U.S. Department of Energy | Office of Environmental Management

EM Recovery News

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In November 2010, workers demolished the west portion of the 2000 Complex at the Oak Ridge National Laboratory.

Oak Ridge Strives for Strong Finish to Recovery Act Projects

OAK RIDGE, Tenn. – With all of the Oak Ridge Office Environmental Management (EM) program's $755 million in American Recovery and Reinvestment Act funds obligated to 36 projects, the division is now focused on successfully completing the site's remaining work by September 2011.

The past 20 months have seen a noticeable transformation in Oak Ridge's skyline following the demolition of several buildings used in the Manhattan Project and the Cold War. More significant changes are coming in the months ahead as Recovery Act workers tear down facilities at the Oak Ridge National Laboratory, Y-12 National Security Complex, and the East Tennessee Technology Park (ETTP). A notable 1.4 million square feet of facilities will be demolished at ETTP, which was originally built as a uranium enrichment facility.

"Although we are proud of the progress and success made over the past 20 months, our attention has shifted to finishing strong by completing the remaining challenges on budget and on schedule," said John Eschenberg, Assistant Manager for Environmental Management in Oak Ridge.

Oak Ridge National Laboratory is one of the busiest sites for Recovery Act work. In November 2010, workers took down the west portion of the 2000 Complex, where radiological studies had once been conducted. And this month, workers have already removed three of the 34 facilities planned for demolition in the Lab's central campus. Eliminating these hazardous or unused facilities makes the Lab safer and clears the way for future development.

Work is also under way to remove hot cells, or specially shielded work areas, that remain after the demolition of Building 3026, a facility that once processed radioisotopes. The Recovery Act is funding the remediation of contaminated soil and groundwater throughout Oak Ridge. The 4,000-gallon Tank

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An aerial view shows the Oak Ridge National Laboratory Central Campus.

Newsletter Details Ongoing and Upcoming Recovery Act Projects

In this December issue, EM Recovery News delivers a comprehensive report on continuing and future projects funded by the American Recovery and Reinvestment Act. The DOE Office of Environmental Management received $6 billion for environmental cleanup around the DOE complex. The Recovery Act investment is reducing the footprint of the Manhattan Project and the Cold War while creating and retaining jobs and spurring economic activity. Throughout this issue, EM Recovery News highlights milestones Recovery Act workers will reach by September 2011. In the months ahead, they will demolish buildings once used for uranium enrichment at Oak Ridge, decommission former nuclear production reactors at the Savannah River Site in South Carolina, and ship transuranic waste to the DOE's Waste Isolation Pilot Plant where it can be safely and permanently disposed.

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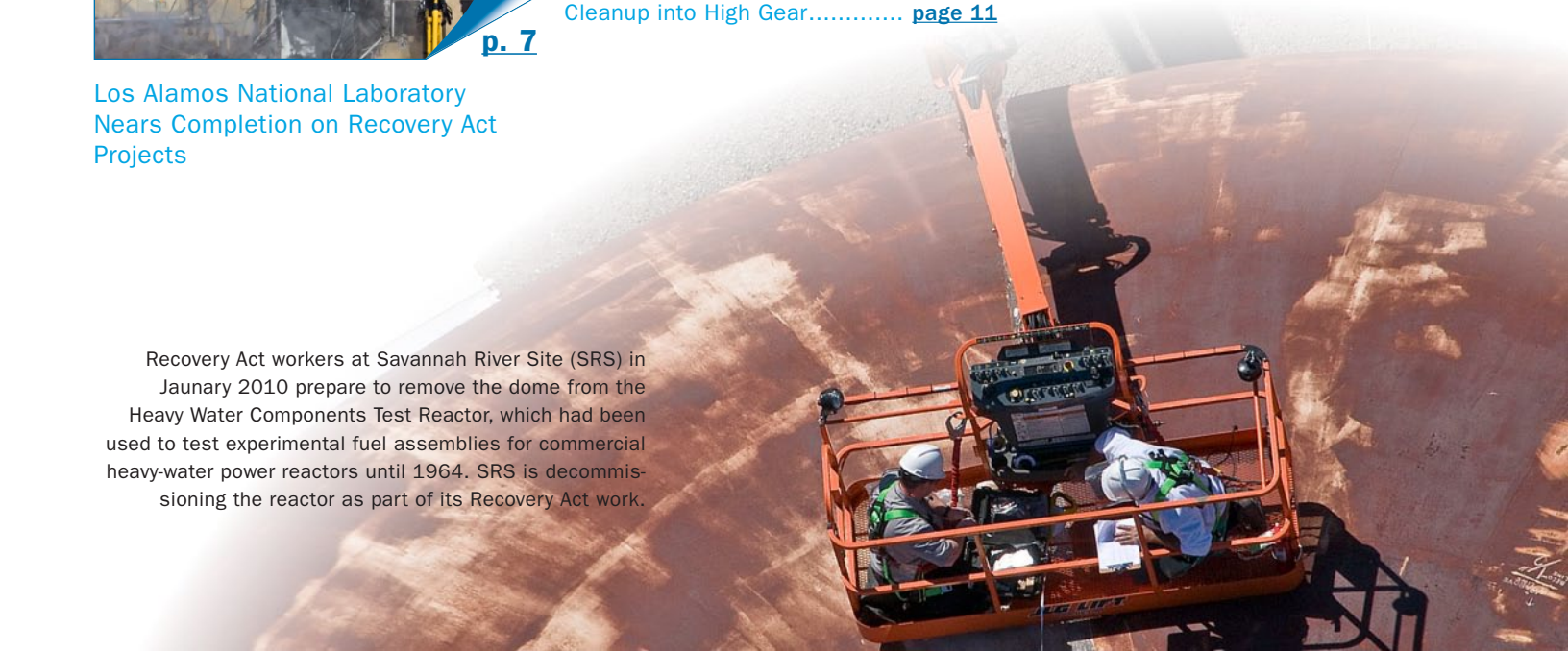
Savannah River Site Retires Reactors, Ships Waste in Remaining Recovery Act Work



Recovery Act workers at Savannah River Site (SRS) in Jaunary 2010 prepare to remove the dome from the Heavy Water Components Test Reactor, which had been used to test experimental fuel assemblies for commercial heavy-water power reactors until 1964. SRS is decommissioning the reactor as part of its Recovery Act work.

A Recovery Act worker saws a bolt loose so that a motor can be removed from the Feed Plant, which operated from 1957 to 1977. Uranium hexafluoride and fluorine were manufactured there.

Recovery Act Workers Save Money, Time in Paducah Site Demolitions

PADUCAH, Ky. – Having saved millions of dollars cleaning up and tearing down an old smelter in September 2010, Recovery Act workers at the Paducah Site are moving on to demolish other closed facilities by September 2011.

With the East End Smelter gone — about a year ahead of schedule and $10 million under budget — these savings are being reinvested to further accelerate Paducah's existing Recovery Act projects. The site received about $80 million from the Recovery Act.

"We saved money on the smelter project by executing work more efficiently and with smaller crews," said Rob Seifert, Recovery Act Project Manager at Paducah. "We plan to do the same with the Feed Plant Complex."

Workers will clean up and demolish two areas of the Feed Plant Complex, which spans nine facilities covering nearly 200,000 square feet. The complex operated from 1957 to 1977, during which time uranium hexafluoride and fluorine were manufactured there.

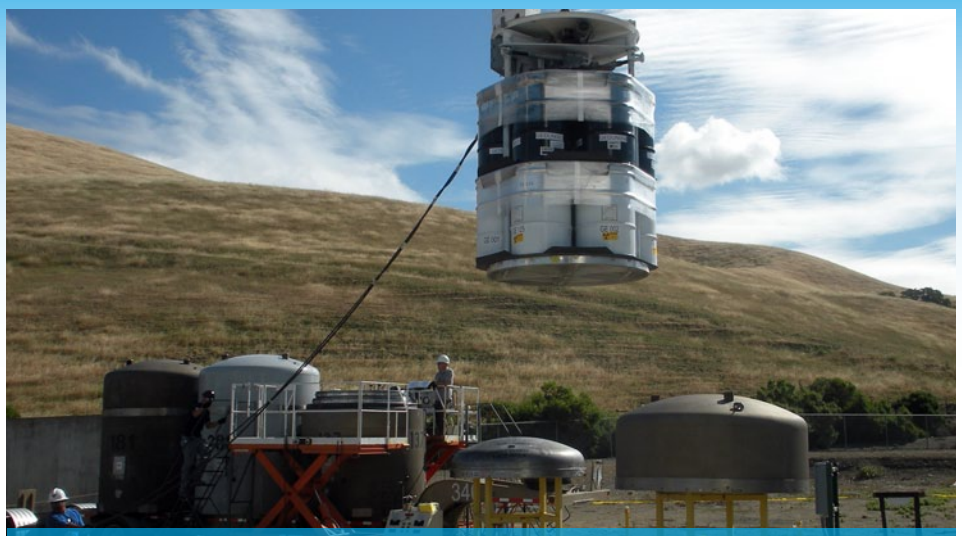
The estimated $18 million Recovery Act project at the Feed Plant is challenging and unique because it is being done in the middle of the nation's only gaseous diffusion plant that is still in operation, Seifert said. To address that challenge, the Paducah Site completed additional evaluation and documentation to ensure decontamination and demolition activities wouldn't impact ongoing operations at the plant.

Other Recovery Act funding is helping clean up and prepare C-340, known as the metals plant, for demolition. Built in the mid-1950s and operated off and on until 1973, the complex converted depleted uranium hexafluoride to uranium metal, as well as uranium oxides and metal. About half of the more than 100,000 cubic feet of systems waste has been removed and packaged for disposition.

Maintenance mechanic Jason Cochran helped remove 23,000 cubic feet of piping, equipment and contaminants such as asbestos during initial Feed Plant cleanup so that part of the complex could be torn down. Nearly 47,000 cubic feet of additional waste awaits removal.

"There is a feeling of accomplishment seeing things cleaned up," Cochran said. "My crew and I are proud of that."

Cochran, a member of United Steelworkers Local 550, works for LATA Environmental Services of Kentucky, LLC, DOE's Paducah cleanup contractor. □



Workers load drums of contact-handled transuranic waste into a TRUPACT-II shipping container.

Recovery Act Funds Spur Cleanup of Additional Transuranic Waste Sites

CARLSBAD, N.M. – Recovery Act funds will speed the cleanup of transuranic waste generated by past defense activities at five Cold War legacy sites by September 2011.

Transuranic waste will be removed from Lawrence Berkeley National Laboratory in California, Sandia National Laboratories in New Mexico, Argonne National Laboratory in Illinois, Bettis Atomic Power Laboratory in Pennsylvania, and NRD LLC in New York.

Those sites will join three others where Recovery Act funds accelerated the completion of small-quantity transuranic waste cleanup: General Electric Vallecitos Nuclear Center and Lawrence Livermore National Laboratory Site 300 in California, and the Nevada National Security Site. In all, approximately 300 cubic meters of transuranic waste will be cleaned up at the eight sites.

A byproduct of the nation's nuclear defense programs, transuranic waste is contaminated with radioactive elements that have atomic numbers greater than uranium. The waste is shipped to the Waste Isolation Pilot Plant (WIPP) in New Mexico, where it is disposed in rooms mined out of an ancient salt formation more than 2,100 feet below the surface. In some cases, contact-handled transuranic waste is sent to the Idaho National Laboratory to ensure it meets WIPP's disposal criteria before it is shipped to WIPP for permanent disposal.

WIPP received $172 million from the Recovery Act to expedite the cleanup of legacy transuranic waste around the DOE complex.

The WIPP Central Characterization Project has begun characterizing the waste at some of the sites, and plans to deploy equipment for characterization activities at the remaining sites in the weeks ahead. All waste must be certified under strict requirements for disposal at WIPP.

"Recovery Act funding has enabled us to mobilize additional teams to increase the amount of waste that is characterized for disposal at WIPP," said Carlsbad Field Office (CBFO) Recovery Act Federal Project Director Casey Gadbury. "The cleanup of these and other small-quantity sites has been accelerated because of the available Recovery Act funds."

WIPP, which is located about 25 miles from Carlsbad, will open two new shipping routes next summer to accommodate the jump in Recovery Act-funded waste shipments, bringing the total number of routes to nine. One new route will originate in New York, the other in Pennsylvania.

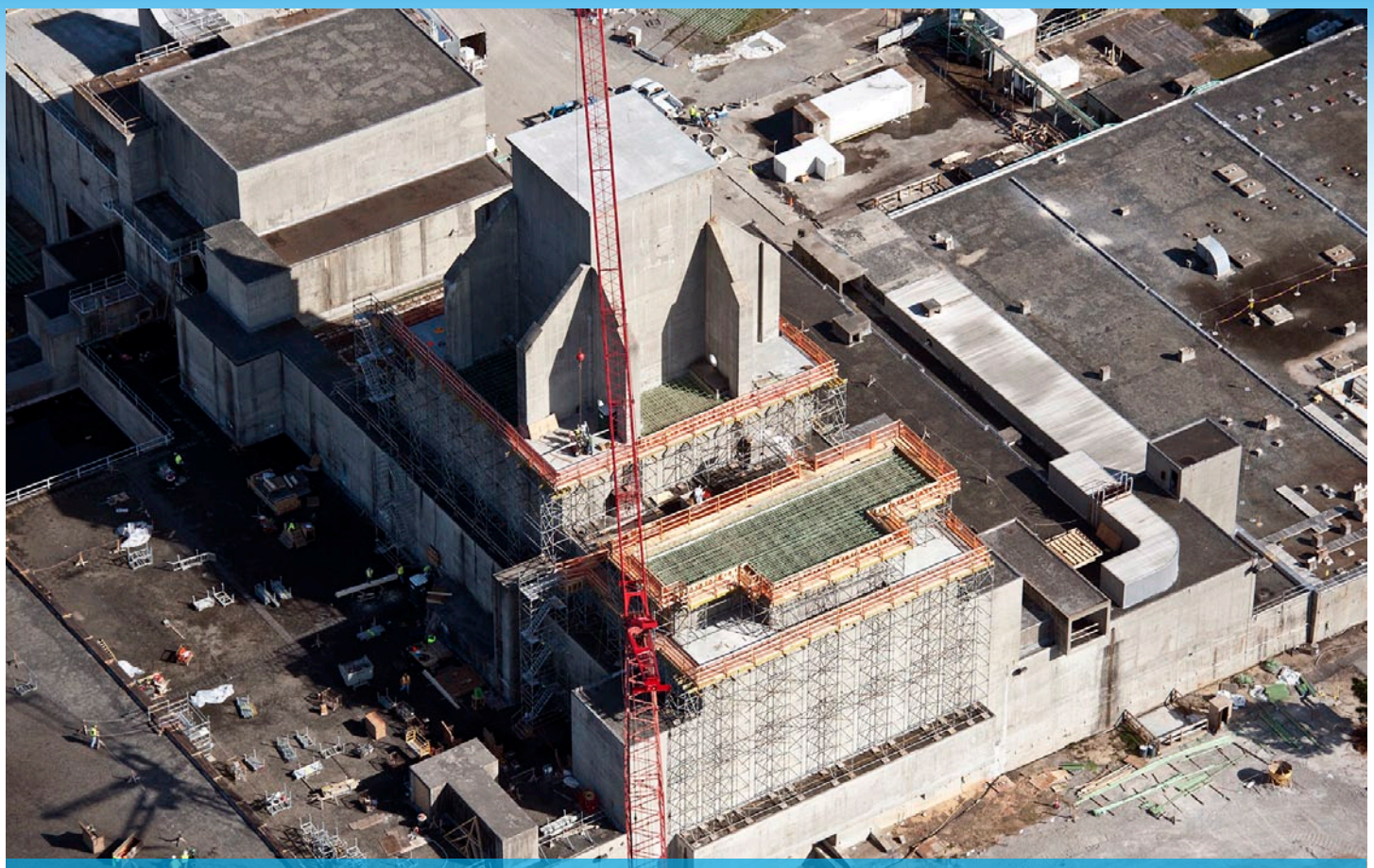
CBFO meets with local and state officials regarding proposed routes, and conducts road shows in which members of a community can ask questions and view the trucks and transportation casks used for WIPP shipments.

DOE also offers training to personnel in fields such as law enforcement and public works to respond to potential incidents involving the waste shipments. WIPP has trained more than 26,000 emergency response professionals along the routes to respond effectively in the event of an accident.

Transuranic waste shipments are tracked by satellite and monitored around the clock from a secure control center at WIPP. Designated federal, state and Tribal officials can monitor shipments.

Members of the public gather for a Waste Isolation Pilot Plant road show in Gray, Tenn., in April 2010, in preparation for a new route opening along Interstate 81.

To date, WIPP has safely received more than 9,200 shipments of transuranic waste that have traveled nearly 11 million miles. More than 139,000 containers of contact-handled and remote-handled transuranic waste containers have been safely disposed at WIPP. □



Workers prepare for roof modifications on portions of P Reactor at Savannah River Site that are expected to remain after facility decontamination and demolition efforts.

Savannah River Site Retires Reactors, Ships Waste in Remaining Recovery Act Work

AIKEN, S.C. – Workers will decommission nuclear materials production reactors, improve groundwater contamination treatment, and remove a large amount of legacy defense-related waste in the nine months that remain of the $1.6 billion Recovery Act Program at the Savannah River Site (SRS).

"We are proud of our accomplishments as we approach this leg of the Recovery Act Program at SRS," DOE-Savannah River Manager Dr. David Moody said. "Teamwork and planning have paid off. At this stage, we are finding many projects both under budget and ahead of schedule."

Major Recovery Act projects remaining for SRS and its management and operating contractor, Savannah River Nuclear Solutions, include:

- Transuranic waste shipments for disposal. Recovery Act workers will dispose approximately 4,100 cubic meters of legacy transuranic waste. As of November 2010, SRS Recovery Act workers disposed about 900 cubic meters of the waste. SRS will dispose a total of 5,000 cubic meters of legacy transuranic waste before the end of the Recovery Act Program.
- Decommissioning of P and R reactors. As part of the decommissioning, workers will use grout to seal portions of the reactors' associated buildings, vessels, and the water-collection basin that supported the P Reactor. The vessels and remaining basin structures will be permanently sealed with caps.

> **"We are proud of our accomplishments as we approach this leg of the Recovery Act Program at SRS."**
>
> *DOE-Savannah River Manager Dr. David Moody*

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Los Alamos National Laboratory Nears Completion on Recovery Act Projects

LOS ALAMOS, N.M. – Sixteen months after receiving $212 million from the Recovery Act, Los Alamos National Laboratory has completed one major environmental remediation project and is wrapping up another one in the weeks ahead.

The third and final piece of the Recovery Act work — excavation of the Lab's oldest waste disposal site — is expected to be finished in early 2011.

That's good news to the Lab's Recovery Act Program officials, who attribute the successful project execution to the Lab's preparedness for Recovery Act work and a productive workforce.

"We were ready to go when the Recovery Act funding became available and ramped up quickly," said Recovery Act Program Director Bruce Schappell. "Thanks to the skill and hard work of our personnel, this work was accomplished quickly, safely and efficiently."

Recovery Act workers have installed all 16 groundwater monitoring wells and decontaminated and demolished all 24 buildings at the Lab's Technical Area 21 (TA-21), many of which were built in the 1940s and served various uses during the Manhattan Project and Cold War eras. Remaining work at TA-21 includes removing concrete slabs and other waste left by the demolitions.

Excavation of about 22,000 cubic yards of soil is under way at the Material Disposal Area B (MDA-B), which was used from 1944 to 1948. Workers are conducting the excavation in several sturdy metal enclosures to ensure safety.

Few records exist that indicate what types of materials were disposed in the six-acre landfill. The excavation team members initially needed to know whether the site contained clothing and equipment contaminated with plutonium, or shock-sensitive chemical canisters, among other things. To address those concerns and respond safely, they studied 87 core samples from the site, researched documents and interviewed people who used to work there. That research took a year, and has proven helpful.

"Despite the challenges posed by the excavation of the World War II landfill, we are on track to complete our last Recovery Act project safely and efficiently," Schappell said.

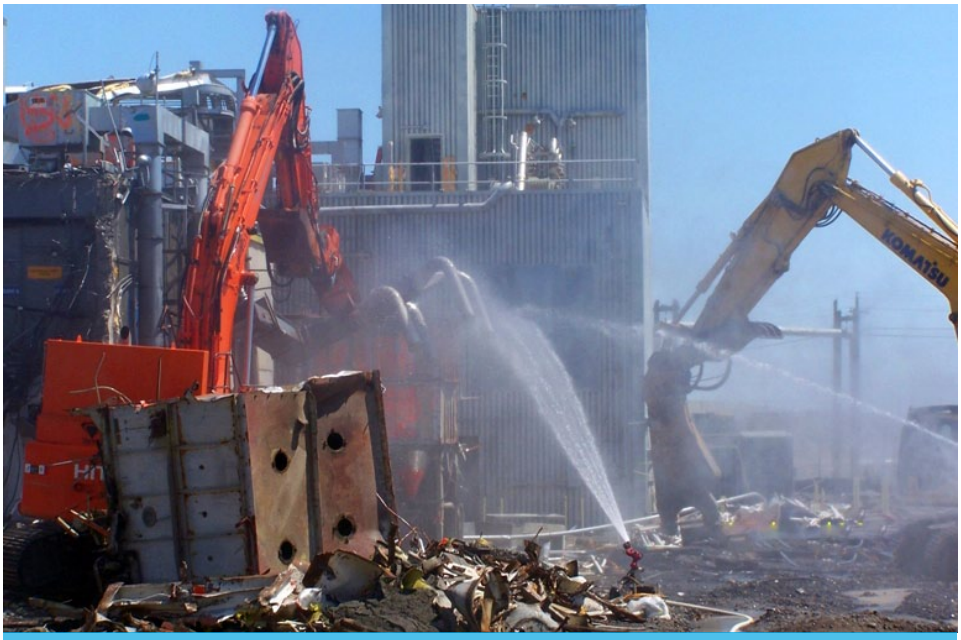
A large portion of TA-21 includes the DP West Site, the world's first industrial plutonium processing facility. Recovery Act workers demolished all 14 buildings at the DP West Site, which reduced the Lab's footprint by more than 100,000 square feet.

"Recovery Act funding allowed us to accelerate cleanup of these legacy sites, drill groundwater monitoring wells, and provide environmental and economic benefits to northern New Mexico," Schappell said. □

Building 21-150 was the final building demolished at Los Alamos National Laboratory's historic DP West, which was the world's only plutonium processing facility immediately following World War II.

Workers Clean Up Land, Remove Waste in Hanford Site Recovery Act Projects

RICHLAND, Wash. – The Richland Operations Office plans to clean large tracts of land used in previous military operations, remove legacy waste and fuels from underground storage, and prepare complexes associated with plutonium and uranium processing for demolition as the Hanford Site's $1.6 billion Recovery Act projects come to close in September 2011.



Workers demolish an ancillary facility near the U Plant processing canyon. They have removed five facilities – more than 53,000 square feet – to clear the way for a first-of-its-kind canyon demolition project, on target to begin in 2012.

Recovery Act workers will reduce the cleanup footprint of the 586-square-mile Hanford Site by 40 percent, or approximately 290 square miles, through the removal of structures and debris on the North Slope and Arid Lands Ecology Reserve.

On the outermost edge of the Hanford Site, the North Slope was used as a buffer to protect Hanford's defense production facilities but no reactor facilities were built there. Workers are removing piles of miscellaneous debris as part of the cleanup.

The Arid Lands Ecology Reserve, located on the eastern flank of Rattlesnake Mountain, was formerly a site that supported anti-aircraft defense for the U.S. Army, telephone and radio communications, and environmental research. Cleanup of the reserve is nearly complete with more than 33,000 square feet of facilities demolished.

Near the center of the Hanford Site, or the Central Plateau, two building complexes are being prepared for demolition. The Plutonium Finishing Plant complex, where plutonium extracted in a liquid form was processed into a solid form, consists of more than 60 buildings. Workers are decontaminating and cleaning the buildings to prepare the complex for demolition in 2013.

Hanford's U Plant was used in the 1950s to recover uranium from waste generated in the plutonium extraction process. Recovery Act funding is preparing the U Plant for a first-of-its-kind canyon demolition project to occur in 2012. Five ancillary facilities totaling more than 53,000 square feet have been demolished surrounding the canyon while the large cells inside the canyon are prepared to be filled with grout.

Workers are accelerating cleanup of legacy waste and fuels. Thanks to Recovery Act funding, Hanford was able to continue shipments of transuranic waste to the Waste Isolation Pilot Plant in New Mexico for permanent disposal. Transuranic waste is contaminated with radioactive elements that have atomic numbers greater than uranium.

Setting the stage for future cleanup at the site, the Recovery Act is accelerating the construction of the 200 West Groundwater Treatment Facility by five years, from 2016 to 2011. The largest pump-and-treat system constructed at Hanford will expand and enhance groundwater treatment for years to come.

The groundwater treatment capacity across the Hanford Site in early 2009 was 35 million gallons per month. Treatment systems were expanded to bring that total to 50 million gallons per month by July 2009.

Three new treatment systems are under construction, with two of those funded by the Recovery Act. The 200 West system will add approximately 100 million gallons per month of treatment capacity. These three new treatment systems across the Hanford Site will quadruple current treatment capacity of 50 million gallons per month to about 200 million gallons per month. □

Recovery Act Program Changes the Face of Hanford's Tank Farms

RICHLAND, Wash. – Office of River Protection (ORP) employees recently celebrated the completion of $15 million in Recovery Act projects at a laboratory that analyzes radioactive waste.

"There are so many improvements to this facility that have taken place over the past year," 222-S Laboratory Manager Duane Renberger said at a ribbon-cutting ceremony outside the lab earlier this year. "Every lab employee has benefited from the many upgrades completed."

An additional $17 million in Recovery Act funds will be used to tackle even more upgrades at the lab, which is a full-service, analytical facility that routinely handles samples of

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Jason Cochran – PADUCAH, Kentucky

Recovery Act worker Jason Cochran is much happier helping clean up old buildings at the Paducah Site than he was during his previous 13 years as a shipyard worker.

"I'm a different person," said Cochran, 33, of Reidland, the father of an 11-year-old girl. "My wife can tell a big difference in my attitude each day when I come home."

After working in dangerous, inclement river conditions, being in a safety-first job culture for DOE environmental cleanup contractor LATA Environmental Services of Kentucky, LLC, is one key reason for job satisfaction, he says. Helping clean up old, contaminated buildings so that they can be demolished is another.

Many displaced workers found jobs in the Paducah Site's $80 million Recovery Act Program amid a major recession. Others, like Cochran, obtained Recovery Act jobs for better opportunities in safe work environments.

Cochran said he was impressed with the extensive safety training he has received and the protective equipment needed to remove contaminated materials from a closed building known as the Feed Plant. The nine-building, 200,000-square-foot complex was used from 1957 to 1977 to manufacture uranium hexafluoride and fluorine.

LATA-Kentucky's Jeff Seaton and two other supervisors thoroughly explained how to safely deal with various work hazards, Cochran said.

"The work I did at the shipyard was dangerous," Cochran said. "Now I don't worry about my health." □

Argonne Recovery Act Workers Remove Waste, Demolish Cold War Legacy Buildings

Workers at Argonne National Laboratory prepare waste shipments.

ARGONNE, Ill. – With the help of $79 million in Recovery Act funding, Argonne National Laboratory will continue to dramatically reduce its inventory of radioactive materials and waste stored on site in the next year.

Meanwhile, workers will continue to make progress in the Lab's decontamination and demolition program. That work includes the removal of waste from the demolition of Building 330, the former site of the historic Chicago Pile-5, which is the fifth and last member of the Chicago Pile, a family of pioneering research reactors.

Argonne will ship irradiated nuclear reactor fuel specimens and transuranic waste off-site for disposal by September 2011.

On Dec. 1, 2010, Argonne shipped approximately one-third of the Alpha Gamma Hot Cell Facility (AGHCF) irradiated nuclear reactor fuel specimen inventory off-site to Idaho National Laboratory (INL). These sodium bonded fuel specimens were originally sent to Argonne for research purposes from reactors at the former Argonne-West facility, which is now part of INL.

Over the past twelve months, those fuel specimens have been repackaged in preparation for their return to INL.

Argonne expects to receive final approval from the DOE Carlsbad Field Office to package a second group of AGHCF irradiated sample inventory — in the form of remote-handled transuranic waste — to the Waste Isolation Pilot Plant nearby Carlsbadin New Mexico. This second group of material represents an expansion of Argonne's transuranic waste disposal campaign. Transuranic waste is contaminated with radioactive elements that have atomic numbers greater than uranium.

This approval will signify the culmination of months of planning between Argonne, DOE, and the U.S. Environmental Protection Agency to develop an acceptable approach for characterizing and packaging the waste. This waste will be packaged this winter and shipped off-site between April and September 2011.

More than 100 drums of transuranic waste from the AGHCF and 205 K-Wing, a facility once used for fuel experiments, have been shipped off-site since the Recovery Act waste campaigns started in May 2009.

In Argonne's decontamination and demolition program, the land where Building 330 was located will be restored with native vegetation in the spring. The demolition phase ended six weeks early and the waste removal activities are on track to be completed before the end of the year, roughly three and a half months ahead of schedule.

More than 600 truckloads of demolition waste — about 22.5 million pounds of material — have left the work site, which will be surveyed and backfilled by spring of next year. Site restoration will include the placement of an asphalt cap over the building footprint and the planting of native grasses over the remainder of the site. No workers have lost work time due to injuries and the project costs to date have been slightly under the planned budget.

At Building 310, which formerly supported experimental work and waste processing, workers have begun removing asbestos as a prelude to full decontamination and demolition. A $5 million contract was awarded to North Wind, Inc. of Idaho Falls, Idaho, a woman-owned small business, for this work. □

Recovery Act Kicks NNSS Cleanup into High Gear

> **"Recovery Act money is helping NSO reach cleanup goals faster."**
>
> *Federal Sub-Project Director Kevin Cabble*

The site of the former Reactor Maintenance, Assembly and Disassembly Facility, which supported nuclear rocket reactor development in the space program, is shown in the center of the photo here. Workers demolished the facility this year.

LAS VEGAS – Recovery Act workers at Nevada National Security Site (NNSS) have accomplished several projects on their environmental cleanup agenda, from the installation of groundwater monitoring wells to the demolition of facilities used in a historic nuclear rocket development program.

In the months ahead, they will carry out additional work to assess and clean up additional environmental sites. The projects have been accelerated by $44 million the Nevada Site Office (NSO) received from the Recovery Act.

"Recovery Act money is helping NSO reach cleanup goals faster," Federal Sub-Project Director Kevin Cabble said.

With a focus on industrial sites, workers are making headway in the demolition of the Pluto Facility, where the world's first nuclear-powered ramjet engine was developed decades ago. They also are addressing miles of potentially contaminated railroad tracks targeted for closure. The route was used for transporting equipment for nuclear rocket development.

Cabble said the environmental management team has found ways to streamline work processes in projects such as the Pluto Facility demolition.

"We learned at Pluto that we need to test for and separate asbestos from all surfaces, floors, ceilings, and insulation prior to any demolition activity. This saves us from having to dispose all waste in an asbestos landfill," Cabble said.

At the Tonopah Test Range, just north of NNSS, workers are removing, packaging and disposing contaminated soil. They recently finished remediating submunitions targets on the range.

Recovery Act funding helped complete the demolitions of the Reactor Maintenance, Assembly and Disassembly Facility and structures at the Test Cell C Facility. Both facilities supported nuclear rocket reactor development in the space program.

At Pahute Mesa, a nuclear test region at NNSS, Recovery Act workers installed two deep wells. The wells will join an extensive network of groundwater characterization and monitoring wells on the NNSS and adjacent range.

In addition to the $44 million, NSO was allocated about $10 million to accelerate the disposal of low-level radioactive waste from Recovery Act projects across the DOE complex. As of November 19, 2010, NNSS received more than 1.7 million cubic feet of waste from those projects, which would fill 20 Olympic swimming pools. □

Oak Ridge Strives for Strong Finish ...

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W-1A, the Lab's largest source of ground contamination in the central campus, will be removed. The project entails creating groundwater extraction wells and cleaning soil surrounding the tank.

At Y-12, Recovery Act funds are addressing one of the site's largest environmental concerns: the West End Mercury Area storm sewer. The project is modernizing and upgrading the storm sewers, which are a source of off-site mercury transport. Workers are removing contaminated soil, cleaning and relining 12,000 linear feet of piping, replacing catch basins, and treating contaminated water.

Demolition of Y-12's Building 9211 began in late October and will be completed by the end of 2010. The project, which is the final and highest-profile Recovery Act demolition at Y-12, will reduce the footprint of the Cold War legacy by more than 83,000 square feet. The removal of scrap metal from the seven-acre Old Salvage Scrap Yard is planned for January 2011. The second phase of that project, soil characterization, is expected to be finished by April 2011. □

An aerial view shows the Oak Ridge National Laboratory Central Campus.

Recovery Workers Save ...

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- P Area groundwater treatment. Technicians will conduct testing to determine whether microbes can be used to remediate solvent-contaminated groundwater. Scientists at Savannah River National Laboratory discovered a new and innovative treatment, known as Microbiological-based Chlorinated Ethene Destruction to eliminate the contaminants, called chlorinated ethenes.
- H4 Basin upgrade. Remaining work includes pouring about 800 feet of concrete for a drainage channel for one of four basins that had received wastewater from previous operations. The new channel will direct rainwater away from the basin and prevent moisture from infiltrating the basin.
- F Area Barrier Wall extension. An underground extension will capture contaminants in groundwater in a project to be completed in April 2011.
- Heavy Water Components Test Reactor decommissioning. Workers will decommission the reactor, which had been used to test experimental fuel assemblies for commercial heavy-water power reactors until 1964. The reactor vessel, 75-foot metal dome, two steam generators, and other components will be removed. A concrete slab will cover the building's footprint.
- Installation of low-level waste trench covers. Covers for five slit trenches used for the disposition of low-level waste will be installed. □

Recovery Act Upgrades Advance Waste Tank Closures at Savannah River Site

AIKEN, S.C. – Recovery Act projects totaling $77 million will accelerate the closure of radioactive waste tanks at the Savannah River Site (SRS).

Savannah River Remediation, LLC, SRS's liquid waste contractor, will install pumps and mixers used to close waste tanks and move highly radioactive materials to SRS's Defense Waste Processing Facility (DWPF) for disposition in a safe waste form.

Recovery Act funding will help close the 49 underground liquid waste storage tanks at SRS. Workers will design and deploy a $15 million chemical cleaning infrastructure system for the tanks and upgrade Tank 13, which has a capacity of more than one million gallons. Tank 13 is slated for use in improved waste blending and transfers to the DWPF. □

"These planned improvements to the SRS liquid waste facilities will help us close waste tanks quicker, under cost and safer."

SRS Recovery Act Program Deputy Director Rod Rimando, Jr.

Recovery Act Program Changes the Face of Hanford's Tank Farms...

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highly radioactive tank waste. The lab is essential to tank-waste retrieval efforts. Preparations are being made to deliver the waste to the Waste Treatment Plant (WTP) under construction at Hanford.

The recent changes at the lab include new analytical equipment, a climate-controlled storage facility, energy-efficient lighting, and more office space. Upcoming Recovery Act projects will convert the heating system from steam to an environmentally friendly electric system and replace aging buildings with new facilities.

Upgrades at the lab are among the many Recovery Act-funded projects on track to be completed by September 2011 by Washington River Protection Solutions (WRPS), the primary ORP contractor.

Down the road from the lab, workers have removed two of eight waste transfer lines that no longer meet regulatory requirements. Over the course of the project, crews will extract more than 700 linear feet of pipe. The old lines will be sent to a nearby facility for disposal.

Crews will install new and refurbished lines connecting the underground storage tanks. The project, funded by more than $16 million from the Recovery Act, is slated for completion in August 2011.

"The crew is extremely focused and entirely devoted to the success of this project," said WRPS Construction Manager Steve Chapman.

The project supports the long-term mission of the tank farms by accelerating essential upgrades needed to prepare the farms for safe and reliable delivery of waste to WTP. □

Workers remove the first portion of old pipe-in-pipe waste transfer lines from Hanford's SY Farm. The Recovery Act-funded project calls for a total of eight pipe-in-pipe waste transfer lines to be removed from the farm by the end of September 2011.

Recovery Act Workers Reduce Contaminant Levels Sharply in Portsmouth Site 'Big Dig'

Members of the Portsmouth EM Site-Specific Advisory Board receive a field briefing on the Recovery Act-funded groundwater source removal project at the Portsmouth Gaseous Diffusion Plant.

PIKETON, Ohio – Recovery Act workers have reduced contaminant levels by 96 percent in soil 30 feet below ground in what has been coined the Portsmouth Gaseous Diffusion Plant's "Big Dig."

In the $34 million Recovery Act project, workers are excavating a 70,000-square-foot area of soil with a high concentration of trichloroethene (TCE) under a now-defunct holding pond. The chemical compound was used as an industrial solvent at the plant, which enriched uranium for defense and commercial nuclear purposes until production ended in 2001.

"Recovery Act funding has been essential to allowing us to treat the high concentrations of TCE," DOE Portsmouth Site

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> **"Recovery Act funding has been essential to allowing us to treat the high concentrations of TCE. We are thrilled this remediation project has been highly effective in reducing the contamination."**
>
> *DOE Portsmouth Site Lead Joel Bradburne*

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Lead Joel Bradburne said. "We are thrilled this remediation project has been highly effective in reducing the contamination."

As of mid-November 2010, workers had treated about 62,000 square feet of the area. The project is scheduled for completion in January 2011.

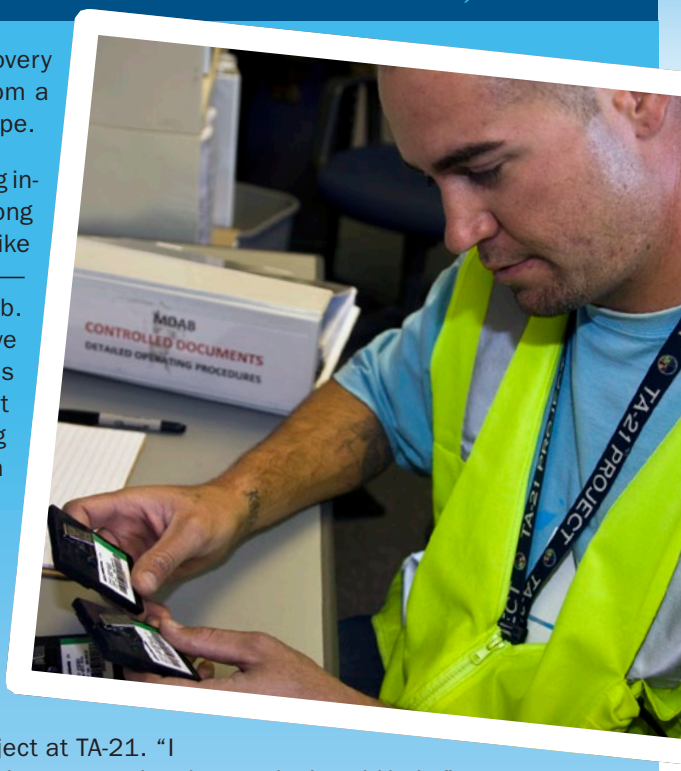
The Portsmouth Site is using an oxidant treatment to reduce the TCE. Catalyzed sodium persulfate oxidant and hydrogen peroxide blend with the contaminated soil, which breaks down the TCE. The treated soil is then reused to backfill the excavated area.

Prior to the oxidant treatment, several technologies were used to address the TCE contamination over the years, with limited success.

In recent weeks, members of the Portsmouth EM Site-Specific Advisory Board Decontamination & Decommissioning/Recycling Committee viewed progress in the Big Dig. The board provides information and advice to the DOE regarding environmental cleanup activities at the Portsmouth Site.

"I was impressed with how careful they were at removing the materials and treating the soils. Everything in this project is moving along rather quickly and it's our hope that we can continue at this same pace with the rest of the cleanup," Committee Chairman Roger Scaggs said. □

Angelo Maestas – LOS ALAMOS, N.M.



For Angelo Maestas, a Recovery Act position pulled him from a bleak employment landscape.

The downturn in the building industry meant that the lifelong construction worker — like many workers nationwide — found himself without a job. An Española, N.M., native and electrician, Maestas was unemployed for about three months before being hired at the Technical Area 21 (TA-21) Recovery Act project operations center at Los Alamos National Laboratory.

"I knew they had a big project here," Maestas said, referring to the 24-building demolition project at TA-21. "I thought with my experience in construction that maybe I could help."

Maestas submitted his resume three times. The third time must have been the charm, for shortly thereafter he received a call from Daniel Oliver, a manager with one of the many subcontractors supporting the project. Impressed with Maestas's knowledge, experience and soft-spoken demeanor, Oliver hired him on the spot.

Maestas was thrilled to return to the working world. In addition to the usual strains that unemployment brings to a family, Maestas and his wife had an additional concern — a seriously ill family member who needed care.

"Because of my job here, my wife, who is a nurse, was able to interrupt her career and move to Arizona to take care of her father, who is terminally ill," Maestas said. "I am very thankful for this opportunity."

Though his current position is short term and expected to end by the close of 2010, Maestas hopes the specialized training he has received will help him find another position at the Lab. He's also learned new computer skills, knowledge he hopes will make him more marketable in the future.

When his position ends, Angelo plans to update his resume and submit it to other contractors working at the LANL.

"If it works out, I'll be grateful," he said. "If not, I'll look for work in Arizona so I can be with my wife and son." □

Workers install high-density concrete culverts to increase shielding around the Materials Test Reactor at the Reactor Technology Complex.

Idaho Site Tackles Recovery Act Work to Help Protect Aquifer, Meet State Requirements

IDAHO FALLS, Idaho – Nearly $470 million from the Recovery Act is accelerating the cleanup of six decades worth of radiological and chemical contamination at the Idaho site — benefiting eastern Idaho residents and helping protect the nearby Snake River Plain Aquifer.

With less than a year to complete Recovery Act work, the Idaho site and workers with its main cleanup contractor, CH2M-WG Idaho (CWI), are in the final stages of several projects, including the removal of buried waste from a pit. The waste exhumation project is far enough ahead of schedule that the Idaho site expects to start retrieving waste from another pit this month using savings from other Recovery Act projects. These Recovery Act projects help DOE meet state and federal requirements to clean up hazardous waste.

"I'm very pleased with the progress we've made on our Recovery work so far," said John Fulton, CWI President and CEO. "We've already completed much of our Recovery Act work, and we've done it with an outstanding safety record. We'll keep our momentum as we focus on safely completing our remaining projects."

The Idaho site's Recovery Act decontamination and demolition team has demolished nearly 102,000 square feet of obsolete and unneeded nuclear and industrial structures, among them several buildings of historic significance, such as the Materials Test Reactor (MTR).

> **"I'm very pleased with the progress we've made on our Recovery work so far."**
>
> *John Fulton, CWI President and CEO*

Workers recently removed the last portions of the reactor vessel from MTR, the second reactor built at the Idaho site. In operation until 1970, the MTR was vital to the development of safe materials and methods for reactor construction in the budding world of nuclear industry more than half a century ago. The Idaho site plans to complete demolition of the landmark building in the first half of 2011.

The biggest remaining Recovery Act challenge is the Experimental Breeder Reactor-II (EBR-II), a groundbreaking sodium-cooled reactor that began operating in the 1960s. The EBR-II provided fast breeder reactor technology. The sodium coolant efficiently removed heat during reactor operations.

The coolant reacts violently with air or water, posing significant safety and operational challenges. Recovery Act team members are completing comprehensive safety checks to address those challenges before treating residual sodium in the EBR-II cooling lines and tanks. After that, they will demolish the facility.

Other Recovery Act projects at the Idaho site are ahead of schedule and nearing completion, including:

- Processing and shipping of remote-handled transuranic waste to the Waste Isolation Pilot Plant (WIPP) in New Mexico for permanent disposal.
- Disposition of low-level and mixed low-level waste from the Advanced Mixed Waste Treatment Project.
- Retrieval of Cold War waste from pits at the Idaho site's Subsurface Disposal Area for shipment to WIPP. □

FOR MORE INFORMATION ON EM RECOVERY ACT WORK PLEASE VISIT:

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