Advocate

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DOE Proposes Tearing Down All of K-25; Offers to Purchase Alexander Inn

In the fall of 2011 the Department of Energy Oak Ridge Office of Environmental Management released its much-anticipated plan regarding historic preservation of the K-25 Building at East Tennessee Technology Park.

What DOE proposes is not much of a surprise, except for one element. After years of discussion and alteration of original plans, DOE wants to completely demolish all of the remaining K-25 Building. Instead it wants to build six 'low-profile wayside exhibits' and offers $350,000 to buy the Alexander Inn near Jackson Square in Oak Ridge. The inn was first known as the Guest House and housed many Manhattan Project VIPs during the mid-1940s.

DOE also proposes to build an interpretive center in a portion of the ETTP fire station that would include a viewing tower where people could see an outline of the footprint of the old building after it's gone. The wayside exhibits would be placed at the Oak Ridge Turnpike Gatehouse, Portal 4 and the site of the old powerhouse at ETTP, the nearby Wheat Community, and in the area known as Happy Valley, which was where many of the K-25 construction workers lived.

DOE's unexpected offer to buy the inn, which is in pretty sad shape, is a way to recompense the community for the loss of K-25, which DOE feels is impractical, fiscally and structurally, to save.

The mitigation plan and new draft memorandum of agreement were distributed in October to the signatory and consulting parties to a 2005 MOA that called for saving the K-25 North Tower to be used as a museum that would have explained the significance of K-25 in enriching uranium. But not long after signing the 2005 MOA, DOE began to have reservations about the structural integrity of the building and the cost to bring it up to safe standards. Many months of plans, discussions, and studies followed about the building's fate. The new plan and MOA is the result.

ORSSAB member Steve Stow, center, makes comments on behalf of the board on DOE's plan for historic preservation of the K-25 Building.

The signatory and consulting parties to the MOA had about a month to review the plan, then DOE convened a public meeting to explain the provisions of the plan and receive comments from the MOA parties and the public. The meeting was held November 17 at the DOE Information Center in Oak Ridge.

The participants around the table included the MOA signatory parties - DOE, the Tennessee Historical Commission, and the Advisory Council on Historic Preservation. The consulting, or concurring, parties included representatives from the Atomic Heritage Foundation, the National Trust for Historic Preservation, the Oak Ridge Heritage and Preservation Association, the East Tennessee Preservation Alliance, the City of Oak Ridge, and ORSSAB.

Only the city appeared to offer complete support of the plan. Mayor Tom Beehan said the mitigation plan was important to the city and reaching consensus was 'critical.' City Manager Mark Watson said he would recommend to the city council that it approve the plan.

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New DOE Liaisons, Board Chair Bring Fresh Perspectives to the Board

The start of the new fiscal year in October brought with it a number of changes in DOE liaisons to the board and its committees.

Melyssa Noe assumed the role of Federal Coordinator, which is the primary DOE interface for the board, taking over from Pat Halsey, who served in this capacity since November 2002. In her nine years with ORSSAB, Halsey shepherded the board through countless meetings and helped the board with other endeavors, such as the Secret City Festival, and took an active role in establishing and participating in the activities of the Center for Oak Ridge Oral History, which came about through the board's role in historic preservation.

Melyssa Noe, new ORSSAB Federal Coordinator

Another primary liaison role, that of Deputy Designated Federal Officer, was assumed by Sue Cange, who took over from John Eschenberg, who was named Acting Manager of DOE Oak Ridge last fall. Cange was named Acting Assistant Manager for the Oak Ridge EM office earlier in October. She had served as Deputy Assistant Manager since earlier in the year, taking over much of the management role from Eschenberg when he was named Acting Deputy Manager of the Oak Ridge office and then Acting Manager.

New DOE liaisons for the board's committees were also named: Delisa Atwater for the Board Finance & Process Committee, Karen Ott (interim) for the EM Committee, Dave Adler and Alan Stokes for the EM Budget & Prioritization Committee, Ben Williams for the Public Outreach Committee, and Joy Sager for the Stewardship Committee.

A change in board leadership also took place, with Maggie Owen taking over as chair from Ron Murphree, who had served the maximum two years allowed by ORSSAB bylaws.

On November 9, Acting Assistant Manager for Oak Ridge EM Sue Cange (right) presented outgoing ORSSAB Federal Coordinator Pat Halsey with a plaque commemorating her nine years of service to the board.

Ron Murphree (center) was presented a plaque commemorating his two-year stint as ORSSAB Chair during the November 9 board meeting. Presenting the plaque are Sue Cange and ORSSAB Vice Chair Ed Juarez.

ORSSAB Chair Says FY 2011 Was a Year of Progress and Change; Details Can Be Found in the Recently-published ORSSAB Annual Report

If you could sum up 2011 for ORSSAB and the Oak Ridge EM program in two words, those words would have to be 'progress' and 'change'. Both the board and EM experienced an abundance of both as we worked together during the 16th year of the board's existence to make the DOE's Oak Ridge Reservation a cleaner, safer place.

Maggie Owen, ORSSAB Chair

The board's biggest accomplishments relate directly to its mission to provide independent advice and recommendations to the Oak Ridge EM program. We issued eight recommendations to DOE in FY 2011 on some very complicated and important issues, such as mitigation of contamination in Bear Creek Burial Grounds, the process for siting a second onsite waste disposal facility, and salt removal at the Molten Salt Reactor Experiment.

We also weighed in on some of the long-term stewardship issues that will have far-reaching impacts at DOE sites both here and across the nation. In particular, our "Recommendation to Establish a Site Transition Process Upon Completion of Remediation at Ongoing Mission Sites" was aimed at helping all the DOE sites like Oak Ridge tackle the challenge of addressing stewardship in the midst of continuing mission activities.

As for the 'change' I mentioned earlier, the board created a new standing committee this year, EM Budget & Prioritization, which will be the primary committee charged with reviewing and drafting the board's recommendations on the annual EM budget request. We also conducted a highly successful membership campaign to recruit potential candidates, and we increased the authorized membership of the board from 20 members to 22 members.

For EM, 2011 marked steady progress in its mission to protect the region's health and environment, make clean land available for future use, and ensure DOE's missions of science, energy, and national security. EM completed 15 of its 20 Recovery Act projects, accomplishing close to $330 million in work at the three main Oak Ridge sites: ETTP, ORNL, and Y-12 National Security Complex. Even more importantly, these projects were completed nearly $100 million under budget, which allowed DOE to reinvest those savings in projects to remove contaminated soil from the lab and Y-12.

The big change for EM was of course its new primary cleanup contractor for the ORR: URS|CH2M Oak Ridge (UCOR), which took over from Bechtel Jacobs on August 1. Indications from initial interactions the board has had with UCOR liaisons are that this new partnership will prove to be of great benefit in accomplishing our shared goal of completing the cleanup mission in Oak Ridge.

You can learn much more about ORSSAB activities in our FY 2011 annual report, which was published recently. I hope you'll take a moment to read through all of the highlights of ORSSAB's accomplishments and activities in FY 2011. Complete details of EM's year can be found in the *2011 Cleanup Progress—Annual Report to the Oak Ridge Community*, which is available online at www.ucor.com/CleanProg2011.pdf.

ORSSAB Annual Report

The FY 2011 ORSSAB Annual Report is available online at www.oakridge.doe.gov/em/ssab/pubs.htm. Copies are also available at the DOE Information Center, 475 Oak Ridge Turnpike, Oak Ridge, Tenn.

NOW ACCEPTING MEMBERSHIP APPLICATIONS

The Department of Energy is seeking to fill upcoming vacancies on ORSSAB. Applications are available on the board's web site at www. oakridge.doe.gov/em/ssab and by calling 865-241-4583 or 241-4584. Technical expertise is not required for board membership, as a broad spectrum of backgrounds and viewpoints is desired. New applications received will be considered for board appointments along with those on file to achieve a diverse board membership. Applicants and all members of the public may fully participate in committee meetings, including voting.

ORSSAB Member Is Recognized Expert in Liquid Rad Waste Disposal

For a guy with no formal training in the nuclear industry, ORSSAB member Chuck Jensen has done all right for himself, becoming a recognized expert in the area of liquid radioactive waste management.

As a student at Iowa State University, studying economics, Chuck was asked by a friend if he'd be interested in a job as an operator at the Ames Laboratory Research Reactor. Even though he had no background in the field he applied and got the job. He worked there several years advancing to senior reactor operator until the facility was the first in the country to be decommissioned to greenfield status.

With the closing of the reactor, Chuck got a job on the railroad, but when President Carter signed a grain embargo against the Soviet Union that stopped most of the rail traffic in Iowa.

He had previously been offered a job with Chem-Nuclear in South Carolina, so when the railroad job went away he contacted the company. He worked there about a year then set out to form his own business, Valley Nuclear, which designed and operated liquid radioactive waste systems at commercial power plants.

Less than a year later the company was bought out by another, "which was pretty good considering I didn't have any revenue or customers, but I did have designs and operating experience," he said.

Chuck then formed another, similar company, which went public in 1988. "I really didn't want to work with a public company, so several of the key employees and I started Diversified Technologies Services," he said. "The company operated in Maryland for about two and half years, and when we were ready to expand we looked at several areas and decided on Knoxville-Oak Ridge because of the critical mass of nuclear companies here." DTS is located in the Karns-Hardin Valley industrial area off Pellissippi Parkway.

Chuck says while the company remains focused on liquid radioactive waste processing, it has also developed innovations in ultra filtration and reverse osmosis for liquid rad waste processing.

DTS is an international business with customers in Mexico, Canada, Korea, and Japan, as well as all over the United States. In fact, DTS has played a role in the cleanup of the Fukushima Daiichi nuclear power plant in Japan. "After the tsunami, we were contacted by Westinghouse and GE Global on the availability of demineralizer filter systems, which are unique in the nuclear industry." The demineralizers are self-contained units with pumps and process vessels that are placed underwater to remove radioactive isotopes from the water. "Production and delivery of a unit usually takes six to eight weeks. We delivered 32 units in eight weeks," he said. Some were built at DTS while others were built by subcontractors. "We basically commandeered 100 percent of their capabilities for a couple of months."

ORSSAB member Chuck Jensen stands beside a Radwaste Reverse Osmosis System that his company, DTS, manufactures to remove radioactive isotopes from contaminated water.

DTS is building and installing two large systems for the Army at the Holston Arsenal for cleanup of process water before it goes into the Holston River. DTS also installed liquid rad waste systems for six of the new nuclear power plants in South Korea.

It's that kind of work, and the fact that he has delivered 45 papers to professional organizations, that earned Chuck recognition by the American Society of Mechanical Engineers with the Sarge Ozker Award in 2011 for lifetime achievement for contributions to waste processing in the commercial nuclear industry.

As for ORSSAB, Chuck currently serves as the secretary of the board and is a member of the EM Committee. "I enjoy it a lot. The nature of the work that is done on the reservation holds a high degree of interest for me because of the type of work we do at DTS.

"Unfortunately I haven't been able to contribute as much as I want. When I got on the board in 2007 I thought the business had plateaued somewhat, but that turned out not to be true. On the one hand that's good, but on the other I haven't been able to make the contributions that I would like."

Despite Chuck's concerns, he is an active participant in board and committee discussions, and his views are heard and respected by his board colleagues. He's also written a recommendation and provides insight and input on recommendations discussed by the board.

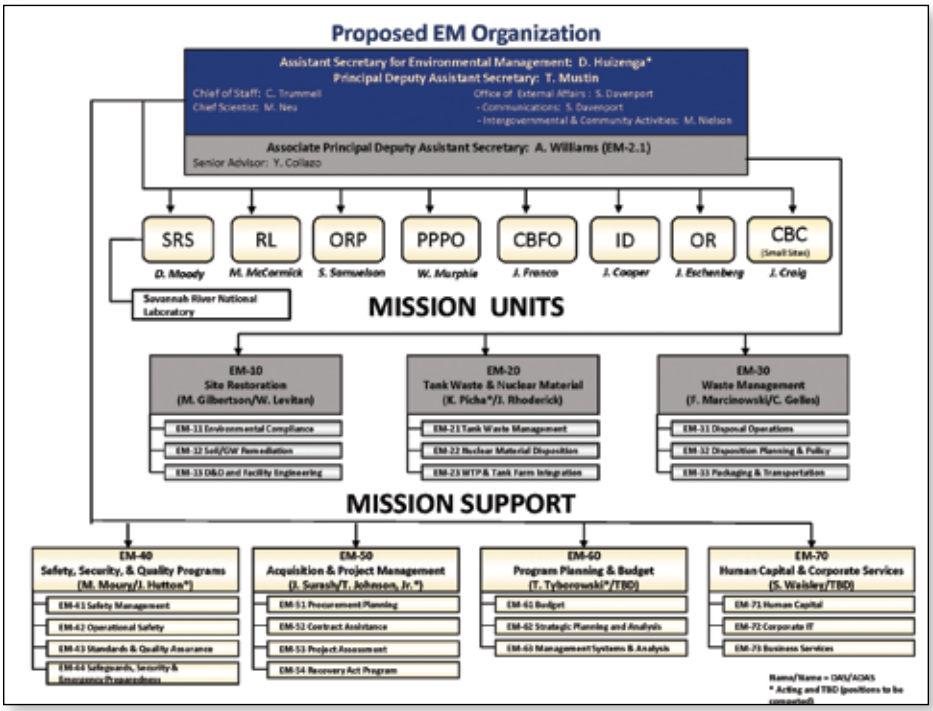
For time away from DTS and ORSSAB, his main interest is flying. He owns a six-passenger turbo-prop airplane that he uses frequently for business.

Recent News

EM Lays Out Details of Proposed Headquarters Reorganization

On December 8 Acting EM Assistant Secretary David Huizenga announced a proposed reorganization that would move EM into a matrix structure to "better align the program and achieve mission success" as well as promote communication and execution throughout the EM organization.

A key feature of the reorganization is the creation of three Mission Unit Offices (see diagram), which "will provide the field strategic planning, expertise, analysis, and technical support achieved through the integration and focus in specific program areas, including site restoration, tank waste and nuclear material, and waste management."



The Mission Units are envisioned to provide leadership, support, and advocacy at the Headquarters level for field office staff at the various program sites across the country.

Supporting the units will be four Mission Support Offices, which will provide leadership for EM's corporate processes: safety and quality management, acquisition and project management, program planning and budget, and human capital.

According to a news release, EM sought the proposed reorganization after looking at ways to best align Headquarters and field offices to support the cleanup mission. Huizenga and EM Principal Deputy Assistant Secretary Tracy Mustin engaged managers and staff at Headquarters and field offices, who communicated the need for an increased Headquarters focus on program areas to support the field and improved integration.

The proposed reorganization was to be presented to DOE's Chief Human Capital Officer for approval in late December, with implementation anticipated for the second quarter of FY 2012.

DOE Takes Major Step to Advance Reindustrialization Efforts at ETTP

On November 3, officials from DOE Oak Ridge, its prime Oak Ridge cleanup contractor UCOR, and the Community Reuse Organization of East Tennessee met to sign a new partnering agreement that establishes goals to enhance reindustrialization and development efforts at ETTP's Heritage Center.

"Today's agreement provides a clear and unified path forward as we strive to continue our Reindustrialization Program's outstanding success," said DOE Oak Ridge Acting Manager John Eschenberg. "We are very encouraged by the readiness and cooperation exhibited by UCOR and CROET to pursue this shared vision."

The agreement establishes goals for the partnership and presents a collaborative framework to promote commercial opportunities through development and asset revitalization. It also helps DOE's Reindustrialization Program further utilize existing infrastructure at ETTP, generating revenue for the regional economy. To aid this process, UCOR and CROET will review progress and conduct organizational adjustments to increase time and resources dedicated to the initiative.

The signed agreement advocates measurable performance criteria to gauge success based on the number of leased and transferred DOE buildings, creation of non-federal jobs, private sector investments, and reduced demolition costs through innovative reuse strategies. A major component within the agreement is an effort to attract alternative energy companies to the Heritage Center.

Oak Ridge was DOE's first site to implement the reuse program, and it serves as a model for the national complex.

Recent Board Recommendations

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

Recommendation on the Uranium-233 Project Re-Examination

About 450 kilograms of uranium-233 are stored in Building 3019 in the central campus of ORNL. U-233 is a special nuclear material with properties similar to plutonium, but with the chemistry of uranium. In addition to being a health hazard, U-233 is fissionable and requires strict safeguards, security, and criticality controls.

In 2006 Congress ordered DOE EM to dispose of the material. The original job was to downblend all of the U-233 with depleted uranyl nitrate, build an annex for drying and packaging the product, convert the downblended material to magnesium diuranate, and ship the final waste to the Nevada National Security Site.

At the March 2011 ORSSAB meeting Federal Project Director John Krueger briefed the board on the status of the project and some proposed alternatives to the original scope of work.

Krueger said instead of downblending all of the U-233, an alternative analysis had identified three ways to rid Oak Ridge of the material that would be less expensive. He said about 15 percent of the material could be used by other programs, some of it can be disposed directly in Nevada, and the rest would still require dissolution.

After Krueger's presentation, the EM Committee discussed the proposed alternatives and developed a recommendation, which the board approved at its September meeting.

In general the board applauded the alternative analysis as "innovative and creative problem solving." The board said that while dissolution would be reduced but not eliminated, DOE should ensure that the work is performed safely to prevent inadvertent criticality. The board recommended, as it has in the past on other recommendations regarding U-233, that additional funding for the project be provided beyond DOE Oak Ridge's normal cleanup budget.

The board also recommended that DOE convene a summit meeting on the removal of U-233 from the lab. Potential attendees would include "people who can make decisions regarding future uses of U-233, downblending, safety, and physical security."

Recommendation to Automate the Stewardship Verification Process for the Remediation Effectiveness Report

Each year DOE's Oak Ridge Water Resources Restoration Program prepares the Remediation Effectiveness Report for the ORR. The RER is a document required by the Oak Ridge Federal Facility Agreement to assess the progress of remedial actions toward goals stated in CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) decision documents and compares pre- and post-remedial conditions at cleaned up sites.

The RER reports on compliance with long-term stewardship requirements for areas remediated under CERCLA where contaminants or hazardous materials remain in place. It also reports on any actions taken during the reporting year and makes recommendations for future actions.

Every five years, the WRRP prepares a Five-year Review, which is required by CERCLA. The Five-year Review determines if a remedy is still appropriate under current conditions.

At the June 2011 Stewardship Committee meeting, representatives of WRRP explained the steps involved in documenting the stewardship requirements for remediated areas with residual contamination. The process is a time-consuming, labor intensive endeavor that requires input from multiple companies and organizations.

Currently about 180 check sheets must be completed by facility managers across the ORR and compiled for the annual RER. As more sites on the reservation are remediated and incorporate stewardship requirements, the amount of documentation will increase significantly.

Because of the amount of documentation required to track CERCLA-required stewardship activities, the Stewardship Committee drafted a recommendation, which the board approved at its October meeting, suggesting that DOE explore ways to automate the stewardship tracking process.

The board recommended that DOE pursue a solution for managing long-term stewardship information on the ORR. Without such a system the process could become overwhelming using current methods.

The system could compile long-term stewardship information for controlled areas on the ORR such as contaminant and physical hazards remaining, regulatory drivers, land use designations and restrictions, and required controls such as land use controls and engineering controls.

Having these processes automated would provide for a more streamlined system for annual verification for the RER as well as verification for the Five-year Review. A system would also allow for data summary reports to be generated and could be linked to the DOE geographic information system web site providing anyone online access to details of the long term stewardship components on the ORR.

EM SSAB Representatives Try Videoconferencing for the First Time

Twice a year the leadership of the eight EM SSABs around the country convene to get information from DOE on budget, cleanup issues, and other topics, and they discuss among themselves individual site issues and topics of common concern.

Typically they meet at the home base of one of the boards, but in October they tried a new method – videoconferencing.

A couple of factors led to the experiment. The meetings are usually held in March or April and in September before the close of DOE's fiscal year. But the April 2011 Las Vegas meeting was cancelled because of a threat of a federal government shutdown. It didn't happen and for awhile there was some question if the meeting would be rescheduled, but the folks in Nevada were able to secure another venue and the meeting was rescheduled for June.

ORSSAB Chair Maggie Owen and Secretary Ed Juarez participate in the first EM SSAB videoconference in October. In the background is ORSSAB member Fay Martin.

After that meeting the discussion was whether to even have a fall meeting because it would come so soon after the June meeting. There was also the consideration of reduced travel budgets for DOE folks.

So came the idea of a videoconference. It was decided to shorten the meeting from a day and a half to a half day.

The meeting was held on October 20 from 11 a.m. to 3 p.m. Eastern time. The main presentation was by DOE Acting Assistant Secretary David Huizenga, who provided an overview of the status of the EM program.

Other presentations were on the EM cleanup budget and a wrapup of Recovery Act projects.

Evaluations of the video-conference were mixed, but somewhat supportive of the concept. One idea was to have one face-to-face meeting and one videoconference each year.

The next meeting is scheduled for mid-April in Paducah, Ky.

DOE/NNSA Appeal Pollutant Discharge Permit for Y-12

In June 2011, the Tennessee Department of Environment and Conservation issued a draft National Pollutant Discharge Elimination System permit for Y-12. The permit is a bit unusual because it includes a number of requirements that DOE and the National Nuclear Security Administration must meet to reduce the amount of mercury going into East Fork Poplar Creek.

At the July ORSSAB EM Committee meeting, Bob Alexander with TDEC said his agency believes it can put requirements in the permit to reduce mercury levels leaving Y-12. DOE and NNSA say since Y-12 is part of a Superfund site TDEC requirements are pre-empted by CERCLA, which guides the cleanup of the ORR. But TDEC argues that mercury discharges in the creek are not being addressed through CERCLA actions. At the November EM Committee meeting Alexander said that TDEC set limits for legacy mercury in the permit because the legacy pollutant is blended with other industrial waste waters and cannot be segregated. He said TDEC's position is that the CERCLA exemption is not applicable in this instance.

At the same November committee meeting DOE's Dave Adler said, while DOE is taking some mitigation measures dictated by CERCLA or the Clean Water Act, DOE and NNSA would likely appeal the permit based on what regulatory requirements should be followed. In fact, NNSA did appeal the permit later in November. Adler said the agencies would follow the appeals process to the Water Quality Board and, if necessary, to the Anderson County Chancery Court.

At the November EM Committee meeting, Adler said DOE is planning some actions to help alleviate the mercury problem in the creek, although he also said there is no funding currently available to execute the work. The planned actions include:

- Excavation of mercury-contaminated sediments in the 81-10 area
- Building a small water treatment plant at Outfall 163, which is an exit point from the Y-12 sewer system
- Collect accumulated visible mercury in storm sewer manholes.

Since DOE and NNSA are appealing only parts of the permit, Y-12 can continue to discharge into the creek.

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ORSSAB's Steve Stow said the board basically supports the plan, but he said it takes issue with 'vague' wording about the future of the American Museum of Science and Energy and its role as the 'hub' of a 'hub and spoke' concept of historic preservation of Oak Ridge that would highlight the calutrons at Y-12 National Security Complex, the Graphite Reactor at Oak Ridge National Lab, and the features at ETTP.

Cindy Kelly with the Atomic Heritage Foundation continued to advocate preserving at least a portion of K-25. "Nothing is more important than saving a portion of the plant," she said. "Nothing compares to actual facilities and equipment." She said visitors would come to Oak Ridge to see a portion of K-25, and a history center at the fire station is not a substitute.

Kim Trent of the East Tennessee Preservation Alliance said saving the Alexander Inn is a "critical piece of the historic preservation experience," but she said $350,000 is not nearly enough to buy and renovate the building. That could approach $900,000, she said.

After all comments were heard from those at the table and members of the public, John Eschenberg, the Acting Manager for DOE Oak Ridge, and Susan Cange, Acting Assistant Manager for EM, asked the group to focus the discussion on the primary points where there were differences of opinion:

- What do with the Alexander Inn
- What to do with process equipment
- Consideration of the fire station as the site of an interpretive center.

While there was considerable discussion on those three points, there was no clear consensus among the participants, and the signatory parties to the MOA were non-committal. The only thing that seems to be a foregone conclusion is that all of the K-25 Building will come down. Eschenberg said in DOE's opinion it would be 'imprudent' to try to save the North Tower.

Cange said the next step will be for DOE to consider all the comments made during the meeting, focusing on the three points mentioned above, and incorporate them into a revised mitigation plan and MOA. She said if the revision is appreciably different from what was originally proposed then another meeting of all the parties will be held. Otherwise if the signatory parties agree on the revisions the MOA would be signed, preferably sometime in early 2012.

Oak Ridge Site Specific Advisory Board

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ABBREVIATIONS

CERCLA — Comprehensive Environmental Response, Compensation and Liability Act
DOE — Department of Energy
EM — Environmental Management
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
Y-12 — Y-12 National Security Complex

UPCOMING MEETINGS

All meetings are held at the DOE Information Center, 475 Oak Ridge Turnpike, Oak Ridge, Tenn.

Board Meeting
January 11, 6:00 p.m.

Committee Meetings
January 17, 5:30 p.m. – Stewardship
January 18, 5:30 p.m. – Environmental Mgmnt.