the Oak Ridge Environmental Information System ([www-oreis.bechteljacobs.org/oreis/help/oreishome.html](http://www-oreis.bechteljacobs.org/oreis/help/oreishome.html)). Smaller versions of the map will be provided to the City of Oak Ridge and Anderson and Roane County officials. The map is color coded to indicate the various watershed decision areas, contamination areas,

and remediated sites under deed restrictions. Icons explain what land use controls are currently in place such as deed restrictions, fences, signs, security patrols, monitoring, and excavation/penetration permits required.

### **Update of ORSSAB's Museum Exhibit Completed**

In FY 2008 ORSSAB remodeled its permanent exhibit at the American Museum of Science and Energy in Oak Ridge. The centerpiece of the exhibit is a scale model of the EM Waste Management Facility in Bear Creek Valley, which provides visitors an idea of the magnitude of the cleanup effort on the ORR.

Two touch-screen kiosks take visitors on an interactive journey through the cleanup process at the Gunite Tanks, one of the highly successful remediation projects at ORNL. Suspended over the exhibit is one of the remotely controlled planes that used infrared photography to survey waste disposal sites



*ORSSAB's museum exhibit of displays, posters, and kiosks was completely remodeled in FY 2008. Also featured is a poster, video presentation, and display about the board's Stewardship Education Resource Kit.*

# Board Meetings

ORSSAB meetings are held the second Wednesday of each month at 6 p.m. at the DOE Information Center, 475 Oak Ridge Turnpike, Oak Ridge. Each meeting features a presentation like the ones described below. Board meetings also include regular business items, such as approval of recommendations, and status reports from DOE, EPA, TDEC, and the various ORSSAB committees. The public is always welcome to attend and participate. In FY 2008, 188 members of the public attended ORSSAB meetings.

*In September 2008 the board voted to change its fiscal year to start in October instead of September. As a result FY 2008 was a 13-month month fiscal year running from September 1, 2007, through September 30, 2008.*

*September 12, 2007*

## **Corehole 8 – Tank W-1A Removal Action Update**

Jeff Cange, BJC, reported on an engineering study to remove Tank W-1A and surrounding contaminated soil at ORNL.

*October 10, 2007*

## **EM Project Update**

Mike Hughes, president and general manager of BJC, provided an update on the Accelerated Cleanup Project to finish cleanup of the ORR by 2015.

Steve McCracken, DOE Oak Ridge assistant manager for EM, reported on the TRU Waste Processing Facility and its mission to treat and package CH and RH TRU for disposal at the

Waste Isolation Pilot Plant in New Mexico. He reported on work at Building 3019 at ORNL to dispose uranium-233 stored in the facility and from the Molten Salt Reactor Experiment.

*November 14, 2007*

## **K-25 Building Historic Preservation**

Steve McCracken reviewed the background of efforts to save a portion of the K-25 Building at ETTP for historic purposes. He said the plan was no longer feasible because the building was deteriorating rapidly. He asked the board to study the issue and provide a recommendation.

*December 12, 2007*

## **Status of K-25/K-27 Decontamination and Decommissioning**

Jack Howard, DOE Oak Ridge, reported that most of the work being done at K-25 was on the west wing of the building. He described a number of problems affecting work including rapid deterioration and falling debris, standing water, and damage to floor panels.

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## Service Hours Contributed to DOE by ORSSAB Members



ORSSAB members spent almost 2,000 hours in FY 2008 participating in board activities including attending meetings and conferences that had bearing on the goals of the board. This figure does not include time spent away from meetings writing recommendations and studying DOE-related materials. Board members and student representatives are volunteers and serve without compensation.



January 9, 2008

### **Low-Level/Mixed Low-Level Waste Disposition Strategy for the ORR**

Christine Gelles, director of the DOE Office of Disposal Operations, provided an overview of the waste disposition strategy of low-level and mixed low-level radioactive waste for the ORR.

February 13, 2008

### **EM Program Budget and Prioritization**

Dave Adler, DOE liaison to the board, explained the timeline for developing and submitting the FY 2010 budget. He also reviewed the status of the FY 2008 and 2009 budgets.

March 12, 2008

### **2006 Annual Site Environmental Report**

Joan Hughes of UT-Battelle said 2006 monitoring results reported in the Annual Site Environmental Report were all within expected ranges.

April 9, 2008

### **White Oak Lake Embayment and Bear Creek Valley Uranium Deposits**

Several alternatives were discussed by Jason Darby, DOE Oak Ridge, for remediating Bear Creek Burial Grounds of some 40 million pounds of depleted uranium. Dave Adler discussed contamination in White Oak Embayment and options to alleviate the problem.

May 14, 2008

### **Report on Submittal of the Integrated Facility Disposition Project**

J.T. Howell, DOE Oak Ridge project manager, said the goal of IFDP is to complete cleanup on the ORR and make way for continued modernization at ORNL and Y-12.

The effort will encompass demolition of 439 facilities and the removal of 5.4 million square feet of building space.

June 11, 2008

### **Update on EM Waste Management Facility**

John Michael Japp, DOE Oak Ridge, discussed a build-out strategy to increase capacity of the EM Waste Management Facility from 1.7 million cubic yards to 2.3 million cubic yards.

July 9, 2008

### **Cleanup History and Progress and How ORSSAB Has Influenced the Program**

Dave Adler explained how ORSSAB has had an effect on every aspect of the Oak Ridge EM program since 1995 through submission of 170 recommendations. He said DOE Oak Ridge considers ORSSAB the primary community group it looks to for advice and recommendations.

August 9, 2008

### **FY 2008 Annual Retreat**

The board held its annual planning retreat at the Whitestone Country Inn near Kingston, Tenn., to review FY 2008 accomplishments and



*Maggie Owen, left, Betty Jones, and Edward Juarez work on an exercise at the annual retreat.*

plan for FY 2009. The board elected officers for the coming year.

September 10, 2008

### **The Federal Historic Preservation Program**

Katatra Vasquez, the DOE Oak Ridge cultural resources management coordinator, said she provides support for historic preservation undertakings on the ORR and serves as an interface with the DOE Federal Preservation Officer, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation.

# Members



*ORSSAB members, liaisons, and student representatives. Seated, left to right: Gloria Mei, Claire Campbell (student representative), Tim Myrick, Steve McCracken (DOE Deputy Designated Federal Officer), Miranda Clower (student representative), Ron Murphree. Standing, left to right: Steve Stow, Darrell Akins, Lance Mezga (FY 2008 Chair), Steve Dixon (FY 2008 Vice Chair), Steve Mead, Kevin Westervelt, Betty Jones, Bob Olson, Maggie Owen, Darryl Bonner, Sondra Sarten, Pat Halsey (DOE Federal Coordinator), Edward Juarez, David Martin, Ted Lundy (FY 2008 Secretary), Charles Jensen. Not pictured: Dave Adler (DOE Liaison), Bill Bass, John Coffman, Connie Jones (EPA Liaison), John Owsley (TDEC Liaison).*

*Following are ORSSAB members and student representatives who served all or part of the year during FY 2008.*

**Ben Adams** is a professional engineer, landscape architect, and land surveyor employed by ACHW, Inc. Ben lives in Oak Ridge and is a member of the East Tennessee Economic Council. Ben retired from the board in June 2008.

**Darrell Akins** of Oak Ridge is the co-owner of AkinsCrisp Public Strategies, a strategic communications firm. Darrell began his professional career on the staff of Knoxville Mayor Kyle Testerman and then as a vice president of the Bank of Maryville. In 1979 he joined the administration of Gov. Lamar Alexander as Deputy Commissioner of Human Services and then as Deputy Commissioner of Transportation. At 31 he became the youngest member of the governor's cabinet as Commissioner of Personnel.

**Bill Bass** is retired from Sears Holdings Corporation after 39 years in senior management. When he retired he was the general manager of a 23-store district covering five states. He currently volunteers with the American Red Cross, where he is a liaison for governmental agencies and a disaster services instructor. Bill lives in Lenoir City.

**Rhonda Bogard** is manager of RADCON Dosimetry and Records for B&W Technical Services Y-12. An Oak Ridge resident, she is involved with hiking clubs and Jewish community activities. Rhonda retired from the board in June 2008.

**Darryl Bonner** is an engineer with 13 years experience in emergency management, facility management, pollution prevention, environmental compliance, and industrial hygiene. He is employed by BJC in Oak Ridge as the emergency management task lead. He holds a B.S. in chemical engineering from Washington

University in St. Louis and an M.S. in public health from the University of Alabama-Birmingham. Darryl resides in Oak Ridge.

**David Branch** lives in Knoxville and is employed by the U.S. Postal Service where he has worked for the past 11 years. He was previously employed in the health care field. David retired from the board in June 2008.

**Claire Campbell** is one of the two current student representatives on the board. Claire is a senior at Oak Ridge High School, where she is section leader of the band's flute section. She is a volunteer at the American Museum of Science and Energy and participates in the First United Methodist choir and First Presbyterian youth program.



*Retiring board members Rhonda Bogard and Ben Adams were recognized at the June meeting for completing six years service.*

**Miranda Clower** is the other current student representative on the board. She is a senior at Roane County High School, where she is a member of the Young Republicans Club and Beta Club. She is a member of Edgewood Baptist Church youth choir and participates in other church functions.

**John Coffman** is the president of DeNuke Services in Oak Ridge, which provides technical

support services to contractors and subcontractors on DOE sites. He is a Certified Health Physicist and has worked in radioactive waste management and remediation activities for more than 25 years. John lives in Clinton.

**Steve Dixon** is the owner of Spectra Environmental Group, which provides environmental services to more than a thousand small businesses in the region. He has worked as the director of management for the Metro Knoxville Airport Authority and as the finance director for the Knoxville Community Development Corp. Steve is a Louisville resident and an 18-year member of the Blount County Chamber of Commerce. He was elected as a Louisville City Alderman in November 2008.

**Hubert Gibson** served as an ORSSAB student representative for the term May 2007–April 2008. He was a student at Oliver Springs High School where he was a member of the Beta Club and Drama Club.

**Ashlyn Hall** served as an ORSSAB student representative for the term May 2007–April 2008. She was a student at Oak Ridge High School where she was a member of the National Honor Society, the Spanish Honor Society, and the Spanish Club.

**Mike Haygood** is a resource teacher at Jefferson Middle School in Oak Ridge and served as president of the Oak Ridge Education Association for five years. Mike retired from the board in June 2008.

**Charles Jensen** is the owner and manager of Diversified Technologies, which manufactures, designs, and services wastewater treatment systems for nuclear power plants. He has founded three technology companies, one of which is listed on NASDAQ, and is operating the third. He has authored and presented several technical papers regarding waste processing in the commercial nuclear industry. Charles resides in Knoxville.

**Betty Jones** lives in Oak Ridge and is employed by B&W Technical Services Y-12 as a chemical operations relief supervisor. She holds an Associate's Degree in applied science in environmental health technology from Roane State and a B.S. in organizational management from Tusculum College.

**Edward Juarez** of Loudon is a retired utility worker who was employed at the commercial Fermi 2 nuclear reactor site in Michigan for 15 years as a trainer, outage management expediter, and senior maintenance planner. He supervised nuclear simulator training and spent numerous hours in training in a wide variety of nuclear subjects and disciplines. He received his Associate of Science degree in applied science and his B.A. in sociology from Madonna University in Michigan, and his M.A. in criminal justice from the University of Detroit.

**Ted Lundy** received his B.S. in engineering physics, M.S. in metallurgy, and Ph.D. in metallurgical engineering, all from the University of Tennessee. He worked more than 30 years at ORNL in the Metallurgy Division, later known as the Metals and Ceramics Division. Upon retirement from ORNL in 1988, he joined the Tennessee Tech University Center for Manufacturing Research and became its director in 1989, retiring from that position in 2000. Ted lives in Knoxville, and during the 1970s he was twice elected to the Knox County Court from the Cedar Bluff/Farragut area.

**David Martin** is a self-employed engineer who has worked on a wide range of power engineering assignments worldwide. His areas of expertise include project management, power station startup oversight, electrical equipment testing and design review, and substation construction and maintenance. David lives in

Harriman where he operates his family's farm, which is registered with the Tennessee Century Farms Program.

**Steve Mead** is employed by B&W Technical Services Y-12 as a shift technical advisor. He has extensive experience with nuclear criticality safety, hazardous material storage and transfer, and emergency management. He has worked with both DOE and naval nuclear reactor weapons systems, and has made 12 trips to Russian uranium processing plants as a treaty compliance inspector.



*Board member Steve Stow, left, discusses ORSSAB activities with members of the Oak Ridge Lions Club.*

**Gloria Mei** of Oak Ridge is a radiation safety specialist at ORNL, where she manages and conducts program activities in radiological design and radiation control. Gloria holds a Ph.D. in nuclear engineering from Kansas State University. She is the recipient of the Fermi Hatchet Award at Kansas State, a diplomate of the American Board of Health Physics, and an adjunct associate professor of the Nuclear Engineering Department at the University of Tennessee-Knoxville.

**Lance Mezga** lives in Knoxville and is employed by UT-Battelle as the project manager for Environmental Integration for New Facilities Development at ORNL. He has more than 30 years experience in waste and environmental management, including projects and programs

involving treatment and disposal of various waste types, strategic planning, technology development, and environmental compliance.

**Ron Murphree** is a registered engineer and certified professional estimator with 25 years of construction-related experience. Since 1996 he has been the chief estimator for Denark Construction in Knoxville.

A Knoxville resident he is active in Knoxville and Knox County government.

**Tim Myrick** is the former director of Facilities Strategic Planning for UT-Battelle, where he was responsible for the development of the new ORNL research campus. He has also worked in the environmental restoration and waste management fields, serving in senior management roles at ORNL, ETPP, and the private sector. A Powell resident, Tim holds a B.S. degree in nuclear engineering and a M.S. degree in environmental engineering.

**Bob Olson**, a retired nuclear engineer, lives in Oak Ridge. He worked as an experimental physicist and as a probabilistic risk analyst at the Savannah River Laboratory and as a nuclear licensing engineer for Sargent and Lundy in Chicago. He has B.S. and M.S. degrees in nuclear engineering from North Carolina State University and a Ph.D. in applied physics from the University of Tennessee-Knoxville.

**Maggie Owen** is employed by Safety and Ecology Corporation RADCON Alliance as a health physics supervisor at ORNL and Y-12. For the last 13 years, she has worked on the ORR in deactivation and demolition of radiological facilities, surveillance and

maintenance, emergency response, and as a health physics specialist assigned to the Melton Valley Closure Project. An Oak Ridge resident, she received a B.S. in political science from Francis Marion University in South Carolina.

**Sondra Sarten** of Lenoir City is the owner of RS Construction and Fabrication in Lenoir City, which provides fabricated metal products and construction services to a variety of companies and organizations, including DOE and UT-Battelle. She also worked as a cost estimator at various DOE sites.



*Board members (left to right) Ted Lundy, Steve Dixon, David Martin, Steve Mead, and Darryl Bonner on the 2008 tour of the Waste Isolation Pilot Plant in New Mexico, the Nevada Test Site, and EnergySolutions in Utah.*

**Steve Stow** is retired from UT-Battelle, where he worked as director of the American Museum of Science and Energy in Oak Ridge. He holds a B.S. in geology from Vanderbilt University and M.S. and Ph.D. degrees in geochemistry from Rice University. Steve has been

involved with remediation and land use issues on the ORR for 25 years. Steve lives in Knoxville.

**Kevin Westervelt** is the civil/structural engineering department manager at Mesa Associates in Knoxville. He has 25 years of experience in civil/structural engineering and special project experience with the University of Tennessee relating to the remediation of the contaminated Coster Shop Rail Yard Facility. He holds a B.S. degree in civil engineering from Purdue University and is a licensed professional engineer in several states. Kevin lives in Knoxville.

# Committees

## **Board Finance & Process**

This committee has overall responsibility for budget prioritization for the board, including setting budget targets for each type of expenditure, proposing general budget guidance, and reviewing monthly costs. The committee also serves as the board's forum for initial discussion on issues involving the ORSSAB Bylaws and Operating Procedures, retreat planning, and preparation of the board's annual work plan. Lastly, the committee reviews and provides input to the board on the EM program's FY +2 budget and prioritization.

FY 2008 members: Ben Adams (Chair, Sept. 2007–June 2008), Steve Dixon, Betty Jones, Ed Juarez, Ted Lundy, David Martin, Maggie Owen.

## **EM**

The mission of this committee is to evaluate and make recommendations on DOE's planning and implementation of ORR environmental restoration projects and on the treatment, storage, disposal, and transportation of wastes and materials for which the DOE Oak Ridge EM program is responsible.

FY 2008 members: Rhonda Bogard, Darryl Bonner, Claire Campbell, Miranda Clower, John Coffman, Hubert Gibson, Chuck Jensen, Betty Jones, Gloria Mei, Lance Mezga, Ron Murphree (Chair), Tim Myrick (Vice Chair), Bob Olson, Maggie Owen.

## **Executive**

General board business is handled by the Executive Committee, which is composed of the elected officers of the board and the standing committee chairs. The committee holds authority to set board agendas, coordinate the work of the committees, and transact business as necessary between regular board meetings.

FY 2008 members: Ben Adams, Darryl Bonner, Lance Mezga (Chair), Steve Dixon (Vice Chair), Ted Lundy (Secretary), Ron Murphree, Kevin Westervelt.

## **Oral History Ad Hoc**

This ad hoc committee was formed to explore the possibility of facilitating an oral history program for the ORR.

FY 2008 members: Steve Stow (Lead), Rhonda Bogard, Hubert Gibson.

## **Public Outreach**

The Public Outreach Committee is responsible for finding ways to educate and inform the public about the EM program and ORSSAB's mission and accomplishments. It does this through publications, presentations, briefings, displays, and exhibits.

FY 2008 members: Ben Adams, Bill Bass (Vice Chair), Mike Haygood, Ed Juarez, Steve Mead, Steve Stow, Kevin Westervelt (Chair).

## **Stewardship**

This committee serves as a forum for discussion of topics relevant to the long-term stewardship of the ORR and as a liaison between DOE and the community. This latter aspect is becoming increasingly important as the committee also acts as a *pro tem* Citizen's Board for Stewardship until DOE appoints a formal board.

FY 2008 members: Ben Adams, Bill Bass, Darryl Bonner (Chair), Ashlyn Hall, David Martin (Vice Chair), Ted Lundy, Sondra Sarten.

# Abbreviations

