



Issue 35
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ADVOCATE

K-25 to Come Down; History Center to Tell the Story

It's all but official – the K-25 Building at East Tennessee Technology Park (ETTP) is coming down, including the North Tower.

Speaking for DOE-ORO, Steve McCracken, the Assistant Manager for Environmental Management (EM), said, "We thought we

could preserve it at a cost comparable to demolition. We found that no longer works." McCracken said the estimate to meet the MOA's requirements plus additional renovation to bring the building to code compliance is about \$67.4 million.



A 45,560 square-foot history center is proposed to commemorate the K-25 Gaseous Diffusion Building. The center would feature exhibits, a theater, and displays of equipment used in K-25. The authentic guard tower would overlook the former footprint of the huge K-25 structure.

In the 1940s the building was built to wartime standards. "They were trying to win a war," said

McCracken, "so building codes were modified or they got waivers to meet wartime needs. I'm not at all sure that getting waivers now would be a good path forward."

McCracken said he had discussed the situation with EM leadership at DOE headquarters and the consensus was to demolish all of the building and pursue either a plan proposed by the Partnership for K-25 Preservation (PKP) to build an interpretive center at the south end of the site or a plan similar to it. Final agreement for how best to preserve the significant history of the site will be made during meetings with the consulting parties.

Since DOE recommends demolishing the North Tower, McCracken asked how best to proceed. Joe Garrison, Review and Compliance Officer for the Tennessee State Historic Preservation Office, said DOE should send a letter to the consulting parties stating the reasons why the building can't be saved and asking for a termination of the current MOA.

The history of K-25 is well known. For about 20 years it enriched uranium for use in atomic weapons and nuclear power reactors. It's a historic old behemoth and there has been a lot of work by many to try to save the North Tower for posterity. The North Tower is the bottom part of the "U" that connects the two long 'legs' of the mile-long building.

But at the May meeting of consulting parties, who, in 2005, signed a memorandum of agreement (MOA) to save the North Tower, they were told what's been well-known for months: the North Tower has severe structural degradation and it would cost more to save it than to tear it down.

The MOA stated that the Department of Energy – Oak Ridge Office (DOE-ORO) would preserve the North Tower, decontaminate it, clean it out, and put a new roof on it. It would be up to some other entity to convert at least part of it into some kind of museum or interpretive center.

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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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K-25 to Come Down *continued from page 1*

McCracken was concerned, however, about terminating the MOA without committing to doing something else. He said he wanted to assure the public that K-25 would be memorialized.

Keith McDaniel with the Oak Ridge Preservation and Heritage Association agreed. “The history community would be unhappy without a commitment from DOE to do something. We need some kind of assurance that something significant will be done if the MOA is terminated.”

Garrison said the letter could make suggestions and solicit responses from the consulting parties.

A suggestion was made to amend the MOA since the retention of K-25 was only one of 10 stipulations in the document. Tom McCulloch with the Advisory Council on Historic Preservation said he would have to consult with the council’s attorneys about amending the MOA. McCracken said he thought amending the MOA would be an efficient way to proceed,

but in the meantime DOE will draft a termination letter and work on developing a new MOA for the consulting parties to consider.

Option K

Over the last several years a number of ideas have been submitted to DOE-ORO for the preservation of the North Tower. At a February 2008 public meeting, McCracken asked for additional suggestions to memorialize K-25 beyond saving the North Tower.

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Consulting Parties Discuss Y-12 and ORNL

K-25 wasn’t the only structure discussed at the May consultation meeting. The second day of the gathering was dedicated to discussing facilities at Oak Ridge National Laboratory (ORNL) and Y-12 National Security Complex that have been identified as having historical significance and are to be preserved during the cleanup of the respective sites.

ORNL and Y-12 will begin to get immediate face lifts by virtue of the proposed Integrated Facility Disposition Program (IFDP) and the American Recovery and Reinvestment Act (ARRA).

IFDP is a plan to eliminate more than 400 excess facilities at the two sites. The Graphite Reactor at ORNL and the Beta-3 “Racetracks,” ancillary transformer Building 9501-8, and Building 9731 “Pilot Plant” at Y-12 have been identified for preservation under IFDP. The Graphite Reactor is already a National Historic Landmark and the facilities at Y-12 are eligible for landmark status.

The reactor produced the first significant amounts of plutonium and was the model for the larger B Reactor at Hanford, Wash., which produced plutonium for “Fat Boy,” the atomic bomb dropped on Nagasaki, Japan to end World War II.

The Beta 3 “Racetracks” produced uranium for the “Little Boy” Hiroshima weapon, and the Pilot Plant housed the prototype calutrons.

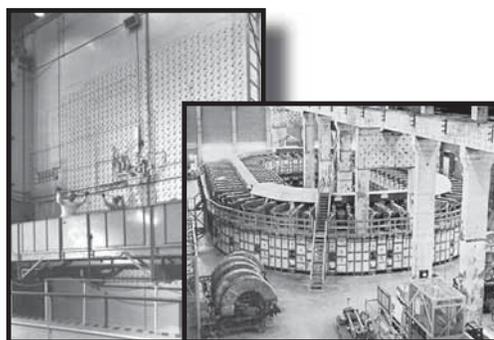
An additional 12 buildings are being reviewed under the National Historic Preservation Act to determine if they should be preserved. Bill Wilcox with

PKP said the 9706-2 Medical Building at Y-12 should also be added to the list for historic preservation.

A number of ORNL’s 2000 Complex buildings will come down under ARRA, but Bob Hightower of the Friends of ORNL said several of those buildings housed activities that had historic significance and he would like to see plaques placed at the spots where the buildings are currently located.

When the MOA is developed for preserving the Graphite Reactor, the Racetracks, and the Pilot Plant, City of Oak Ridge officials hope an oral history component will be part of the agreement. Amy Fitzgerald, Government and Public Affairs Coordinator, said the consulting parties should consider incorporating the Center for Oak Ridge Oral History into the MOA. “The city is considering funding to expand the Oak Ridge Public Library for the program,” she said.

Steve McCracken said he is the DOE-ORO ‘champion’ for oral history. “We hope to see something meaningful come out of this effort, so we ought to include that as part of the MOA.”



The Graphite Reactor, left, at ORNL and the Beta-3 “Racetracks” at Y-12 will be part of the next MOA for historic preservation.

DOE-Oak Ridge Receives \$755 Million in ARRA Stimulus Funding To Be Used Over Two Years

The big story for months has been the economy and the U.S. stimulus package to help get the economy moving again. The stimulus package is formally known as the American Recovery and Reinvestment Act (ARRA). The other big story is how much of that is coming to assist the local economy.

For DOE-Oak Ridge the answer is \$755 million that is earmarked for use at ETTP, Y-12 National Security Complex, ORNL, and the Transuranic Waste Processing Center (TWPC).

J.T. Howell, DOE-Oak Ridge, spoke at the May ORSSAB meeting and presented the general plan for how ARRA money will be used on the Oak Ridge Reservation.

“The \$755 million is divided among four major areas,” he said. “The money must be obligated by the end of September this year and all work must be completed by September 2011.”

The \$755 million is appropriated:

- \$327 million for Y-12
- \$230 million for ORNL
- \$118 million for ETTP
- \$80 million for TWPC

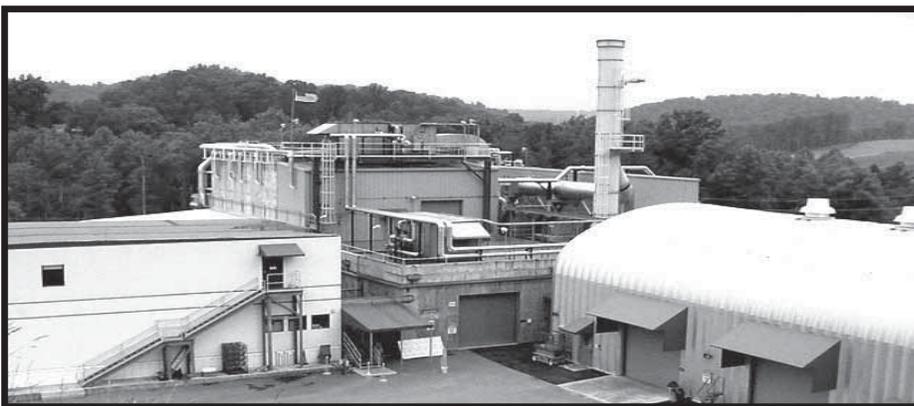
The Y-12 work encompasses nine subprojects, notably legacy materials disposition at the Alpha-5 and Beta-4 facilities, the biology complex decontamination and decommissioning (D&D), the Scrap Yard Removal Project, remediation of the West End Mercury Area storm sewers, and expansion of various landfills.

Regarding the storm sewers, Howell said, “We believe they are the major contributors of mercury to East Fork Poplar Creek. We’re going to run cameras through the sewers and clean them out and go back and do any re-lining/repairing as necessary.”

At ORNL the work is divided into four areas totalling 14 subprojects. The four main projects are building demolition, removal of legacy waste, removal of contaminated soil, and groundwater actions.

At TWPC the processing schedule has been accelerated by a year for getting remote- and contact-handled waste ready for shipment out of Oak Ridge. To do that multiple shifts will be added to handle the work.

Four major contractors will be involved in ARRA projects in Oak Ridge: UT-Battelle, B&W Y-12, Bechtel Jacobs, Co., and EnergX. DOE will also use a number of ‘indefinite delivery/indefinite quantity’ contractors for some individual projects.



One of the many projects to be funded through the American Recovery and Reinvestment Act will be adding more shifts at the Transuranic Waste Processing Center to process contact- and remote-handled waste for shipment from Oak Ridge to final disposition in New Mexico.

Highlights include taking down Building 3026 and hot cell removal, 2000 Complex D&D, the Southeast Contaminated Lab Complex D&D, capping of Solid Waste Storage Areas 1 and 3, the Melton Valley Monitoring Wells Project, and removal from the lab’s central campus of the infamous Tank W-1A, also known as Corehole 8.

The primary focus at ETTP is preparing the K-27 Gaseous Diffusion Building for demolition. “We’re going to go in and remove all of the high-risk equipment and get it ready to take it down,” said Howell.

Although \$755 million of ARRA funds have been earmarked for Oak Ridge only about 80 percent, or \$604 million, has actually been received. Progress on the ARRA-funded projects will be monitored closely by DOE Headquarters. If work proceeds in a timely and efficient manner the balance of funds will be received before September 2011. Howell said it’s possible that if work is progressing smoothly Oak Ridge could actually receive an additional 10 percent in funding beyond the \$755 million, bringing the total to \$830.5 million.

**Follow the progress of
ARRA projects nationwide
by going to
www.recovery.gov/**

Student Reps Complete Terms in April...

ORSSAB said 'thank you and best wishes' to its two student representatives for FY 2008-09 at its April meeting. Claire Campbell of Oak Ridge High School and Miranda Clower of Roane County High School completed their one-year terms on the board as they also finished their high school careers and begin new lives as college students.

"Being on the board has been an incredible experience for me," said Claire. "I plan to explore environmental policy as a career and being on ORSSAB solidified my decision that I want to make a difference through environmental policy and management. This experience gave me a huge head start."

Claire will participate in an internship this summer through the ORNL Environmental Sciences Division.

In the fall she plans to attend Furman University in South Carolina.



Outgoing student representatives Claire Campbell, left, and Miranda Clower show off their 'farewell' cake at the April meeting.

"I became more aware of the enormity of what is taking place in Oak Ridge and its importance to the future

of East Tennessee," said Miranda. "Another important lesson I learned is the necessity of preserving the history of what took place here, be it written, oral, or whatever."

Miranda plans to attend Maryville College. "I know that whatever major I choose, my experience on the board may well influence my decision."

At their last meeting Miranda and Claire were presented plaques for their service.

"We have really enjoyed their participation," said Dave Adler, the DOE liaison to ORSSAB. "We really appreciated their ideas and their energy."

...and Two New Students Are Seated in May

At the May ORSSAB meeting the board seated two new students – Sidney Sherrill, a senior at Oak Ridge High School, and Josh Pratt, a senior at Hardin Valley Academy.

"I welcome these two young people to the board, which has a tremendous amount of importance to DOE-Oak Ridge for the work that we do in helping us figure out how to get through all the issues and problems that we have to clean up the Oak Ridge Reservation," said Steve McCracken, DOE-Oak Ridge Assistant Manager for Environmental Management. "We really appreciate your spending a year with us. I hope you get to participate in a lot of activities of the board that will be meaningful for you in the future."

Board chair Steve Dixon also welcomed Josh and Sidney saying, "We

look forward to working with you over the next year, and we hope it will be a good learning experience for you."

Sidney is active in the Environmental Club and Interact Club and is a member of Student Council and the Recycling Committee at Oak Ridge



Sidney Sherrill and Josh Pratt are the new ORSSAB student representatives.

High. She contributes to the community through youth service projects organized by the Oak Ridge Unitarian Universalist Church. After school she keeps busy with the Atomic Rowing Club and occasional ballroom dancing classes.

Josh is a member of the Hardin Valley track program. He enjoys outdoor activities and is an advocate for conservation. Josh was accepted to the Tennessee Governor's School for the Sciences and Engineering 2009.

Their terms will run one year until April 2010.

ORSSAB is the only DOE Environmental Management advisory board that allows student participation at its board and committee meetings.

Recent Recommendations and Comments

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

Recommendation on the FY 2011 EM Budget

Each year DOE Headquarters develops its Congressional budget request two years in advance. DOE Headquarters typically issues guidance to the site offices regarding how much budget the offices should plan for when developing their own budget requests to Headquarters. The site offices brief their respective regulators and the public on that guidance.

Based on the guidance provided ORSSAB by DOE-Oak Ridge the board made a number of recommendations on the FY 2011 budget request.

- The board found it unacceptable that DOE-Oak Ridge has an unfunded mandate from DOE Headquarters to dispose of uranium-233 from Building 3019 at ORNL. That has taken about \$50 million a year from other projects in Oak Ridge and has caused a number of missed milestones. The board strongly

recommended that sufficient funding for work at Building 3019 be provided to complete the job.

- The board recommended that funding should be provided to deal with some remote-handled transuranic waste left in Trench 13 in Melton Valley. Some of the waste still remains in the trench after a flare up a couple of years ago during excavation work.
- Finally the board recommended that funding be provided to investigate the possibility of migration of contamination leaving injection sites in deep geologic strata.

A technique known as hydrofracture was used at ORNL to dispose of low-level radioactive waste. From 1959 to 1984, 43 injections totalling about 5 million gallons of waste mixed with grout and test injections were made in four deep wells in Melton Valley.

Research has shown that contaminated groundwater surrounds the grout, and observation wells are contaminated indicating a potential pathway for contaminant migration.

Recommendation on Providing Information in the DOE Quarterly Project Reviews

DOE Quarterly Project Reviews (QPRs) first came to the attention of ORSSAB in March 2007 at the Environmental Management SSAB chairs' meeting.

In August 2008 the chairs of the eight SSABs recommended to DOE Headquarters that QPRs be shared with the SSABs.

DOE declined to provide the QPRs in total because it said "QPRs are internal documents developed for DOE and the Assistant Secretary. They may contain preliminary data or business sensitive information making them inappropriate for release."

DOE suggested that local boards identify specific information they would like to have and work with the site managers to receive it.

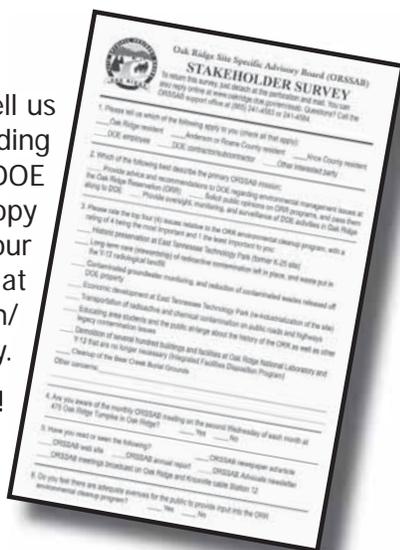
At its June meeting, ORSSAB requested that it receive QPRs on the major cleanup projects on the Oak Ridge Reservation. The board also requested calendar year funding associated with the major projects and subprojects and what year funding is available to start any subproject work.

At the subproject level, the board asked DOE-Oak Ridge to identify during a quarter if there were:

- funding changes/challenges that may affect completion,
- identified technical issues/challenges that may affect completion,
- unresolved regulatory issues,
- milestone challenges identified, and
- significant accomplishments for the reporting period.

Take Our Stakeholder Survey. Tell us your concerns and opinions regarding environmental management on the DOE Oak Ridge Reservation. Look for a copy in your mailbox soon or complete our 2009 Stakeholder Survey online at www.oakridge.doe.gov/em/ssab/survey.

Your opinion matters!



Reservation Update

BJC Completes Cleanup of David Witherspoon Sites in South Knoxville

Bechtel Jacobs, Co., has finished the 'heavy lifting' in cleaning up the David Witherspoon sites in South Knoxville. All that remains is final documentation of the work.



On hand for a celebration of the completion of cleanup at the Witherspoon 1630 site were, from left, Steve McCracken, DOE-Oak Ridge Assistant Manager for Environmental Management, and Bechtel Jacobs personnel Julie Pfeffer, Paul Champ, Paul Divjak, and Steve Smith.

Two sites were remediated. The 901 Maryville Pike location was completed in 2006. Completion of work at the 1630 site in May finishes up a job that has been underway for several years.

Almost 16,000 truckloads of contaminated soil and waste were shipped from the sites in Knoxville to the waste disposal facility near Y-12. It's something of a round-trip for the waste since it originated from the Oak Ridge Reservation many years ago and was disposed at the Witherspoon sites.

Privately-owned Companies to Fill Void Left by Closure of DOE Incinerator

Even though DOE is moving forward with shutting down the Toxic Substances Control Act Incinerator at ETTP by the end of the year, incineration work will continue at privately-owned facilities.

Diversified Scientific Services Inc., near Kingston has already received

shipments of PCB wastes from several locations, which will be treated in its thermal boiler system.

IMPACT Services is planning to expand its incineration capabilities at its current facility at ETTP.

Ponds Remediation Begins at ETTP

The K-1007 Ponds at ETTP are undergoing a remediation technique called environmental restoration. The ponds are contaminated primarily with PCBs.

Work began in early June to get rid of all the fish in the ponds.

The ponds were the homes of grass carp and gizzard shad, which are bottom-feeders and tend to re-suspend contaminated sediment. PCBs accumulate in high levels in the shad, which are a favorite prey of large-mouth bass in the pond. The bass, in turn, could be consumed by humans.



The K-1007 Ponds at ETTP have been drained, the fish removed, and clean fill placed over contaminated sediment.

Restoration includes drawing down the ponds, removing the fish, and reintroducing blue gill fish, which are not bottom feeders. Some clean fill will be added on top of the contaminated sediment, and vegetation will be planted in and around the pond to limit sediment re-suspension and erosion.

New DOE Assistant Secretary for EM Confirmed

Inés S. Triay, Ph.D., has been confirmed by the U.S. Senate as the new DOE Assistant Secretary for Environmental Management. Dr. Triay officially replaces James Rispoli, who resigned the position prior to the November elections. Dr. Triay has been the acting director in the interim.

Snapshots in Oak Ridge Cleanup History

10 years ago...

In May 1999 the Oak Ridge Reservation Environmental Management Site Specific Advisory Board (ORREMSSAB) shortened its name to ORSSAB.

Anne-Marie Wiest, a senior at Oak Ridge High School, became the board's first student representative.

5 years ago...

A truck hauling waste between ORNL and the waste disposal facility in Bear Creek Valley near Y-12 leaked strontium-90 along a section of Highway 95. As part of the cleanup a portion of the highway was repaved. The incident was one reason DOE decided to build a dedicated haul road between ETTP and the waste facility.

Gloria Mei Grows Through Her Involvement with ORSSAB and the Oak Ridge Community

A visit to Gloria Mei's office at ORNL shows that she likes to surround herself with the things that matter to her most. Photos of family, home, and hobbies occupy prominent spots on her office walls and roll across her computer in screen saver mode.

An obviously dedicated professional at work, she is equally focused in her personal life, as evidenced by the wide variety of family and community activities she engages in.

One pursuit that has occupied much of her spare time for almost four years is the Oak Ridge Site Specific Advisory Board. Gloria joined in 2005 as a way of continuing her ongoing interest in serving the community and to know more about the DOE cleanup activities. She says she has always liked to volunteer – at her children's schools, at the Senior Center, and elsewhere.

"It's been a good experience for me," she says of her time on the board. "I like to learn and be involved in the community. I have learned a lot by being on the board and through its Environmental Management Committee. Before I joined the board I didn't know too much about the cleanup program details on the Oak Ridge Reservation. Just by reading materials and participating in the board meeting discussions and making recommendations I've learned a lot and helped my goal to serve my community."

Gloria grew up in Taiwan, where she received her bachelor's degree in physics and where she worked for several years after graduation for the Institute of Nuclear Energy Research. She came to Kansas in 1983 and earned her doctoral degree. She and her family moved to New Jersey in 1986 where she worked

for Teledyne Isotopes as a radiation dosimetry scientist for three years. She later moved to Oak Ridge to work at ORNL, where she has been employed for 20 years. She was familiar with Oak Ridge through her association with several individuals at the University



"I just want to do something for the community and hope I can do more."

of Tennessee and the lab, and was impressed with the educational opportunities in the area for her children.

She is a Radiation Safety Specialist and Program Manager at the lab, where she conducts program activities in radiological design and radiation

control. Her recent work includes radiological design projects for hot cells operation, High-Flux Isotope Reactor upgrades, and the Spallation Neutron Source accumulator ring.

She is certified by the American Board of Health Physics and serves as an adjunct associate professor of the Nuclear Engineering Department at the University of Tennessee, Knoxville.

Gloria resides in Oak Ridge with her husband Donald, who is recently retired from the nuclear industry. They have two grown children: a daughter, who is a lawyer, and a son, who works in Internet design.

She belongs to several organizations, including the American Nuclear Society, Health Physics Society, Women in Nuclear, and the Organization of Chinese Americans. She is a dedicated exerciser who enjoys gardening, movies, and cooking, but most of all volunteering her time and skills.

"I just want to do something for the community and hope I can do more."

Board members Bill Bass, left, and Ron Murphree, center, join Downtown Sertoma Club President Tim Curbow following Bill's presentation to the club on May 20. ORSSAB members have given 21 presentations and briefings this year about the Oak Ridge cleanup program and the role the SSAB plays in the DOE-Oak Ridge cleanup decision-making process.



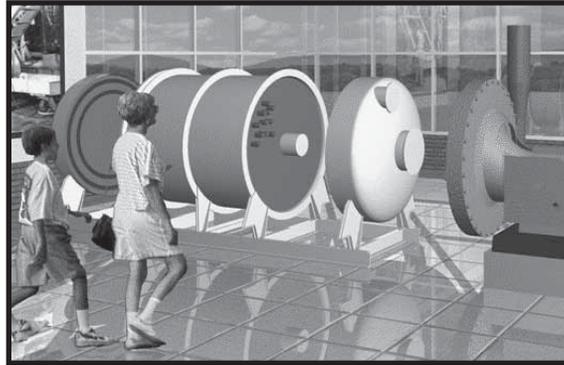
History Center to Commemorate K-25 *continued from page 2*

The overwhelming majority of opinions from the meeting, though, was to save the tower. But in the ensuing months other suggestions were made when it became evident that the tower was not salvageable.

PKP abandoned its hope to renovate the tower and developed another plan called Option K to build a 45,560 square-foot K-25 History Center at the south end of the site between the ends of the legs of the old building.

The history center would be a two-story structure housing galleries of World War II and Cold War histories, an operating cell taken from the old building, an exploded view of a uranium enrichment converter, an authentic guard

tower offering a bird's-eye view of the former site, a theater, and a gift shop. Option K also includes plans to restore a guard portal, build a 200-foot mural using a section of the interior wall of one of the legs, and develop a history trail to include stops at the Wheat Community, Happy Valley (where



One of the displays in the K-25 History Center would be an 'exploded' model of a uranium enrichment converter.

workers who built K-25 lived), the current K-25 overlook on Highway 58, the African Burial Grounds, and other points of interest.

The Oak Ridge Site Specific Advisory Board (ORSSAB) put forth its own recommendation, somewhat similar to Option K but for an un-staffed interpretive center at the south end of the site and an exhibit or additional structure dedicated as an interpretive center for K-25 at the American Museum of Science and Energy in Oak Ridge.

Estimates to build a fully furnished history center are about \$18.3 million, compared to the \$67.4 million to save and renovate the North Tower to make it fit for occupancy.

The Advocate is a publication of the Oak Ridge Site Specific Advisory Board. To add your name to or remove it from our mailing list, to advise us of a change in address, or for additional copies of the Advocate, write us at the above address, or call the SSAB Support Office at (865) 241-4583 or 241-4584. **Web address: www.oakridge.doe.gov/em/ssab**

JOIN US FOR OUR PUBLIC MEETINGS

Board Meetings

- **July 8, 6:00 pm** – DOE's CERCLA and Other Waste Landfills

Committee Meetings

- **July 15, 5:30 pm** – Environmental Mgmt.
- **July 21, 5:30 pm** – Stewardship
- **Aug. 18, 5:30 pm** – Stewardship
- **Aug. 19, 5:30 pm** – Environmental Mgmt.

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