SITE SPECIFIC ADVISORY BOARD
OAK RIDGE

ADVOCATE

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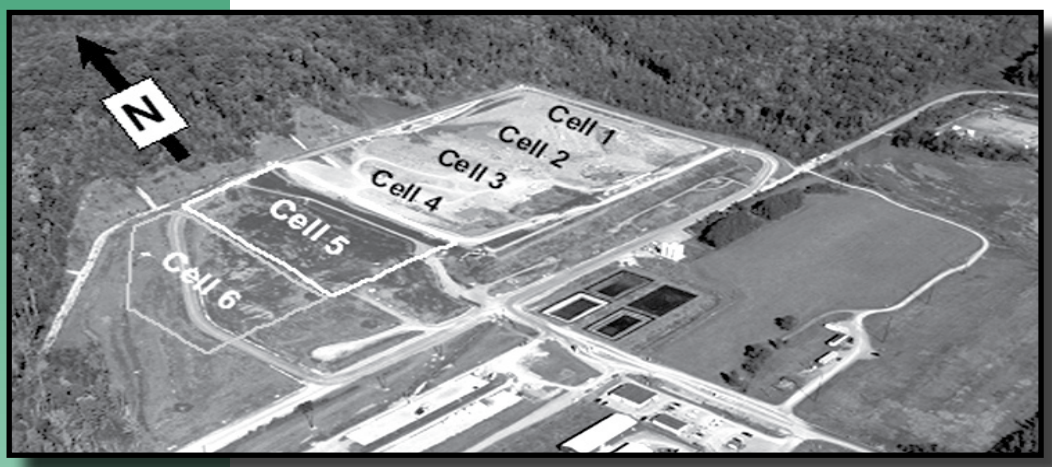
ORSSAB Asks DOE to Consider Seeking Another Landfill Site

Since 2002 the large waste disposal facility located in Bear Creek Valley near the Y-12 National Security Complex has been receiving hundreds of thousands of tons of waste from demolition activities on the Oak Ridge Reservation (ORR). Most of the waste is construction debris from work underway at East Tennessee Technology Park (ETTP). The waste is contaminated either with low levels of radioactivity or is regulated hazardous waste.



Cells 2-4 are currently being filled at the landfill in Bear Creek Valley. Cell 5 is under construction and the outline shows the proposed Cell 6 location.

The landfill is commonly known as the Environmental Management Waste Management Facility or EMWMF, a mouthful for sure. But it's been pointed out that that moniker is not in any of the official documentation that established the facility. It's also been referred to as the CERCLA Waste Facility, which is an even bigger mouthful if you sound out the acronym – Comprehensive Environmental Response, Compensation, and Liability Act.

Whatever you care to call it, the facility has been built in stages, or cells, over the years. Cells 1 and 2 went into operation in 2002 with a capacity of 400,000 cubic yards. Build out of Cells 3 and 4 in 2005 increased capacity to 1.2 million cubic yards.

Even as more waste comes into the facility, construction is underway on Cell 5 to handle an additional 465,000 cubic yards. Yet current forecasts indicate that Cells 1-4 will be full by the end of next year based on the takedown of the K-25 Building at ETTP and demolition projects funded through the American Recovery and Reinvestment Act (Cell 1 is already full). Cell 5, which allows capacity to only 1.7 million cubic yards, could be filled in the 2014-2015 time frame. "The most recent capacity assurance report in May 2009 indicates that will not be sufficient to handle all the waste that is in the current baseline," said Laura Wilkerson, the Department of Energy Oak Ridge Office (DOE-ORO) Federal Project Director for the waste facility. Wilkerson spoke at the July meeting of the Oak Ridge Site Specific Advisory Board (ORSSAB).

What to do?

Fortunately, Wilkerson said, there is enough space remaining at the site to build a sixth cell without going beyond the 44-acre footprint specified in the record of decision (ROD) that allows construction of the landfill. But to build a sixth cell requires changing a portion of the ROD that authorized the facility. That change must be documented through an explanation of significant differences (ESD) to spell out the need for expansion and how much the

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IN THIS ISSUE

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

Thoughts from Outgoing Chair Steve Dixon

The relationship between environmental improvements and economic growth has been the subject of intense debate for the past four decades. Beginning with the passage of the Clean Air and Water Acts in the early 1970s, the economic impact from various cleanup programs has been subject to interpretation. However, here at the DOE Oak Ridge Reservation, the relevance is becoming increasingly clear.

Steve Dixon, ORSSAB Chair, FY 2009

One of the most prominent programs ever undertaken at Oak Ridge has just begun in earnest. This program involves the eventual demolition of over 400 buildings and facilities at Oak Ridge National Laboratory and the Y-12 National Security Complex, plus the ongoing demolition of 500 structures at the East Tennessee Technology Park.

In addition to the obvious, immediate advantages of economic stimulus and job creation, this dismantlement and demolition effort will eliminate many high-risk legacies of the Manhattan Project, thereby facilitating future private-sector industrial development and enabling modernization activities at the lab and Y-12.

Many of the buildings to be demolished are over 60 years old, have not been in use for several years, and are prone to weather-induced deterioration. Prior to demolition, many of these facilities must undergo a careful decommissioning process to mitigate the potential release of any harmful contaminants. A critical challenge for DOE involves being able to maintain these older, abandoned buildings in a safe and stable condition until the time of demolition.

Innovative strategic planning will be needed to prioritize the highest risk facilities, coordinate maintenance and surveillance activities, and identify and save historically significant artifacts. Based on the quantity of structures involved, it will be a substantial task to ensure that the pace of demolition exceeds any serious building decay.

The dismantlement and demolition work will generate a substantial volume of waste which must be disposed of in the hazardous waste facility in Bear Creek Valley. Typical wastes include contaminated soil, building debris, and scrap equipment. While sorting and segregation of the waste can defer a portion of this waste to a non-hazardous waste landfill, the remaining quantities are significant. Expansion of the current hazardous waste facility is proceeding, but concerns have been raised that the volume of new wastes will exceed the maximum capacity of the current landfill. This waste disposal issue must be addressed promptly to avoid any adverse impact on the demolition work schedule.

The top priority must always be protection of public health. Vigilant compliance with worker safety standards must be maintained without compromise. And of course, the public must be properly informed and given the opportunity for input into the environmental management program.

Continued stakeholder participation in the process is essential. As a citizens' advisory board, we ask you, the stakeholders, to join us in our endeavor to stay closely engaged and involved as DOE pursues its environmental goals.

Landfill Nears Capacity

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landfill will be expanded. DOE-ORO is working with the Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC) to prepare such an ESD. When the three agencies are in agreement on the ESD, copies of a fact sheet advising the public of the changes will be available at the DOE Information Center (865-241-4780), 475 Oak Ridge Turnpike in Oak Ridge. A notice will be placed in local newspapers in early October.

But there's more.

Even if the landfill is expanded to Cell 6 bringing the capacity to 2.2 million cubic yards, there's a catch. The Integrated Facility Disposition Program (IFDP), a project currently being developed, is a strategy to complete the cleanup of the ORR over the next two or three decades. It adds more than 200 additional surplus and deteriorating facilities at Y-12 and at Oak Ridge National Lab to the current DOE-ORO baseline of work. Demolition of those additional facilities could add another 2.2 million cubic yards of debris to the waste inventory. "While adding Cell 6 would allow us to accommodate all the forecast waste in the current baseline, it would not be sufficient to accommodate all the other waste coming in from IFDP," said Wilkerson.

So where will all that stuff go?

That hasn't been answered yet. But Dave Adler, the DOE-ORO liaison to ORSSAB, said at the April Environ-

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ORSSAB Holds Annual Planning Retreat in Maryville; Issues Identified for FY 2010

During its annual retreat in August held at RT Lodge in Maryville, ORSSAB reviewed its accomplishments and carryover activities for FY 2009 and prioritized issues to consider for FY 2010. Topics to be considered came from suggestions made by DOE-ORO EM, EPA, and TDEC, as well as information collected through a stakeholder's survey that was provided to about 800 local residents.

The board was also introduced to the new DOE-ORO Assistant Manager for Environmental Management John Eschenberg. He is transitioning into that role and will also be the board's Deputy Designated Federal Officer as Steve McCracken works toward retirement in the next few months.

McCracken, participating in his last ORSSAB retreat, reminded the board of its importance to DOE. "The board helps DOE make decisions and it must remind us when decisions need to be made. I hope you know that DOE cannot succeed without a group like this," he said. "We must have your input to do our jobs."

The board will take issues identified for consideration and develop a work plan with issues assigned to the various standing committees.

Darryl Bonner makes a point during discussions at the ORSSAB annual retreat in August. At right is the board's EPA liaison Connie Jones.

ORSSAB is one of eight branches of the EM Site Specific Advisory Board chartered through the Federal Advisory Committee Act. The other seven boards are located in Kentucky, Idaho, Nevada, New Mexico, Ohio, South Carolina, and Washington.

Information about ORSSAB and the other boards can be found on the DOE website at www.em.doe.gov/Pages/ssab.aspx.

ORSSAB meets the second Wednesday of each month at 6 p.m. at the DOE Information Center, 475 Oak Ridge Turnpike, Oak Ridge. The meetings are open to the public and a comment period is provided.

Stakeholder Surveys Provide Information to Help ORSSAB Choose Issues to Consider

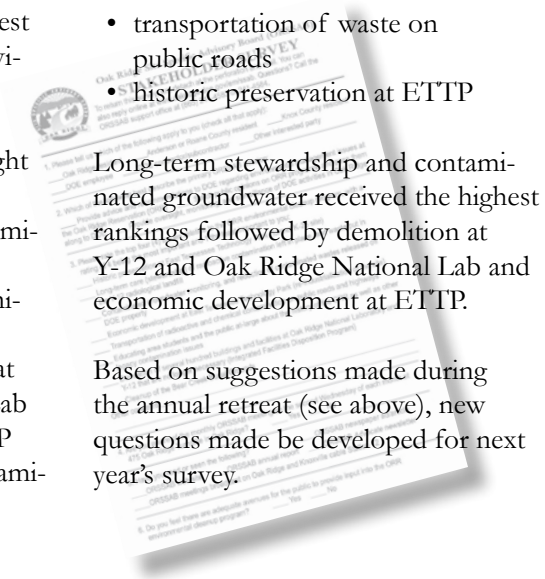
ORSSAB members rely on a number of sources to identify cleanup issues to consider each fiscal year.

One of those sources is the annual Stakeholder Survey. Each year ORSSAB distributes the survey in five counties through a mailing list, public gatherings, and through the ORSSAB website. About 800 surveys were distributed in 2009 and the response rate was more than double what it was in 2008.

The larger-than-usual number of responses, 163, could indicate area residents are taking increasing interest in environmental management activities on the ORR.

Respondents were asked to rank eight issues:

- long-term stewardship of contaminated buried waste
- contaminated groundwater monitoring
- demolition of excess buildings at Y-12 and Oak Ridge National Lab
- economic development at ETTP
- education about ORR and contamination on the reservation.
- clean up of Bear Creek Burial Grounds
- transportation of waste on public roads
- historic preservation at ETTP



Long-term stewardship and contaminated groundwater received the highest rankings followed by demolition at Y-12 and Oak Ridge National Lab and economic development at ETTP.

Based on suggestions made during the annual retreat (see above), new questions made be developed for next year's survey.

Reservation Update

McCracken to Retire

Steve McCracken, DOE-ORO Assistant Manager for EM, has announced he will retire sometime after January 1.

He will be succeeded by John Eschenberg who comes from Hanford, Wash., where he was the Assistant Manager for the Waste Treatment and Immobilization Plant project for DOE's Office of River Protection. In that role, he was responsible for the

John Eschenberg, left, is the new Assistant Manager for EM for DOE-Oak Ridge, succeeding the retiring Steve McCracken, who will continue to assist Eschenberg as he transitions into his new responsibilities.

design, construction, and operation of the plant, a complex chemical waste treatment facility.

In fact, Eschenberg already has the title of Assistant Manager for EM for Oak Ridge. McCracken will be available as Eschenberg gets up to speed with his new responsibilities and will assist DOE-ORO Manager Gerald Boyd with other tasks, including acting as champion for the DOE oral history project (see page 7).

"I appreciate Steve's willingness to stay on board to work with John during this change," Boyd said. "It is further evidence of his dedication to what we are doing here in Oak Ridge and within the Department of Energy, and I am certain it will help John as he prepares to lead our EM organization."

McCracken has been the Assistant Manager for EM and the Deputy Designated Federal Officer for ORSSAB since 2003.

ARRA-funded Projects Underway on the ORR

A number of EM-related projects on the ORR are underway as part of economic stimulus funding from the American Recovery and Reinvestment Act (ARRA).

The first project started in July is the cleanup and eventual demolition of the Radioisotopes Development Laboratory, Building 3026, at Oak Ridge National Lab. The project will use about $10.6 million of the $755 million in ARRA funds allotted to Oak Ridge. The project is expected to be completed by January 2010.

Another ARRA-funded project that began in July is the Cell 5 expansion of the CERCLA Waste Facility in Bear Creek Valley. The $35 million dollar expansion will add 465,000 cubic yards of capacity to the landfill, bringing total capacity to 1.7 million cubic yards (see page 1).

Work began in August to prepare the old K-27 gaseous diffusion building at ETTP for demolition. The preparatory work, which includes removal of asbestos and other hazardous materials and the immobilization of residual uranium in the process system, will cost about $118 million.

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

Cleanup work funded by ARRA at Y-12 includes removal of excess equipment and scrap material from the Alpha 5 and Beta 4 buildings. The estimated completion time is about 27 months with cost expected to be in the $100-$130 million range for both of the buildings.

"We've also begun removing scrap from the Y-12 Scrap Yard and have completed the video camera inspection of the storm sewers as part of the West End Mercury Area remediation," said J.T. Howell, DOE-ORO director for ARRA-funded projects.

McCracken Clarifies Question of Tech-99 Contamination at K-25

At the September ORSSAB meeting, Steve McCracken, DOE Assistant Manager for EM, commented on the situation at the K-25 Building at ETTP in regard to technetium-99 contamination in the east wing of the building.

A newspaper article the day before the meeting indicated that tech-99 contamination in K-25 might be more extensive than first thought. "As far as I know," said McCracken, "there is no evidence to suggest that it is more widespread than we thought. The sampling hasn't been done to confirm that. That is the real issue. We have to figure out if it is more widespread, which is an important issue itself."

Tech-99 is a long-lived radioactive isotope that is especially mobile and difficult to detect.

It's important to isolate material with tech-99 contamination because only very small amounts can go into the waste disposal landfill in Bear Creek Valley. Anything above the waste acceptance criteria for the landfill must be shipped off site.

Time Spent on the Board Has Been a Fun, Learning Experience for New Chair

It so happens that our Advocate member profile is on the man who has recently been elected chair of ORSSAB for FY 2010.

Ron Murphree was chosen unanimously to lead the board at the September meeting.

Ron joined the board in June 2006 and has been a valuable, contributing member on the EM Committee, serving as chair of the committee the last two years.

"It's been fun, really good," he says of his experience. "Like anything else you get out of it what you put into it. If you want to study and learn about the issues and participate it's a lot, but not overwhelming. The biggest challenge is learning all the technical stuff, the jargon, the acronyms, who reports to whom, and so on. But it's fun to learn and be exposed to things a lot of people may not know about."

New ORSSAB Chair Ron Murphree in his office at Denark Construction in Knoxville where he is chief estimator.

Ron is a West Tennessee native of Milan, leaving home at 17 to attend the U.S. Military Academy at West Point. He served seven years in the Army as a platoon leader, company commander, and finishing his military service in the Corps of Engineers Area Office in Ft. Benning, Ga. He remained with the Corps of Engineers a few years in the Civil Service after he left the Army.

While in Georgia he received an MBA from Georgia State University and then worked at the Arnold Engineering Development Center in Tullahoma, Tenn. After leaving the Civil Service he worked for general contractors in Oklahoma and Texas, returning to Nashville in 1986, and coming to work for Denark Construction in Knoxville in 1996.

As chief estimator for Denark he has worked on such notable projects as Smokies Stadium near Sevierville, the Knoxville Convention Center, the Knoxville News Sentinel Building, and the Tennessee Theatre renovation.

As the chair for FY 2010 Ron says the board will be kept busy keeping up with the Recovery Act projects as well as IFDP work. "I've talked with [DOE liaison] Dave Adler about providing the board monthly updates on Recovery Act work.

"I'd like to see some sort of resolution toward the cleanup of Bear Creek Valley, although I don't think that will happen during my tenure as chair. I think we'll see some steps taken toward the expansion of the on-site waste facility in Bear Creek Valley."

Ron and wife Penny live in Knoxville and are big University of Tennessee football and basketball fans. They have two adult children, Amanda and Blake. Ron is active in Sertoma International and is an avid cyclist, sometimes pedaling 50 miles at a stretch.

He is a 10-year member of the American Society of Professional Estimators and is currently the society's southeast regional representative to the Standards Board. He has also served as the society's southeast regional governor.

Follow the progress of Environmental Management and Recovery Act activities in two new DOE publications

You can stay up-to-date on the latest cleanup activities around the DOE complex as well as how recovery funds are being used through the EM Update and the American Recovery and Reinvestment Act Newsletters.

Both publications are available online at http://www.em.doe.gov/pages/emhome.aspx

DOE Appoints University of Tennessee Distinguished Professor to ORSSAB

Robert D. Hatcher, Jr., Ph.D., a distinguished research scientist and professor in the Department of Earth and Planetary Sciences at the University of Tennessee, was appointed to ORSSAB by DOE in July.

Dr. Hatcher previously worked for 14 years under a joint appointment between UT and Oak Ridge National Laboratory as part of the UT/ORNL Distinguished Scientist Program. Of note is his work as senior author of the laboratory's efforts in the early 1990s to produce a new geologic map and report on the geology of the ORR.

His 45 years of geologic research in the Appalachians and other mountain chains has resulted in his authorship of more than 200 publications including nine books. He has served on the National Academy of Sciences Board on Radioactive Waste Management and on the Nuclear Regulatory Commission Reactor Safety Research Federal Advisory Committee.

Robert D. Hatcher, Jr., Ph.D.

"We are fortunate to have someone with the credentials of Dr. Hatcher contributing to ORSSAB," said DOE-ORO Manager Gerald Boyd.

Dr. Hatcher received his Bachelor of Science degree in geology and chemistry and his Master of Science degree in geology from Vanderbilt University. He holds a doctorate in structural geology from UT-Knoxville. He was employed as a geologist by Humble Oil and Refining Company and served on the faculties of Clemson University, Florida State University, and the University of South Carolina.

He has also served as president of the Geological Society of America (GSA) and the American Geological Institute (AGI) during the 1990s. He received the highest honors in his profession when he was awarded the GSA Penrose Medal and the AGI Ian Campbell medal, both in 2006.

DOE to Request Proposals for Sale of Excess Nickel at Oak Ridge and Paducah

DOE will issue a request for proposals later this year to sell more than 15,000 tons of contaminated nickel for use in radiologically controlled government or commercial facilities. The nickel is currently stored at ETTP and at the uranium enrichment facilities in Paducah, Ky. The nickel was used at both locations in the process to separate uranium-235 from uranium-238. Uranium-235 was used in building atomic weapons and in nuclear power reactors.

At ETTP the nickel was mined from the process equipment and was slated to go to British Nuclear Fuels as part of its contract to clean up and clean out Buildings K-29, 31, and 33. But in 2000 then-DOE Secretary Bill Richardson put a moratorium on selling contaminated metal from any DOE site.

The nickel is contaminated with uranium and technetium, as well as a little plutonium and neptunium.

The buyer will be required to declassify and decontaminate the nickel prior to gaining title. It will be processed and reused or recycled into products for use in radiologically-controlled applications only. The material is not intended for unrestricted release for recycling into commerce.

Comments on a draft proposal to sell the nickel are currently being evaluated at DOE Headquarters.

Seven of the eight EM SSAB chairs weighed in on the issue earlier this year when a letter was sent to DOE Assistant Secretary for EM Inés Triay recommending that DOE identify opportunities to recycle and reuse excess metals, including the nickel at Oak Ridge and Paducah.

ORSSAB Chair Steve Dixon did not sign the letter saying "there is no specific driver or incentive to recycle/reuse valuable metals. As such, the Oak Ridge cleanup contractors have little motivation to pursue recycling/reuse avenues."

DOE's response to the recommendation was the notice that it will request proposals for selling the surplus nickel.

COROH and NOROH to Work Together to Capture Oak Ridge Oral Histories

In 2007 ORSSAB served as a platform to launch an oral history initiative to consolidate existing oral histories across the ORR and to jump-start the collection of additional oral histories.

An oral history workshop hosted by ORSSAB led to the creation of the Center for Oak Ridge Oral History (COROH), which is now being managed by the Oak Ridge Public Library. The library relies on the input from an Oral History Steering Committee, which includes ORSSAB member Steve Stow.

The library is making space available to catalogue existing oral histories and will be videotaping additional interviews. The library will catalog and digitize the interviews and ultimately produce films or DVDs on specific historical topics.

The creation of COROH prompted DOE-ORO to establish NOROH, the Networking Oak Ridge Oral History Committee Project Team. NOROH was established to identify and make available staffing and resources necessary to work in partnership with COROH to ensure that oral histories of DOE and the Oak Ridge community are preserved and made available to the public.

NOROH is a cooperative effort among the DOE-ORO, the National Nuclear Security Administration Y-12 Office, and the Oak Ridge Office of Scientific and Technical Information.

NOROH will develop an implementation plan to support the goal of interviewing current and former DOE staff who were involved in key programs throughout the history of the site. These histories will be made available to COROH and the public, when possible. Some of the interviews to be conducted will be classified, at least for now, but NOROH recognizes the need to capture these stories before sources are lost.

Steve McCracken, the Deputy Designated Federal Officer for ORSSAB, has been identified as the DOE 'champion' for the project.

He said at the board's annual retreat in August that a short video is being produced to explain the importance of capturing the personal histories of the people who lived and worked in Oak Ridge during the days of the Manhattan Project, the Cold War, and the recent past.

For more information about either oral history program call the Oak Ridge Public Library, 865-425-3455, or Katatra Vasquez, DOE-ORO Cultural Resources Coordinator, 865-576-0835.

David Witherspoon Cleanup Complete

In March 2009 DOE completed the cleanup of the David Witherspoon, Inc., site at 1630 Maryville Pike in South Knoxville. This finished a two-stage project that started five years earlier up the street at 901 Maryville Pike at the David Witherspoon Recycling site.

DOE was charged with cleaning up both locations because years ago contaminated material had been shipped there from the ORR.

The 901 site cleanup was finished in October 2006. Work at 1630 started a month later.

The 901 site operated as a scrap metal recycling facility for more than 45 years. The 1630 site is an area of about 50 acres that includes 3.4 acres used as an unregulated industrial landfill for about 24 years. Sampling at the two sites before remediation began indicated the land was contaminated with radionuclides, PCBs, and semi-volatile compounds.

Jason Darby, DOE-ORO, gives a wrap-up report on the David Witherspoon cleanup project during a meeting of the Local Oversight Committee at the South Knoxville Community Center in August.

DOE knocked down the buildings and removed surface debris and contaminated soil and sent it all back to the ORR for final disposal in the Bear Creek Valley landfill near Y-12.

"When the job was finished we had shipped 15,647 truckloads totaling 233,000 cubic yards of material to Oak Ridge without a single accident," said Jason Darby, the DOE-ORO Federal Project Director. "The cost of remediating both sites was about $31.9 million, less transportation costs."

New Landfill Site Recommended

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mental Management (EM) Committee meeting that a decision will have to be made about expanding at the current site, building another separate facility, or even shipping waste off site. He said a similar process will be used as was done for the current facility – a feasibility study will look at various alternatives, such as siting a new landfill or shipping waste to a commercial facility. He said the lowest cost option probably will be to build another facility, but that option is the most difficult of all in gaining regulator and public acceptance. In locating a new facility he thought the logical place would be farther down Bear Creek Valley.

He also posed the question, "if aggressive volume reduction were done, would it be possible to avoid building a new facility?" He said an analysis needs to be done, but it is likely that an additional facility will need to be built.

Even before Wilkerson's presentation to the board in July a draft recommendation was written, based on Adler's presentation to the EM Committee, asking that DOE "proceed with a sense of urgency to evaluate the future need for disposal capacity and, if warranted, begin planning for the expansion of the existing CERCLA Waste Facility while concurrently evaluating the need for a new facility should additional capacity be required."

In addition, the board recommended that DOE implement an aggressive approach to waste sorting and segregation on all projects to assure that only those wastes which have low levels of contamination or are considered hazardous wastes are placed in the CERCLA Waste Facility.

The board passed the recommendation on expanding the landfill and determining the need for a second site shortly after Wilkerson's presentation at the July board meeting.

While the ESD that is being prepared explains the need and how to expand the current landfill, it makes no mention of a second facility. That discussion will come later

Oak Ridge Site Specific Advisory Board
P.O. Box 2001, MS-7604
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JOIN US FOR OUR PUBLIC MEETINGS

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

Board Meetings

- **Oct. 14, 6:00 pm – check the ORSSAB website for presentation topic**

Committee Meetings

- **Oct. 20, 5:30 pm – Stewardship**
- **Oct. 21, 5:30 pm – Environmental Mgmnt.**
- **Nov. 17, 5:30 pm – Stewardship**
- **Nov. 18, 5:30 pm – Environmental Mgmnt.**

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