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ADVOCATE

DOE Achieves Legacy Low-Level Waste Milestone

The Department of Energy - Oak Ridge Operations (DOE) has reached a major milestone under the accelerated closure plan at East Tennessee Technology Park (ETTP).

On September 30, DOE, through its primary cleanup contractor Bechtel Jacobs Co.,

achieved final disposition of all legacy low-level (LLW) and mixed low-level (MLLW) waste, as defined within their contract. According to DOE, legacy waste is defined as 'waste belonging to the environmental

management (EM) program prior to September 30, 2000, when waste inventories were baselined, coinciding with the effective date of DOE Order 435.1'

The total amount of waste, either disposed at the Environmental Management Waste Management Facility (EMWMF) or shipped offsite, was about 1.2 million cubic feet. Only 16,000 cubic feet of that total was MLLW.

LLW is composed of radioactive waste not classified as high level, transuranic, or spent nuclear fuel. Facilities that process, create, or handle radioactive materials, perform chemical separations or conversions, or fabricate nuclear components generate low-level waste.

MLLW contains hazardous waste subject to regulation by the Resource Conservation and Recovery Act (RCRA). MLLW is generated

through a broad spectrum of processes including equipment maintenance, materials production, cleaning, environmental restoration, facilities deactivation and decommissioning, and the treatment and handling of LLW.

Bill McMillan, DOE's LLW project manager, said the LLW was generated in the 1990s and stored at ETTP. Much of it was stored in containers at two areas: outside Building K-33 and on the 1066-H storage pad.

Almost all of the LLW stored outside was disposed at EMWMF. McMillan said the waste consisted mostly of what is called dry active waste, such as construction debris, soil, and personal protective equipment that has radioactive contamination. Anything with radioactive contamination higher than allowed by the waste acceptance criteria for EMWMF was shipped to the Nevada Test Site or to Envirocare in Utah. Such wastes included high-fissile material or special nuclear materials. Roughly equal amounts of LLW were disposed at the EMWMF or shipped offsite.

"For things to go into EMWMF you have to show that it can be declared a CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) waste," said McMillan. "CERCLA waste must have some risk to the environment, such as a potential break to containers that might lead to a spill or contamination by waste going offsite. We were able to show there was risk associated with those containers at the outdoor storage areas. It wasn't imminent, but it was there."

Disposal of LLW that could go to EMWMF was completed in March. Since then,



Low-level waste containers make their way from the Oak Ridge Reservation to DOE's Nevada Test Site.

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The Advocate is a publication of the Oak Ridge Site Specific Advisory Board (ORSSAB)—an independent, nonpartisan, volunteer citizens panel providing recommendations and advice to DOE's Environmental Management Program

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Waste Milestone Reached

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remaining LLW was shipped off the reservation. McMillan said the cost of LLW disposal was about \$50 million.

The MLLW was sent offsite for treatment and then primarily to Envirocare for disposal, said Bryan Westich, DOE's MLLW project manager. He said there was a small waste stream that had a "CERCLA pedigree" that came from the David Witherspoon site in south Knoxville and was disposed at EMWFM. In the mid-1980s DOE was directed by the state to take some material from the site and store it on the reservation.

Westich said the waste was mostly chemicals, heavy metals, and organics that had been generated throughout the reservation. All of it had been stored at Building K-1065 at ETTP. He said the 16,000 cubic feet of MLLW accounted for half of all MLLW generated throughout the DOE complex nationwide.

About 0.4 percent of all the legacy waste, about 7,500 cubic feet of material, has no pathway to disposal at this time; however, it is not part of the milestone. It will remain stored until disposal issues are worked out.

Of that total 3,383 cubic feet of waste is MLLW. The rest, a little over 4,100 cubic feet, is LLW.

Now that the milestone has been reached there is quite a feeling of accomplishment by the project managers. "It's really a good feeling to see how things have changed," said McMillan. "It's nice not being able to see all those containers stored outside."

"It's a great feeling to go into the storage facilities that are no longer containing any waste," said Westich.

Melton Valley Cleanup Progress on Target

After reaching the legacy low-level waste milestone, the next major goal on the horizon is the Melton Valley Closure in 2006. Major activities include hydrologic isolation of solid waste storage areas, waste retrieval from the 22-Trench, demolition of the New Hydrofracture Facility, defueling of the Molten Salt Reactor Experiment, and soils and sediments remediation.

"We are progressing with activities," said Bechtel Jacobs project manager Charlie Johnson. "The majority of our work is tied up with hydrologic isolation, which is all of the cap work at the solid waste storage areas (SWSAs)."

Hydrologic isolation is the action to prevent migration of contamination into groundwater from SWSAs 4, 5, and 6, as well as some seepage pits and trenches. The capping of SWSA 4 was completed in December 2004, and the remainder of the capping should be finished by Thanksgiving.

While hydrologic isolation is being used around the SWSAs and five of the seven seepage pits and trenches, Trenches 5 and 7 are to be grouted in place. Johnson said an equipment

failure delayed work at the trenches for about a month. "We have to dig a test trench to show the regulators how the grouting technique will work," he said. "That should be finished by the end of September, and we'll start with Trench 7. Grouting of Trench 5 will start soon afterwards and finish in the fall."

Work has been stopped temporarily at the 22 Trench area because of an unexpected flame-up when some pyrophoric material, apparently resin beads that had not been completely incinerated before disposal in the 1970s, came in contact with air during excavation of the trench. Work was halted because of nuclear safety concerns. Restart activities are currently underway.

Grouting of the T-1 and T-2 storage tanks was finished in June.

Demolition of the New Hydrofracture Facility was about 90 percent complete when work was halted for a time. The remaining 10 percent of the facility, which Johnson said is the most difficult to dismantle, is being prepared for final demolition. An enclosure is being put over the remaining structure, which is extra protection against airborne

contamination. Final demolition will be done remotely.

A problem draining fuel salts from the Molten Salt Reactor Experiment tanks forced stoppage of work on the tank and the transitioning to a second tank. Johnson said it takes about two and a half months to reconnect and test all of the lines. Work is being done to figure out how to drain the salts from the first tank. The second tank should be ready for re-heating the solidified salts by the end of September.

Johnson said all soil remediation work is complete, which included removing contaminated soil associated with pipeline leaks and removal of contaminated floodplain soil. He said backfilling is currently being done at the High Flux Isotope Reactor and the Homogeneous Reactor Experiment ponds where contaminated water had been pumped out and sediments excavated.

Johnson said part of the closure project is to do a radiological survey of the valley to find any previously unknown hot spots. He said that work is underway, and a few areas have been found, which will be excavated.

Annual Retreat Sets Tone for New Fiscal Year

ORSSAB held its annual retreat and planning meeting Saturday, August 13, at Pollard Auditorium in Oak Ridge.

The retreat was divided into a morning session, to review Board function and processes and devise strategies to improve function, and an afternoon session, to lay the foundation for work in FY 2006, starting September 1.



Steve Douglas, Donna Campbell, Sandy Reagan, Chris Grove, and Darryl Bonner (left to right) work on ways to shorten the learning curve for new ORSSAB members.

The morning session was led by facilitator Catherine Whitworth, who reviewed the results of a survey she conducted with Board members. Her survey questions solicited input about Board and committee structure and presentations, member participation and workload, goals and expectations, access to personnel and materials, and how disagreements are handled during Board and committee meetings.

After going over the results, Whitworth suggested topics she thought the Board should work on that day and also asked for suggestions from the group. The group decided to work on three areas: reviewing the process of developing recommendations submitted to DOE; committee structure and member participation; and shortening the learning curve new members must experience before they can participate effectively. The participants divided into three groups to address each issue.

The group working on recommendations developed a flow chart to illustrate the process and formulated several ideas to improve the process. The main points included:

- developing criteria for what issues to consider and what to discard,
- determining precisely what DOE wants when it asks for a recommendation,

- inviting more member participation when developing a recommendation, and
- developing a method of tracking responses from DOE.

Those ideas will be explored further through the Board Process Committee.

The group working on committee structure and member participation came up with lists of responsibilities for committee members, the committee chairs, issue managers, and project liaisons.

It recommended that all Board members serve on at least one committee and participate fully on committees by communicating with other members, studying the issues under consideration, and accepting more responsibility as experience is gained.

The group defined responsibility for committee chairs to include prioritizing work plans, coordinating meeting presentations with issues managers, and developing committee work reports.

Issue manager responsibilities were defined as making use of staff, DOE personnel, and project liaisons; keeping committee members informed; and completing issue assignments.

Responsibilities of project liaisons were described as serving as the link between the committees, DOE, the Environmental Protection Agency (EPA), and the Tennessee Department of Environment and Conservation (TDEC), and engaging DOE contractors and federal officials to support issue development and resolution.

The group working on ways to shorten the time it takes for new members to understand the issues and be able to participate effectively developed a number of ideas to “shorten the effectiveness curve.”

A mentoring program has been used sporadically in the past for new members and has been discussed more recently by the Board Process Committee. The group addressing the issue at the retreat supported the mentoring program and suggested continued new member orientation, as well as a two-hour training program and assignment of mentors to new members.

The group also suggested that new members be given specific activities to work on and that a mentoring plan be developed. The mentoring plan would include an initial assessment of individual needs, “homework” given to new members to complete, and rotating of mentors if necessary to provide new members proper instruction in particular areas.

During the afternoon sessions, committee chairs reported on FY 2005 accomplishments. After the reports, the group reviewed issues suggested for consideration by DOE, EPA, TDEC, and assigned the issues to committees.

At the conclusion of the retreat, the Board convened its annual meeting and elected FY 2006 officers. Board Chair Kerry Trammell was reelected, Rhonda Bogard was elected Vice Chair, and Sandy Reagan was elected Secretary.



DOE-ORO EM Manager Steve McCracken (far left), SSAB Federal Coordinator Pat Halsey, and SSAB Chair Kerry Trammell perform the honorary cake-cutting duties.



DOE-ORO Manager Gerald Boyd speaks to attendees about his appreciation for the Board and about his previous experience as Deputy Designated Federal Officer.

ORSSAB Celebrates Its 10th Anniversary



Steve McCracken addresses the approximately 40 attendees at the celebration.



Pat Halsey shows off the newly updated ORSSAB exhibit at the American Museum of Science & Energy to John Owsley of the Tennessee Department of Environment and Conservation (center) and Doug Frost, SSAB Designated Federal Officer.



Board Chair Kerry Trammell (left) accepts a proclamation from Oak Ridge City Mayor David Bradshaw.



Member Heather Cothron and Luther Gibson, who recently retired from the Board following six years of service, view a poster of historical photographs.

American Museum of Science & Energy

September 12, 2005



Rod Nelson (left) served as DDFO from July 1999 to December 2001.



Luther Gibson (left) and Board member Ben Adams talk during the social hour that followed the presentations.



Doug Frost reads a plaque from Secretary of Energy Samuel Bodman congratulating ORSSAB on its 10th anniversary.

Adams Presents Paper at ANS Conference

ORSSAB member Ben Adams presented a paper at the American Nuclear Society's Decontamination, Decommissioning and Reutilization Conference in Denver, Colorado, on August 9. The meeting was a gathering of international experts for a series of presentations on cleanup and closure of contaminated land and buildings, waste management, and long-term stewardship of contaminated areas.

ORSSAB member Donna Campbell, who was the vice-chair of the Board's Stewardship Committee, attended the conference as well.

Adams' presentation outlined a recommendation ORSSAB made in July to DOE to standardize language in documents placed in county land records when contaminated waste sites are closed or transferred from DOE ownership. Consistent terms will help ensure accurate and complete

retrieval of information on land parcels containing contamination.

The paper, entitled "Two Counties, One City—Long-term Stewardship Information for Anderson County, Roane County, and the City of Oak Ridge, Tennessee," was



Ben Adams (right) reviews the American Nuclear Society paper with Al Brooks.

coauthored by Adams and Al Brooks, a member of the ORSSAB Stewardship Committee and a retired long-time employee at ORNL and the K-25 site.

"We must be sure that generations to come will be able to determine if a parcel of land contains contamination," said Adams. "This recommendation will help protect human health and safety long after we're gone."

Information on land records is provided regularly by Anderson and Roane counties to the City of Oak Ridge and to the Tennessee State Parcel Mapping System. Use of consistent terms in filing land notices by DOE would follow information to the city and state. Anyone searching city land records or the state mapping system would find notices of contamination in those records.

"What better place to store information about land containing contamination than in public land records?" said Brooks. "Land records are permanent and will always be available even if someday DOE no longer exists."

Bethel Valley Groundwater Engineering Study Issued

The first draft of the Bethel Valley Groundwater Engineering Study was issued in August. The study, performed at the Oak Ridge National Laboratory (ORNL) main plant and the 7000 area to the east of the main plant, evaluated contributors to groundwater contamination, as specified in the Interim Record of Decision for the Bethel Valley Watershed.

The new data will supplement information from previous investigations and provide a basis for designing groundwater and soil remediation specified in the Record of Decision.

"It was a really successful project," said Bechtel Jacobs project manager Charlie Mansfield. "We poked 283 holes in central ORNL and took many samples.

We installed 15 new monitoring wells, seven of them downtown.

"We got lots of data that put the last pieces of the puzzle in the Record of Decision. We did the remedial investigation and then realized a few pieces were missing. What this did was put those last few pieces together, so now we know some major things."

And the major things appear to be that all is not as bad as first thought.

"We now know that the soil in downtown ORNL is not nearly as dirty as had been thought," said Mansfield. "There are not those 'heinous' places people have talked about. There may be areas under some buildings that we don't know about yet, but not all the ones people had told us about."

Mansfield briefly checked off some the areas of particular interest.

"We put our arms around the trichloroethene plume on the west end so we know how big it is, how deep it is, and where it's going.

"We know what's leaking into White Oak Creek. It's smidges of strontium. We got our hands around the Corehole 33 plume, a small spot on Fifth Creek.

"We know that the Tank W-1A plume (Corehole 8) is not going under First Creek, which is good news, and we know the plume at Solid Waste Storage Area 3 is not going into Clinch River."

The study results will be the featured presentation at the Board meeting on Wednesday, Oct. 12, 6:00 p.m., at the DOE Information Center.

Reservation Update

BJC Fined for Accidents

DOE has proposed a fine of \$247,500 against Bechtel Jacobs, Co., (BJC) for two industrial accidents in 2004. BJC is DOE's prime cleanup contractor for the Oak Ridge Reservation.

In May of last year strontium-90 leaked onto State Highway 95 during transport from the Oak Ridge National Laboratory (ORNL) to a treatment facility. While no one was injured, the road was repaved at a cost of more than \$1 million.

The following August four workers were exposed to radioactive material while working at the Hot Storage Garden at ORNL.

Although both incidents involved BJC subcontractors, DOE fined BJC. "One of our top safety priorities is to improve the performance of subcontractors, and to do that we need to hold prime contractors responsible," said Assistant Energy Secretary John Shaw.

A sodium fire at the former K-25 site that also occurred in May 2004 forced a day long evacuation of about 150 people living near the plant. That incident was not included in the fine.

Energy Secretary Visits

Samuel Bodman made his first visit to Oak Ridge as Energy Secretary on August 1.

During his visit he said DOE's Environmental Management program is reviewing a proposal that would increase spending for cleanup efforts on the Oak Ridge Reservation. If approved, the budget for cleanup operations would increase by \$1.7 billion over five years and include new projects to complete work ahead of previously set schedules.

The proposal would increase the cleanup budget by about \$680 million a year between 2007 and 2012.

"I haven't seen the information yet," he said. "One of the reasons for this trip is to see and get educated."

He declined to comment on a proposal to consolidate nuclear weapons plants at a single site. He said regulations prohibited him from talking about the report until the public has had a chance to make comments.

Contracts Awarded for Haul Road Bridges

Contracts have been awarded to two companies to fabricate and install three bridges for the haul road being built between the East Tennessee Technology Park (ETTP) and the Environmental Management Waste Management Facility.

Steadfast Bridge Company of Fort Payne, Alabama, will fabricate and deliver the bridges at a cost of about \$600,000. Conti Environment & Infrastructure, Inc., of South Plainfield, New Jersey, will install the bridges for \$2.7 million.

The longest of the three, 130 feet, will be installed first over State Highway 58 near the intersection of Blair Road. A 90-foot span of bridge will be installed next over State Highway 95 near its intersection with Bear Creek Road. The last bridge is 110 feet long and will cross Bear Creek Road just west of Highway 95.

The bridge work will require temporary highway closures and detours as the steel spans are set in place.

The haul road, which will be used to transport waste from ETTP to the Waste Management Facility, is about

one third done and is on schedule for completion in late November or early December. When cleanup operations are finished at ETTP the bridges will be removed, and the road will be allowed to return to a natural state.

Demolition of Building K-29 Scheduled for December

BJC officials have said recently that demolition of Building K-29 at ETTP is set to begin in December. (K-29 is one of the three buildings in which the interiors were remediated under the BNFL contract.) However, much has to be done inside the building before actual take down begins. J.Q. Hicks, BJC manager of projects, said certain wastes inside must be segregated and removed, including asbestos from pipe insulation, mercury, and PCBs from the building's lights. He said demolition should begin in December and should take about 13 months to complete.

Plugged Line Slows MSRE Remediation

Work to remove radioactive fuel salts from the Molten Salt Reactor Experiment (MSRE) storage tanks has been suspended until a new drain pipe can be installed.

When MSRE was shut down in 1969 the molten fuel salts were transferred to storage tanks where they cooled and solidified. The cleanup plan called for the salts to be reheated and pumped into stainless steel tanks for storage while awaiting transport to New Mexico for final disposition.

But the one-half inch line used to drain one of the tanks became plugged, and efforts to unclog it have failed. Plans now are to try to drain two other tanks and return to the first later and install a new drain pipe.

Six New Members Join ORSSAB...

ORSSAB welcomed five new members to the Board at its July meeting. Taking their seats for the first time were Darryl Bonner and Steve Douglas of Oak Ridge, Chris Grove and Lance Mezga of Knoxville, and Ken Sadler of Harriman. Linda Grandage of Knoxville joined in August.

“The experience these individuals bring to our team is substantial,” said Steve McCracken, DOE Oak Ridge Assistant Manager for EM. “We are excited about having six new members who bring a fresh perspective to the Board.”

Bonner is an engineer with 13 years experience in emergency management, facility management, pollution prevention, environmental compliance, and industrial hygiene. He is employed by Bechtel Jacobs.

Douglas is the Senior Environmental Compliance Specialist for CDM

Federal Services in Oak Ridge. He is a Certified Hazardous Materials Manager and is completing his graduate work in occupational safety and environmental management.



New ORSSAB members (left to right) Chris Grove, Lance Mezga, Steve Douglas, Linda Grandage, Darryl Bonner, and Ken Sadler.

Grandage is retired from the U.S. State Department Passport Agency and has been involved in commercial contracting. She has provided volunteer services to the Habitat for Humanity of Anderson County over the last 10 months.

Grove is the Executive Director of Community Network Services in Knoxville, a non-profit organization dedicated to providing professional services to individuals with developmental disabilities.

Mezga 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 and has served as a technical expert to both national and international agencies.

Sadler is the Manager of Focus Compliance and Validation Services in Knoxville, where he provides consulting services to Food and Drug Administration regulated industries. He is a chemical engineer with more than 17 years experience in the engineering and environmental field.

...As Six Others Say Goodbye

Six ORSSAB members completed their service and were presented awards of appreciation by DOE in June and July.

Luther Gibson, John Kennerly, John Million, and David Mosby rotated off the Board after completing three terms. Robert McLeod served two terms and relocated to Georgia. Chris Smith served one term and resigned because of business and travel commitments.

In thanking them for their service, Steve McCracken, DOE's Assistant Manager for EM, said, “I express my sincere appreciation to you for the contributions you have made over the years. It's a significant sacrifice for something that is very important to

this community. I hope you will remain interested in what we are doing and continue to participate in ways that will benefit all of us.”

David Mosby chaired the Board in 2003 and 2004. “I've enjoyed the years I've had on the Board,” he said at the June Board meeting. “It's been enlightening. When I came on the Board I had this sense that the ORSSAB was basically rubber



Retiring members (left to right) Dave Mosby, John Million, Bob McLeod, and John Kennerly. (Not pictured: Luther Gibson, Chris Smith).

stamping what DOE was doing. I've come to learn that the ORSSAB is truly a dedicated group of stakeholders who learn the issues and deliver advice to DOE that is very meaningful.”

Recent Recommendations & Comments

Complete recommendation text can be found on the ORSSAB web site at www.oakridge.doe.gov/em/ssab/recc.htm.

Standardized Language Submitted to Land Record Authorities of Land With Notices of Contamination

The Board has recommended to DOE that it use a standardized form to send to local land record authorities when it files notices of contamination on closed waste sites. Consistent terms would help ensure accurate and complete retrieval of information on land parcels containing contamination.

Whenever DOE closes a waste site the agency files a notice of contamination with either the Anderson or Roane County register of deeds. The recommendation simply proposes DOE use the same language and terms on every notice of contamination. For instance, the owner of the property could be listed as the Department of Energy, United States of America – Department of Energy, or some other combination. Unless consistent terms are used someone searching land records might not discover all land parcels containing contamination.

Information on land records is also provided regularly by Anderson and Roane Counties to the City of Oak Ridge and to the Tennessee State Parcel Mapping System. The information provided by DOE to county authorities would follow information sent to the city and state, so anyone searching city land records or the state mapping system would find notices of contamination in those records.

When the recommendation was discussed at the Board's July meeting, DOE's Assistant Manager for Environmental Management, Steve McCracken, was very supportive of the

idea. "I applaud this. I think it's very important," he said. "That importance will be proven when we get way down the road and we have the ability to always locate these areas, and we never make a mistake and allow inappropriate use of these areas. So this is good. A good, thorough, durable approach to keeping track of this information. I think is very important."

Recommendation on Establishing Local Advisory Boards and Establishing Mechanisms for National Meetings

Beginning in 2006, several sites around the DOE complex will be transferred from Environmental Management to other offices or agencies within DOE. There is concern among the nine nationwide SSABs that these transfers would be detrimental to the boards' abilities to address common issues.

As a result, in June the nine SSABs sent a letter to DOE Secretary of Energy Samuel Bodman recommending that he establish local advisory boards at sites that will be transitioned from EM to other agencies. The SSABs also recommended that a mechanism be established where advisory boards, regardless of their affiliations within DOE, can continue to meet in a national setting to discuss issues of common concern.

National Waste Disposition Workshop

The nine nationwide SSABs have recommended to DOE's Principal Assistant Deputy Secretary for Environmental Management, Charles Anderson, that the department hold a national stakeholder workshop on waste disposition issues.

A similar letter of recommendation on the topic was sent to Acting Secretary

Paul Golan in November 2004. Golan basically declined to convene such a workshop.

The chairs of the nine SSABs drafted another letter and formal recommendation to hold a stakeholders' workshop and resubmitted the idea to Anderson in May.

The intent of the workshop is to determine where all DOE's waste is, what DOE's plans are for disposing of it, and what barriers impede the disposition of the wastes. The ultimate goal of the workshop is to formulate solutions to overcome the barriers to waste disposition.

2005 Remediation Effectiveness Report Now Available

The 2005 Remediation Effectiveness Report (RER), DOE/OR/01-2211&D2, is now available to the public. A copy is on file at the DOE Information Center.



The RER is a comprehensive study of all environmental restoration activities on the Oak Ridge Reservation in accordance with the Comprehensive Environmental Restoration, Compensation and Liability Act.

comprehensive Environmental Restoration, Compensation and Liability Act.

The report uses the results of monitoring and stewardship activities collected between Oct. 1, 2003, and Sept. 30, 2004. The RER also provides a brief progress report on continuing actions.

Teacher's Workshop Set for Mid-November

When ORSSAB launched its Stewardship Education Resource Kit in March (see article in March 2005 *Advocate* newsletter at www.oakridge.doe.gov/em/ssab/pubs.htm), Board members knew that putting the kit together was only half the job. The other half was getting it implemented in area schools.

To do that, Board members Donna Campbell and Heather Cothron began working with staff at the University of Tennessee this summer to plan a workshop for local high school teachers for introducing and implementing the Stewardship kit in high school science curricula.

Geology professor Mike McKinney and graduate student Leslie Marra are providing guidance in preparing for the workshop, contacting teachers and

public school officials, and designing and distributing information packets about the workshop. McKinney and Marra will also participate in the two-day event.

The workshop will be held Tuesday, Nov. 8, and Saturday, Nov. 12, at Pollard Auditorium in Oak Ridge. The agenda will include focused instruction on the lesson plans developed for the kit, group discussion, Internet research, videos, lectures from subject matter experts, and (of course) homework.

Campbell says that "The kit represents a lot of collaborative hard work and contributions from a number of SSAB members. The SSAB's Stewardship Committee and the End Use Working Group have made a significant impact on national stewardship efforts. It seems appropriate for the Oak Ridge

SSAB to sponsor this workshop and provide the background and means for discussion of stewardship issues within the classroom. The SSAB is now empowering the next generation to make decisions that will have a positive impact on the environment."

Approximately 50 teachers from Anderson, Roane, Knox, Loudon, and Meigs counties will be invited to attend the workshop. The kit was designed for broad application in science education, and invitations to the workshop will be extended to area teachers in the fields of chemistry, physics, biology, ecology, and environmental science.

For more information about the Stewardship Education Resource Kit or the teacher's workshop, contact the ORSSAB office at (865) 576-1590.

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JOIN US FOR OUR OCTOBER MEETINGS

Monthly Board Meeting – Oct. 12, 6:00 p.m.

The meeting presentation will feature a review of the Bethel Valley Groundwater Study.

Committee Meetings

Oct. 18, 5:30 p.m.	Stewardship
Oct. 19, 4:45 p.m.	Board Process
Oct. 19, 5:30 p.m.	Environmental Mgmt.
Oct. 25, 5:30 p.m.	Public Outreach
Oct. 27, 5:00 p.m.	Board Finance
Oct. 27, 5:30 p.m.	Executive

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