



EM RECOVERY NEWS

American Recovery & Reinvestment Act Newsletter

February 2011 | Issue 21

Recovery Act Shapes Environmental Improvements at Hanford Tank Farms

RICHLAND, Wash. – With American Recovery and Reinvestment Act work now two-thirds of the way complete at Hanford's tank farms, the DOE Office of River Protection (ORP) is engaged in essential projects that will reduce the risk posed to the environment by more than 53 million gallons of radioactive and chemical waste stored in 177 underground tanks. The waste is left over from decades of Cold War plutonium production.

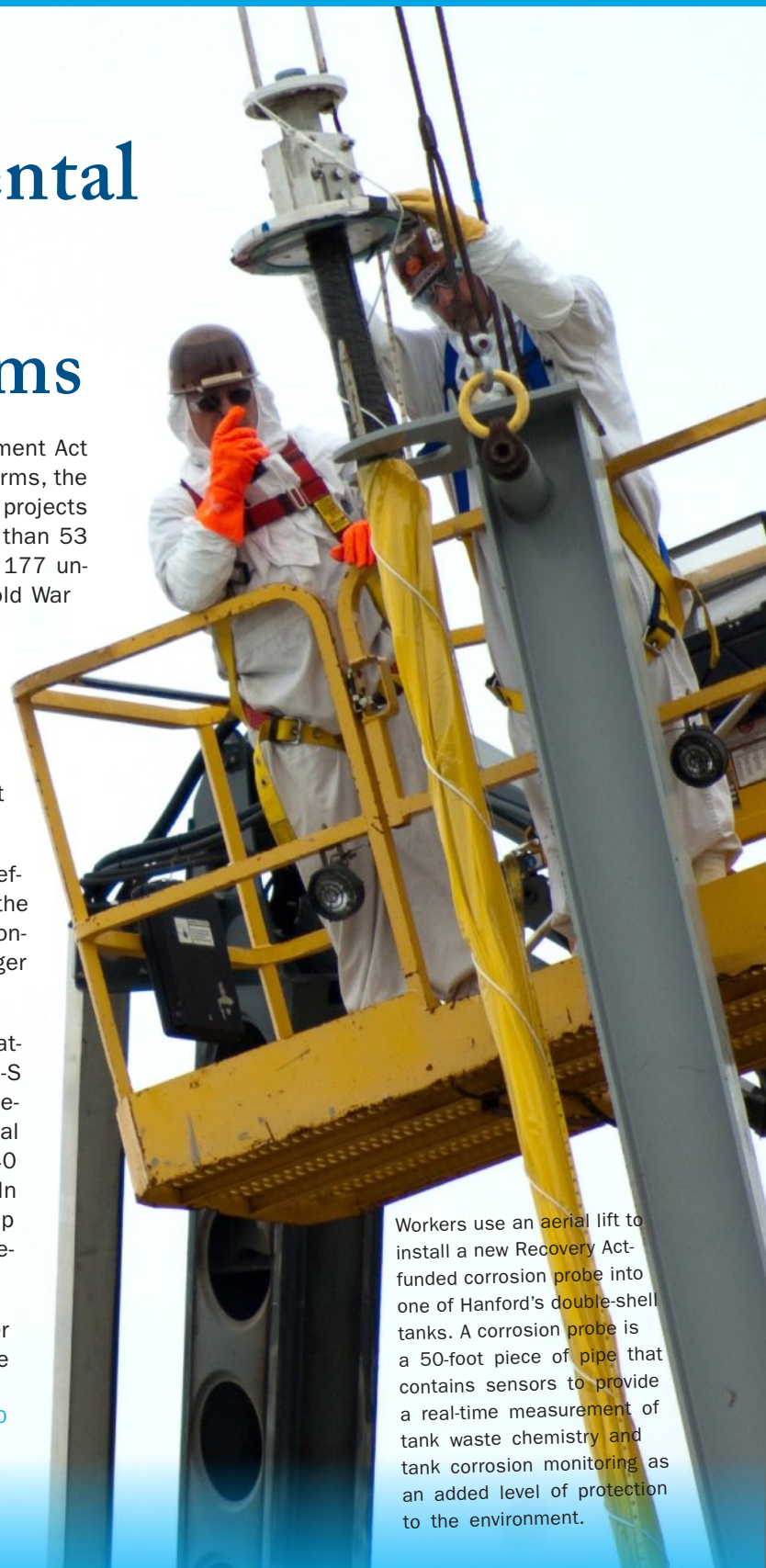
ORP and its prime contractor, Washington River Protection Solutions (WRPS), have spent \$209 million of \$326 million from the Recovery Act to upgrade tank farm infrastructure, extend the life of critical operating nuclear facilities and prepare the waste for delivery to the Waste Treatment Plant (WTP) now under construction at Hanford.

"The upgrades to tank farm infrastructure allow us to more effectively monitor the integrity of the waste tanks, keeping the public, our workers and the environment safe and free from contamination," ORP Tank Farms Project Acting Assistant Manager Tom Fletcher said.

Recovery Act workers are also making upgrades to two operating nuclear facilities — the 242-A Evaporator and the 222-S Laboratory — that provide support to Hanford cleanup. The Recovery Act-funded modernization of these facilities is essential for them to be able to operate successfully over the next 40 years until waste treatment and tank closure are complete. In addition, Recovery Act money is funding projects that will help ORP meet one of its most urgent near-term cleanup goals: preparing for consistent delivery of waste to the WTP.

"Many of our buildings are past their design life," Fletcher said. "But with Recovery Act-funded upgrades, they will be

[Continued on page 10](#)



Workers use an aerial lift to install a new Recovery Act-funded corrosion probe into one of Hanford's double-shell tanks. A corrosion probe is a 50-foot piece of pipe that contains sensors to provide a real-time measurement of tank waste chemistry and tank corrosion monitoring as an added level of protection to the environment.

February 2011 Issue 21

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At the Savannah River Site (SRS) in South Carolina, the E Area is used for storage and disposal of waste materials. Much of this work is related to SRS Recovery Act Program's disposition of transuranic and low-level waste generated by deactivation activities. This aerial view shows administrative offices and shipping areas, various pads where transuranic waste is prepared for shipping, and trenches for the burial of low-level waste.

February EM Recovery News Focuses on Recovery Act's Environmental Improvements

In this February issue, EM Recovery News highlights environmental improvements brought by the U.S. Department of Energy Office of Environmental Management's (EM) \$6 billion American Recovery and Reinvestment Act Program. Recent program-wide data show substantial progress in the Recovery Act environmental cleanup at the 17 DOE EM sites in 12 states. According to the data, Recovery Act workers permanently disposed of enough demolition debris and soil to fill 403 Olympic swimming pools; completed demolition or cleanup of 163 facilities; and installed 439 groundwater remediation and monitoring wells. In this month's Recovery News, we draw attention to the environmental work under way or completed at the sites. For example, at the Hanford Site in Washington, Recovery Act projects are reducing the risk posed to the environment by more than 53 million gallons of radioactive and chemical waste stored in 177 underground tanks. At Los Alamos National Laboratory in New Mexico, Recovery Act workers are safely cleaning the Lab's oldest waste disposal site that supported the world's first plutonium processing facility. And the National Nuclear Security Administration's Nevada Site Office recently completed cleanup operations at two military test locations, moving the Nevada Site Office closer to reaching its environmental restoration objectives.



p. 5

Recovery Act Helps Clean Environment at DOE's Paducah Site



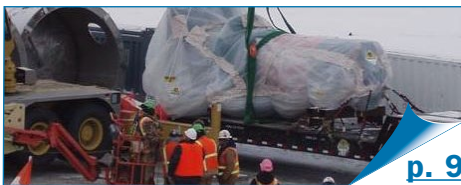
p. 6

Savannah River Site Recovery Act Program Focuses on Safe Environmental Cleanup



p. 8

Idaho Site Develops Unique Solution in Recovery Act Demolition Project



p. 9

Recovery Act Crews Bury Last of Historic Reactors at Idaho Site



p. 1

Recovery Act Shapes Environmental Improvements at Hanford Tank Farms

Recovery Act Means Cleanup at Nevada Military Test Areas [page 4](#)

Recovery Act Helps Savannah River Site Progress Toward Waste Tank Closures [page 7](#)

Cautious Recovery Act Excavation Cleans Up Los Alamos Waste Disposal Site..... [page 7](#)

Hanford Site Recovery Act Workers Maintain Momentum to Prepare Plant for Demolition [page 12](#)

West Valley Recovery Act Workers Clean Up Cell to Prepare Facility for Demolition [page 13](#)

A worker uses a leading edge anchorage connector to work safely with building scaffolds at upper elevations during the deactivation and decommissioning of P and R reactors.



Recovery Act Means Cleanup at Nevada Military Test Areas

LAS VEGAS – Cleanup at two military test locations on the Tonopah Test Range (TTR) in Nevada has recently been completed, moving the National Nuclear Security Administration's Nevada Site Office closer to reaching its environmental restoration objectives.

Enduring extreme temperatures and the remote conditions of TTR, crews worked more than a year to complete the large-scale cleanup made possible by approximately \$4.5 million from the Recovery Act. TTR lies just north of the Nevada National Security Site (NNSS).

The first operation, completed in July 2010, involved clearing seven target areas over approximately 1,600 acres that were used by Sandia National Lab-

oratories for testing between the mid-1960s and mid-1980s.

Field crews from the Nevada Site Office environmental restoration contractor, Navarro-Intera, scoured the terrain using handheld metal detectors to locate baseball-sized bomblets or “submuni-

“The completion of this activity represents a significant success for environmental restoration efforts at the Nevada Site Office.”

Federal Sub-Project Director Kevin Cabble, on TTR cleanup operations

tions,” which are parts of larger bombs or explosives formerly used in testing, to a depth of 1 foot below the surface. The materials were retrieved and ren-

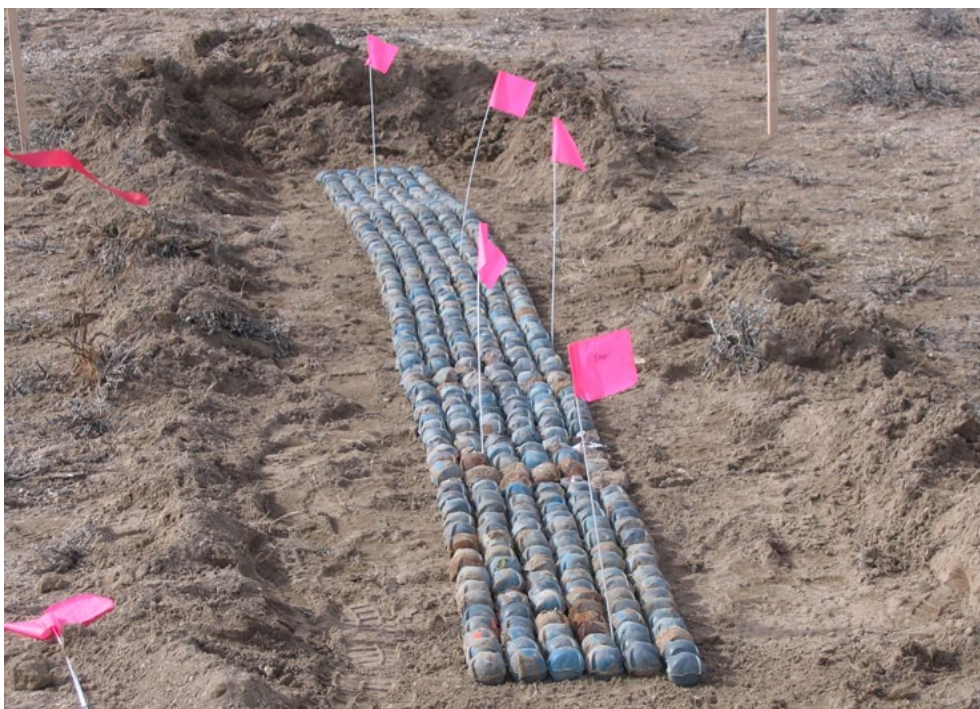
dered safe by blasting them apart with explosives. They were then disposed in a landfill as inert munitions debris.

Once submunitions were successfully cleared from the 1,600 acres, a second Recovery Act-funded TTR cleanup began. Work to remove radioactively contaminated soil at four sites on TTR's South Antelope Lake had been suspended in 2007 due to the potential presence of unexploded ordnance (UXO), such as bomblets. In July 2010, the Nevada Site Office authorized the UXO-trained Navarro-Intera team to resume and complete soil excavation activities, which resulted in all four sites being safely cleaned. The contaminated soil was packaged and transported to NNSS for disposal as low-level radioactive waste.

“The completion of this cleanup represents a significant success for environmental restoration efforts at the Nevada Site Office,” Federal Sub-Project Director Kevin Cabble said. “We are pleased Recovery Act money allowed it to happen, and are proud this dedicated crew made it happen safely and smoothly.”

The TTR cleanup sites are now considered clean-closed, which means they have met regulatory requirements with no more contaminants of concern present. While this land is open for further testing by Sandia or the U.S. Air Force, new policies require immediate removal of testing materials to avoid the accumulation of debris that would require further cleanup.

The TTR cleanup is part of a larger, ongoing environmental restoration effort that involves characterization and remediation of soils and industrial sites across TTR and NNSS. □



Pictured here is the accumulation area for bomblets on TTR prior to demolition. Pink flags mark every 100 bomblets.

Recovery Act Helps Clean Environment at DOE's Paducah Site

PADUCAH, Ky. – The environment at DOE's Paducah Site is becoming cleaner and safer thanks to \$80 million from the Recovery Act.

So far, about \$50 million in Recovery Act funds have been spent at Paducah. Aside from cleaning up the environment, the work expedites removal of old buildings with no reuse potential.

"That makes more land available for potential beneficial reuse," said Rob Seifert, DOE Recovery Act Project Manager at the Paducah Site.

A 200,000 square-foot complex known as the old Feed Plant operated from 1957 to 1977 to make uranium hexafluoride and fluorine. Recovery Act workers, who are cleaning up the contaminated complex to prepare it for demolition in late 2011 or early 2012, achieved their latest milestone January 7 after eight months of efforts.

Workers used heavy equipment to finish removing hundreds of feet of paper-insulated, lead-cased cable that supplied the Feed Plant with high-voltage electricity. The cable is the diameter of a fire hose and weighs nearly 15 pounds per foot.

Machines pulled the cable out of a large conduit that ran from man-holes through the building slab into the basement and up to electrical rooms. Wearing protective suits and respirators, workers cut the cable into shorter sections for waste storage. In all, they removed about 1,000 feet of cable, weighing nearly 15,000 pounds packaged.

Supervisor Bridgid Mills led a team of electricians, mechanics and operators with support from engineering, crane operators, and hoisting and rigging crews.

Recovery Act workers have nearly finished asbestos abatement in the Feed Plant, having previously removed the insulating material from about 41,000 feet of piping and 9,000 square feet of tanks and equipment. Workers also took out about 30,000 square feet of hazardous hydrogen fluoride, fluorine, and other contaminants in the eastern end of the complex, which would cover nearly half of a football field.

A 65,000 square-foot complex known as the Metals Plant is slated for demolition in summer 2011. Used from the early 1950s to the early 1970s to convert depleted uranium hexafluoride into uranium metal and uranium tetrafluoride, the Metals Plant had been one of the site's most contaminated structures.

In December 2010, Recovery Act personnel completed the removal of a magnesium fluoride system from the Metals Plant. Front Line Supervisor Chris Stewart's crew devised a way of placing the waste directly into proper shipping containers. That efficient process eliminated handling of the waste from one container to another and helped workers finish the job five months ahead of schedule. □



Recovery Act workers remove asbestos from the C-410 Feed Plant to prepare it for demolition in late 2011 or early 2012.



Savannah River Site Recovery Act Program Focuses on Safe Environmental Cleanup

AIKEN, S.C. – The Recovery Act provided \$1.6 billion to accelerate the DOE Savannah River Site (SRS) cleanup of waste resulting from decades of Cold War nuclear weapons material production that began in the 1950s.

“Recovery Act funding is facilitating SRS’s safe cleanup of the environmental legacy from those early years,” DOE-Savannah River Manager Dr. David Moody said.

Improvements to the environment are occurring across SRS as Recovery Act workers safely remove Cold War legacy transuranic waste, remediate contaminated groundwater and soil, clean contaminated areas, and tear down surplus facilities.

SRS is working to complete the final disposition of 5,000 cubic meters of legacy transuranic waste by December



Joao Cordoso-Neto, Savannah River Nuclear Solutions Control Account Manager for the D-Area Thermal Detritiation Unit Project, examines soil treated at high temperatures. The D-Area Detritiation Unit is in the background.

2012. SRS had disposed 1,000 cubic meters of the waste by early 2011.

Recovery Act workers dig up the transuranic waste stored in drums and boxes buried in earthen mounds. The waste is then characterized and remediated in preparation for shipment to DOE’s

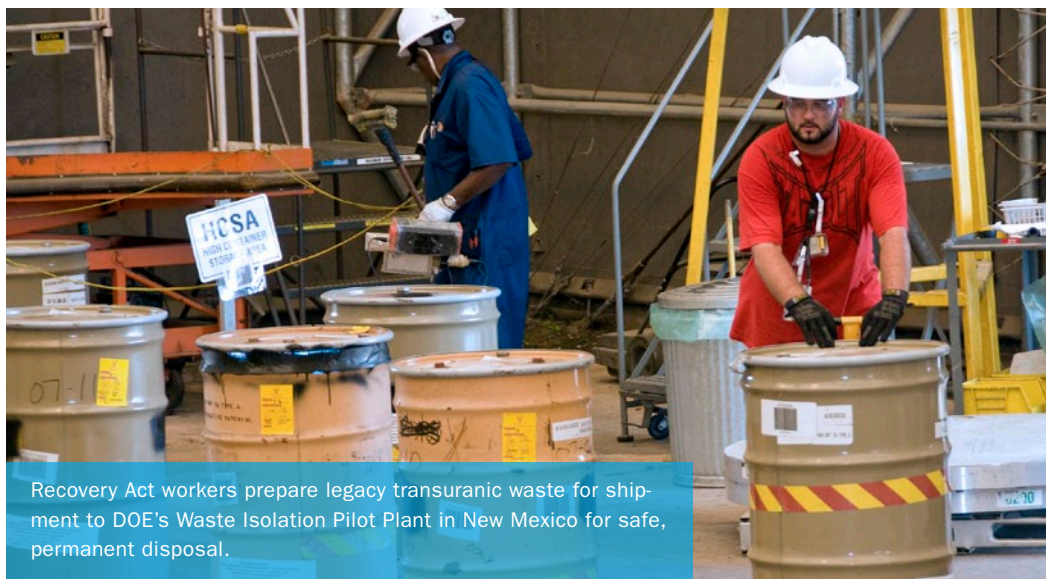
Waste Isolation Pilot Plant (WIPP) in New Mexico for safe, permanent disposal.

“The Recovery Act gave us the opportunity to safely accelerate the disposition of this Cold War legacy waste much quicker than we could have otherwise,” Savannah River Nuclear Solutions (SRNS) Solid Waste Management Facility Manager Dewitt Beeler said. SRNS is the management and operating contractor at SRS.

Other Recovery Act environmental efforts have focused on the 40-square-mile industrial site known as the M Area Operable Unit.

In October 2010, SRS celebrated the cleanup of M Area after workers demolished 23 buildings and remediated contami-

[Continued on page 12](#)



Recovery Act workers prepare legacy transuranic waste for shipment to DOE’s Waste Isolation Pilot Plant in New Mexico for safe, permanent disposal.



Recovery Act Helps Savannah River Site Progress Toward Waste Tank Closures

AIKEN, S.C. – With \$200 million from the Recovery Act, the Savannah River Site (SRS) is building momentum in the cleanup of radioactive liquid waste from 49 underground tanks.

The Recovery Act funds are helping SRS and its liquid waste contractor address important concerns citizens and other stakeholders and state and federal regulators have related to the underground waste. In addition, the DOE increased its environmental management focus by creating a separate contract for SRS's liquid waste operations apart from the site's management and operations contract. Savannah River Remediation, LLC (SRR) was selected for the liquid waste operations contract and began work in July 2009.

The Recovery Act funds are accelerating the closure of tanks and the replacement of aging tank infrastructure while creating jobs. At a peak in 2010, more than 600 workers were employed in Recovery Act projects undertaken by SRR.

Fifteen of the storage tanks containing material from more than five decades of nuclear materials production are in various phases of operational closure, the most ever in SRS history. SRR is committed to meeting an aggressive goal to close 22 of the tanks by 2018.

SRR President and Project Manager Jim French credited Recovery Act funding with helping SRR maintain momentum as employees accelerate tank closures.

"With the support of Recovery Act funding, we've accelerated waste processing and taken a big step in addressing key priorities of our stakeholders, regulators and the Department of Energy," French said.

SRR had spent \$120 million of its Recovery Act funds by the close of 2010. Fifteen of 41 Recovery Act-funded projects had been completed by that time.

The Recovery Act funded the installation of argon-injecting bubblers in the Defense Waste Processing Facility (DWPF) melter, the nation's largest facility of its kind that melds high-level radioactive waste with glass at high temperatures. The molten material is poured into canisters and stored in glass waste storage facilities. The bubblers will increase the number of canisters produced annually from 215 to 325. Other Recovery Act-funded DWPF enhancements are projected to push that annual total to 400.

SRR invested Recovery Act funds in equipment, such as \$11 million submersible mixing and transfer pumps, to replace aging tank infrastructure and expedite waste removal and tank closure.

Anticipating the launch of the Salt Waste Processing Facility (SWPF) in 2014, SRR used Recovery Act funds to upgrade facilities and build new facilities that will integrate the SWPF with liquid waste operations. SWPF operations will significantly increase capabilities to process accumulated salt waste from SRS's tanks. □

Cautious Recovery Act Excavation Cleans Up Los Alamos Waste Disposal Site

LOS ALAMOS, N.M. – Transforming a 10-acre waste disposal site from the 1940s into clean land is no easy task.

At Los Alamos National Laboratory, \$94 million in Recovery Act funding is being used to clean the Lab's oldest waste disposal site, Material Disposal Area B (MDA-B), which was used from 1944 to 1948. The project is scheduled to be completed this summer.

Crews are excavating trenches at MDA-B inside sturdy metal structures that resemble Quonset huts, which were used by the U.S. Navy to support World War II operations. The MDA-B structures are equipped with a number of safety features, including high efficiency particulate air filters, air quality monitors, and fire suppression. Monitors that detect radioactivity were placed on the bucket of each excavator after a plutonium-contaminated pipe was unearthed.

"Plutonium was rare and valuable in the late 1940s, so scientists recovered as much of it as possible before disposing of waste," said Gordon Dover, director of Recovery Act projects at the Lab. "But MDA-B was the waste disposal site for the world's first plutonium processing facility, so excavation requires several layers of safety precautions."

With about 62 percent of MDA-B excavated, the team has dug up the type of run-of-the-mill trash any office might generate, including numerous cardboard boxes, glass Coke bottles and even a calendar from 1943, Dover said. The team also removed beakers from labs, clothing, and plutonium-contaminated soil.

[Continued on page 13](#)



Engineers prepare a mockup of the Experimental Breeder Reactor II's internal parts for a test run.

Idaho Site Develops Unique Solution in Recovery Act Demolition Project

IDAHO FALLS, Idaho – After removing 300,000 pounds of lead from a former experimental nuclear reactor, Recovery Act workers at the Idaho site are set to begin the challenging treatment and removal of large volumes of potentially dangerous sodium that had been treated with carbon dioxide inside the reactor's cooling system years ago.

“It’s an exciting solution. People around the world have been working on this problem for 10 years, and in less than a year, it is our decontamination and decommissioning engineers, and the project team, that have it figured out.”

Jason Casper, decontamination and decommissioning project manager for the Idaho site’s cleanup contractor CH2M-WG Idaho

Safely removing the sodium before the Experimental Breeder Reactor II’s demolition prompted the development of innovative solutions for which DOE has filed a provisional patent application — all made possible with \$70 million from the Recovery Act.

Workers will reduce the reactor to a concrete monolith about eight feet above grade by March 2012, helping the Idaho site advance the overall environmental cleanup of the Materials and Fuels Complex, where the reactor is located.

After the reactor’s operations ended in 1994, engineers passivated the sodium throughout nearly two linear miles of pipes. This means they used a wet carbon dioxide gas that reacted with the exposed sodium and covered the rest in an inert protective crust of sodium bicarbonate.

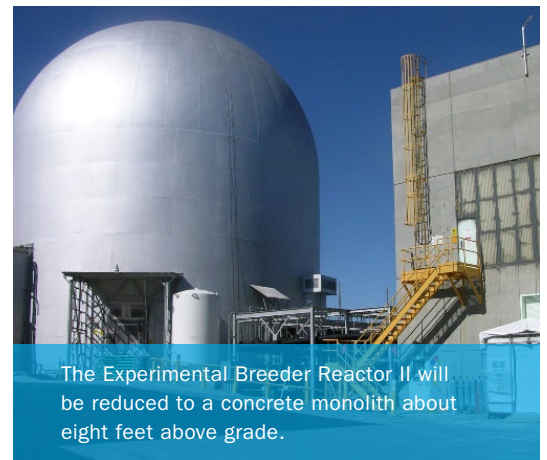
“Our challenge was to thoroughly understand passivated sodium, develop a new process, build a new system and implement the safety controls to be able to treat passivated sodium in less than 18 months with no passivated sodium research readily available from anywhere else,” said Jason Casper, decontamina-

tion and decommissioning project manager for the Idaho site’s cleanup contractor CH2M-WG Idaho.

CH2M-WG Idaho teamed with several subcontractors to develop and test a system that includes a mild chemical solution to safely treat the sodium, a portable system to deliver the solution, and instrumentation and infrared cameras to monitor progress of the reactions deep in the pipes.

Sodium reacts violently with water, but the chemical solution the team developed reacts calmly with the bicarbonate crust and the sodium beneath it, preventing harm to workers.

After months of mockups, testing and preparation, crews are scheduled to begin using the three-part system this month.



The Experimental Breeder Reactor II will be reduced to a concrete monolith about eight feet above grade.

“It’s an exciting solution. People around the world have been working on this problem for 10 years, and in less than a year, it is our decontamination and decommissioning engineers, and the project team, that have it figured out,” Casper said.

The 58,439-square-foot EBR-II operated as a sodium-cooled nuclear reactor capable of converting non-fissionable uranium into fissionable plutonium – in essence, “breeding” its own fuel. □



The Materials Test Reactor reaches its final destination at a disposal facility at the Idaho site.

Recovery Act Crews Bury Last of Historic Reactors at Idaho Site

IDAHO FALLS, Idaho – In a historic Recovery Act accomplishment, Idaho Cleanup Project crews recently transported the last of three reactor vessels to an onsite facility for safe, permanent disposal.

Funded by \$3.6 million from the Recovery Act, the removal of the 1950s-era Materials Test Reactor (MTR) at the Advanced Test Reactor Complex was the result of challenging work by the Idaho site and Recovery Act workers with cleanup contractor CH2M-WG Idaho (CWI).

“This reactor was not designed to be easily taken apart,” CWI Project Manager Kirk Winterholler said. “It has taken over three years of perseverance and hard work to finally get it through the gate.”

Crews applied a fixative to the reactor vessel to bond loose contamination and wrapped the 17-foot-long, 63,000 pound reactor in two layers of plastic sheeting to prevent the fixative from flaking off during shipment.

The MTR was moved by truck three miles to the disposal facility and buried with the Engineering Test Reactor and Power Burst Facility reactor. All three had operated at the Idaho site.

“**The disposal of all three reactor vessels has been completed safely and ahead of schedule.**”

CWI Waste Management Vice President Jeff Bradford

“The disposal of all three reactor vessels has been completed safely and ahead of schedule,” CWI Waste Management Vice President Jeff Bradford said. “It represents the completion of a major portion of the decontamination and decommissioning work scope.”

Powered up with enriched uranium fuel and water-cooled, the MTR began opera-

tions in 1952 and was a key part of the post-World War II reactor development program. It was used to conduct essential research on metals and other materials for commercial power reactors. Knowledge gained from the MTR was essential to the development of the nuclear industry.

The MTR logged more than 125,000 operating hours and over 19,000 neutron irradiations. In 1970, the MTR’s materials testing workload was taken over by the newer and larger Advanced Test Reactor, which still operates.

Winterholler said the burial of the third reactor was bittersweet.

“On one hand, it is sobering to think that a small piece of history created by all of the brilliant people who worked to design, develop, construct and utilize the reactor for all those years is now gone,” he said. “On the other hand, getting rid of that highly contaminated and radiated reactor reduces a legacy liability on the site and brings a great sense of accomplishment in its own right.” □

Rick Nickeson - WA



Recovery Act Opens Doors to Worker at Hanford Site

RICHLAND, Wash. – Rick Nickeson worked in the automotive business for more than two decades.

As he watched the industry struggle in the nation's economic downturn, Nickeson feared he would lose his job.

But then he learned about the Recovery Act and a need for workers at the Hanford Site.

"I went to the job fair not knowing what would happen. It turned out to be well worth it," Nickeson said. "I was there all day, talking with representatives and participating in on-the-spot interviews. Within days, I got a call back."

In 2009, Nickeson was hired as a work planner by Babcock Services Inc., one of several subcontractors helping DOE contractor CH2M HILL Plateau Remediation Company perform environmental cleanup of the Hanford Site. He is putting his previous experience as an operations manager to work, teaming with engineers and subject matter experts to develop plans to execute field work safely and efficiently.

"I've been trained for a new career, in a new field, at a site that is unlike anywhere else I've ever worked," Nickeson said, describing not only the landscape but also the work culture. "They are serious about safety here. From day one, they put you into training that helps you become aware of your safety and the safety of others."

Having lived in the region for years, Nickeson was aware of the Hanford Site but never expected he would have the opportunity to join the workforce.

"Recovery Act funding has helped open up opportunities for those of us with different but applicable skill sets. It is bringing in people from different fields with fresh perspectives who are excited about getting this work done," he said. □

Recovery Act Shapes Environmental...

Continued from page 1

able to play a vital role in supporting the long-term mission of safely getting waste from the tanks to the vitrification plant for treatment."

Vitrification combines the waste with glass in a safe, stable form.

Recovery Act funds are not only helping shape the future of tank waste retrieval and treatment, but they are also bolstering environmental protection efforts. A Recovery Act-funded moisture barrier has been built over the top of one of Hanford's tank farms to prevent rain and snow melt from penetrating the soil and driving contaminants deeper underground. Workers are digging up old waste transfer lines and replacing them with newer, less leak-prone lines. Engineers also are developing new technologies with Recovery Act funding that look to improve the speed and efficiency with which waste can be removed from Hanford's underground tanks.

"The Recovery Act has provided a tremendous opportunity to further DOE's important environmental cleanup mission," Fletcher said. "The funds really allowed us to get a jump start on projects that will pave the way for ORP to achieve its goal of keeping the Columbia River free from contamination for generations to come." □

“ Recovery Act funds play a vital role in preparing our facilities to support the long-term mission of safely getting waste from the tanks to the vitrification plant for treatment. ”

ORP Tank Farms Project Acting Assistant Manager Tom Fletcher

Workers place concrete footings for a new 10,000-square-foot storage facility being built at Hanford. The Recovery Act-funded building will provide a centralized storage area for materials currently being housed in other site facilities, providing a safer and more efficient distribution system to support Hanford maintenance and operations activities.





A worker cuts a glove box in Hanford's Plutonium Finishing Plant.

Hanford Site Recovery Act Workers Maintain Momentum to Prepare Plant for Demolition

RICHLAND, Wash. – Recovery Act workers at the Hanford Site are working to reach a September 2011 target to decontaminate and remove 174 pieces of equipment that once supported plutonium production and processing at the Plutonium Finishing Plant.

In January 2011, the workers with DOE contractor CH2M HILL Plateau Remediation Company removed the 100th piece of equipment. The work is part of a \$300 million Recovery Act effort to prepare the plant for demolition by 2013.

The pieces of equipment, known as glove boxes, are sealed and range in size from 35 cubic feet to more than 1,200 cubic feet.

The Richland Operations Office at the Hanford Site is evaluating an innovative technique to improve capabilities for decontaminating and removing the boxes. In December 2010, the Hanford Site deployed a new inorganic decontamination agent called Aspigel® on two glove boxes to decrease radioactive contamination levels inside the boxes. If successful following the evaluation period, the agent will be used on other highly contaminated boxes requiring cleanup.

Work is under way to lower the contamination level of the boxes from transura-

nic to low-level so the boxes can be disposed onsite, which is less costly than disposing the waste offsite. Boxes contaminated at transuranic waste levels — which have atomic numbers greater than uranium — must be cut into pieces, packaged, and shipped to the Waste Isolation Pilot Plant (WIPP) in New Mexico for safe, permanent disposal. More than 80 of the 100 boxes removed so far have been successfully decontaminated and disposed as low-level waste at the Hanford Site.

The Hanford Site also established a centralized station within the plant to safely cut up the boxes requiring disposal as transuranic waste for packaging and shipment to WIPP. A second station is under consideration and would begin operation in spring 2011. CH2M HILL is also teaming with PermaFix-Northwest, a treatment facility near the Hanford Site, to further expand glove box treatment and size reduction capabilities.

In January 2011, the Hanford Site reassigned 30 workers from other projects to accelerate the removal of the boxes for disposal. Work shifts are also being added to maintain the schedule to remove 174 boxes by September 2011. □

Savannah River Site Recovery Act Program Focuses...

Continued from page 6

nated soil, groundwater, and underground piping and sewer lines.

The Recovery Act accelerated the cleanup of M Area by eight years and reduced SRS's Cold War footprint by about 13 percent. SRS's goal is to reduce that footprint by 75 percent, from 310 square miles to 78 square miles, by September 2012.

At the D Area Thermal Detritiation Unit, workers are treating contaminated soil and concrete. The materials are heated to a high temperature to lower the radioactive levels of tritium, a radioactive form of hydrogen. Once treated, the materials are returned to their excavation sites, saving SRS disposal costs. The contamination resulted from heavy water production in SRS's D Area from the 1950s to the 1990s.

In December 2010, Recovery Act workers completed the remediation of a 17-acre basin containing coal ash eight months ahead of schedule. The earthen basin received the ash from nuclear reactor operations. Workers installed a soil cover over the basin to protect workers from the ash and keep contaminants from migrating to water pathways.

"While accomplishing our cleanup work, safety continues to be our top priority," said SRNS Area Completion Projects Director Mary Flora said. "Meanwhile, the Recovery Act is helping us accelerate some of these cleanup projects by as much as a decade." □



West Valley Recovery Act Workers Clean Up Cell to Prepare Facility for Demolition

WEST VALLEY, N.Y. – Recovery Act funds are at work at the West Valley Demonstration Project (WVDP), where workers are removing contamination to prepare a five-story facility for demolition.

As part of a \$28 million Recovery Act project, WVDP is decontaminating and dismantling equipment in and around the Off Gas Cell, one of the remaining cells in the former spent nuclear fuel reprocessing facility containing reprocessing equipment last used nearly four decades ago. A commercial entity reprocessed spent nuclear fuel at the facility to recover uranium and plutonium until the 1970s.

Recovery Act workers removed more than 200 linear feet of material containing asbestos. That project allowed workers to access the Off Gas Cell and install grout on the cell's floor to reduce radiological levels. Workers were then able to safely enter the cell for the first time in nearly 40 years in August 2010.

High dose levels still present in a corner of the Off Gas Cell require the installation of a concrete column to shield workers from that area so they can safely complete the cleanup.

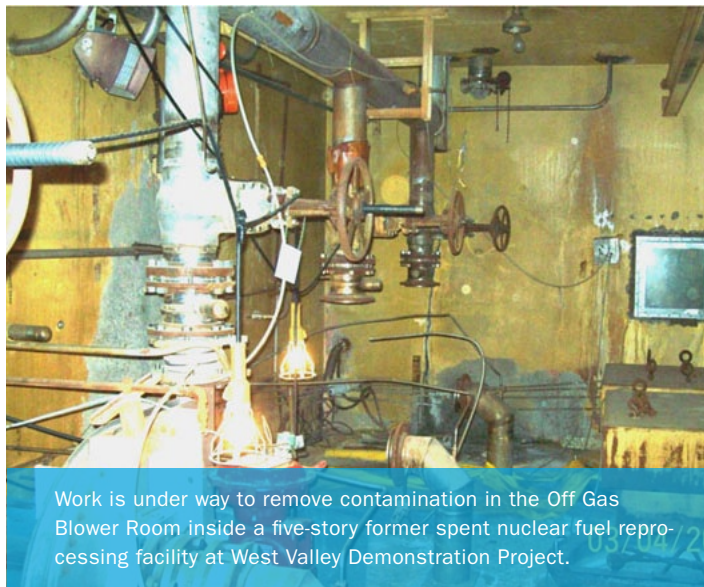
The contamination in the Off Gas Cell corner is believed to stem from a commercial nuclear fuel reprocessing leak in the

1970s that also led to groundwater contamination. In an \$8 million Recovery Act project completed in 2010, workers built a trench to strip Strontium-90 from the groundwater.

Workers will drain up to 200 gallons of residual liquids from piping and vessels in the Off Gas Cell. The piping, vessels, and eight large tanks will be removed. Waste generated from the project will then be packaged for safe, permanent disposal.

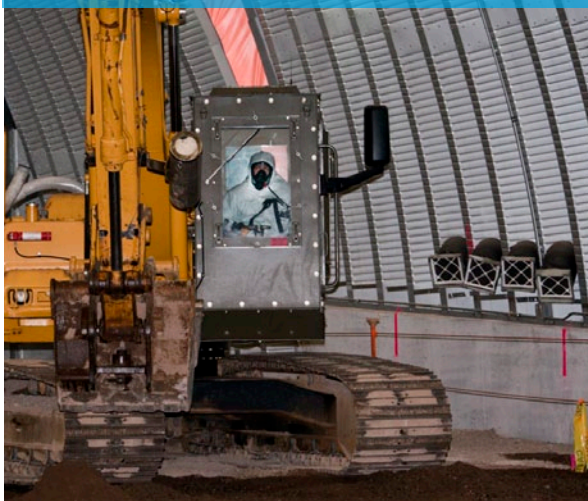
The Off Gas Cell project is slated for completion in June 2011.

□



Work is under way to remove contamination in the Off Gas Blower Room inside a five-story former spent nuclear fuel reprocessing facility at West Valley Demonstration Project.

To ensure worker safety during remediation of a 67-year-old waste disposal site at Los Alamos National Laboratory, excavator operators are outfitted in full personal protective equipment, including supplied air, and excavators are equipped with a blast shield.



Cautious Recovery Act Excavation Cleans Up...

Continued from page 7

Since few records existed about what MDA-B might contain, the team conducted interviews with people who worked at the facility and studied more than 80 core samples taken prior to excavation. The type of work conducted at Los Alamos in the 1940s and the fact that MDA-B spontaneously combusted three times before it was closed in 1948 made cautious excavation both a necessity and priority.

“Safety for the public, our workers and the environment is our first priority,” Dover said. “A project like this, where you are dealing with unknown factors from more than 60 years ago, requires conscious and careful planning and excavation.”

When the project is complete, 10 acres of mesa in Los Alamos will be cleaned up to a condition not seen since before World War II.

“Recovery Act funding allowed us to accelerate the cleanup of MDA-B, which helps the Lab achieve compliance with a state consent order and benefits the community and the environment,” Dover said. “When this project is complete, MDA-B will be gone and only clean land will be left.” □

Joe Wise - OH

Portsmouth Superintendent Adds Another Chapter to Storied Career with Recovery Act

PIKETON, Ohio – Like many military veterans, Joe Wise could spend countless hours sharing experiences from his travels around the world in the military. He could recall his first steps on the soils of Panama during a U.S. invasion, training as part of a joint session of military forces in Bulgaria, and coordinating a training program for police in his first tour of duty in Iraq.

Wise also could talk about his second tour of duty with the U.S. Army National Guard in Iraq. On his only day off in a 10-month span in 2010, he reunited with his son, Tommy, who was serving in the U.S. Army. They had not seen each other in more than a year.

Wise, now a superintendent on several projects at the Portsmouth Site for DOE cleanup contractor LATA/Parallax Portsmouth, could tell stories about his travels, but he would rather draw wisdom from other people, such as the experienced men and women at the Portsmouth Gaseous Diffusion Plant who have worked alongside him on projects being funded by the Recovery Act.

“I’ve been to a few places, but I like being here,” Wise said of the Portsmouth Site. He had worked at the Portsmouth Site before he was called to his second tour of duty in Iraq. Upon his return, he was assigned to Recovery Act projects.

“I am a people person and have been privileged to work with some great people,” he said. “There are many people here with morals, ethics, and integrity who have years of knowledge and experience. It has been good to have them share some of their experiences.”

Wise related a motto from the military: mission first, people always.

“That encompasses so much because you are putting the safety of your people at the same priority as accomplishing your mission. I think that’s exactly what is happening here and has been exemplified by the successes on the Recovery Act projects. They’re being completed by skilled people and being done safely.”

He looks forwards to his job at the Portsmouth Site each day.

“I know skills I’ve learned and utilized halfway across the world are now being used in southern Ohio,” Wise stated. “That’s a good feeling.” □

Top Photo: Joe Wise, right, points out a structural feature to LATA/Parallax Portsmouth D&D Worker Tim Souders during preparations for a facility demolition at the Portsmouth Site.

Bottom Photo: Joe Wise, right, stands with his son, Tommy, outside a palace in Baghdad in March 2010. The father and son were stationed with separate military units 60 miles apart when arrangements were made for them to see each other for the first time in more than a year.





Rebecca Daniels - KY

'Tomboy' Tackles Tough Recovery Act Work

PADUCAH, Ky. – Recovery Act worker Rebecca Daniels is a self-described tomboy who loves the challenge of working amid hazardous chemicals to clean up old buildings at the Paducah Site and prepare them for demolition.

The 43-year-old started work in late 2009 at Paducah under the Recovery Act. She was eager to prove to co-workers

that she could excel as an employee of DOE cleanup contractor LATA Environmental Services of Kentucky, LLC.

"I wanted to earn their respect — not because I'm a girl, but because I could do the job," Daniels said. "And I've done that."

Daniels underwent rigorous safety training to prepare for work. The only woman in a 13-member crew asked to be assigned to front-line supervisor John Jacobs because of his reputation for paramount safety and thoroughness.

"I trust him with my life," Daniels said. "I told him that."

Working in multi-layered protective equipment, Daniels helped remove hydrogen, fluorine and water tanks atop one of two buildings where workers fed uranium hexafluoride into the plant during the Cold War. As is required, Daniels worked in the heavy safety clothing to guard against hazardous chemical exposure.

She and husband Mike are ex-Marines who ran a trucking firm that struggled during the recession. She also worked for a home-improvement retailer, but knew her job was in jeopardy when the company began shifting her duties to supervisors.

Seeking job security, the couple applied for work at the Paducah Site. Plant operator USEC Inc. hired Mike while Rebecca took the Recovery Act job. She hopes her training and experience will help her land a job with USEC after Recovery Act work ends later this year. □



Martin Troutt - KY

Technician Makes Safety a Top Priority for Paducah Recovery Act Workers

PADUCAH, Ky. – Radiation control technician Martin Troutt helps keep Recovery Act workers at DOE's Paducah Site safe.

Troutt uses instruments to measure two types of radiation as well as rates of exposure for the workers, who clean up some of the site's most contaminated old buildings so they can be torn down.

"I'm looking beyond my co-workers to the pictures in their wallets," said Troutt, who is married and has a daughter. "I want their families to be safe, too."

Troutt, 41, of Brookport, Ill., currently works in a three-building complex called C-340, used from the early 1950s to the early 1970s to convert depleted uranium hexafluoride into uranium metal and uranium tetrafluoride. He and others wear full protective clothing and respirators, and he makes sure they stay well below strict exposure limits.

Hired in February 2010, Troutt underwent rigorous safety training for his position working for DOE cleanup contractor LATA Environmental Services of Kentucky, LLC.

Troutt sold cars before completing health physics courses in 2004 at West Kentucky Community & Technical College. Six years later, he got a job at the Paducah Site, thanks to Recovery Act funding.

He hopes to remain at the plant after the completion of the Paducah Site's projects funded by \$80 million from the Recovery Act. If not, he knows the training and experience improve his chances of getting hired at another nuclear facility.

"The Recovery Act really changed my life," Troutt said. "I was the youngest of eight kids, and if you can think of the poorest of families, that was us. It's definitely opened up a whole new door for me." □

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EMAIL ANY QUESTIONS OR COMMENTS TO:

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