



EM UPDATE

Office of Environmental Management



safety ❖ performance ❖ cleanup ❖ closure

U.S. Department of Energy • Volume 1, Issue No. 10 • December 4, 2009

EM Scorecard

Square Footage of Buildings and Other Structures Demolished (Fiscal Year 2009)

1,816,047*

Percent Reduction in Overall Square Footage

5.3%

* Based on data tracked by the Facilities Information Management System (FIMS), DOE's real property database

In This Issue

- Construction Project Reviews 1
- Biomass Groundbreaking 1
- In Brief..... 1
- People 3

— IN BRIEF —

■ Oak Ridge: Incinerator's Mission Complete

The Toxic Substances Control Act Incinerator located in East Tennessee Technology Park was permanently shut down on December 2 after handling its final load of liquid and solid waste.

During 18 years of operation, the incinerator treated more than 35 million pounds of hazardous and polychlorinated biphenyl (PCB) mixed waste from approximately twenty DOE sites. For much of that time, the incinerator was the only facility in the United States permitted and authorized to treat PCB mixed waste.

continued on page 6

EM Taps Peer Reviews to Help Manage Its Big Projects

When it comes to managing big construction projects, the Office of Environmental Management is in the first stages of a culture change.

EM Assistant Secretary Inés Triay has made it one of her top priorities to bring new budget and schedule discipline to the \$15 billion of large-scale waste treatment plants and other specialized facilities that EM is building at its sites around the country.

In the past, delays and cost overruns on those projects have led to critical reviews of EM's performance by the Government Accountability Office and other auditors.

To change that, Triay has committed EM to adopting the successful Construction Project Review model for managing large, complex projects first developed by the Department of Energy's Office of Science in the early 1980s and later adopted by the National Nuclear Security Administration as well.

It is a team approach built around peer reviews conducted at regular intervals by experts drawn from throughout EM and other parts of DOE. Reviewers have no

continued on page 2

Breaking Ground for a New Green Era at Savannah River

On a cool, sunny fall day, Secretary of Energy Steven Chu joined Senator Lindsey Graham, South Carolina's senior senator, and other members of the South Carolina and Georgia Congressional delegations to break ground on a new renewable energy fueled facility at the Savannah River Site (SRS).



Letting the wood chips fly at the groundbreaking ceremony for the new Biomass Cogeneration Facility at the Savannah River Site, the shovelers were, from left to right: U.S. Representative Gresham Barrett (R-S.C.); U.S. Representative John Barrow (D-Ga.); House Majority Whip James Clyburn (D-S.C.); Secretary of Energy Steven Chu, U.S. Representative Joe Wilson (R-S.C.); Ameresco President and CEO George Sakellaris; U.S. Senator Lindsey Graham (R-S.C.); South Carolina Governor Mark Sanford and DOE-Savannah River Manager Jeffrey Allison.

The new Biomass Cogeneration Facility will replace a deteriorating, inefficient coal powerhouse and oil-fired boilers and generate savings of approximately \$35 million

continued on page 4

Construction Project Reviews

... continued from page 1

connection to the projects they assess and can offer independent and objective advice as critics and advisors.

Dan Lehman, who oversees construction reviews for the Office of Science, said they don't focus on process or checking the right boxes. Their key feature, he said, is bringing in knowledgeable people "who are able to ask the right questions with the goal of finding out facts, analyzing the facts in real time based on their experience, providing feedback to the project, and anticipating problems."



Ken Picha, Headquarters WTP Sponsor

EM conducted its first review in April at the Depleted Uranium Hexafluoride (DUF6) Conversion Facility at Portsmouth, Ohio, one of the five large-scale construction projects it has underway. It has since reviewed the other four: the Waste Treatment and Immobilization Plant Project at the Hanford Site; the Uranium-233 Downblending and Disposition Project at the Oak Ridge Site; the Salt Waste Processing Facility at the Savannah River Site; and the Integrated Waste Treatment Unit (IWTU) at the Idaho Site.

Reports on the reviews of the Portsmouth DUF6 plant, the Hanford



Bob Raines, Acting Deputy Assistant Secretary for Project Management, supervises EM's Construction Project Review process.

Waste Treatment Plant, the Salt Waste Processing Facility at SRS and the Uranium-233 Project at Oak Ridge have been completed and the report on the IWTU review, which was conducted last month, is now being prepared.

The reports have praised some aspects of the projects' management and criticized others. They have also included broad recommendations, observations and, in some cases, have called for specific actions to be taken.

"We have acted quickly on the recommendations the review teams have made and we will continue to do so," said Bob Raines, who supervises the review process as EM's Acting Deputy Assistant Secretary for Project Management.

Raines said the reviews have already led to changes such as appointing an executive sponsor at headquarters for the \$12.2 billion Waste Treatment Plant project to help maintain open communications with the project's managers and shorten the chain of command.

Dae Chung, EM's Principal Deputy Assistant Secretary, named Ken Picha to the new post of Headquarters WTP Sponsor on September 22.

Raines, who chaired the review committee on WTP, noted that another change its report called for was ending the practice of having the contractor and DOE maintain separate reserve accounts for their respective liabilities in the event the contract is terminated.

That change was made after the report was issued, giving managers more flexibility in allocating funds. "As a result of the review, headquarters focused on getting that done," Raines said.

And, after issues identified in the review of the Portsmouth DUF6 plant were addressed, DOE's Office of Engineering Construction Management, which serves as the Department's budget watchdog, upgraded its rating on the project to indicate it has greater confidence it will be finished on time and within budget.

But beyond the specific gains that have already been generated, Raines sees the real value of the reviews in the opportunities they create for sharing best practices across the complex and bringing needed resources to bear on a particular project. "We are letting our sites know that there are more resources available to help the projects deliver," he said. "By sharing information across the complex, we will provide the support they need to complete projects on time and on budget."

The reviews create an analytic approach that helps managers maintain a laser-like focus on keeping their projects on budget and on schedule in the short and long term. "Our goal is to ensure that every proposal and project at each of the sites is reviewed in the context of time and cost schedules, so that at the end of the day we're successful across the complex," Raines explained.

Chip Lagdon, DOE's Chief of Nuclear Safety, who chaired EM's reviews of the Portsmouth DUF6 plant and the Salt Waste Processing Facility at SRS, said the process can be valuable to

continued on page 3



– PEOPLE –



Tom Johnson

Thomas Johnson was named Deputy Director for Recovery Act Projects at the Office of Environmental Management effective October 25, 2009. In his new position, he is assisting Cynthia Anderson, Director of the Recovery Act Program, with implementation of the Recovery Act Projects within EM.

Using Recovery Act funds, EM has awarded nearly \$6 billion in contracts to create jobs across the country through the acceleration of legacy waste cleanup activities at its sites.

Prior to being named Deputy Director, Thomas served as Federal Project

Director for DOE’s Energy Technology Engineering Center (ETEC) in Canoga Park, Calif.

Earlier, he served in various roles at DOE’s Savannah River Site including more than twelve years as a Remedial Project Manager in the Environmental Restoration Division. Prior to joining DOE, he spent eleven years with the U.S. Army Corps of Engineers in project planning and study management, engineering design, and construction divisions.

He earned a Bachelor of Science degree in Civil Engineering and a Master’s degree in Earth and Environmental Resources Management from the University of South Carolina.

Bill Backous has joined DOE’s Energy Technology Engineering Center staff at the Santa Susana Field Laboratory, in Canoga Park, Calif., as the Federal Project Director.

Bill succeeds Thomas Johnson in the post. [see preceding item] In his new job, he will oversee the day-to-day operations related to EM’s remediation of the former Atomic Energy Commission’s research activities at ETEC.



Bill Backous

Bill is a licensed professional engineer who was most recently with the Northwest Water Business Group in Bellevue/Tacoma, Wash. Prior to that, he was with CH2M Hill. Previously, he was with the Washington State Department of Ecology for 22 years.

He also previously worked with the City of Seattle Public Works Department, the Environmental Projection Agency and for a design and build engineering firm building nuclear power plants.

Backous started his career in the U.S. Navy where he was a nuclear power plant mechanical operator for submarine propulsion systems.

Construction Project Reviews

... continued from page 2

contractors as well as federal project and site managers, because “it helps them get issues resolved, things don’t linger.”

And, he said, it can help prod them to take a harder look at whether their people have the right skill sets to succeed in their jobs and whether systems and equipment like software and digital controls they are counting on will actually work.



Chip Lagdon, DOE’s Chief of Nuclear Safety

Both Raines and Lagdon said field managers and contractors have generally been receptive to the reviews, seeing them as efforts to help their projects succeed.

W.E. Murphie, manager of DOE’s Portsmouth/Paducah Office, echoed that view. “The CPR [Construction Project Review] team provided valuable assistance in resolving several issues that will significantly improve our expectations for success,” he said.

Lehman says adapting to this probing new approach to managing projects can

continued on page 7



Breaking Ground

... continued from page 1

a year in energy, operation and maintenance costs while removing 100,000 tons per year of greenhouse gases from the site's emissions.

"If you think it's about replacing a coal plant, you are missing the point," Graham stressed as he introduced Secretary Chu. "We believe the Savannah River Site, South Carolina and Georgia can lead the country in this effort to become energy independent. I want it to be said about South Carolina—when it comes to energy independence in the green economy—that we led the nation."

"By investing in energy efficiency, we are creating good jobs that can't be outsourced. This project will employ 800 workers during construction and about 25 people during permanent operations," Chu said in addressing an audience of more than 220 stakeholders and employees during the groundbreaking ceremony at SRS. "The money from those paychecks will go straight back into the local economy and drive even more economic recovery."

Joining Chu and Graham for the ceremonial groundbreaking were: South Carolina Governor Mark Sanford, House Majority Whip James Clyburn (D-S.C.); U.S. Representative Gresham Barrett (R-S.C.); U.S. Representative John Barrow (D-Ga.); U.S. Representative Joe Wilson (R-S.C.); DOE-Savannah River Manager Jeffrey Allison; DOE Principal Deputy Assistant Secretary for Environmental Management Dae Chung; and Ameresco President and CEO George Sakellaris.

Under the Department's largest ever Energy Savings Performance Contract (ESPC), DOE contracted with Ameresco Federal Solutions, Inc. (Ameresco) in May to finance, design, construct, operate, maintain and fuel



Jeffrey Allison, manager of DOE's Savannah River Operations Office, welcomes Energy Secretary Steven Chu and members of the Georgia and South Carolina Congressional delegations to the November 30 groundbreaking ceremony for the Biomass Cogeneration Facility.

the new biomass facility over the term of the 20-year contract valued at \$795 million.

"We face a great national challenge on energy. The development of clean, renewable sources of energy will be the growth industry of the 21st century," Chu said. "The only question is—which countries will invent, manufacture, and export these clean technologies and which countries will become dependent on foreign products?"

"The Obama Administration believes the United States can and must be the world leader on clean energy. Through the investments in the American Recovery and Reinvestment Act, we are working to jump-start an American clean energy economy. We're promoting domestic manufacturing and rebuilding America's infrastructure. And we are working very hard to make the federal government a leader by example.

"Today's groundbreaking demonstrates DOE's commitment to design and

construct clean and efficient federal facilities," he added.

"We believe wholeheartedly in President Obama's initiative to make this country energy independent," House Majority Whip Jim Clyburn said during the groundbreaking event. "The transition to a clean-energy economy is inevitable."

When the facility begins operations in December 2011, it will support 25 permanent positions in plant operations and maintenance and another 100 in the local forestry and logging industries. The project will be fueled primarily with the residues that are currently left in the forest to rot when timber is harvested.

"Getting to this groundbreaking point is the result of productive teamwork," said DOE Savannah River Manager Jeffrey Allison. "DOE, Ameresco, and Savannah River Nuclear Solutions [the management and operating contractor for SRS] have done a tremendous job

continued on page 5



Biomass Plant

... continued from page 4

of laying the groundwork for what will be a major energy conservation benefit to our children and our children's children."

The existing D Area cogeneration plant at the site produces both steam and electricity. The steam is delivered through a large distribution pipeline that runs several miles from the plant to the end-user facilities. The plant also produces approximately 15 megawatts of electricity that is consumed by DOE facilities on site. The 1950s era plant is fired by coal and would require significant modifications to bring it into compliance with current environmental requirements and make it a reliable source of energy.

Ameresco will construct a steam cogeneration facility with two steam boilers and will be reimbursed from actual cost savings generated during the 15-year debt service payback period. The savings will come from operating a more efficient plant fired with biomass instead of coal and outfitted with new equipment better matched to SRS's load requirements.

Under the ESPC, DOE will not provide any upfront money to fund the energy efficiency and renewable energy project. Instead, Ameresco will be reimbursed for its investment in the plant from the guaranteed energy and operational cost savings it generates over the term of the contract. After the contract ends, all future cost savings will accrue to DOE.

"This is exactly the type of innovative financing tools we need to unlock energy efficiency savings," Chu said. "And we have to get this right. As the largest Energy Savings Performance Contract in the Department's history, we will be monitoring this project very closely to be sure it delivers.



Dae Chung, right, EM's Principal Deputy Assistant Secretary, with U.S. Rep. John Barrow (D-Ga.) following the ceremony.

"There is more at stake here than just one project. You have the chance to prove to the world that energy efficiency savings are real and can be realized in a profitable way. We will all be watching your progress—and

rooting for your success. This facility can make an important contribution to our national energy future, and I know that's just what we'll do," the Secretary concluded. ■



Exploring WIPP: Carlsbad Field Office Manager Dave Moody, left, talks with Deputy Energy Secretary Dan Poneman as EM Assistant Secretary Triay looks on during a November 19 tour of the Waste Isolation Pilot Plant, DOE's underground repository for the permanent disposal of transuranic waste located outside Carlsbad, N.M.



– IN BRIEF: NEWS FROM AROUND THE COMPLEX –



The Toxic Substances Control Act Incinerator at Oak Ridge has entered retirement.

... continued from page 1

The incinerator was shut down because alternate commercial facilities are now available to treat PCB mixed waste. In the future, PCB mixed waste from the DOE's EM Program will go to commercial treatment facilities in Tennessee and Utah.

Closure of the facility under provisions of the Resource Conservation and Recovery Act is now underway. This will place the incinerator in a surveillance and maintenance mode until decontamination and decommissioning can be performed. Closure is to be completed by the end of 2010 and decontamination & decommissioning of the facility is anticipated to begin in 2014 and continue through 2016.

■ Hanford: Plutonium Finishing Plant Cleared of Special Nuclear Material

Workers completed the removal last month of special nuclear materials containing plutonium from the Han-

ford Site's Plutonium Finishing Plant clearing the way for further demolition work.

From 1949-1989, the plant produced plutonium oxides and metals used in the nation's nuclear weapons program.

Subsequent cleanup efforts have removed several tons of plutonium-bearing material as well as nuclear

reactor fuel containing plutonium from the plant to the Savannah River Site in South Carolina. Those shipments were completed by May 2009. The material removed last month was slightly irradiated reactor fuel that was transferred to a secure storage facility on the Hanford Site.

continued on page 7



Workers remove a section of a wall in the former Analytical Laboratory at Hanford's Plutonium Finishing Plant. The work is part of the ongoing decommissioning of the complex.



An aerial view of the Plutonium Finishing Plant at Hanford where the removal of special nuclear materials was completed last month.





Hanford Site managers provide an overview of cleanup progress to the Nez Perce Tribal Executive Committee. (Facing the camera are Mike Weis, left, Dave Brockman, center, and Shirley Olinger, right.)

... continued from page 6

With the special nuclear material out of the plant, DOE and its contractors have changed its security requirements. The new security posture makes it easier for deactivation and decontamination workers to enter the plant and remove cleanup debris. Using funding provided by the American Recovery and Reinvestment Act, contractor CH2M HILL Plateau Remediation Company is dismantling hundreds of pieces of production equipment and is preparing to demolish all of the more than 40 remaining buildings in the plant complex by 2013.

■ **Hanford: Managers Meet with Nez Perce Leaders**

Hanford Site Managers Dave Brockman and Shirley Olinger and Pacific Northwest Site Office Manager Mike Weis held their first “State of the Site” briefing with the Nez Perce Tribal Executive Committee (NPTEC) on November 24 at the Nez Perce Reservation in Lapwai, Idaho. The meeting was part of the managers ongoing consultations with Hanford affected tribes.

The managers discussed the Hanford Site 2015 vision and cleanup priorities, progress at the tank farms and Waste Treatment Plant and current laboratory projects and initiatives. Each manager discussed how their programs have communicated and consulted with the Nez Perce Tribe at Hanford. The managers will next visit the Yakama Nation, Confederated Tribes of the Umatilla Reservation and the Wanapum Band.

“We appreciate the continued dialogue you have with us [the NPTEC],” Brooklyn Baptiste, Vice-Chairman of the NPTEC said, “and we hope to continue our role and the discussions we have had with Inés (Triay) and Secretary Chu.”

After the official meeting, the Nez Perce Tribe’s Manager of Hanford programs, Gabriel Bohnee, hosted the Hanford managers on a tour of the Nez Perce Reservation including a visit to the Wolf Education and Research Center which provides a habitat for a gray wolf pack. The Nez Perce Tribe has been awarded wolf management jurisdiction for Idaho to lead the state’s wolf recovery efforts.

Construction Project Reviews

... continued from page 3

take some time. “We are talking about a change in culture,” he said. “Science was no different than EM. When I got here, scientists underestimated and over promised. It took a while to get people thinking we have to deliver on what we say we are going to deliver on—scope, cost, schedule.” ■

EM Update

Published twice monthly by the Office of Environmental Management U.S. Department of Energy 1000 Independence Avenue, SW Washington, DC 20585

Contributors: James Giusti, Cameron Hardy, Walter Perry, Dirk Roberson, Bill Taylor and Geoff Tyree

Web site: www.em.doe.gov

Email: EMUpdateNewsletter@hq.doe.gov

