



EM Scorecard

Remediation Completions Fiscal Year 2011*

*through April 30, 2011



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EM Leaders Review French Nuclear Operations to Probe Cost Savings

Two top officials from the U.S. Department of Energy’s Office of Environmental Management visited major nuclear facilities in France last month to examine waste processing and technologies that could lower life-cycle costs and accelerate cleanup activities across the EM complex.

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■ Lawrence Berkeley Cleaned Up

A shipment this month of legacy transuranic (TRU) waste from Lawrence Berkeley National Laboratory in California to the Advanced Mixed Waste Treatment Project, marked a significant milestone for the EM organization that oversees the nation’s massive nuclear waste cleanup efforts.

The June 4 shipment to the Department of Energy’s Idaho site makes LBNL the 18th site that has been cleaned of all legacy TRU waste.

DOE officials expect that NRD, LLC in New York will be de-inventoried soon of all legacy TRU

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EM Chief Scientist Dr. Mary Neu (left) and Shirley Olinger, EM’s Associate Principal Deputy for Corporate Operations (right), during visit to French nuclear facilities in May to assess technologies that could unlock cost savings.

Triay Touts Partnering as Way to Boost Performance

Office of Environmental Management Assistant Secretary Inés Triay encouraged industry leaders last week to support the Department of Energy’s new partnering policy as a way to enhance project performance across the EM complex.

In her June 15 presentation to the Energy Facility Contractors Group (EFCOG) 2011 Executive Council Meeting at the L’Enfant Plaza Hotel in Washington, D.C., Triay urged the gathering to pursue partnering relationships “to create win-win scenarios.” Said Triay: “We have demonstrated excellence, and we must do so for all activities going forward.”

The initiative to create partnering agreements with major EM contractors launched by the EM organization late last year represents “a change in attitude and behavior” aimed at improving communications and build better business relationships.

Triay said that partnering sessions completed by EM officials to date cover the following areas: River Corridor; Plateau Remediation; Mission Support; SRS Liquid

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EM Leaders

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EM Chief Scientist Mary Neu and Shirley Olinger, EM's Associate Principal Deputy for Corporate Operations, visited the La Hague and Marcoule sites in early May to better understand France's AREVA and Commissariat à l'énergie atomique (CEA) nuclear operations, waste treatment and technology development. AREVA's La Hague site is the leading industrial center of its kind in the world. Located west of Cherbourg in the Manche region of France, it employs over 6,000 people and provides treatment of used fuel taken from nuclear reactors. The CEA is a French public establishment related to industrial and commercial activities whose mission is to develop all applications of nuclear power, both civilian and military. It conducts fundamental and applied research in many areas, including the design of nuclear reactors.

EM leaders' analyses of French waste processing and technologies that are mature in commercial application supports Secretary of Energy Steven Chu's management tenet that science and technology lay at the heart of the Department's mission. Their survey also emphasizes EM's pledge to reduce the life-cycle costs linked to the nation's multi-decade environmental cleanup mission and to hasten the cleanup of the Cold War nuclear waste legacy.

"There are valuable lessons learned from the French approaches that could benefit DOE EM, particularly with regard to reducing life-cycle costs by applying transformational French technologies to enhanced tank waste strategy," Olinger said.

The visit during the week of May 9 focused on material processing at La Hague and technology development at Marcoule. AREVA officials briefed the EM officials on environmental monitoring facilities and practices for gaseous, liquid and solid waste

sampling. They also toured cask receipt operations as well as the dry unloading facility, storage pool, interim storage hall and the vitrification facility.

"EM can benefit from comparing research and technology development strategies with international leaders in nuclear and environmental areas, including those in France. A collaborative relationship, between DOE EM, National Labs, CEA, and AREVA, to share scientific information, lessons learned, and technologies could benefit all parties," Neu said.

During their visit, the High-Level Waste (HLW) Cold Crucible Induction Melter (CCIM) was viewed from multiple levels and in-plant perspectives. Elements of the system were discussed in detail, including the front-end calciner, the dust collection system, the off-gas system and the recycle loop that transfers material back to the front end of the calciner. AREVA's process does not directly vitrify solutions or slurries. Material is calcined prior to

being combined with glass formers and additives, and then fed into vitrification melters. This dry commercial fuel processing differs from EM's processing of legacy liquid tank waste.

The CCIM system is of particular interest to EM officials relative to the second goal in EM's Journey to Excellence: to create cost savings and schedule momentum in U.S. environmental cleanup activities that are set to span several decades.

EM officials believe the CCIM system may provide a lower life-cycle cost approach to completing the vitrification of Hanford radioactive liquid tank waste than the traditional U.S. joule-heated melter approach that was deployed at both DOE's Savannah River Site in Aiken, S.C., and the West Valley site in New York. This method also is currently slated for the Waste Treatment and Immobilization Plant (WTP) being constructed at the Hanford Site in southeastern Washington State. ■



DOE, NNSA and Savannah River Nuclear Solutions representatives responded to questions from members of the Defense Nuclear Facilities Safety Board on the modified operations status plan for the SRS H Canyon Chemical Separations facility. On June 16, DNFSB held a public hearing in Augusta, Ga., to discuss SRS liquid waste operations, emergency preparedness and H Canyon modified operations. Shown from left to right are: Pat McGuire, DOE-SR Assistant Manager for Nuclear Material Stabilization; David Moody, DOE-SR Manager; Dae Chung, EM's Principal Deputy Assistant Secretary, and Xavier Ascanio, NNSA Office of Nuclear Material Integration Director.



EM Major Procurements as of 6/15/11

The following information is based on information publicly available on the DOE Acquisition Forecast (<http://hqinc.doe.gov/Forecast>). An actual date is provided when an event occurs. Quarterly Projections are provided for other activities based on the best available information and are update to reflect changes.

Site	Acquisition Description/ Category	Contracting Office	Solicitation Method	Contract Type	Estimated Dollar Range	Pre-Solicitation Conference/ Industry Meetings	Draft Solicitation	Synopsis	Solicitation	Receipt of Proposal	Anticipated Evaluations Complete/ Award
Oak Ridge & Paducah	Disposition of Nickel	EMCBC	Sales Agreement	N/A	N/A	8/26/2009 & 8/27/2009	7/21/2009	4/29/2010	5/14/2010	7/28/2010	Apr-Jun 2011
West Valley	West Valley Contract/ Environmental Cleanup	EMCBC	Full & Open Competition	Cost Plus Award Fee	\$50M-\$1B	9/13/10 - 9/17/10	8/30/2010	9/21/2010	10/13/2010	12/28/2010	Apr-Jun 2011
Moab	Moab Remedial Action Contract/ Environmental Cleanup	EMCBC	Small Business – IDIQ Task Order	Cost Plus Award Fee – Fixed Unit Price	\$125M-\$150M	01/05/11 - 01/19/11	N/A	N/A	12/17/2010	2/22/2011	Oct-Dec 2011
Carlsbad	Carlsbad TRU Waste Transport	EMCBC	Small Business – IDIQ	FFP	\$80M-\$100M	3/8/2011	3/2/2011	3/2/2011	3/30/2011	5/17/2011	Nov-Jan 2012
Carlsbad	Carlsbad M&O	EMCBC	Full & Open Competition	CPAF	\$1B+	Apr-Jun 2011	4/1/2011	3/17/2011	Apr-Jun 2011	Jul-Sep 2011	Apr-Jun 2012
HQ Enterprise-Wide	LLW/MLLW Disposal	EMCBC	Full & Open Competition	Fixed Price IDIQ	\$50M-\$1B	N/A	6/6/2011	Jul-Sep 2011	Oct-Dec 2012	Jan-Mar 2012	Apr-Jun 2012
Idaho	Idaho Cleanup Contract/ Environmental Cleanup	EMCBC	Full & Open Competition	CPAF	\$1B+	3/3/2011	2/25/2011	3/31/2011	Jul-Sep 2011	Jul-Sep 2011	Jul-Sep 2012
Richland	Hanford Occupational Medical Services	EMCBC	SB Set-Aside	TBD	\$50M-\$1B	Jul-Sep 2011	Apr-Jun 2011	Jul-Sep 2011	Jul-Sep 2011	Oct-Dec 2011	Apr-Jun 2012

M&O (Management and Operating Contract)
 D&D (Decommissioning and Decontamination)
 IDIQ (Indefinite Delivery/Indefinite Quantity)
 EMCBC (Office of Environmental Management Consolidated Business Center)
 ETPP (East Tennessee Technology Park)
 PBI (Performance Based Incentive)

DOE Hosts UK Nuclear Decommissioning Authority Visit

Representatives from the U.S. Department of Energy and industry co-hosted a senior delegation from the Nuclear Decommissioning Authority (NDA), a non-departmental public body of the United Kingdom, during its visit to DOE sites in New Mexico and South Carolina as well as Headquarters in Washington, D.C.

The group's visit began at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, N.M., where NDA officials received a detailed briefing and toured the underground facility. WIPP is a deep geologic repository for the safe and permanent disposal of transuranic (TRU) waste inventories where disposal operations began in 1999.

The UK delegation included Chief Executive Officer Tony Fountain, John Mathieson, Head of International Relations, Sean Balmer, Commercial Director, Mark Lesinski, Executive Director of Delivery, and Jon Phillips, Communications Director.

The group had a series of discussions with community leaders to gain a better appreciation of how the Department manages the national TRU waste program and sustains community support. The delegation also participated in discussions on the history of the site, facility operations, transportation and cooperative agreements with the State of New Mexico.

Members of the delegation then traveled to Washington, D.C., where they met with Triay and other EM managers, as well as officials from the Office of Nuclear Energy, National Nuclear Security Administration and the Blue Ribbon Commission on America's Nuclear Future. The meetings covered a wide variety of topics including contracting, partnering, used fuel management and long-term storage of waste.

The delegation's tour included DOE's Savannah River Site in Aiken, S.C.,

and URS's Global Management & Operations Services headquarters. During the Aiken visit, the group toured the tank waste management program and Defense Waste Processing Facility and attended a community reception.

The officials also discussed how the two country's cleanup programs could explore ways to leverage expertise and share lessons learned for mutual benefit. ■



Roger Nelson, the Department of Energy's Carlsbad Field Office Chief Scientist, shows a salt crystal to members of the Nuclear Decommissioning Authority, during a June 6 visit to the Waste Isolation Pilot Plant underground.



From left to right: Dave Pethick, URS President of Global Management and Operations Services; Tony Fountain, CEO of the UK's Nuclear Decommissioning Authority; Tom Zarges, URS President of Energy and Construction; and Dave Moody, DOE-Savannah River Operations office manager.



– IN BRIEF –

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waste, becoming the 19th site cleared of all legacy TRU waste.

■ DOE Approves Mist Eliminators Testing

The Department of Energy's Office of Environmental Management has approved funding for Mississippi State University's Institute for Clean Energy Technology (ICET) to begin testing of high efficiency mist eliminators.

Workers at the institute will test the High Efficiency Mist Eliminators (HEMEs) to provide data for evaluating the life of HEME filters when operating without a water spray. HEMEs are primarily used to remove moisture and liquid aerosols from an airstream. The contract amount for this effort is \$360,000.

Successful testing is expected to lead to a procurement of the mist eliminators. The procurement and installation of the HEMEs is a critical path activity at the Waste Treatment Plant (WTP) at DOE's Hanford Site in southeast Washington.

The WTP is being constructed to process and stabilize up to 53 million gallons of waste currently being stored in 177 underground storage tanks at the Hanford site. The project consists of four large individual facilities, including the Pretreatment Facility.

The Hanford WTP has designated the HEME to reduce the dust-loading rate on the primary High Efficiency Particulate Air filters. The HEME units will be used to remove liquid and solid aerosols in the off-gas from the vessel vent process (PVP) and vessel vent exhaust (PVE) in the Pretreatment Facility.

The HEMEs are predicted to have a high solid particle loading capacity because the units are continuously cleaned with a water spray that washes away solid particle deposits. However, the water spray would not be available following a design basis earthquake. Thus the testing will seek to determine if solid aerosols would plug the filters and reduce the particle loading capacity.

■ Los Alamos Records TRU Waste Milestone

Los Alamos National Laboratory reached a significant milestone last month in its campaign to ship transuranic (TRU) waste from Cold War-era nuclear operations to the U.S. Department of Energy's Waste Isolation Pilot Plant (WIPP) in New Mexico.

In May, the Laboratory surpassed 100,000 plutonium-equivalent curies of TRU waste shipped to the WIPP underground repository located near Carlsbad. A curie is a measure of radioactivity for a given element.

Transported in more than 750 shipments since 1999, the waste represents about one third of the Laboratory's total and amounts to several hundred pounds of radioactive residue on gloves, lab equipment and protective clothing. About 190,000 plutonium-equivalent curies remain to be shipped in 10,000 containers currently stored above ground and another 6,000 retrievably buried containers.

"It's very important to get this waste material to WIPP. It is part of our commitment to this community and to New Mexico," said George Rael, environmental projects assistant manager for the National Nuclear Security Administration's Los Alamos Site Office. "The repository has a proven record of safe and secure operations."

As remaining drums are shipped, the Laboratory is demolishing unused storage facilities in a plan to close the waste site.

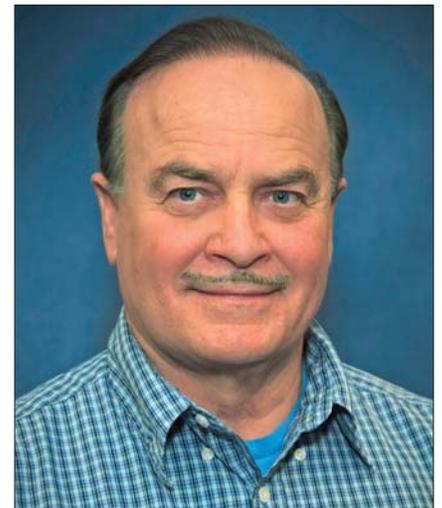
"Safety and environmental stewardship are core values within the Lab's national security missions," said LANL's TRU waste program director Kathryn Johns-Hughes. "We're proud to contribute to WIPP's safe transportation record and the Department of Energy's national mission to disposition this material."

■ Unger Named QA Director at Carlsbad

Randy Unger has been named Director of Quality Assurance (QA) for the Department of Energy's Carlsbad Field Office (CBFO), which oversees the Waste Isolation Pilot Plant (WIPP). Unger, who replaces Ava Holland, has 17 years of experience within the DOE complex from sites across the country.

Unger came to WIPP in the fall of 2009 as headquarters site representative for the CBFO American Rein-

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Randy Unger, Director of Quality Assurance, WIPP.

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vestment and Recovery Act Project funds received by the DOE facility.

He joined CBFO after spending the last five years at the National Nuclear Security Administration (NNSA) as an electrical engineer and program manager for the electrical safety program. Prior to his work with NNSA, Unger spent 10 years at the Hanford site in Richland, WA.

“I’m excited to have a chance to work with our regulators,” Unger said. “Our mission is to assure that all the elements supporting the National TRU Program are compliant with regulatory requirements.”

Unger has undergraduate and graduate degrees in engineering, science and management programs from Texas A&M University in central Texas.

■ Nevada Site Hosts Groundwater Open House

Groundwater in and near the Nevada National Security Site (NNSS), formerly the Nevada Test Site, was the topic of discussion at an open house last month in Beatty, Nev.

Residents of Beatty, Amargosa Valley, Pahrump and other neighboring communities attended the May 25 Groundwater Open House to learn about the extensive work under way to address groundwater contamination from historic underground nuclear tests.

A series of posters and displays on such topics as drilling, hydrology, radiation, computer modeling and groundwater sampling lined the Beatty Community Center, providing community members the opportunity to move at their own pace and discuss



Open house attendees study a map that details groundwater wells and springs throughout the Nevada National Security Site.

one-on-one with experts on each subject.

The U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office sponsored the open house. Other organizations participating in the event included Nye County, the State of Nevada Divisions of Environmental Protection and Water Resources, U.S. Geological Survey, Desert Research Institute, and the Nevada Site Specific Advisory Board.

Subjects such as water rights, the State of Nevada’s role as regulator, and independent monitoring, were part of the discussion. In addition, contractor and federal staff working on the Nevada Site Office groundwater characterization and environmental monitoring programs shared information on the team’s integrated efforts to protect the public from contaminated groundwater.

The role of computer modeling was also a featured topic. Experts de-

scribed how data from sampling is used to develop computerized three-dimensional images of groundwater flow patterns beneath the NNSS surface. Guests were able to see model images as well as speak directly to the computer modeling experts who use the data to better understand how contaminants behave in groundwater.

“People want to know how this affects them,” remarked Amargosa Valley resident Jack Sypolt, who spent more than an hour speaking with experts and studying NNSS maps. He said he was especially interested in the drilling component of the process, and how dozens of wells, extending several thousands of feet beneath the surface, are being placed on and surrounding the NNSS to test groundwater. “What I learned is that there is contaminant flow,” Sypolt explained, “but it is moving very slowly, and that is good.”

– IN BRIEF –



Sixth-graders pet banded mallard ducks at the 2nd Annual Eco Fair near the Department of Energy's Paducah Site in Kentucky.

■ Students Go 'Green' at Paducah Eco Fair

About 550 sixth-graders attended the Paducah Site's second annual Eco Fair last month co-hosted by the Department of Energy and Paducah Citizens' Advisory Board (CAB). Eco Fair took place near a small lake near the plant in western Kentucky.

Students from four Paducah area middle schools visited the West Kentucky Wildlife Management Area near the Paducah Gaseous Diffusion Plant. Activities at the May 18-19 event included banding and tracking waterfowl, monitoring fish population and cooking with solar heat. Students also learned about radiation in everyday life, predator-prey relationships, and the essential role wetlands play in the ecosystem.

"Kids are our future," said Reinhard Knerr, the Department's Paducah Site Lead. "We want them to be good stewards of the environment."

The Eco Fair helps build community rapport through schools, said Ralph Young, CAB vice chairman, who participated at the fair and represented the Greater Paducah Sustainability Project, a nonprofit recycling organization.

During the fair, Kentucky Department of Fish and Wildlife Resources personnel demonstrated how waterfowl are banded and tracked with transmitters and how fish are stunned with mild electrical charges so they can be examined to monitor their population.

■ Grant Program Enhances Emergency Response Efforts in Nevada

Nevada's rural communities are better equipped to handle emergencies thanks in part to the Emergency Preparedness Working Group's (EPWG) ten years on the job and more than \$10 million distributed in grant monies.

Since 2000, the EPWG has allocated an annual grant among six participat-

ing counties (Clark, Elko, Esmeralda, Lincoln, Nye and White Pine), through which low-level and mixed low-level radioactive waste shipments travel en route to the Nevada National Security Site (NNSS), formerly known as the Nevada Test Site. The EPWG consists of representatives from each of the participating counties, as well as the Nevada Site Office and the State of Nevada Division of Emergency Management.

Supported by the U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office, the community grant program has allowed the counties to acquire emergency resources such as ambulances, fire trucks and communication equipment, as well as construct vital training facilities and emergency services buildings.

The Nevada Site Office acquires grant funding every year by charging its national network of waste generators a fifty-cent fee for every cubic foot of waste disposed at the NNSS. The fifty cent per cubic foot fee is in addition to the regular fee charged to the generators for disposing low-level and mixed low-level waste at the site.

While the entire EPWG group is responsible for determining how grant money is divided among the counties, it is the job of Federal and State members to review and approve individual requests for specific items, such as equipment, training, and facilities.

"The community grant program has definitely improved the emergency response capabilities of rural counties in Nevada," said Federal Project Director Frank DiSanza. For example, Lincoln County upgraded

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its entire emergency communication system in 2003, increasing the range of communication for emergency responders in the area and providing much needed versatility for future upgrades,” DiSanza said.

While the entire EPWG group is responsible for determining how grant money is divided among the counties, federal and state members must review and approve individual requests for specific items such as vehicles, equipment, training and facilities.

■ Paducah Hosts Gifted and Talented Science Students

Twenty-five of Heath Middle School’s top science students visited the neighboring Paducah Gaseous Diffusion Plant in western Kentucky last month to investigate an environmental spill by the Big Squeazy Lemonade Company.

The May 19 fictional exercise marked the first time in recent memory that a school group conducted field ac-

tivities at the 59-year-old plant to enhance learning. Heath Middle is about two miles southeast of the plant.

Working with representatives of the Department of Energy, and its cleanup contractor LATA Environmental Services of Kentucky, the gifted and talented students in grades 6-8 identified hazards, created maps, simulated monitoring wells, and sampled groundwater to understand and treat the contamination.

“It is very important that we work with young students to promote experimentation and exploration in the field of science,” said Reinhard Knerr, the Department’s Paducah Site Lead.

Students learned that the Department provides free municipal water to residents north of the plant where past use of the degreaser trichloroethene contaminated about 2,100 acres of groundwater. They also visited one of two pump-and-treat facilities that together since the mid-1990s have cleansed about 2.75 billion gallons of groundwater to meet national drinking water standards.



Ken Davis, geologist with Department of Energy cleanup contractor LATA Kentucky, uses an aquarium model to demonstrate the earth’s water cycle to Heath Middle School Gifted and Talented science students. The students were briefed prior to visiting the Paducah Gaseous Diffusion Plant in Kentucky.

Partnering

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Waste; Paducah Remediation and Oak Ridge transuranic (TRU) Waste Operations. Upcoming partnering discussions are slated in these areas: Office of River Protection Tank Operations; Portsmouth Decontamination and Decommissioning; and the Separations Process Research Unit (SPRU) facility in New York.

During the session, Triay urged industry officials to “become stronger owners” as both government and industry managers strive to advance contract and project management with the objective of delivering results on time, and within cost. “EM is committed to making those improvements,” Triay said.

Collaborative partnering arrangements where both the federal staff and contractor staff understand and respect the rules of engagement will fortify the organization’s ability to fulfill its mission of completing challenging cleanup work on schedule and within cost, delivering value to American taxpayers, Triay said. ■

EM Update

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

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