



Advocate

A publication of the Oak Ridge Site Specific Advisory Board – a federally appointed citizens panel providing independent recommendations and advice to DOE’s Environmental Management Program

DOE Launches K-25 Virtual Museum

The Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) launched the K-25 Virtual Museum in November, one of the stipulations

Park, commemorating the work done to develop the first atomic weapon. The K-25 Virtual Museum is accessible at <http://www.k-25virtual-museum.org/>.

“The website is an impressive product that will serve to inform an international audience about the incredible work that happened at K-25, beginning with



These images are of some of the main pages of the K-25 Virtual Museum.

of a memorandum of agreement for historic site interpretation at East Tennessee Technology Park (ETTP).

The debut of the online museum coincided with the November 10 signing of an agreement between the Departments of Energy and the Interior establishing the Manhattan Project National Historical

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the Manhattan Project and continuing through to the cleanup mission we are executing today,” said OREM Manager Sue Cange. “The online museum includes a comprehensive history of Oak Ridge, photographs, interviews with former workers, a 3D model of the K-25 Building and Happy Valley hutment, among other items of interest.”

The Virtual Museum has

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Manhattan Project National Historical Park Established

On November 10 Energy Secretary Ernest Moniz and Interior Secretary Sally Jewell signed a Memorandum of Agreement establishing the Manhattan Project National Historical Park. The unique three-site park commemorates the massive effort to build the first atomic bomb. Park sites will be Oak Ridge, Los Alamos, N.M., and Hanford, Wash.

Oak Ridge enriched uranium and Hanford plutonium for the first bombs

Little Boy and Fat Man. The weapons were assembled in Los Alamos.

The signing of documents by Moniz and Jewell took place in Washington, D.C., but there were celebrations in Oak Ridge as well. A ceremony was held at Oak Ridge High School and a recreation of Ed Westcott’s famous ‘war ends’ photograph was staged at the recently renovated Jackson Square. This time instead of taking the picture Mr. Westcott was front and center

of the re-staged photo shot by DOE photographer Lynn Freeny.

In Oak Ridge the national park will include the site of the former K-25 Gaseous Diffusion Building at ETTP, the Graphite Reactor at Oak Ridge National Lab, and two buildings at Y-12 National Security Complex where uranium was enriched using the electromagnetic separation process. Also eligible for inclusion in the park

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K-25 Virtual Museum Debuts

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several main pages that explain K-25 and the surrounding area. The home page provides the initial introduction to K-25 with links to other pages.

Additional main sections include the K-25 Site Tour and a map of all of the buildings with links explaining their various functions.

The page Life in Happy Valley describes living conditions in the self-contained community. K-25 was several miles from Oak Ridge so Happy Valley sprang up where workers could be near their jobs.

The Preservation page describes in more detail about future site interpretation, and the Oral Histories page has many transcribed interviews with former workers.

Throughout the site are many photographs of work and life associated with K-25.

Work on historic preservation at ETTP has been underway for some time, beginning well before steps to establish the Manhattan Project Park.

Historic preservation work at ETTP is being done independently of the Manhattan Project Park, but will be part of the park.

Efforts to preserve part of the K-25 Building were taken in the mid-2000s.



The dining room of the recently renovated Alexander Guest House. DOE provided \$500,000 toward the purchase of the historic structure. After falling into serious disrepair it's been completely restored and modernized for use as an assisted living facility.

Ultimately it was determined the old building was in no condition to be saved. But a final memorandum of

agreement was signed in 2012 by a number of signatory and consulting parties that contained several stipulations for historic preservation of the site. The Virtual Museum was one of those stipulations.

Another stipulation was the provision of \$500,000 by DOE to be applied toward the purchase of the rapidly deteriorating Guest House in Oak Ridge. The Guest House was where many Manhattan Project VIPs stayed in the 1940s.

It was later renamed the Alexander Inn, but fell into disrepair. Using the DOE funds it was bought and renovated for use as an assisted living facility and is now called the Alexander Guest House. A ribbon cutting ceremony was held

just a few days before the release of the Virtual Museum and the signing of the national park agreement.

Other stipulations to come include the construction of an Equipment Building that will be a scale representation of the gaseous diffusion technology used to enrich uranium. The Equipment Building will have a viewing tower that will overlook the mile-long U-shaped footprint of K-25.

The second floor of the adjacent ETTP fire station will have a museum of Manhattan Project and K-25 artifacts and a theater. There will be wayside markers around the K-25 footprint and other locations at ETTP.

Completion of the remaining stipulations is dependent on funding.

Full establishment of the Manhattan Project Park and completion of ETTP stipulations are some time away, but for now people in the U.S. and around the world can log on to learn about K-25 and its place in history. 🌿

Manhattan Project Park Established *(Continued from page 1)*

is the recently renovated Alexander Guest House, where VIPs stayed during the Manhattan Project. The Alexander Guest House is now an assisted living facility.

Technically, the park is open with a National Park Service visitor assistant on duty at the American Museum of Science and Energy. But there are some details that need to be worked out such as joint operating agreements between DOE and the Park Service, and how to provide access to points of interest within Y-12 and the lab, which currently require visitor badging. 🌿



Ed Westcott shot the famous photo above in August 1945. The photo was recreated as part of the celebration establishing the Manhattan Project National Historical Park. Mr. Westcott is holding the 'War Ends' newspaper.

Courtesy of Lynn Freeny, DOE photographer.

Reservation Update

Public Input on Proposed New Waste Disposal Facility Provided

There was a flurry of activity in the fall by government entities and some private citizens asking for information related to building a second low-level waste disposal facility on the Oak Ridge Reservation (ORR).

At their respective meetings in November, the Oak Ridge City Council and the Anderson County Commission passed resolutions requesting additional details for siting the landfill as proposed and consideration of offsetting potential impacts to the community.

DOE's preferred location for the proposed EM Disposal Facility (EMDF) is just east of the existing Environmental Management Waste Management Facility.

In response to a third draft of a remedial investigation/feasibility study, the Tennessee Department of Environment and Conservation had a number of comments concerning the siting of the facility over a shallow water table to allowing disposal of mercury. DOE is working on a fourth draft of the study.

New Contractor Assumes Operation of Transuranic Waste Processing Center

North Wind Solutions took over the operation of the Transuranic Waste Processing Center in December. The Idaho-based company was awarded the \$123 million contract to operate the facility in June. North Wind replaces Wastren Advantage, Inc., which has

operated the center since 2010.

North Wind will continue to process and store transuranic waste on site until the Waste Isolation Pilot Plant (WIPP) in New Mexico reopens.

Storage Containers Developed to Store Remote-handled Waste

Since WIPP has been shut down, DOE needed way to store remote-handled transuranic waste on site. Wastren Advantage designed 'remote-

equipment. The switchyard is adjacent to the K-27 Building.

Copper, aluminum, and steel from the yard can be recovered for recycling.

CTI has engaged an Alabama subcontractor, TCI, that specializes in electrical recycling.

Deactivation of K-27 Continues

Deactivation of the K-27 Building at ETTP continues, preparing it for demolition to begin early in 2016.

At the beginning of December deactivation of the building was more than 96 percent complete. Workers continue to remove transit paneling on the building, but that job is 80 percent complete.

UCOR Completes Work on Oak Ridge Research Reactor

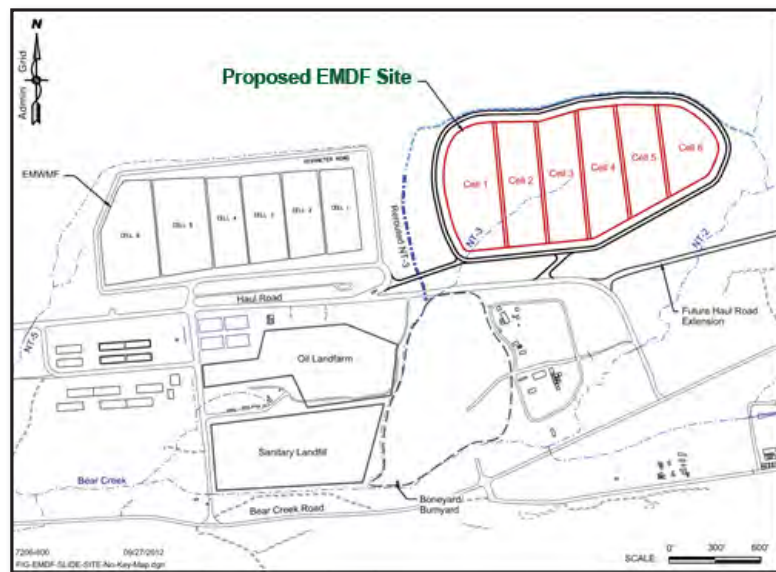
DOE's prime cleanup contractor in Oak Ridge, UCOR, completed work on the Oak Ridge Research Reactor pool where a leak was discovered last year.

Water from the leak, estimated at about 100 drops per minute, was collected underneath the reactor pool and was treated while officials decided what to do.

UCOR removed some radioactive components that were in the pool. The irradiated metal plates, weighing about 200 pounds each, were put in an 80,000-pound shipping cask and sent to a disposal facility in Texas.

The pool was then drained of the 125,000 gallons of water that had acted as shielding. The pool wall was sealed to fix any remaining contamination in place, and the pool was covered with concrete blocks for additional shielding.

Eventually the reactor will be deactivated and demolished but that is not scheduled until sometime in the 2030s or so. 🌱



This map shows DOE's preferred location of the proposed new waste disposal facility to be known as EMDF. It is immediately east of the existing Environmental Management Waste Management Facility.

handled overpacks' to hold the waste and provide protection to workers.

Companies in Tennessee, Colorado, and Idaho are manufacturing the overpacks.

DOE Awards Contract to Demolish Electrical Switchyard at ETTP

DOE has awarded at \$2.1 million fixed-price contract to a small business based in Michigan, CTI & Associates, to perform asset recovery and demolition work at the old electrical switchyard at ETTP.

The scope of the work includes removal and recycling of electrical

ORSSAB Celebrates 20 Years of Recommendations & Community Involvement

The Oak Ridge Site Specific Advisory Board was established in 1995 under the Federal Advisory Committee Act to provide informed advice and recommendations to DOE's Oak Ridge Office of Environmental Management. Since its establishment the board has provided more than 200 recommendations regarding cleanup and stewardship of the Oak Ridge Reservation, plus input on historic preservation and DOE EM budget requests. ORSSAB has had a number of other milestones, some of which are illustrated here.



The first ORSSAB members. Front row, left to right: Larry Robinson, Lovene Sigal, Rikki Traylor, Janice Stokes, Bob Cheetham. Back row, left to right: Bill Pardue, Joe Alexander, Bob Peelle, Mary Bryan, Randy Gordon, Howard Revie, Archie Tucker.



Recommendations are at the heart of the board's mission. The first of the board's 229 recommendations was written in 1996 and focused on project prioritization.



Public outreach has always been a core interest for the board and has included publications, presentations, exhibits, booths, displays, TV programs, and just about everything else you can think of. Shown are the first Advocate, published in 1996, and the ribbon-cutting ceremony for the ORSSAB exhibit at the American Museum of Science and Energy in 2005.



Oral history planning began in 2007 when ORSSAB sponsored a workshop to consider ways to consolidate existing Oak Ridge oral histories in one manageable location and how to continue gathering oral histories for future use. Thirty people representing a variety of agencies and interests participated in the workshop, which ultimately led to creation of the Center for Oak Ridge Oral History, now managed by the Oak Ridge Public Library.



Education is an area the board has long valued, so in 1999 the first student representative was seated, Anne-Marie Wiest from Oak Ridge High School. Current students are Alana Joldersma from Oak Ridge High School (left) and Sophia Cui from Hardin Valley Academy.



Historic preservation is an issue the board has supported for many years. A milestone was the 2008 meeting ORSSAB co-sponsored to gather public input on how best to preserve the historic significance of the K-25 Building at East Tennessee Technology Park. Over 150 people attended.



Recognition for public involvement came in 2006 when EPA presented ORSSAB its "Citizen Excellence in Community Involvement Award."

Partnership with DOE, EPA, and TDEC is critical to ORSSAB's mission. Representatives to the board such as Susan Cange, Dave Adler, and Melyssa Noe from DOE, and Connie Jones, EPA, and Kristof Czartoryski, TDEC, have provided leadership and perspective to the board's deliberations over the years.



Stewardship was a key focus for the board from the beginning and remains so today.

In 1997 the board started up its Stewardship Committee and organized the End Use Working Group to study future uses for contaminated areas on the ORR. Key stewardship accomplishments included publication of the two-volume Stakeholder Report on Stewardship, hosting the national "SSAB Workshop on Stewardship" in 1999, development of the Stewardship Education Resource Kit and an associated workshop for teachers in 2005.



ORSSAB'S 20-year relationship with the seven other local boards that comprise the national EM SSAB has provided the board with a wider perspective on cleanup issues across the DOE complex. Sharing information and discussing common issues with the other boards through the semiannual SSAB chairs' meetings and other venues has provided a valuable resource and context for board deliberations.



The FY 2016 ORSSAB. Seated left to right: Lisa Hagy, Sue Cange (Deputy Designated Federal Officer), Belinda Price (Chair), Dave Hemelright (Secretary), Connie Jones (EPA Liaison). Standing left to right: Leon Baker, Alana Joldersma (Student Representative), Donald Mei, Sophia Cui (Student Representative), Kristof Czartoryski (TDEC Liaison), Martha Deaderick, Dave Adler (Alternate Deputy Designated Federal Officer), Greg Paulus, Bob Hatcher, Richard Burroughs, Wanfang Zhou, Ed Trujillo. Not Pictured: Alfreda Cook (Vice Chair), Mike Ford, Howard Holmes, Jennifer Kasten, Melyssa Noe (Federal Coordinator and Alternate Deputy Designated Federal Officer), Mary Smalling, Corkie Staley, Scott Stout, Dennis Wilson.

Board Member Reports on 2015 PermaFix Waste Management Forum

by Dave Hemelright, ORSSAB Secretary



PermaFix Environmental Services puts on an annual conference in December each year in Nashville to showcase success stories in nuclear waste cleanup

throughout the DOE EM complex, military installations, sites not presently under the watchful eyes of advisory boards, and international market places.

The December 2015 meeting was the 14th annual forum. Personnel from DOE EM headquarters generally do the keynote address, and local (Oak Ridge) managers also make presentations. As in the past Senator Lamar Alexander was not able to appear but video recorded an address for the opening night reception.

Christine Gelles, DOE Acting Deputy Assistant Secretary for Waste Management, was the keynote speaker, and being very familiar with the EM budget process, she spoke of the budget for FY 2016 and how the budget is allocated by state and by site requirements. Sue Cange, Manager, OREM, was also a keynote speaker this year. She talked about the three "Visions" for the Oak Ridge Reservation. Those visions are: Vision 2016 - complete demolition of gaseous diffusion plants; Vision 2020 - reindustrialization of ETTP, and Vision 2024 - commencement of demolition of the Y-12 contaminated, unused facilities.

As the name implies, the PermaFix Nuclear Waste Management Forum truly is a forum with exchange of ideas and comments back and forth between presenters and participants. What makes this conference unique and informative is that the participants hear from the contractors actually doing cleanup work and the various sites, not the federal overseers. Sometimes a vendor will

pitch their services, but it is done in a lighthearted manner.

The overall atmosphere of the conference is semi-informal; the audience may ask questions of the presenters during their talks. There is plenty of opportunity to ask questions after the presentations, and, of course, face-to-face opportunities during the breaks and meals abound. The number of participants is not so massive that individuals feel like they are but faces in the crowd. The conference is small enough so that everyone who wishes to participate in the process is welcomed to do so. Many of the presenters sit in the audience when they are not on stage, so opportunities arise to discuss specifics with them during the course of the day.


To be isolated in what you do does not make an individual effective. To fully understand what is happening around you a person will become a more informed and valuable individual. This conference covers all of the DOE EM sites from the contractors' perspectives and highlights their successes in attaining the DOE EM goals.

Large sites, small sites, updates, successes and, yes, failures are presented and discussed. The DOE EM started 26 years ago with 107 sites to clean up. Now only 16 sites remain, of which advisory boards watch only eight of the sites. Who knew we had nuclear site cleanup outside St. Louis, Mo., and near Buffalo, N.Y.? This conference shows that each site is sometimes unique, and sometimes common problems and conditions are shared.

Different technologies for solving similar conditions are underway across the country. Some

are more successful than others. It is one of the best conferences an individual can attend to become more aware of the complexity and enormity of the DOE EM cleanup program. There are conditions at other sites that Oak Ridgers have no idea of how complex and big they are, and other sites have no idea of the closeness of civilians to the ORR cleanup activities.

Travel is easy to the conference, and the time spent is invaluable in informing the attendee of the accomplishments and scope of the cleanup program. In addition, presentations are made on what other countries are doing with their nuclear waste. This year China, Italy, and the United Kingdom presented and took questions. New technologies were shown, and we even heard from our own U.S. Navy on their nuclear cleanup and decommissioning efforts on nuclear-powered ships.

If the opportunity arises to attend, do so. It is valuable time well spent. It is an unparalleled educational opportunity. 



Oak Ridge Site Specific Advisory Board
NEW MEMBER RECRUITMENT

Interested in Becoming a Board Member?
Call the board offices at (865) 241-4583 or email Pete.Osborne@orn.doe.gov.
Or visit our website at www.energy.gov/orssab.

What is the Oak Ridge Site Specific Advisory Board (ORSSAB)?
ORSSAB is a volunteer citizens' advisory board to the Department of Energy's Environmental Management Program in Oak Ridge. It provides DOE with advice and recommendations concerning environmental remediation, waste management, monitoring and surveillance of legacy waste, and other issues.

The board meets monthly to hear from DOE personnel about the status of the cleanup program, discuss recommendations on cleanup issues, and conduct board business.

The board meets on the second Wednesday of the month from 6:00 to 8:00 p.m.

Who Serves on ORSSAB?
The board is composed of 22 members chosen to reflect the diversity of gender, race, occupation, and interests of persons living near the Oak Ridge Reservation. Technical expertise is not required for membership, as a broad range of backgrounds and viewpoints is preferred.

Facebook icon, YouTube icon, QR code

Recent Recommendations

Complete text of all ORSSAB recommendations and DOE responses are available on the board's website at energy.gov/orssab.

Recommendation on Preferred Alternative for the Proposed Plan for Water Treatment at Outfall 200 at Y-12

Mercury contamination at the Y-12 National Security Complex has been a persistent problem for decades and is widespread in soil, sediment, surface water and groundwater, in and underneath buildings, drains, and sumps. Mercury continues to be released into Upper East Fork Poplar Creek (UEFPC) in amounts above acceptable levels.

Mercury contamination is the result of operations that took place primarily in three buildings at the west end of Y-12, namely, Alpha 4, Alpha 5, and Beta 4, and to a lesser extent in Alpha 2.

DOE's objectives for mercury cleanup at Y-12 are to reduce mercury in surface water and stabilize and eliminate mercury in the soils.

One of the solutions is to reduce mercury leaving Y-12 via surface water.

In July 2015 DOE EM issued a Proposed Plan for Water Treatment at Outfall 200 Under the Record of Decision for Phase I Interim Source Control Actions in the Upper East Fork Poplar Creek Characterization Area (DOE/OR/01-2661&D2). The proposed plan describes several alternatives for constructing a water treatment plant at Outfall 200 where UEFPC originates.

DOE's preferred alternative is to build a water treatment plant at Outfall 200 with 3000 gallons per minute treatment capacity and 2 million gallons of stormwater storage to hold overflow in the event of a large rainfall event so the captured water can be treated later.

ORSSAB's recommendation endorsed DOE's preferred alternative.

DOE thanked the board for its recommendation and said it was working on a draft record of decision that will select the preferred alternative for the remedial action.

EM SSAB Chairs' Recommendation on Supplemental Environmental Projects

ORSSAB signed off on a recommendation crafted by the eight chairs of the site specific advisory boards in the DOE complex regarding supplemental environmental projects (SEP).


The chairs wrote that DOE EM sites with legacy waste waiting for off-site disposal have been, or could be, subject to fines from regulatory agencies for failure to meet legally mandated deadlines for permanent disposal.

They said payment of fines reduces the ability of cleanup sites to meet cleanup goals. The recommendation stated 'in most cases states have the option to use the funds collected on fines for work unrelated to the issues that led to the direct benefit of residents of the affected area.'

The chairs wrote that a more effective use of funds would be to use the money from fines to fund SEPs 'given that EM funding ...for EM work should be used to protect and/or improve the health and environment of the citizens of the geographic area and population affected by the previous disposal of legacy wastes.' SEPs are defined as environmentally beneficial projects that violators voluntarily agree to under-

take in settlement of an enforcement action but which is not legally required by law.


The chairs recommended that 'in lieu of fines and penalties that could be required and instituted at the respective facilities, DOE EM should consider SEPs as beneficial and amenable means to help accomplish the legally mandated cleanup goals at DOE facilities.'

At publication time, DOE had not responded to the chairs' recommendation. 

ORSSAB Annual Report Now Available

ORSSAB's Annual Report for FY 2015 is now available.

The ORSSAB Annual Report can be accessed online at <http://energy.gov/oreml/services/community-engagement/oak-ridge-site-specific-advisory-board/orssab-news>.

It is also available at the DOE Information Center, 1 Science.gov Way Oak Ridge, Tenn., 865-241-4780. 



ORSSAB to Host National EM SSAB Chairs' Meeting in April

Twice a year the leadership of the eight site specific boards in the DOE EM complex gather to hear presentations by DOE officials and discuss areas of common concern. They often craft recommendations for DOE EM to consider.

ORSSAB will host the Spring EM SSAB Chairs' meeting April 19-21 in Oak Ridge.

Tuesday, April 19 is set aside for a tour of the ORR so meeting participants can see Y-12 National Security Complex, Oak Ridge National Lab, and ETTP.



ORSSAB hosted the Spring 2010 EM SSAB Chairs' meeting.

Wednesday, April 20 and half a day on Thursday, April 21 will be the meeting days at the DoubleTree Hotel in Oak Ridge.

While the agenda is still being developed, the meetings usually include updates on cleanup activities and waste disposition across the DOE complex, the national cleanup budget, and other topics of interest to the boards' leadership.

Each board also shares its local concerns, accomplishments, or topics of interest.

Participants will travel from sites across the country that comprise the EM SSAB. Other boards are located in South Carolina, Kentucky, Ohio, Nevada, Idaho, New Mexico, and Washington.

ORSSAB last hosted the chairs' meeting in April 2010.

The meetings are open to the public. 



Oak Ridge Site Specific Advisory Board

P.O. Box 2001, EM-90
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UPCOMING MEETINGS

All meetings are held at the DOE Information Center, 1 Science.gov Way, Oak Ridge, Tenn.

ORSSAB Board meeting

Wednesday, January 13, 6 p.m.

EM & Stewardship Committee Meeting

Wednesday, January 27, 6 p.m.

ABBREVIATIONS

DOE — Department of Energy
EM — Environmental Management
EPA — Environmental Protection Agency
ETTP — East Tennessee Technology Park
ORR — Oak Ridge Reservation
ORSSAB — Oak Ridge Site Specific Advisory Board
TDEC — Tennessee Dept. of Environment and Conservation
Y-12 — Y-12 National Security Complex

