# DOE Oak Ridge and Regulators Collaborate in Groundwater Strategy Workshops

Representatives of the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the Tennessee Department of Environment and Conservation (TDEC) have completed most of a series of groundwater strategy workshops to discuss issues and possible solutions related to contaminated groundwater on or adjacent to the Oak Ridge Reservation (ORR).

The mission of the team organized for this planning effort is to develop an interagency strategic approach to identify, manage, and pursue any potential on-site and off-site groundwater public health threats and to protect and restore DOE-ORR groundwater resources to beneficial use.

Also participating in the workshops are representatives of UCOR, the DOE Oak Ridge prime cleanup contractor; SAIC, which is facilitating the meetings; and Dan Goode, U.S. Geological Survey, who is acting as a liaison for the Oak Ridge Site Specific Advisory Board (ORSSAB) and its

Environmental Management (EM) Committee. Goode has been providing updates on the progress of the workshops to ORSSAB and EM Committee members.

In April Goode provided an overview of the purpose and status of the workshops. He enumerated a number of objectives for the groundwater strategy:

- Set priorities to help guide sequencing and funding decisions for short- and long-term actions, with focus on pathways potentially migrating off site, including an agreed-upon action to start on September 30, 2014.
- Identify groundwater related activities, which could be implemented with the proposed three-year funding.
- Develop a comprehensive longterm strategy for groundwater on and around the ORR independent of the short-term funding levels for FY14 through FY16.

The long-term strategy document is due on September 30. The group will also develop a work plan for a specific project to begin in September 2014.

#### First workshops

The first three workshops focused on groundwater flow basins and contaminant boundaries in Bear Creek



Dan Goode, USGS, right, briefs ORSSAB EM Committee members on the Groundwater Strategy Workshops. Goode is acting as a liaison between ORSSAB and the workshop proceedings.

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Valley, Upper East Fork Poplar Creek, Chestnut Ridge, Bethel Valley, Melton Valley, and East Tennessee Technology Park (ETTP). The group worked to identify data gaps and uncertainties and potential projects to address problems and to describe and rank groundwater issues and rank potential remedial projects.

Goode told ORSSAB and EM Committee members that discussions of the workshops and areas of consensus will be documented in the

September 30 report. The report will include recommendations for near-term steps that can be taken using funds budgeted for FYs 2013-16.

Goode explained how issues are ranked for each area. "The group discussed each area's geology, land use, surface water and groundwater interaction," he said. "Then they considered contaminant sources,

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# Groundwater workshops

(Continued from page 1)

long-term fate and transport of contaminants, and any data gaps and uncertainties."

The areas were ranked according to hazards, pathways, and receptors. In ranking hazards, toxicity was based on effects on human health and ecological considerations. Volumes of hazards were based on relative plume sizes, and longevity of hazards was based on half-lives and biodegradation rates.

Pathways and receptors were divided between groundwater pathways and groundwater-to-surface water pathways. Groundwater through karst received a higher score than groundwater in an aquitard (a bed of low permeability). Distance to a receptor well or spring was also considered. Groundwater release to surface water with a sensitive receptor (such as fish) received a higher score.

After all of the areas were scored they were placed in tables for comparison. Similar charts for potential actions were developed as well.

#### Workshop 5

During Workshop 5 on May 2, participants began discussion of what actions to take.

Following the conclusion of Workshop 5, Goode briefed members of ORSSAB and the EM Committee. The highest ranking projects, according to Goode, involved additional studies and monitoring to address the potential for off-site migration to the southwest of the ORR toward the Clinch River, although there was some discussion about pursuing a remediation project in the 7000 Area near Oak Ridge National Lab (ORNL). That project involves bioremediation of a volatile organic compound plume of trichloroethylene (TCE) in the 7000 Area by providing additional 'food' for naturally occurring dechlorinating microbes. DOE had conducted a treatability study earlier that demonstrated dramatic reductions in TCE concentrations.

Goode said EPA assigned a lower priority to studies of off-site contamination since detections of ORR-related contaminants on the west side of the Clinch River in Melton Valley have been sporadic, low concentrations, and there are no known health or environmental impacts to this point. Goode said the conditions that might have caused initial detections may no longer exist because private wells on the west side of the Clinch that could have drawn groundwater under the river have been taken out of service.

#### What's next?

Workshop 6 will examine the final rankings and select a project to undertake. A date for that workshop has not been set, but Elizabeth Phillips, the DOE representative for the workshops, said a decision will be made soon when to meet. She pointed out that the September 30 deadline for the strategy document is a Federal Facility Agreement milestone that must be met.

# Spring EM SSAB Chairs' Meeting Morphs into a Webinar

Twice each year the leadership of the eight boards that comprise the national EM Site Specific Advisory Board (EM SSAB) gather to hear presentations on topics of common interest and share issues and concerns at the various sites.

This spring, however, the government sequestration impacted the April meeting, which was to be hosted by the SSAB at the Hanford, Wash., site. So, instead of a face-to-face meeting, the decision was made to hold a webinar, a first for the chairs' meetings, except for a video-conference in 2011.

The webinar was held on April 25 from 1 to 5:30 p.m. and was facilitated by Cate Alexander, the EM SSAB Designated Federal Officer. The agenda included an EM program update and discussion by David Huizenga, EM Senior

Advisor; an EM budget update by Terry Tyborowski, Deputy Assistant Secretary for Program Planning & Budget; a waste disposition strategies talk by Frank Marcinowski, Deputy Assistant Secretary for



Representing ORSSAB at the EM SSAB Chairs' webinar were Vice Chair Dave Hemelright, left, and Chair David Martin. In background is Dave Adler, Alternate Deputy Designated Federal Officer for ORSSAB.

Waste Management; and a session on cross-cutting issues and product development by the SSAB chairs.

One potential recommendation was presented during the webinar by the Nevada SSAB. It suggested that

at each EM SSAB meeting DOE and the SSAB work together to identify relevant focus areas for in-depth study. Then, at the following EM SSAB meeting, members could be better prepared to have informed discussion on identified focus areas and develop recommendations as appropriate. The recommendation was tabled for further development, however.

The next chairs meeting is scheduled to be an in-person meeting hosted by the Portsmouth, Ohio, SSAB.



## Reservation Update

#### **DOE EM Celebrates Successes**

The DOE Oak Ridge EM
Program took a day to celebrate its
accomplishments since its inception in
1989. The event, held May 2 at Pollard
Auditorium on the campus of Oak
Ridge Associated Universities, featured
a number of displays of cleanup
successes on the ORR and the premiere
of a video created as part of the DOE
oral history project.

Dignitaries included Congressman Chuck Fleischmann; David Huizenga, Senior Advisor for the DOE EM Program in Washington, DC; TDEC Commissioner Robert Martineau; EPA Region 4 Deputy Administrator Stan Meiburg; and three former Oak Ridge Office managers who were instrumental in advancing the cleanup



A timeline of cleanup activities in Oak Ridge was part of the EM celebration of successes in May.

mission in Oak Ridge - Jim Hall, Joe LaGrone, and Gerald Boyd.

### Sen. Alexander Supports Construction of Mercury Treatment System at Y-12

On May 3 Tennessee Senator Lamar Alexander was in town to show his support for the construction of a water treatment system at Y-12 National Security Complex to mitigate mercury contamination in Upper East Fork Poplar Creek.

"One of the biggest cleanup problems we have from the Cold War era is mercury contamination of waterways in Oak Ridge," said Sen. Alexander.

"We fully understand the need to address the mercury contamination issue at Y-12, and the mercury treatment facility at Outfall 200 is the cornerstone of that strategy," said Senior EM Advisor David Huizenga. Outfall 200 is the point



Sen. Lamar Alexander offers his support for the mercury treatment plant at Y-12.

at Y-12 where the creek surfaces and is the integration point for much of the mercury.

DOÉ Oak Ridge EM Manager Mark Whitney said the proposed

\$120 million facility would treat 1,500 gallons of water per minute. The conceptual design for the facility was completed in March and construction is expected to begin in 2017 with operations beginning in 2020.

Sen. Alexander had earlier questioned Ernest Moniz, the new Secretary of Energy, if he agreed that "a good, temporary strategy would be to build a facility at the head of the creek" to intercept and clean the water. Moniz replied that he would look at the details of

the plan, but that "clearly protecting the health and safety of our citizens is paramount."

## Oak Ridge EM Continues to Refine Uncontaminated Areas of the Oak Ridge Reservation

DOE Oak Ridge EM continues to determine what areas of the ORR are not contaminated and do not require cleanup. The work is being done through a review of historic documents and extensive sampling, analysis, and characterization. So far, thousands of acres of the 33,550-acre

reservation have been verified as not being contaminated or otherwise meeting regulatory standards.

Documentation of these areas creates possibilities for future mission work and economic development.

"This project clarifies our future environmental cleanup needs within the Oak Ridge Reservation," said EM Manager Whitney. "Our efforts confirm that a large percentage of our site does not require cleanup, and we can focus our planning, energy, and resources on the identified contamination areas."

In 2008 DOE EM began sampling and characterizing 21,000 acres surrounding ETTP, ORNL, and Y-12. In April EM completed the first Environmental Baseline Survey Report that confirmed five parcels totalling 4,600 acres around ETTP are not contaminated.

This summer EM expects to complete the second report addressing 14 parcels totalling 15,500 acres around ORNL and Y-12. A total of 19,300 acres could be approved as requiring no further investigation.

A majority of the parcels were never involved in process-related activities, but also were not classified as uncontaminated or determined to need no further investigation by EPA. The validation allows that land to be removed from the Federal Facility Agreement's list of areas to address for cleanup.

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Extensive sampling and characterization have been done on the ORR to determine what areas have never been impacted by operations.



# Reservation Update

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EM collaborated on the project with EPA and TDEC. The program contracted Oak Ridge Associated Universities to complete verification activities. Workers analyzed 102 surface water samples, 80 soil and sediment samples and nine groundwater samples. They also surveyed soil at 203 grid points in an area identified as potentially contaminated.

### Work Begins on Last Section of K-25 East Wing

UCOR has begun removing transite panels from the last remaining section of the K-25 Building at ETTP.

More than 2,800 of the panels, measuring 4 feet by 8 feet each, must be removed before demolition can begin this fall. Care must be taken removing the panels because they contain asbestos. "Safe completion of the transite removal will bring us one step closer to wrapping up the largest-ever demolition project in the Department of Energy complex," said Steve Dahlgren,

UCOR project manager for taking down K-25.

The last part of K-25 is also contaminated with technetium-99, a slow decaying radioisotope that causes problems if released into the environment.

Removal of the panels should be finished in August and then final demolition can begin this fall and be completed in 2014.



Workers began removing the transite panels from the last section of the K-25 Building in late May. Final demolition will begin this fall.

## Oak Ridge EM Seeks Public Input on Cleanup

In April DOE Oak Ridge EM held a public meeting to discuss the program's budget and cleanup priorities.

Presentations were made by the portfolio managers for ETTP, ORNL, and Y-12. They talked about what has been done so far and what remains to be done.

EM was seeking public input on its FY 2015 budget request. This meeting, which has been held for three

years now, is one of EM's primary channels to collect stakeholder input before submitting its budget request and priorities.

"As taxpayer stewards, holding these public meetings is a responsible practice that increases transparency and explains our decision process," said EM Manager Mark Whitney. "These meetings provide a forum for residents and stakeholders to voice their opinions, suggestions, and concerns about our vision."

A public comment period followed the presentation. About 75 people attended the meeting.

# ORSSAB Members Tour Transuranic Waste Processing Center

Several ORSSAB members toured the Transuranic Waste Processing

Center (TWPC) in May. Attending were Lisa Hagy, Dave Hemelright, Donald Mei, Belinda Price, Corkie Staley, and Tom Valunas.

Also attending were newly appointed member Wanda Smith and former member Gloria Mei.

They were split into two groups and led by TWPC General Manager Bob McKay and Operations Process Manager Ron Gentry. The groups were shown how contacthandled (CH) and remotehandled (RH) transuranic (TRU) waste is prepared for shipping.



Ron Gentry, TWPC Operations Process Manager, explains to ORSSAB members how remote-handled TRU waste is processed in the hot cells.

While processing continues at TWPC, no shipments are being made until 2014 when the Central

Characterization Project returns to certify waste for shipment.

Processing of CH waste is scheduled for completion in FY 2014 with shipping completed in FY 2017.
Processing and shipment of RH waste is to be finished in FY 2016.

TRU waste is sent to the Waste Isolation Pilot Plant near Carlsbad, N.M., where it is permanently disposed in salt caverns 2,100 feet below the surface.



# Board Member Fay Martin Stays Busy With Many Activities

Fay Martin is a very busy person. She's an athlete. She's a writer. She's an artist. She's involved in the community. The multitude of trophies, awards, certificates, and samples of her work proves that she has been doing all of these things for a long time.

Her background as a tennis player is quite amazing. "I've been playing tennis all my life," she says. "I started out with a wooden racket playing at boarding school in Jamaica." She has competed almost the entire time, and she still competes. Fay has scores of trophies from competitions all over the U.S. and the world.

Here's just a few of her accomplishments. She was the women's 55 singles champion in the 1996 Tennessee State Open. She won a gold medal for women's singles in the 1993 National Senior Olympics and took home silver medals in 1995 and 1997.

Through the U.S. Tennis Association, Fay competed with the U.S. Friendship Cup Team, which earned a silver medal in 2011 in Poertschach, Austria.

She even won a men's B singles stitle in the Oak Ridge city leagues in 1967. "They didn't have enough women for my division so they asked me to play in the men's division."

In addition to the many trophies she has won, Fay was inducted into the Oak Ridge and Knoxville Sports Halls of Fame in 1998.

But it's not just about competing. "I really enjoy the travel and the camaraderie with all the people."

She has also competed in the long jump, high jump, javelin throw, and badminton in the Senior Olympics.

As an artist, Fay has done a number of paintings and mixed media works that she has exhibited at the Anderson County Fair. She has won many prizes for floral arrangements at the fair. Her interest in botany led her to the Oak Ridge Garden Club, in which she currently serves as its vice-president.

Through the Oak Ridge Institute for Continued Learning, where she is a member of the Curriculum Committee, she has taken a number of classes in literature, poetry, art, and science. She received a Trophy of Excellence in 2004 from the Famous Poets of America.

As a community volunteer she worked many years with the Oak Ridge YWCA and has served as the Y's board president. She received the organization's Lifetime Achievement



Fay Martin displays her award for winning the singles title for women 55 in the 1996 Tennessee State Tennis Open. In the background are just a few of the numerous trophies she has won over the years.

Award in 2006. Fay has served on the board of Girls, Inc., and has given tennis lessons to students registered with the city recreation department and Girls, Inc.

Fay is currently the vice president of the American Association of University Women, Oak Ridge chapter. She received the Distinguished Service Award from the Association of Women in Science in 1997, having served as president for many years.

She was a long-time member of the Citizens Advisory Panel of the Local Oversight Committee and currently serves on the Oak Ridge City Health and Educational Facilities Board.

With all she does why would she want to be a member of ORSSAB? "I

want to remain involved; to continue to be a helping hand on the board," she says, "and I think DOE listens to what the board says through the recommendations it makes."

Fay is a native of Jamaica. She attended St. Andrew's High School for Girls and was offered a scholarship to the University College of the West Indies, where she received a bachelor's degree in chemistry/botany/zoology. She later received a scholarship to McMaster University in Hamilton,

Ontario, Canada, earning a master's degree in biology.

It was at McMaster where she met her husband Murray, a physicist. Shortly after they were married in 1963 he was offered a job in Washington, DC, and later was transferred to Oak Ridge. Fay began working in the biology lab at ORNL in 1964 and had several assignments over the years. She also worked parttime at the Technical Information Center writing abstracts.

Fay continued her education while working, and in 1984 she earned a doctorate in environmental toxicology from the University of Tennessee. She retired from the lab in 1996.

Fay is a member of St. Stephen's Episcopal Church and has served on the vestry. She has been co-president of Church Women United and is on the Women's Interfaith Dialogue steering committee.

She has served on the board of the local League of Women Voters and was president of the East Tennessee Chapter of the Society of Risk Analysis.

Fay has even performed in several plays and musicals at the Oak Ridge Playhouse, with her favorite role as Josephine in "The Mad Woman of Chaillot."

Fay and Murray recently celebrated their golden wedding anniversary. They have four adult children, Kathy, Derek, Karen, and Debra and five grandchildren.



## Recent Recommendations

Complete text of the following recommendations can be found on the ORSSAB website at <a href="www.oakridge.doe.gov/em/ssab/recc.htm">www.oakridge.doe.gov/em/ssab/recc.htm</a>

#### Recommendation on Remaining Legacy Materials on the Oak Ridge Reservation

DOE Oak Ridge EM has a collection of legacy materials stored at various locations around the ORR. Some of this material is considered waste and is best left for permanent disposal, while some is non-waste that has potential for re-use. Most of it is under some type of regulatory requirement and must be dealt with eventually.

This legacy material includes sodium shields stored at ETTP and at ORNL, shielded transfer tanks in Melton Valley, Disposal Area Remedial Action Soils in Bear Creek Valley, and 28 vaults of low-level radioactive waste on a concrete pad at ORNL.

While these legacy materials are considered to be in safe storage, they have no future mission and are a cost liability to keep.

After presentations on the legacy materials at both a full ORSSAB meeting and at an ORSSAB EM Committee meeting, a recommendation was developed and approved at the May ORSSAB meeting.

Some of the main points in the recommendation included:

- Maintain a table of legacy materials that includes description, current locations, and recognized obstacles to disposition.
- Where applicable evaluate potential for declassification of materials as a means to facilitate disposal or re-use.
- Consider moving materials currently stored outdoors into secure indoor areas to better

- control access and reduce damage from the elements.
- Characterize the Disposal Area Remedial Action soils to determine whether some or all can be used as fill material in the on-site waste disposal facility.
- Investigate whether waste materials stored in vaults on the concrete pad at ORNL can be processed for disposal through the Transuranic Waste Processing Center.

The board also suggested some prioritized criteria for dealing with the remaining legacy materials:

- 1. Dispose to mitigate pressing environmental concerns.
- 2. Dispose to avoid regulatory liabilities.
- 3. Dispose while disposal paths are available.
- 4. Dispose when there is a high cost to maintain in place.
- 5. Dispose only when re-use options are prohibitive.

## Recommendations on the FY 2015 DOE Oak Ridge EM Budget Request

Each year the DOE EM Program develops its budget request for the fiscal year two years beyond the current fiscal year. It uses budget requests from the various DOE field offices in developing the EM Program budget request to the President. DOE EM Headquarters typically issues guidelines to the field offices advising them how much budget they should reasonably expect when developing their fiscal year +2 budget requests to Headquarters. The field offices then brief the public, the regulatory agencies, and ORSSAB and seek input from them regarding budget requests.

In February 2013, DOE briefed ORSSAB on the current budget picture and described near-term, mid-term, and long-term priorities. Near-term priorities (2013–2015) are:

- Complete demolition of the K-25 Building.
- Continue direct disposition of uranium-233 from Oak Ridge.
- Process and dispose of transuranic waste.
- Continue planning for a Y-12 mercury treatment system.
- Prepare the K-27 Building for demolition.

Mid-term (2016–2026) priorities include:

- Complete the processing and disposition of remaining uranium-233.
- Complete the processing and disposition of transuranic wastes from Oak Ridge.
- Complete the closure of ETTP
- Build and operate the Y-12 mercury treatment system.
- Begin demolition of old Y-12 mercury use facilities.

Long-term (2027–2043) priorities include completing cleanup of Y-12 and ORNL.

DOE also briefed ORSSAB on EPA/TDEC comments on DOE's prioritization. In developing the recommendation on DOE's budget request ORSSAB generally agreed with DOE's current strategy for cleanup and endorsed its 2015 budget request.

ORSSAB's endorsement, however, didn't come without some reservations. It noted that delays in cleanup generally increase life-cycle costs and human risk. When programs are delayed, financial costs and environmental and safety risks escalate.

The recommendation noted that the major change in this year's budget request is the elevation of the priority of the Outfall 200 Project at Y-12 for processing mercury. The board believes that this adjustment will enable a more expedient solution to the mercury contamination at Y-12 and specifically in Upper East Fork Poplar Creek.

DOE Oak Ridge has responded to the recommendation saying it has forwarded it along with its budget request to DOE Headquarters.



# Four Board Members Are Recognized for Service at Their Last ORSSAB Meeting

Four ORSSAB members were recognized at the June meeting as they

completed their service on the board.

Two of them, Chuck Jensen and David Martin, completed three two-year terms, and finished their work on the board as the current secretary and chair, respectively.

Jan Hart and Tom Valunas each served one term and decided not to

apply for second terms.

Susan Cange, the board's Deputy Designated Federal Officer, thanked them for their service and presented them with plaques of appreciation. "These exceptional individuals have served in a wide variety of leadership positions both at the board and committee level, and they represent the very best example of selfless dedication to their communities," she said.

"I would especially like to thank Chuck and David, both of whom have completed the maximum six years service on the board."

During his six years on the board David Martin participated on the EM Committee (2011-13), the Stewardship Committee (2008-10), and the Board Finance & Process Committee (2008, 2012-13).

David also represented the board at EM SSAB national chairs' meetings, most recently in Paducah, Ky. (spring 2012), Washington, DC (fall 2012), and during the Spring 2013 chairs' meeting webinar.

He was also active in reaching out to community leaders and media

representatives educating them about ORSSAB and its mission.



Tom Valunas, Chuck Jensen, and David Martin (left to right) were recognized for their service to the board by Susan Cange, the board's Deputy Designated Federal Officer at the June meeting. Jan Hart was unable to attend.

"It has been a honor to serve on what I believe is the most helpful, productive, open federal citizen's advisory committee in America," said David. "I have learned so much while serving on the ORSSAB. Going forward, the experience should help me be a better environmental steward."

Chuck Jensen was a member of the EM Committee all six years he was a member of the board. He served as the board's secretary during FYs 2012-13. As board secretary he also was a member of the Executive Committee during that time.

"I've enjoyed my time on the board a lot," said Chuck. "The work that is done on the reservation holds a high degree of interest for me. The highlight of serving has been all of the presentations that have been given. It gives you a good understanding of how complex cleanup is. There are no simple solutions, but it's good to see they are being addressed in an orderly manner. That in itself has been worth my entire service."

Jan Hart was a member of the board's Public Outreach Committee

during her term and served as the committee vice chair in 2013. "Serving on the ORSSAB has been a rewarding experience," said Jan. "It has given me not only the opportunity to

learn in depth about the issues and challenges surrounding the EM program, but also the privilege of meeting a dedicated group of exceptional people who work hard for the good of their community."

Tom Valunas served as vice chair of the Board Finance & Process Committee during 2012-13. He also

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# Snapshot in History

July-September 1942

The Manhattan Engineer district is established in New York City for the development of substitute metals. A microscopic sample of pure plutonium is produced.

To better respond to urgent issues regarding development of an atomic bomb and resolve conflicts between the S-I Executive Committee and the Army, General Leslie Groves, an engineer credited with building the Pentagon, is appointed to head the entire bomb project, a.k.a. the Manhattan Project.

The S-I Executive Committee recommends building an electromagnetic pilot plant and a section of a full-scale plant in Tennessee. Gen. Groves selects Oak Ridge as the pilot plant site.



# ORSSAB Welcomes Two New Student Reps

ORSSAB welcomed two new student representatives at its May meeting. Gracie Hall and Julia Riley will serve on the board through April

Gracie will be a senior at Oak Ridge High School in the fall, where she is a member of the National Honor Society, the Oak Ridge High School marching and concert band, and the International Relations Club.

She also sings in Sound Company Children's Choir and practices various forms of martial arts. After high school, Gracie hopes to obtain a degree in Spanish, perform service work in other countries, and pursue a career that allows her to work with animals.

Julia will be a senior at Hardin Valley Academy, where she participates in the National Honor Society, Leo Club, a Lions Club organization, and Venture Crew, a co-ed branch of the Boy Scouts.

Julia spends her free time hiking and backpacking and plans to pursue a wildlife and fisheries biology degree at Clemson University.



Gracie Hall, left, and Julia Riley are the new student representatives to ORSSAB for FY 2013-14.

## Retiring Members

(Continued from page 7)

was a member of the EM Budget & Prioritization Committee in 2012 before the committee became part of Board Finance & Process. That committee drafted recommendations on the DOE Oak Ridge EM budget requests to DOE EM Headquarters.

"I really appreciate having been given the opportunity by DOE to serve on the ORSSAB board the last two years," said Tom. "Participation on the board gave me a better appreciation for the challenges we face with the cleanup and the dedicated efforts so many people are putting into getting the cleanup completed in a professional manner. I believe that each and every member contributed and that the board serves the community well."



## Oak Ridge Site Specific Advisory Board

P.O. Box 2001, EM-90 Oak Ridge, Tennessee 37831

#### **ABBREVIATIONS**

DOE — Department of Energy

EM — Environmental Management

EPA — Environmental Protection Agency

ETTP — East Tennessee Technology Park

ORNL — Oak Ridge National Laboratory

ORR — Oak Ridge Reservation

ORSSAB — Oak Ridge Site Specific Advisory Board

UCOR — URS/CH2M Oak Ridge, LLC

Y-12 — Y-12 National Security Complex

#### UPCOMING MEETINGS

Committee Meetings

July 16, 5:30 p.m. - Stewardship

July 17, 5:30 p.m. – EM

DOE Information Center, 1 Science.gov Way,

Oak Ridge, Tenn.

**ORSSAB** Annual meeting August 17, 8 a.m. - noon Holiday Inn, Pigeon Forge, Tenn.



